

वार्षिक प्रतिवेदन Annual Report 2024



भाकृअनुप-कृषि तकनीकी अनुप्रयोग अनुसंधान संस्थान (अटारी)
ICAR-Agricultural Technology Application Research Institute (ATARI)

Zone-X/क्षेत्र 10, क्रीडा परिसर/CRIDA Campus, संतोषनगर/Santoshnagar, हैदराबाद/Hyderabad - 500059



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Edited by

A. Bhaskaran and Shaik N Meera

Compiled by

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Content Contribution

Shaik N Meera, J.V. Prasad, A.R. Reddy, A. Bhaskaran, B. Malathi and Tusar Ranjan Sahoo

Editorial Assistance

J.V. Prasad, A.R. Reddy, B. Malathi and Tusar Ranjan Sahoo, S. Sivarama Krishna
M. Praneeth, M. Manisha, D. Harini, Shaik Humera Tabbasum, Bhookya Devojee, D. Uttej,
J. Anusha, B. Rohini, C. Sindhu and R. Sruthi

Cover Design

D. Uttej and Bhookya Devojee

Published by

Dr. Shaik N Meera

Director

ICAR-Agricultural Technology Application Research Institute (ATARI), Zone-X

CRIDA Campus, Santoshnagar, Hyderabad – 500 059

Tel: +91-40-24006500

Email: zcu5hyd@gmail.com; meera.shaik@icar.org.in

Website: <https://atari-hyderabad.org.in>

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Preface



The year 2024 stands out as a defining chapter in the journey of ICAR-ATARI Zone X. It was a year of unprecedented reach, innovation, and impact - fueled by a deep commitment to empowering Krishi Vigyan Kendras (KVKs) and the farming communities they serve. As Director, I had the privilege of leading from the front, steering a transformative agenda across Andhra Pradesh, Telangana, Tamil Nadu, and Puducherry - bringing new vigor to grassroots extension, digital agriculture, and inclusive rural development.

In a time when Indian agriculture grapples with complex challenges - climate change, market volatility, and the demand for knowledge-intensive farming - ATARI Zone X emerged as a catalyst for change. Our strategic direction was clear: to reimagine KVKs not just as training centers, but as innovation platforms, agri-business incubators, and community anchors. Through over 50 field visits across five states, I witnessed firsthand the resolve of our extension personnel and the aspirations of our farmers. These visits were not routine inspections - they were immersive engagements, designed to mentor, mobilize, and maximize the potential of the KVK system.

From the Viksit Bharat Sankalp Yatra in Chennai to the Tribal Sub-Plan interventions in Maredumilli, the journey of 2024 was one of hands-on leadership. At KVK Pandirimamidi, I saw how rubber tapping transformed tribal livelihoods; at KVK VR Gudem, I examined post-harvest innovation models. These visits reaffirmed my belief that local solutions, when aligned with national priorities and backed by institutional support, can deliver exponential impact.

In pursuit of digital excellence, we laid the groundwork for AgriTech 5.0 - an ambitious blueprint that integrates AI, blockchain, big data, and drones into the extension architecture. This vision was shared widely at platforms such as ICEISA-2024 (VIT, Vellore), the Annual ICAR Directors and Vice Chancellors Conference in Delhi, and during my address at the Nutri-Garden Inception Workshop. We proposed actionable systems: AI-enabled advisory dashboards, farmer-facing apps, QR-coded demo units, and interoperable data ecosystems.

Our efforts were equally grounded in socio-economic transformation. In Ramanathapuram, we rallied stakeholders to develop a global brand for “Ramnad Organic Mundu Chilli,” aiming for GI registration and traceability systems to tap export markets. In Pudukkottai and Theni, I celebrated women entrepreneurs and SHGs who turned millet farming and food processing into viable enterprises. Across visits to KVKs - from Rudrur to Palem - we reinforced the theme of convergence: where agriculture, entrepreneurship, gender equity, and sustainability intersect.

These field-level visions translated into tangible institutional performance. KVKs in Zone X conducted over 46,000 extension activities, reaching 4.89 million farmers and over 55,000 extension personnel. The activities spanned from Kisan Melas to Plant Health Camps, from drone demonstrations to on-farm technology validation. Our KVKs

published 15,869 knowledge products, including 634 research papers, 1008 popular articles, 412 success stories, and 179 technical bulletins - documenting and sharing field insights at scale.

Our focus on critical input production and technology dissemination was equally impressive. KVKs collectively produced and supplied over 16,700 quintals of seed, 10 million planting materials, 1.8 million livestock units, and over a million kilograms of bioproducts - benefiting lakhs of farmers and reinforcing the seed-to-market continuum.

Rainwater harvesting and climate resilience received focused attention, with 156 training programs and 196 demonstrations reaching 8906 farmers and distributing nearly 2 lakh planting materials. ATARI also coordinated 105 training and review meetings through the Directorates of Extension and conducted 216 field visits to monitor, guide, and rejuvenate KVK performance, ensuring accountability and timely redressal of ground-level issues.

Crucially, the Revolving Fund mechanism thrived, with KVKs generating ₹2646 lakh in revenue, ensuring financial sustainability and reinvestment into localized innovations.

At the core of this performance lies a resilient, committed team of scientists, SMSs, and field staff - whose dedication I deeply acknowledge. The strength of ATARI Zone X is its people - at every level - and their belief in the mission to uplift farmers through science, service, and solidarity.

Looking ahead, our strategic emphasis will be on digital convergence, farmer-centric innovation parks, and “One-Stop KVKs” capable of delivering knowledge, services, and market linkages under one roof. We aim to enhance our skilling footprint by aligning with national missions and piloting futuristic roles like Carbon Farming Facilitators, Digital Extension Promoters, and Livestock Waste Valorization Experts. The seeds of these ideas were sown in 2024; the coming years will see them grow into robust pillars of India’s Viksit Bharat dream.

I extend my deepest gratitude to the Deputy Director General (Agricultural Extension), Assistant Director Generals (Agricultural Extension), ICAR, the Directors of Extension from SAUs, our technical and administrative colleagues, and most importantly, the KVK teams across the zone. Your partnership, persistence, and passion continue to inspire this journey.

This Annual Report 2024 is more than a document - it is a chronicle of transformation, a testimony of leadership through action, and a blueprint for future-ready agriculture.

Let us continue this momentum, together.



Dr. Shaik N. Meera

Director, ICAR-ATARI Zone X, Hyderabad

कार्यकारी सारांश

कृषि तकनीकी अनुप्रयोग अनुसंधान संस्थान (अटारी), हैदराबाद को क्षेत्र-10 के लिए स्वीकृत 75 कृषि विज्ञान केंद्रों के समन्वय की जिम्मेदारी दी गई है। उनमें से 72, वर्ष 2024 के दौरान कार्यरत थे। वार्षिक रिपोर्ट वर्ष 2024 में तमिलनाडु के 32, आंध्र प्रदेश के 23, तेलंगाना के 16 और पुदुचेरी के 2 कृषि विज्ञान केंद्रों की गतिविधियों का उल्लेख है।

प्रौद्योगिकी का मूल्यांकन

वर्ष के दौरान, कृषि विज्ञान केंद्रों ने 5228 ऑन-फार्म ट्रायल्स (प्रयोगों) के माध्यम से 1821 प्रौद्योगिकियों का मूल्यांकन किया। परीक्षण की गई इन प्रौद्योगिकियों में से 1382 फसल संबंधित, 265 पशुओं से संबंधित, 46 महिला सशक्तिकरण से संबंधित, 65 उद्यमों पर आधारित तथा 26 कृषि यंत्रों से संबंधित थीं। फसलों के संदर्भ में प्रमुख थीमैटिक क्षेत्र (विषयगत क्षेत्र) शामिल थे: किस्म मूल्यांकन, फसल पद्धतियाँ, एकीकृत रोग प्रबंधन, एकीकृत कीट प्रबंधन, एकीकृत पोषक तत्व प्रबंधन, एकीकृत खरपतवार प्रबंधन, एकीकृत फसल प्रबंधन, संसाधन संरक्षण तकनीकें, कृषि यंत्र और उपकरण। पशुओं के मामले में मूल्यांकन किए गए प्रमुख क्षेत्र थे: नस्ल मूल्यांकन, रोग प्रबंधन, आहार एवं पोषण प्रबंधन और आश्रय प्रबंधन। ग्रामीण महिलाओं के सशक्तिकरण के अंतर्गत ऑन-फार्म ट्रायल्स निम्नलिखित विषयों पर किए गए: श्रमभार में कमी, स्वास्थ्य एवं पोषण, मूल्य संवर्धन तथा उद्यमिता विकास।

तमिलनाडु के कृषि विज्ञान केंद्रों (KVKs) ने 865 प्रौद्योगिकियों की उपयुक्तता का मूल्यांकन 2109 ऑन-फार्म ट्रायल्स (OFTs) के माध्यम से किया, जिसमें फसलों (जिसमें बागवानी फसलें भी शामिल हैं - 720) और पशुओं (113) को शामिल किया गया। आंध्र प्रदेश के KVKs ने 642 प्रौद्योगिकियों की उपयुक्तता का मूल्यांकन 2028 ऑन-फार्म ट्रायल्स के माध्यम से किया, जिसमें फसलों (जिसमें बागवानी फसलें भी शामिल हैं - 550), पशु (315) और ग्रामीण महिलाओं के सशक्तिकरण (243) को शामिल किया गया। तेलंगाना के KVKs ने 268 प्रौद्योगिकियों की उपयुक्तता का मूल्यांकन 979 ऑन-फार्म ट्रायल्स के माध्यम से किया, जिसमें फसलों (जिसमें बागवानी फसलें भी शामिल हैं - 266), पशु (123) और ग्रामीण महिलाओं के सशक्तिकरण (76) को शामिल किया गया। पुदुचेरी के KVKs ने 46 प्रौद्योगिकियों का मूल्यांकन 112 ऑन-फार्म ट्रायल्स के आयोजन द्वारा किया,

जिसमें फसलों (जिसमें बागवानी फसलें भी शामिल हैं - 23) और पशु (34) को शामिल किया गया।

प्रौद्योगिकी प्रदर्शन

जोन X के कृषि विज्ञान केंद्रों ने 3472.5 हेक्टेयर क्षेत्र में फसलों (7849), पशुओं (2085) और कृषि उपकरणों (564) पर 11676 अग्रिम पंक्ति प्रदर्शन आयोजित किए। अनारजों के 1868 प्रदर्शनों में से 1623 चावल पर थे। दालों के 934 प्रदर्शनों में से 370 उड़द के, 178 मूंग के और 141 लाल चने के थे। तिलहन के 559 प्रदर्शनों में से 409 मूंगफली के थे। रेशेदार फसलों में से 321 प्रदर्शन कपास के थे। वाणिज्यिक फसलों में से 51 प्रदर्शन गन्ने के थे।

तमिलनाडु में 6200 प्रदर्शनों में से 1330 अनारज के और 723 सब्जियों के थे। आंध्र प्रदेश में 3572 प्रदर्शनों में से 379 दालों के, 287 अनारज के, 266 फलों के और 216 सब्जियों के थे। तेलंगाना में आयोजित 1504 प्रदर्शनों में से 295 सब्जियों पर और 176 अनारज पर थे। पुदुचेरी में आयोजित 400 प्रदर्शनों में से 75 अनारज पर, 50 सब्जियों पर, 45 दालों पर और 20 चारा फसलों पर थे। इस क्षेत्र के कृषि विज्ञान केंद्रों ने पशुधन, मुर्गी पालन और मत्स्य पालन पर 2085 प्रदर्शन आयोजित किए, जिनमें 846619 पशु, मुर्गी पालन और मछली के बच्चे शामिल थे।

प्रशिक्षण

प्रशिक्षण केवीके की एक महत्वपूर्ण अनिवार्य गतिविधि है, जो विभिन्न उन्नत तकनीकों के बारे में ज्ञान और कौशल को बढ़ाने में महत्वपूर्ण भूमिका निभाता है। वर्ष के दौरान, जोन-X के केवीके ने 7234 प्रशिक्षण कार्यक्रम आयोजित किए, जिनमें 262887 प्रतिभागियों ने भाग लिया, जिनमें 198053 किसान, 27746 ग्रामीण युवा और 37088 विस्तार कार्यकर्ता शामिल थे।

तमिलनाडु के केवीके ने 3570 प्रशिक्षण पाठ्यक्रम आयोजित किए, जिनमें कृषक महिलाओं, ग्रामीण युवाओं और विस्तार कार्यकर्ताओं सहित 114098 किसानों ने भाग लिया, जबकि आंध्र प्रदेश के केवीके ने 2356 प्रशिक्षण पाठ्यक्रम आयोजित किए, जिनमें कृषक महिलाओं, ग्रामीण युवाओं और विस्तार कार्यकर्ताओं सहित 90543 किसानों ने भाग लिया। तेलंगाना के केवीके ने 56225 लाभार्थियों के लिए 1231 पाठ्यक्रम आयोजित किए। पुदुचेरी के केवीके ने 2021 लाभार्थियों के लिए 77 पाठ्यक्रम

आयोजित किए। प्रशिक्षण के अंतर्गत शामिल मुख्य विषयगत क्षेत्रों में फसल उत्पादन, बागवानी, मृदा स्वास्थ्य एवं उर्वरता प्रबंधन, पशुधन उत्पादन एवं प्रबंधन, गृह विज्ञान/महिला सशक्तिकरण, कृषि अभियांत्रिकी, पौध संरक्षण, मत्स्य पालन, क्षमता निर्माण एवं समूह गतिशीलता, कृषि वानिकी आदि शामिल हैं।

ज़ोन-X के कृषि विज्ञान केंद्रों ने 40512 किसानों, कृषक महिलाओं और ग्रामीण युवाओं को शामिल करते हुए 659 प्रायोजित प्रशिक्षण कार्यक्रम भी आयोजित किए। विशेष रूप से ग्रामीण युवाओं और स्कूल छोड़ने वाले युवाओं के बीच उद्यमिता विकास, आय सृजन और स्वरोजगार को बढ़ावा देने के लिए, कृषि विज्ञान केंद्रों ने 9011 लाभार्थियों के लिए 269 व्यावसायिक प्रशिक्षण कार्यक्रम आयोजित किए। महत्वपूर्ण विषयगत क्षेत्रों में फसल उत्पादन एवं प्रबंधन, कटाई-पश्चात प्रौद्योगिकी और मूल्य संवर्धन, पशुधन एवं मत्स्य पालन, आय सृजन गतिविधियाँ आदि शामिल हैं।

प्रौद्योगिकी प्रसार

उन्नत तकनीकों के बारे में जागरूकता पैदा करने के लिए, ज़ोन-X के कृषि विज्ञान केंद्रों ने 4895966 किसानों, कृषक महिलाओं और विस्तार कर्मियों की भागीदारी से 46627 विस्तार गतिविधियाँ आयोजित कीं। इन विस्तार गतिविधियों में परामर्श सेवाएँ, प्रदर्शन भ्रमण, पशु स्वास्थ्य शिविर, प्रौद्योगिकी सप्ताह, समूह चर्चाएँ, विधि प्रदर्शन, मृदा स्वास्थ्य शिविर, किसान मेले, किसान गोष्ठियाँ आदि शामिल थीं। उन्नत कृषि तकनीकों के बारे में जानकारी के तीव्र प्रसार हेतु, ज़ोन-X के कृषि विज्ञान केंद्रों ने 15869 प्रकाशन प्रकाशित किए।

परीक्षण सेवाएँ और महत्वपूर्ण इनपुट की आपूर्ति

केवीके ने मिट्टी की पोषकता की स्थिति का पता लगाने और जिले में प्रचलित सूक्ष्म-कृषि स्थितियों में किसानों को मृदा परीक्षण आधारित पोषक तत्व संबंधी सुझाव देने के लिए मृदा और जल परीक्षण किया। केवीके द्वारा कुल 52017 नमूनों का विश्लेषण किया गया, जिनमें 44058 मृदा नमूने, 6706 जल नमूने, 1001 पौधों के नमूने और 21 उर्वरक/खाद शामिल थे, जिससे तमिलनाडु, आंध्र प्रदेश, तेलंगाना और पुदुचेरी के 7904 गाँवों के 38428 किसान लाभान्वित हुए।

कृषि विज्ञान केंद्रों ने 9696.85 क्विंटल बीज और 100.56 लाख पौधों का उत्पादन कर खेत/बागवानी फसलों की उत्कृष्ट सामग्री

की आपूर्ति की। दलहन के लिए बारह बीज केंद्र कृषि विज्ञान केंद्रों (तमिलनाडु में 6, आंध्र प्रदेश में 4 और तेलंगाना में 2) ने किसानों को गुणवत्तापूर्ण बीज की आपूर्ति के लिए 5679.29 क्विंटल बीज (मूंग, उड़द, लाल चना और बंगाल चना) का उत्पादन किया। कृषि विज्ञान केंद्रों ने किसानों को मवेशी, बकरी और भेड़, मुर्गी के चूजे और मछली के बच्चों सहित 18.09 लाख पशुधन सामग्री वितरित की।

किसान एफ.आई.आर.एस.टी परियोजना

चार आईसीएआर संस्थानों (आईआईएमआर, आईआईओपीआर, आईआईओआर और सीआरआईडीए) और एक विश्वविद्यालय (टीएनयूवीएएस) ने किसान फर्स्ट परियोजना को लागू किया। किसान फर्स्ट केंद्रों ने किसान-वैज्ञानिक इंटरफेस को बढ़ाने के लिए 17,612 किसानों को शामिल करते हुए 233 कार्यक्रम आयोजित किए, जिसमें प्रशिक्षण कार्यक्रम, जागरूकता अभियान, प्रदर्शन यात्राएँ, पशु स्वास्थ्य शिविर, क्षेत्र दिवस, इंटरफेस मीटिंग और अन्य विस्तार गतिविधियाँ शामिल हैं। केंद्रों ने परिचालन गांवों में 947.7 हेक्टेयर क्षेत्र और 3154 घरों को कवर करते हुए 94 हस्तक्षेप किए। 687.2 हेक्टेयर में पैंतीस फसल आधारित प्रौद्योगिकियों का प्रदर्शन किया गया। 5.7 हेक्टेयर में सात प्रौद्योगिकियों पर बागवानी हस्तक्षेप का प्रदर्शन किया गया। पशुधन मॉड्यूल में, 1142 कृषि परिवारों को शामिल करते हुए 25 प्रौद्योगिकियों का प्रदर्शन किया गया।

जलवायु लचीलापन कृषि में राष्ट्रीय नवाचार (एनआईसीआरए)

ज़ोन-X में निम्न परियोजना के प्रौद्योगिकी प्रदर्शन घटक के अंतर्गत, तीन राज्यों में आठ कृषि विज्ञान केंद्रों ने जलवायु अनुकूल कृषि प्रौद्योगिकियों और पद्धतियों का प्रदर्शन किया। परियोजना के अंतर्गत, 487 प्रदर्शन आयोजित किए गए, जिनसे एनआरएम हस्तक्षेपों के अंतर्गत 739 किसान लाभान्वित हुए। फसल उत्पादन मॉड्यूल के अंतर्गत, 1492 प्रदर्शनों में 1457 किसान शामिल हुए। पशुधन और मत्स्य पालन हस्तक्षेपों के अंतर्गत, 860 किसान लाभान्वित हुए। कस्टम हायरिंग सेंटर, चारा बैंक और बीज बैंक जैसे संस्थागत हस्तक्षेपों के अंतर्गत 1319 किसान लाभान्वित हुए। क्षमता निर्माण और विस्तार गतिविधियों के माध्यम से, जलवायु अनुकूल प्रौद्योगिकियों के बारे में जागरूकता फैलाई गई, जिससे क्रमशः 83 और 58 गतिविधियों के माध्यम से 2729 और 3168 किसान लाभान्वित हुए।



कृषि में युवाओं को आकर्षित करना और बनाए रखना (आर्या)

आर्या परियोजना का क्रियान्वयन अंचल के 10 कृषि विज्ञान केंद्रों (तमिलनाडु में 4, आंध्र प्रदेश में 3, तेलंगाना में 2 और पुदुचेरी में एक) द्वारा किया गया। परियोजना के अंतर्गत उद्यम इकाइयाँ स्थापित करने हेतु 93 प्रशिक्षण कार्यक्रमों के माध्यम से 2242 ग्रामीण युवाओं को कौशल प्रशिक्षण प्रदान किया गया। 2024 तक 459 उद्यम इकाइयाँ स्थापित की गईं, जिनसे 509 ग्रामीण युवाओं को आजीविका सुरक्षा सुनिश्चित हुई।

दलहन और तिलहन पर क्लस्टर अग्रिम पंक्ति प्रदर्शन

राष्ट्रीय खाद्य सुरक्षा मिशन (एनएफएसएम) के अंतर्गत दलहनों पर क्लस्टर अग्रिम पंक्ति प्रदर्शन, 2024 के दौरान तीन मौसमों में, ज़ोन-X में तमिलनाडु, आंध्र प्रदेश, तेलंगाना और पुदुचेरी सहित 22 कृषि विज्ञान केंद्रों द्वारा आयोजित किए गए। दलहनों के अंतर्गत 2138.4 हेक्टेयर क्षेत्र को कवर करते हुए कुल 4892 अग्रिम पंक्ति प्रदर्शन आयोजित किए गए। इसी प्रकार, खरीफ और रबी 2024 के दौरान तिलहन फसलों में 59 कृषि विज्ञान केंद्रों द्वारा राष्ट्रीय खाद्य सुरक्षा मिशन (एनएफएसएम) के अंतर्गत 2946.4 हेक्टेयर क्षेत्र को कवर करते हुए 7366 क्लस्टर अग्रिम पंक्ति प्रदर्शन आयोजित किए गए। अग्रिम पंक्ति प्रदर्शनों में प्राप्त दलहनों और तिलहनों की उत्पादकता जिला/राज्य औसत से अधिक रही, जो उपज अंतर को पाटने की क्षमता का संकेत देती है।

मॉडल दलहन गांव

तमिलनाडु, आंध्र प्रदेश और तेलंगाना में 2024-25 खरीफ और रबी मौसमों के दौरान अंचल के 15 कृषि विज्ञान केंद्रों द्वारा आदर्श दलहन ग्राम कार्यक्रम लागू किया गया। मूंग और उड़द पर 1567 हेक्टेयर में कुल 4375 प्रदर्शन आयोजित किए गए। एकीकृत फसल प्रबंधन तकनीकों के साथ मूंग और उड़द की नई और उन्नत किस्मों ने किसानों की किस्मों और प्रथाओं के पैकेज की तुलना में 6 से 53 प्रतिशत अधिक उपज दी।

तिलहन मॉडल गांव

क्षेत्र के कृषि विज्ञान केंद्रों ने तिलहन मॉडल ग्राम परियोजना के अंतर्गत मूंगफली, तिल, सूरजमुखी और सोयाबीन पर तिलहनों पर क्लस्टर अग्रिम पंक्ति प्रदर्शन आयोजित किए। आंध्र प्रदेश, तमिलनाडु और तेलंगाना राज्यों में 18 कृषि विज्ञान केंद्रों को कुल 3600 हेक्टेयर क्षेत्र आवंटित किया गया था। कृषि विज्ञान

केंद्रों द्वारा 4841 प्रदर्शन आयोजित करके 1936.4 हेक्टेयर क्षेत्र में कार्यक्रम का क्रियान्वयन किया गया। एकीकृत फसल प्रबंधन तकनीकों के साथ तिलहन फसलों की नई और उन्नत किस्मों ने किसानों द्वारा इस्तेमाल की गई किस्मों और तकनीकों की तुलना में 40 प्रतिशत तक अधिक उपज दी।

कपास पर विशेष परियोजना

क्षेत्र के 21 कृषि विज्ञान केंद्रों द्वारा कार्यान्वित। एचडीपीएस तकनीक का प्रदर्शन 2030 हेक्टेयर में 2176 स्थानों पर किया गया। क्लोज़र स्पेसिंग रोपण प्रणाली का प्रदर्शन 1581 हेक्टेयर क्षेत्र में 1889 प्रदर्शनों में किया गया। ईएलएस कपास की उत्पादन तकनीक का प्रदर्शन 50 हेक्टेयर में 91 स्थानों पर किया गया।

किसान उत्पादक संगठन

एनसीडीसी ने क्षेत्र में 4 केवीके और 2 आईसीएआर संस्थानों को क्लस्टर-आधारित व्यावसायिक संगठन (सीबीबीओ) के रूप में चिन्हित किया। प्रत्येक सीबीबीओ ने 354 से 960 शेयरधारकों और लगभग 10.48 लाख रुपये की इक्विटी के साथ दो एफपीओ स्थापित किए। इन सीबीबीओ द्वारा 10 एफपीओ के लिए प्रशिक्षण मॉड्यूल विकसित किए गए, 95 जागरूकता कार्यक्रम, 38 एक्सपोज़र विजिट और 34 प्रशिक्षण आयोजित किए गए, जिनसे 850 सदस्य लाभान्वित हुए।

कृषि ड्रोन

ज़ोन 10 में आईसीएआर संस्थानों, कृषि विज्ञान केंद्रों और राज्य कृषि विश्वविद्यालयों के 21 केंद्रों में परिचालन शुरू हो चुका है। 32 ड्रोन खरीदे जा चुके हैं। 1895 हेक्टेयर क्षेत्र में कुल 2112 प्रदर्शन आयोजित किए गए, जिनसे 14683 किसान लाभान्वित हुए।

प्रधानमंत्री मत्स्य सम्पदा योजना

राष्ट्रीय मत्स्य विकास बोर्ड (एनएफडीबी) से वित्तीय सहायता प्राप्त 8 केवीके द्वारा मत्स्यपालन किसानों के क्षमता निर्माण के लिए 60 दिनों के लिए 20 प्रशिक्षण आयोजित किए गए, जिससे 540 किसान लाभान्वित हुए।

भारतीय कृषि कौशल परिषद (एएससीआई) द्वारा वित्त पोषित कौशल प्रशिक्षण कार्यक्रम

केवीके ने 527 प्रतिभागियों के लिए 210 घंटों तक जैविक कृषक, उद्यानपालक, मधुमक्खीपालन, वर्मीकम्पोस्ट उत्पादक और मशरूम उत्पादक पर 22 प्रशिक्षण आयोजित किए।

किण्वित जैविक खाद

इसे उर्वरक विभाग (डीओएफ, भारत सरकार) से 77.795 लाख रुपये की वित्तीय सहायता के साथ 25 केवीके द्वारा कार्यान्वित किया जा रहा है।

राष्ट्रीय प्राकृतिक खेती मिशन

क्षेत्र के 44 कृषि विज्ञान केंद्रों द्वारा अपने अनुदेश फार्म में लगभग 2-5 हेक्टेयर क्षेत्र में प्राकृतिक खेती ब्लॉक स्थापित किए गए। कृषि विज्ञान केंद्रों ने 379 जागरूकता कार्यक्रम, 119 प्रदर्शन और 180 प्रशिक्षण आयोजित किए, जिनसे 20333 किसान लाभान्वित हुए।

एस टी के लिए विकास कार्य योजना

जनजातीय समुदायों की सामाजिक-आर्थिक स्थिति में सुधार लाने के उद्देश्य से जनजातीय उप-योजना (टीएसपी) का क्रियान्वयन 20 कृषि विज्ञान केंद्रों द्वारा किया गया, जिससे 7866 परिसंपत्तियों/सूक्ष्म उद्यमों का सृजन हुआ और 3355 जनजातीय किसानों को आय सृजन के अवसर प्राप्त हुए। 1118 लाभार्थियों को कौशल विकास प्रशिक्षण (43) प्रदान किए गए।

एस सी के लिए विकास कार्य योजना

डीएपीएससी के अंतर्गत, 446 ओएफटी, 710 एफएलडी और 1244 जागरूकता कार्यक्रम एवं प्रदर्शन भ्रमण आयोजित किए

गए, जिनसे 21308 किसान लाभान्वित हुए। कृषि विज्ञान केंद्रों ने विभिन्न अवधियों में 177 क्षमता निर्माण और कौशल विकास प्रशिक्षण भी आयोजित किए, जिनमें 5248 प्रतिभागियों ने भाग लिया। अन्य गतिविधियों में गुणवत्तापूर्ण बीज वितरण, उद्यम विकास के माध्यम से आजीविका सहायता, मृदा परीक्षण सेवा आदि शामिल हैं।

मेरा गाँव मेरा गौरव

मेरा गाँव मेरा गौरव (एमजीएमजी) के अंतर्गत, जिसे क्षेत्र में 8 आईसीएआर संस्थानों द्वारा कार्यान्वित किया जाता है, वैज्ञानिकों की 59 टीमों द्वारा 200 गांवों को गोद लिया गया और उन्होंने 1100 गतिविधियां आयोजित कीं, जिनसे 20992 किसानों और ग्रामीण लोगों को लाभ मिला।

किसान सारथी

अटारी, हैदराबाद ने कुल 71 केवीके, 13 डीएटीटी केंद्रों को शामिल करते हुए किसान सारथी को क्रियान्वित किया है, जिसमें आंध्र प्रदेश (637178), तमिलनाडु (575581), तेलंगाना (516891) और पुडुचेरी (2948) के केवीके द्वारा कुल 1732598 किसानों को पोर्टल पर पंजीकृत किया गया है, ताकि वे कृषि विज्ञान केंद्र (केवीके) के संबंधित वैज्ञानिकों से सीधे कृषि और संबद्ध क्षेत्रों पर व्यक्तिगत सलाह प्राप्त कर सकें।



Executive Summary

ICAR- ATARI, Hyderabad is mandated to coordinate technology application interventions of 75 sanctioned KVKs located in Zone-X comprising the states of Andhra Pradesh, Telangana, Tamil Nadu and the union territory of Puducherry. Among the established KVKs of the zone, 72 are functional during 2024. The Annual Report 2024 documents the activities of 31 KVKs in Tamil Nadu, 23 in Andhra Pradesh, 16 in Telangana and 2 in Puducherry.

Technology Assessment

During the year, KVKs assessed 1821 technologies by laying out 5228 On-Farm Trials. Of these technologies tested, 1382 technologies are related to crops, 265 are related to animals, 46 are related to women empowerment, 65 technologies on Enterprises and 26 on farm machinery. The important thematic areas covered in case of crops include varietal evaluation, cropping systems, integrated disease management, integrated pest management, integrated nutrient management, integrated weed management, integrated crop management, resource conservation technologies, farm machinery and equipment. In the case of animals, thematic areas such as breed evaluation, disease management, feed and nutrition management and shelter management are assessed and refined. Under the empowerment of rural women, on-farm trials were conducted in thematic areas viz., drudgery reduction, health and nutrition, value addition and entrepreneurship development.

KVKs in Tamil Nadu assessed the suitability of 865 technologies by conducting 2109 OFTs covering crops including horticultural species (720) and animals (113). KVKs in Andhra Pradesh, assessed the suitability of 642 technologies by conducting 2028 OFTs covering crops including horticultural species (550), animals (315) and empowerment of rural women (243). KVKs in Telangana, assessed the suitability of 268 technologies by conducting 979 OFTs covering crops including horticultural species (266), animals (123) and empowerment of

rural women (76). KVKs in Puducherry, assessed 46 technologies by organizing 112 OFTs that include crops including horticultural species (23) and animals (34).

Technology demonstrations

KVKs in Zone X conducted 11676 frontline demonstrations on crops (7849), animals (2085) and farm implements (564) in an area of 3472.5 ha. Among the 1868 demonstrations in cereals, 1623 were on rice. Among the 934 demonstrations on pulses, 370 were in blackgram, 178 in greengram and 141 in redgram. Among 559 demonstrations in oilseeds, 409 were in groundnut. In fibre crops, 321 demonstrations were conducted in cotton. Among commercial crops 51 demonstrations were in sugarcane.

In Tamil Nadu, out of 6200 demonstrations, 1330 were in cereals and 723 in vegetables. In Andhra Pradesh out of 3572 demonstrations, 379 were in pulses, 287 on cereals, 266 in fruits and 216 in vegetables. Out of 1504 demonstrations in Telangana, 295 were in vegetables and 176 in cereals. In Puducherry, out of 400 demonstrations, 75 were in cereals, 50 in vegetables, 45 in pulses and 20 in fodder crops. KVKs of the zone conducted 2085 demonstrations on livestock, poultry and fisheries involving 846619 animals, poultry birds and fish fingerlings.

Training

Training is an important mandated activity of KVKs, which plays an important role in enhancing the knowledge and skill about various improved technologies. During the year, KVKs in Zone-X organized 7234 training programmes covering 262887 participants that included 198053 farmers, 27746 rural youth and 37088 extension functionaries.

KVKs in Tamil Nadu, organized 3570 training courses with a participation of 114098 farmers including farm women, rural youth and extension

functionaries, while KVKs in Andhra Pradesh organized 2356 training courses with a participation of 90543 farmers including farmwomen, rural youth and extension functionaries. KVKs in Telangana conducted 1231 courses for 56225 beneficiaries. KVKs in Puducherry, conducted 77 courses for 2021 beneficiaries. The main thematic areas covered under training include crop production, horticulture, soil health and fertility management, livestock production and management, home science/women empowerment, agricultural engineering, plant protection, fisheries, capacity building and group dynamics, agro-forestry etc.

KVKs in Zone-X also organized 659 sponsored training programmes covering 40512 farmers and farm women and rural youth. To facilitate entrepreneurship development, income generation and self-employment, especially among rural youth and school dropouts, KVKs organized 269 vocational training programmes for 9011 beneficiaries. The important thematic areas include crop production and management, post-harvest technology and value addition, livestock and fisheries, income generation activities etc.

Technology dissemination

To create awareness on improved technologies the KVKs in Zone-X organized 46627 extension activities with the participation of 4895966 farmers, farm women and extension personnel. The extension activities included advisory services, exposure visits, animal health camps, technology week, group discussions, method demonstrations, soil health camps, kisan melas, kisan ghostis etc. To accelerate rapid dissemination of information on improved farm technologies, KVKs in Zone-X brought out 15869 publications.

Testing services and supply of critical inputs

KVKs undertook soil and water testing to ascertain the soil nutrient status and also to make soil test based nutrient recommendations to farmers in the prevailing micro-farming situations in the district. A total of 52017 samples including 44058 soil samples, 6706 water samples, 1001 plant samples and 21 fertilizers/manures were analyzed by the KVKs that benefited 38428 farmers belonging to

7904 villages in Tamil Nadu, Andhra Pradesh, Telangana and Puducherry.

KVKs produced and supplied 9696.85 q of seed and 100.56 lakh saplings of elite material of field/horticultural crops. Twelve seed hub KVKs for pulses (6 in Tamil Nadu, 4 in Andhra Pradesh and 2 in Telangana produced 5679.29 q of seed (Greengram, blackgram, redgram and Bengal gram) for supply of quality seed to farmers. KVKs distributed 18.09 lakh livestock materials including cattle goat and sheep, poultry chicks and fish fingerlings to farmers.

Farmer FIRST Project (FFP)

Four ICAR Institutes (IIMR, IOPR, IIOR and CRIDA) and one University (TANUVAS) implemented Farmer FIRST project. The Farmer FIRST centers organized 233 programmes involving 17,612 farmers to enhance Farmer-Scientist Interface, which include trainings programmes, awareness campaigns, exposure visits, animal health camps, field days, interface meetings, and other extension activities. The centres undertook 94 interventions covering 947.7 ha area and 3154 households in the operational villages. Thirty five crop-based technologies were demonstrated in 687.2 ha. Horticultural interventions on seven technologies were demonstrated in 5.7 ha. In livestock module, 25 technologies were demonstrated involving 1142 farm families. Twenty NRM technologies were demonstrated in 231.7 ha. Three enterprises were established for the benefit of 223 households. Four drudgery reduction technologies were demonstrated benefiting 127 households.

National Innovations in Climate Resilience Agriculture (NICRA)

Under Technology demonstration component of NICRA project in Zone-X, eight KVKs demonstrated climate resilient agricultural technologies and practices across the three states. Under the project, 487 demonstrations were organized, benefiting 739 farmers under NRM interventions. Under the crop production module, 1492 demonstrations were taken up covering 1457 farmers. Under livestock and fisheries interventions, 860 farmers benefited. Under institutional interventions like custom hiring center, fodder bank and seed bank 1319 farmers



were benefited. Through capacity building and extension activities, awareness on climate resilient technologies was brought about benefitting 2729 and 3168 farmers through 83 and 58 activities respectively.

Attracting and Retaining Youth in Agriculture (ARYA)

ARYA project was implemented by 10 KVKs of the Zone (4 in Tamil Nadu, 3 in Andhra Pradesh, 2 in Telangana and one in Puducherry). Skill training was imparted to 2242 rural youth through 93 training programmes for establishing enterprise units under the project. Enterprise units numbering 459 were established benefiting 509 rural youth during 2024 ensuring livelihood security.

Cluster Frontline Demonstrations on Pulses and Oilseeds

Cluster Frontline Demonstrations on Pulses under NFSM were organized by 22 KVKs comprising of Tamil Nadu, Andhra Pradesh, Telangana and Puducherry in Zone-X during 2024. A total of 4892 FLDs were conducted covering an area of 2138.4 ha under pulses. Similarly, 7366 cluster frontline demonstrations covering 2946.4 ha were conducted under NFSM in oilseed crops by 59 KVKs during kharif and rabi 2024. Productivity of pulses and oilseeds realized in FLDs was higher than the district/ state averages indicating potential for bridging the yield gap.

Model Pulse Village

Model Pulses Village programme was implemented by 15 KVKs in the Zone during 2024 -25 kharif and rabi seasons in Tamil Nadu, Andhra Pradesh and Telangana. A total of 4375 demonstrations were conducted in 1567 ha on blackgram and redgram. The new and improved varieties of redgram and blackgram in combination with integrated crop management technologies yielded 6 to 53 per cent higher than farmers varieties and package of practices.

Oilseeds Model Village

KVKs of the zone conducted cluster front line demonstrations on oilseeds under Oilseeds model village project on groundnut, sesame, sunflower

and soyabean. A total of 3600 hectares area was allotted to 18 KVKs in Andhra Pradesh, Tamil Nadu and Telangana states. The programme was implemented in 1936.4 ha by organizing 4841 demonstrations by the KVKs. New and improved varieties of oil seed crops in combination with integrated crop management technologies yielded up to 40 per cent higher than the farmers varieties and technologies.

Special Project on Cotton

Implemented by 21 KVKs in the Zone. HDPS technology was demonstrated in 2176 locations in 2030 ha. Closer Spacing planting system was demonstrated in 1889 demonstrations in 1581 ha area. Production technology for ELS cotton was demonstrated in 91 locations in 50 ha.

Farmer Producer Organizations

NCDC identified 4 KVKs and 2 ICAR Institutes as Cluster- Based Business Organizations (CBBOs) in the zone. Each CBBO established two FPOs with 354 to 960 shareholders each and about Rs. 10.48 lakh equity. Training modules were developed for 10 FPOs, 95 awareness programmes, 38 exposure visits, and 34 trainings were organized by these CBBOs benefiting 850 members.

Agricultural Drones

Operational in 21 centers of ICAR institutes, KVKs and SAUs in the Zone 10. Thirty two drones have been purchased. A total of 2112 demonstrations were conducted covering 1895 ha area benefiting 14683 farmers.

Pradhan Mantri Matsya Sampada Yojana

Capacity building of fisheries farmers was organized by 8 KVKs conducting 20 trainings for 60 days benefitting 540 farmers with financial support from National Fisheries Development Board (NFDB).

Skill Training Programmes funded by Agricultural Skill Council of India (ASCI)

KVKs conducted 22 trainings covering organic cultivator, garden keeper, beekeeping, vermicompost producer and mushroom grower for 527 participants for 210 hours.



Fermented Organic Manure

The is being implemented by 25 KVKs with a financial support of Rs.77.795 lakhs from Department of Fertilizers (DoF, Govt. of India).

National Mission on Natural Farming

Implemented by 44 KVKs of the Zone established natural farming blocks of about 2-5 ha area in their instruction farm. KVKs conducted 379 awareness programmes, 119 demonstrations and 180 trainings benefiting 20333 farmers.

Development action plan for Schedule Tribes

The (DAPST) aimed at ameliorating the socio-economic conditions of tribal communities was implemented by 20 KVKs and facilitated creation of 7866 assets/ micro-enterprises and provided income generating opportunities to 3355 tribal farmers. Skill development trainings (43) were imparted to 1118 beneficiaries.

Development Action Plan for Schedule Castes

Under DAPSC, 446 OFTs, 710 FLDs and 1244 awareness programmes and exposure visits were organized benefitting 21308 farmers. KVKs also organized 177 capacity-building and skill development trainings, covering 5248 participants through various durations. Other activities include quality seed distribution, livelihood support through enterprise development, soil testing service *etc.*

Mera Gaon Mera Gaurav

Under Mera Gaon Mera Gaurav (MGMG), which is implemented by 8 ICAR institutes in the zone, 200 villages were adopted by 59 teams of scientists and they organized 1100 activities which benefited 20992 farmers and rural people.

Kisan Sarathi

ATARI, Hyderabad implemented Kisan Sarathi involving a total of 71 KVKs, 13 DATT Centers in which a total of 1732598 farmers have been registered in the portal by the KVKs of Andhra Pradesh (637178), Tamil Nadu (575581), Telangana (516891) and Puducherry (2948) to receive personalized advisories on agriculture and allied areas directly from the respective scientists of Krishi Vigyan Kendra (KVKs).

Catalysts of Change

Pioneering Innovations and New Approaches in the KVK System of ICAR-ATARI Zone X

"The future belongs to those who prepare for it today."
– Malcolm X

Introduction: Reimagining the KVK System ICAR-ATARI, Zone X (Hyderabad), which coordinates the activities of 75 sanctioned Krishi Vigyan Kendras (KVKs) across Andhra Pradesh, Telangana, Tamil Nadu, and Puducherry, has set a benchmark in reimagining agricultural extension. In the year 2024, our Zone took strategic strides toward building futuristic, impactful, and inclusive KVK systems, ushering in new paradigms in frontline extension, digital transformation, climate resilience, and knowledge democratisation.

The cutting-edge innovations and novel methods piloted and institutionalized by KVKs under Zone X, showcasing how we translated vision into action, and dreams into data-backed, farmer-first delivery models are captured here.

1. Technology Assessment and Validation: Towards Precision and Relevance

In 2024, a total of 1054 On-Farm Trials (OFTs) were conducted, assessing 1821 technologies across crops, livestock, women empowerment, enterprises, and machinery. What's noteworthy is the shift from traditional varietal trials to systemic assessments on IPM, INM, ICM, and farm mechanization-showing a transition toward precision, sustainability, and climate-resilient interventions.

Highlights:

- 796 OFTs on crops (248 on new varieties) and 143 on livestock-based technologies
- 36 OFTs tested 46 technologies for women empowerment
- 17 OFTs assessed farm machinery and tools, incorporating automation and drudgery-reducing innovations



These OFTs were not just scientific validations but co-learning platforms between farmers and researchers—paving the way for evidence-based scaling.

2. Extension Innovations: *Reaching the Unreached with Hybrid Outreach*

In an unprecedented feat, KVKs under Zone X conducted 46,627 extension activities, directly benefiting over 49.5 lakh stakeholders, including 4.8 million farmers and 55,677 extension personnel.

Innovative Formats:

- Mana Telangana – Mana Vyavasayam: A region-specific initiative to deepen localised learning.
- Tech-enabled Kisan Melas: Integrating drone demos, mobile-based polling, and digital stalls.
- Integrated Field Schools: Extension formats combining group discussions, demonstrations, and expert advisories in one continuum.
- Over 5,000 Scientist–Farmer Interactions, emphasizing demand-driven extension.

The extension paradigm has thus shifted from transfer of technology to mutual knowledge empowerment.

3. Knowledge Products and Digital Democratisation

The year 2024 witnessed a publication surge—with 15,869 outputs, including 634 research papers, 1008 popular articles, 412 success stories, and 224 books.

Noteworthy Innovations:

- E-newsletters and podcasts: 24 KVKs published periodic newsletters in local languages and English, engaging over 5000 farmers monthly.
- Digital repositories: Several KVKs (e.g., Kadapa, Kalyandurg, Pudukkottai) hosted

QR-coded demo plots linked to real-time knowledge systems.

- AI-curated WhatsApp advisory groups: For micro-niche farmers such as millet growers, tribal women, and inland aquaculturists.

This indicates a paradigm shift from knowledge scarcity to curated knowledge abundance.

4. Critical Technology Products: *Building Resilience Through Input Self-Sufficiency*

Zone X KVKs emerged as mini-bio-industrial complexes, producing and disseminating critical inputs across 6 categories:

Summary of Production:

- 16,764 quintals of quality seed (cereals, pulses, oilseeds)
- 10 million+ planting materials (vegetables, fruits, forest crops, medicinal plants)
- 110 tonnes of biopesticides and biofertilizers
- 1.8 million livestock units (poultry, fish seed, small ruminants)
- 329,706 quintals of feed and organic inputs

These outputs not only ensured input access but also deepened climate resilience, especially in fragile agro-ecologies.

5. Water-Smart Innovations: *Mainstreaming Rainwater Harvesting*

In 2024, 156 training programs and 196 demonstrations were held across the Zone to promote rainwater harvesting technologies. 8906 farmers and 877 officials were trained in diverse technologies—from farm ponds and rooftop harvesting to peri-urban water conservation.

Notable Interventions:

- Ananthapuram (Kalyandurg): Integrated watershed demos, "Catch the Rain" campaigns.
- Madurai and Virudhunagar: Urban water conservation through school and SHG models.

- Saline water management in Sivagangai with 1.2 lakh plantation-based models.

These efforts contribute to climate proofing and are integral to India's Jal Shakti Abhiyan goals.

6. Institutional Capacity and Technology Backstopping: *A Multi-Tiered Collaborative Framework*

The backbone of innovation is institutional agility. In 2024, 105 review meetings were held by SAUs and ICAR-ATARI with participation from over 5963 scientists and staff.

Strategic Shifts:

- 360° Review Protocols: Based on KPIs like technology saturation, convergence, and digital penetration.
- Directorate of Extension-KVK-ATARI Triads: Strengthening coordinated planning and backstopping.
- 216 institutional visits to 116 KVKs, using a robust rubric of scientific, infrastructural, and financial health.

Such collaborative governance models represent a federalized, yet integrated, system of agricultural innovation.

7. Agricultural Technology Information Centres (ATICs): *Farmer-Facing Technology Windows*

ATICs in PJTAU, TNAU, and TANUVAS emerged as single-window delivery nodes, facilitating the distribution of:

- 10,000+ technical publications
- 6,371 technology products
- 199,490 worth of technical bulletins sold to 9876 farmers

They represent a critical node in the “last-mile first” delivery principle, ensuring that technological knowledge is not only produced but reaches the end-user efficiently.

8. KVKs as Livelihood Incubators: *Enterprise Promotion and Skill Building*

Several KVKs have evolved into livelihood and enterprise incubators.

Key Innovations:

- KVK Pandirimamidi: Rubber tapping and processing among tribal youth raised incomes by 300%.
- KVK Ramanathapuram: Mundu Chilli branding and GI-tagging ecosystem development.
- KVK VR Gudem: Post-harvest innovation museum and tribal livelihood clusters.

These cases demonstrate a shift from “subsistence support” to “sustainable entrepreneurship”.

9. Green KVKs and CSR Integration: *Aligning with SDGs*

The emergence of Clean & Green KVKs such as Garikapadu and Ramagirikhilla set a blueprint for SDG-aligned infrastructure.

Features include:

- Drip and solar integration
- Waste-to-compost models
- SHG-led microenterprises supported by CSR

Such models validate KVKs as green labs and local hubs for sustainable agriculture.

10. Leveraging ICTs and Big Data: *Toward Digital-First KVKs*

ATARI Zone X has been a front-runner in digital extension, working toward:

- AI-based farmer advisory models
- Geo-tagged dashboards for real-time monitoring
- Big Data architecture for weather-linked market advisories



In collaboration with DDG (Extension), the Digital Delivery Blueprint was showcased at the Annual ICAR Conference-positioning Zone X as a national lighthouse for digital KVK transformation.

Conclusion: Shaping the Future, Today

"Innovation is seeing what everybody has seen and thinking what nobody has thought." – Dr. Albert Szent-Györgyi

The year 2024 has been a watershed moment for ICAR-ATARI Zone X. Through disruptive thinking, evidence-led practices, and an unwavering commitment to inclusivity, the KVK system has transitioned from technology dissemination units to innovation-led transformation engines.

The journey ahead beckons greater convergence, policy linkages, private-public partnerships, and data-driven extension. With a strong institutional spine and farmer-centric soul, ATARI Zone X stands ready to catalyse India's Viksit Bharat vision—one innovative KVK at a time.

11. Digital Competency Mapping and Future Strategy for Modern KVKs

"If agriculture is the backbone of our nation, then digital agriculture is its nervous system." – Anonymous

In a significant move towards creating a digitally empowered KVK ecosystem, ICAR-ATARI Zone X initiated a pioneering research project titled "Assessing the Digital Competencies of KVKs: Current Status and Future Strategies." This project was envisioned to serve as the first benchmark framework in India that systematically maps the digital preparedness of frontline extension systems.

Rationale and Relevance

As KVKs continue to bridge research and field realities, the integration of emerging digital technologies such as IoT, Artificial Intelligence (AI), Machine Learning (ML), drones, mobile apps, blockchain, and remote

sensing has become essential to enhance reach, efficiency, and impact. While many KVKs are experimenting with digital tools, there exists a critical knowledge and impact gap—with no comprehensive repository documenting what works, where, how, and why.

The project thus addresses four key questions:

- What digital strategies are deployed by KVKs and how effective are they?
- What are the factors influencing the adoption of digital tools?
- What support systems do KVKs need to digitally transform?
- What is the roadmap for digitizing India's frontline extension system?

Approach and Methodology

The project adopts a network research design covering KVKs across all states of Zone X, with a blend of:

- Structured data collection (quantitative + qualitative)
- Development of a Digital Strategy Efficacy Index (DSEI)
- Participatory consultations with farmers and extension personnel
- Policy scenario simulations for futuristic KVKs

This methodology ensures a systematic assessment of infrastructure, adoption barriers, knowledge systems, and institutional readiness.

Early Observations and Innovations

Although the project is in early stages, preliminary field visits and consultations indicate:

- Many KVKs have fragmented digital infrastructure—lacking interoperability across devices, platforms, and data systems.
- Innovations such as QR-coded demo plots, WhatsApp-based market alerts, and

YouTube explainer videos are common but undocumented.

- KVK staff across the Zone have demonstrated high digital curiosity but low digital confidence, highlighting the need for capacity building in digital pedagogy and analytics.

Expected Outcomes

The project envisions the following path-breaking deliverables:

- A comprehensive digital strategy inventory, identifying best practices and local innovations
- The Digital Strategy Efficacy Index (DSEI) for benchmarking performance and guiding investment
- A detailed digital need assessment for each KVK to align digital tools with agro-climatic and social contexts
- A strategic policy roadmap and action framework to optimize the digital transformation of the KVK system across India

Policy Impact and Future Vision

The project aims to feed into the national discourse on Digital Agriculture Missions, providing data-backed insights for institutions like ICAR, MoA&FW, and NITI Aayog. Furthermore, the project proposes:

- Creating Digital Advisory Labs at select KVKs
- Establishing a federated digital extension framework for participatory data governance
- Developing AI-driven decision support systems for agro-advisory at the KVK level

Strategic Implication

This initiative signals a transition from ad-hoc digital engagement to a structured, policy-driven digital transformation—positioning ATARI Zone X as a national pioneer in digital extension system modernization. It aims to future-proof KVKs against emerging challenges such as climate shocks, market volatility, and demographic shifts in farming.

As India eyes the goals of Viksit Bharat @2047, this project lays the digital foundation for building smart, sustainable, and responsive agricultural institutions.

Contents

S.No.	Particulars	Page No.
i.	कार्यकारी सारांश	v
ii.	Executive Summary	ix
1.	Introduction	1
2.	Krishi Vigyan Kendras	3
	2.1. Status	3
	2.2. Staff	3
	2.3. Infrastructure	4
	2.4. Revolving Fund	6
	2.5. Scientific Advisory Committee	9
3.	Achievements	10
	3.1 Technology Assessment	10
	3.2 Frontline Demonstrations	28
	3.3 Trainings	45
	3.4 Extension Activities	59
	3.5 Publications	70
	3.6 Critical Technology Products	71
	3.7 Rainwater Harvesting	75
	3.8 Technological Backstopping	77
	3.9 Agricultural Technology Information Centre (ATIC)	78
	3.10 Success Stories	79
4	Special Projects	85
	4.1 Farmer FIRST Programme (FFP)	85
	4.2 National Innovations in Climate Resilient Agriculture (NICRA)	88
	4.3 Attracting and Retaining Rural youth in Agriculture (ARYA)	94
	4.4 Cluster Frontline Demonstrations on Pulses	97
	4.5 Ensuring pulses sufficiency in India by capitalizing the Model Pulse Village approach	101
	4.6 Cluster Frontline Demonstrations (CFLDs) on Oilseeds	104
	4.7 Oilseeds Model Village under NFSM	111
	4.8 Seed Hubs	115
	4.9 Special Project on Cotton: Targeting technologies to agro-ecological zones - largescale demonstrations of best practices to enhance cotton productivity	116
	4.10 Formation and Promotion of 10,000 Farmer Producer Organizations (FPOs)	119
	4.11 Agricultural Drone Project	120
	4.12 Pradhan Mantri Matsya Sampada Yojana (PMMSY)	121
	4.13 Skill Training Programmes funded by Agricultural Skill Council of India (ASCI)	123
	4.14 Awareness and Demonstrations for Popularization of Fermented Organic Manure (FOM)/Liquid Fermented Organic Manure (LFOM) through KVKs	126
	4.15 National Mission on Natural Farming (NMNF)	128
	4.16 Development action plan for Schedule Tribes (DAPST)	130
	4.17 Development Action Plan for Schedule Castes (DAPSC)	135
	4.18 Mera Gaon Mera Gaurav	137
	4.19 Kisan Sarathi	139
	4.20 New Extension Methodologies and Approaches (NEMA)	139
5	Awards and Recognitions	140
6	Important Events	148
7	Staff Position	159
8	List of KVKs in Zone X	160



1. Introduction

ICAR-Agricultural Technology Application Research Institute (ATARI)

A massive programme by the name “Lab to Land” was launched by the National Co-ordination committee during 1979-80, the golden jubilee year of ICAR for ensuring successful transfer of economically viable and socially acceptable technologies generated in the laboratories to farmers’ fields. The objective of the programme was to adopt 50000 small and marginal farmers and landless labourers throughout the country to transfer available farm technologies of crop production, livestock farming, farm tools and implements, pisciculture, sericulture, apiculture *etc.* including crop-livestock integration and the programme was implemented from September, 1979. To facilitate the implementation and monitoring of the Lab to Land programme, the country was divided into eight zones and Zonal Co-ordination units were established for each zone during the same year. Zonal Coordination Unit for Transfer of Technology, Zone-V was established in September, 1979 as Cess Fund Scheme at Andhra Pradesh Agricultural University, Hyderabad primarily to monitor the activities of the Lab to Land Programme in the states of Andhra Pradesh and Maharashtra. The unit was shifted to the campus of Central Research Institute for Dryland Agriculture (CRIDA), Hyderabad during the year 1985 and it remained operational till 1986. It was later brought under the plan scheme of ICAR during the year 1986.

All the other ICAR supported Transfer of Technology Projects that were implemented in the zone *viz.* Krishi Vigyan Kendras (KVK), Trainers Training Centre (TTC), National Demonstration Scheme (NDS), Operational Research Projects (ORP), All India Coordinated Project on SC / ST (AICRP SC/ST) and Special Projects on Oilseeds were brought under the umbrella of the Zonal Co-ordination unit

during the year 1987. The additional responsibility of monitoring the Frontline Demonstrations (FLD) on oilseeds under Oilseeds Production Programme (OPP) and pulses under National Pulse Project (NPP), farm implements, and cotton was entrusted with the ZC Unit during the years 1990 and 1991. In 1995, a pilot project on Institute Village Linkage Programme (IVLP) launched by the council for Technology Assessment and Refinement (TAR) was also implemented in the zone by the unit. In 1998, Zonal Research Stations under the State Agricultural Universities (SAU) were strengthened to take up the additional functions of KVKs and these re-mandated KVKs have also been monitored by the unit since then.

The X and XI Five Year Plan (FYP) period was marked by a phenomenal impetus in the establishment of new KVKs in Zone-V covering the states of Andhra Pradesh and Maharashtra. During XI FYP period, Council approved establishment of 97 new KVKs which included 24 additional KVKs in geographically larger districts, 12 each in the states of Andhra Pradesh and Maharashtra. With the addition of several new KVKs in each zone, ICAR has upgraded all the eight Zonal Coordination Units to the status of Directorates and thus Zonal Project Directorate (ZPD), Zone-V came into existence during the year 2009. The status of the ZPDs was changed into Institutes with the mandate of Extension Research being added and the post of Zonal Project Director being upgraded to that of Director with effect from 2015. The ZPD was re-designated as “Agricultural Technology Application Research Institute (ATARI). Further, ICAR reorganized the 8 ATARIs into 11 with revised jurisdiction of states. ATARI, Hyderabad is re-designated as Zone-X for coordination of KVKs in Andhra Pradesh, Telangana, Tamil Nadu and Puducherry. In XII plan, 11 additional KVKs were sanctioned out of which six were established in Andhra Pradesh and Telangana.

Mandates of ATARI

- Coordination and monitoring of technology application and Frontline Extension Education Programs
- Strengthening Agricultural Extension Research and Knowledge Management

The ICAR-ATARI, Hyderabad functions under the administrative control of Division of Agricultural Extension of ICAR headed by the Deputy Director General (Agricultural Extension). The ATARI is headed by the Director who is assisted by the Principal Scientists, Senior Scientists, Scientists, technical, administrative and supporting staff. The requisite infrastructure for the smooth functioning of ATARI was built in the same premises as ICAR-Central Research Institute for Dryland Agriculture (CRIDA), Santoshnagar, Hyderabad.

Krishi Vigyan Kendra

Krishi Vigyan Kendra (Farm Science Center) is a science/ technology led, farmer centric institution, established with the purpose of providing knowledge and skill training to the farmers, rural youth and field-level extension workers. Vocational training in agriculture and allied fields through KVK has become the need of the hour for ensuring livelihood security and enhancing farm income which is envisaged to be doubled. The farmers not only require knowledge and understanding of intricacies of new technologies but also more

skills to adopt the same in varied and complex field situation on their farms. In view of this, the role of KVK was further enhanced by adding the responsibility of on-farm testing and front-line demonstrations of major agricultural technologies to dovetail the same with location specific environment. To equip the present-day farmers to face the challenges of information explosion and to bridge the digital divide, KVKs were also given the other responsibility of acting as knowledge and resource centre of agricultural and allied technologies. The use of ICT by KVKs has been substantial to provide necessary and timely information on weather, markets and solutions to various day to day problems faced by farmers.

Mandates of KVKs

- On-farm testing to assess the location specificity of agricultural technologies under various farming systems.
- Organize frontline demonstrations to establish production potential of technologies on the farmers' fields.
- Capacity development of farmers and extension personnel to update their knowledge and skills in frontier agricultural technologies and enterprises.
- Work as Knowledge and Resource Centre for improving overall agricultural economy in the operational area.



ICAR ATARI, Zone-X, Hyderabad



2.

Krishi Vigyan Kendras

2.1. Status

The sanctioned strength of KVKs in Zone-X is 75 out of which 72 are in operation during 2024. The state-wise sanctioned KVKs include 32 in Tamil Nadu, 24 in Andhra Pradesh, 16 in Telangana and three in Puducherry. Out of 32 KVKs in Tamil Nadu, 20 are with SAUs (15 with TNAU, four with TANUVAS and one with TNJFU), one with DU and eleven with NGOs. One KVK with NGO is non-functional during 2024. Of the 24 KVKs in Andhra Pradesh, 18 are with SAUs (13 with ANGRAU, four

with Dr YSRHU and one with SVVU), two with ICAR (ICAR-CTRI) and four are with NGOs. One among the NGO KVKs is non-functional. Of the 16 KVKs in Telangana, 10 are with SAUs (eight with PJTSAU, one each with SKLBTSU and PVNRTSVU) one with ICAR (ICAR-CRIDA) and five with NGOs. In Puducherry, all three KVKs are administered by State Department of Agriculture. One among the three KVKs is not established.

Table 2.1.1. Status of KVKs

State	No. of rural districts	No. of KVKs Sanctioned						Functional during 2024
		SAU	ICAR	NGO	DU	SDA	Total	
Tamil Nadu	38	20	-	11	1	-	32	31
Andhra Pradesh	13	18	2	4	-	-	24	23
Telangana	33	10	1	5	-	-	16	16
Puducherry	4	-	-	-	-	3	3	2
Total	88	47	3	20	2	3	75	72

2.2 Staff

The details of staff position of KVKs in different states is given in Table 2.2.1. The total sanctioned staff strength of KVKs in Zone-X stands at 1152, out of which 957 (83.07%) positions are filled. Scientific staff strength is 432 out of which 377 (87.27%) are filled. In Tamil Nadu, 442 out of 496

positions are filled (89.11%), in Andhra Pradesh, 283 out of 368 positions are filled (76.90%), in Telangana, 213 out of 256 positions are filled (83.20%) and in Puducherry, 19 out of 32 positions are filled (59.38%).

Table 2.2.1 Consolidated staff position

Category	Tamil Nadu			Andhra Pradesh			Telangana			Puducherry			Total		
	S	F	V	S	F	V	S	F	V	S	F	V	S	F	V
Programme Coordinators	31	26	5	23	23	0	16	13	3	2	1	1	72	63	9
Subject Matter Specialists	186	175	11	138	116	22	96	77	19	12	9	3	432	377	55
Farm Managers	31	27	4	23	14	9	16	13	3	2	2	0	72	56	16
Programme Assistant (Computer)	31	26	5	23	16	7	16	14	2	2	2	0	72	58	14
Programme Assistant (Lab Tech)	31	26	5	23	16	7	16	14	2	2	0	2	72	56	16
Assistant	31	27	4	23	19	4	16	15	1	2	0	2	72	61	11
Stenographer (Grade-III)	31	27	4	23	16	7	16	12	4	2	0	2	72	55	17
Driver	62	54	8	46	31	15	32	26	6	4	2	2	144	113	31
SSS	62	54	8	46	32	14	32	29	3	4	3	1	144	118	26
Total	496	442	54	368	283	85	256	213	43	32	19	13	1152	957	195

S=Sanctioned; F= Filled; V=Vacant

2.3. Infrastructure

To facilitate proper functioning of KVKs, modest infrastructure is provided by ICAR. The details of land, buildings, laboratory, vehicles, demonstration units and other facilities available at KVKs are presented in Tables 2.3.1 to 2.3.4. The

other infrastructure such as rainwater harvesting structure and Integrated Farming System models are provided to some KVKs, while the buildings and vehicle are provided to all the KVKs by ICAR.

Table 2.3.1. Details of infrastructure facilities available with KVKs in Tamil Nadu

KVK	Land area (ha)	Cultivable area (ha)	Admin Building	Farmers Hostel	Staff Quarters	Soil & Water Testing Lab	Mini Soil Testing Kit	Sales Counter	IFS Unit	Jeep	Tractor	Two-wheeler	No. of Demo Units
Ariyalur	20.00	17.50	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	50
Coimbatore	20.50	11.50	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	25
Cuddalore	20.00	19.90	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	18
Dharmapuri	16.16	12.14	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	31
Dindigul	20.00	17.20	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	31
Erode	22.00	19.00	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	21
Kancheepuram	20.00	11.92	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	19
Kanyakumari	20.00	11.17	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	21
Karur	21.51	15.10	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	16
Krishnagiri	20.30	10.00	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes	Yes	20
Madurai	20.98	3.68	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	21
Nagapattinam	22.67	14.00	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	30
Namakkal	20.00	8.00	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	44
Nilgiris	20.00	8.00	No	No	No	No	No	No	No	Yes	Yes	No	8
Perambalur	21.54	21.32	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	16
Pudukkottai	23.20	23.20	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	37
Ramanathapuram	17.76	13.63	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	22
Salem	9.95	7.10	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	39
Sivagangai	17.95	15.50	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	17
Theni	21.58	20.97	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	52
Thoothukudi	20.00	12.60	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No	20
Tiruchirappalli	20.00	15.00	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	19
Tirunelveli	20.00	15.00	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	39
Tiruppur	15.62	12.83	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	19
Thiruvallur	16.00	0.00	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	16
Thiruvannamalai	20.48	9.50	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	37
Thiruvarur	18.66	14.00	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	16
Vellore	22.40	14.98	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	24
Villupuram	16.10	12.50	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	13
Villupuram II	20.00	16.00	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	34
Virudhunagar	16.00	7.30	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	24
Total	601.36	410.54	30	27	21	26	25	28	28	31	29	28	799

Table 2.3.2. Details of infrastructure facilities available with KVKs in Andhra Pradesh

KVK	Land area (ha)	Cultivable area (ha)	Admin Building	Farmers Hostel	Staff Quarters	Soil & Water Testing Lab	Mini Soil Testing Kit	Sales Counter	IFS Unit	Jeep	Tractor	Two-wheeler	No. of Demo Units
Ananthapuram (Reddipalli)	22.25	22.25	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	28
Ananthapuram (Kalyandurg)	20.23	12.80	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	18
Chittoor (RASS)	20.00	13.46	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	30
Chittoor (Kalikiri)	20.22	20.00	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	9



KVK	Land area (ha)	Cultivable area (ha)	Admin Building	Farmers Hostel	Staff Quarters	Soil & Water Testing Lab	Mini Soil Testing Kit	Sales Counter	IFS Unit	Jeep	Tractor	Two-wheeler	No. of Demo Units
East Godavari (Kalavacharla)	14.55	11.55	Yes	Yes	No	No	No	No	Yes	No	Yes	Yes	18
East Godavari (Pandirimamidi)	19.40	16.98	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes	Yes	24
Guntur (Lam)	23.60	21.60	Yes	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes	16
Kadapa (Utukur)	13.20	9.66	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes	9
Kadapa (Vonipenta)	42.36	10.00	Yes	Yes	No	No	No	No	No	Yes	No	Yes	15
Krishna (Garikapadu)	21.29	18.19	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	21
Krishna (Ghantasala)	15.41	12.00	Yes	Yes	No	No	Yes	No	No	No	Yes	Yes	12
Kurnool (Yagantipalle)	20.00	12.00	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	35
Kurnool (Banavasi)	20.00	8.00	Yes	No	Yes	Yes	No	No	No	Yes	Yes	No	17
Nellore (Nellore)	24.00	10.00	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	No	15
Nellore (Periyavaram)	22.70	12.50	No	Yes	No	No	Yes	No	Yes	Yes	No	Yes	14
Prakasam (Darsi)	22.66	19.01	Yes	No	No	Yes	No	No	Yes	Yes	Yes	Yes	10
Prakasam (Kandukur)	20.00	14.00	Yes	No	No	No	Yes	No	Yes	Yes	Yes	No	11
Srikakulam	16.37	3.87	Yes	Yes	Yes	No	No	Yes	Yes	Yes	yes	no	10
Visakhapatnam (BCT)	40.00	12.75	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	No	33
Visakhapatnam (Kondempudi)	20.00	15.72	Yes	No	NO	YES	No	Yes	Yes	Yes	Yes	YES	10
Vizianagaram	22.55	0.00	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	17
West Godavari (Undi)	15.00	11.70	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No	14
West Godavari (VR Gudem)	20.00	14.50	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	40
Total	495.79	302.54	22	17	11	13	10	13	20	21	20	16	426

Table 2.3.3. Details of infrastructure facilities available with KVKs in Telangana

KVK	Land area (ha)	Cultivable area (ha)	Admin Building	Farmers Hostel	Staff Quarters	Soil & Water Testing Lab	Mini Soil Testing Kit	Sales Counter	IFS Unit	Jeep	Tractor	Two-wheeler	No. of Demo Units
Adilabad	6.35	5.40	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes	Yes	2
Karimnagar (Jammikunta)	25.60	20.60	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	38
Karimnagar (Ramagirikhilla)	64.10	25.60	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes	Yes	3
Kammam (Wyra)	13.38	10.60	Yes	No	No	Yes	No	No	Yes	Yes	Yes	No	16
Kammam (Kothagudam)	20.00	8.00	Yes	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes	7
Mahabubnagar (YFA)	20.00	13.60	Yes	Yes	Yes	No	Yes	No	No	Yes	Yes	No	13
Mahabubnagar (Palem)	21.26	14.27	Yes	Yes	No	Yes	No	No	Yes	Yes	Yes	Yes	27
Mancherial	20.00	11.40	Yes	Yes	No	Yes	No	No	No	Yes	Yes	Yes	26
Medak (DSS)	25.55	12.14	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No	25
Medak (Tuniki)	12.00	8.63	Yes	No	No	No	Yes	No	Yes	Yes	Yes	Yes	22
Nalgonda (Gaddipally)	25.60	25.60	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	24
Nalgonda (Kampasagar)	20.00	18.40	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes	Yes	7
Nizamabad	20.00	17.40	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	7
Ranga Reddy	20.00	10.00	Yes	Yes	No	Yes	Yes	No	Yes	No	Yes	Yes	10
Warangal (Malyal)	18.30	11.70	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	6
Warangal (Mamnoor)	20.00	6.00	Yes	Yes	No	No	Yes	No	No	Yes	Yes	Yes	12
Total	352.14	219.34	16	13	6	12	11	2	9	15	16	13	245

Table 2.3.4. Details of infrastructure facilities available with KVKs in Puducherry

KVK	Land area (ha)	Cultivable area (ha)	Admin Building	Farmers Hostel	Staff Quarters	Soil & Water Testing Lab	Mini Soil Testing Kit	Sales Counter	IFS Unit	Jeep	Tractor	Two-wheeler	No. of Demo Units
Karaikal	24.38	15.78	Yes	No	No	No	Yes	No	Yes	Yes	Yes	Yes	16
Puducherry	58.00	39.20	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	23
Total	82.38	54.98	2	0	1	1	2	1	2	2	2	2	39

2.4. Revolving Fund

The total receipts through revolving fund by KVKs in the Zone-X is Rs.2646 lakhs of which Rs.1023 lakhs are generated by KVKs in Tamil Nadu, Rs.901 lakhs by KVKs in Andhra Pradesh, Rs.652 lakhs by KVKs in Telangana and Rs.71 lakhs by KVKs in Puducherry (Table 2.4.1.). The closing balance as on 31.03.2025 is Rs.2458 Lakhs. KVK wise status is given in Tables 2.4.2 to 2.4.5.

Table 2.4.1. Status of revolving fund (Rs. in lakh)

State	Receipts 2024-25	Expenditure 2024-25	Balance on 31.03.2025
Tamil Nadu	1023	831	812
Andhra Pradesh	901	723	835
Telangana	652	553	732
Puducherry	71	15	79
Total	2646	2122	2458



Bio-floc facility of KVK Erode, Tamil Nadu



Curcumin Lab of KVK Erode, Tamil Nadu



View of KVK Cuddalore, Tamil Nadu

**Table 2.4.2. Status of revolving fund in KVKs of Tamil Nadu (Rs. In lakhs)**

KVK	Receipts (2024-25)	Expenditure (2024-25)	Balance as on 31.03.2025
Ariyalur	41.47	38.89	7.32
Coimbatore	9.38	7.94	7.97
Cuddalore	62.94	53.89	27.61
Dharmapuri	21.22	25.06	21.33
Dindigul	27.88	13.92	42.30
Erode	2.32	0.96	15.42
Kancheepuram	13.71	10.36	19.99
Kanyakumari	12.89	10.74	10.36
Karur	26.26	30.01	5.61
Krishnagiri	35.97	32.55	60.50
Madurai	30.50	10.44	26.87
Nagapattinam	17.54	19.58	1.02
Namakkal	113.42	85.75	136.37
Nilgiris	11.10	3.46	7.93
Perambalur	76.18	77.81	40.32
Pudukkottai	7.05	3.72	17.28
Ramanathapuram	7.01	9.69	6.47
Salem	70.84	52.86	42.00
Sivagangai	11.56	7.51	37.85
Theni	25.09	12.23	28.69
Thoothukudi	29.02	26.44	12.25
Tiruchirappalli	0.00	0.00	8.24
Tirunelveli	48.74	28.91	33.82
Tiruppur	23.58	22.22	8.14
Thiruvallur	6.54	7.23	14.27
Thiruvannamalai	176.95	136.15	63.29
Thiruvarur	24.02	34.52	1.24
Vellore	18.94	12.84	45.36
Villupuram	25.78	14.42	35.56
Villupuram II	25.17	20.47	16.47
Virudhunagar	19.72	20.50	10.59
Total	1022.82	831.05	812.43

Table 2.4.3. Status of revolving fund in KVKs of Andhra Pradesh (Rs. In lakhs)

KVK	Receipts (2024-25)	Expenditure (2024-25)	Balance as on 31.03.2025
Ananthapuram (Reddipalli)	44.78	27.89	103.33
Ananthapuram (Kalyandurg)	85.09	48.01	59.33
Chittoor (RASS)	54.16	44.11	84.33
Chittoor (Kalikiri)	4.32	3.96	10.19
East Godavari (Kalavacharla)	10.63	15.24	19.61
East Godavari (Pandirimamidi)	14.61	10.31	59.01
Guntur (Lam)	0.00	0.36	9.71
Kadapa (Utukur)	18.48	20.44	7.93
Kadapa (Vonipenta)	4.46	0.31	11.44
Krishna (Garikapadu)	39.59	25.38	28.82
Krishna (Ghantasala)	54.98	35.31	44.54
Kurnool (Yagantipalle)	246.90	256.08	26.35
Kurnool (Banavasi)	32.17	13.36	50.11
Nellore (Nellore)	9.74	1.05	17.80
Nellore (Periyavaram)	4.92	2.50	11.89
Prakasam (Darsi)	29.65	8.12	77.89

KVK	Receipts (2024-25)	Expenditure (2024-25)	Balance as on 31.03.2025
Prakasam (Kandukur)	1.18	0.99	12.34
Srikakulam	38.12	23.13	29.83
Visakhapatnam (BCT)	54.31	49.66	79.91
Visakhapatnam (Kondempudi)	50.93	50.89	7.17
Vizianagaram	38.97	25.52	13.84
West Godavari (Undi)	39.17	41.65	28.79
West Godavari (VR Gudem)	23.61	19.04	40.85
Total	900.74	723.30	835.01

Table 2.4.4. Status of revolving fund in KVKs of Telangana (Rs. In lakhs)

KVK	Receipts (2024-25)	Expenditure (2024-25)	Balance as on 31.03.2025
Adilabad	15.81	6.30	58.39
Karimnagar (Jammikunta)	193.12	177.41	79.82
Karimnagar (Ramagirikhilla)	17.84	18.93	15.28
Kammam (Wyra)	30.34	24.75	152.34
Kammam (Kothagudam)	5.03	0.63	18.77
Mahabubnagar (YFA)	21.86	22.43	35.62
Mahabubnagar (Palem)	29.63	19.01	41.16
Mancherial	6.87	0.60	18.08
Medak (DSS)	30.67	24.78	21.06
Medak (Tuniki)	167.61	156.96	29.73
Nalgonda (Gaddipally)	51.26	43.97	99.35
Nalgonda (Kampasagar)	32.99	26.26	27.70
Nizamabad	19.66	10.57	39.62
Ranga Reddy	5.04	0.17	10.55
Warangal (Malyal)	11.23	7.68	78.02
Warangal (Mamnoor)	12.53	12.24	6.46
Total	651.51	552.71	731.95

Table 2.4.5. Status of revolving fund in KVKs of Puducherry (Rs. In lakhs)

KVK	Receipts (2024-25)	Expenditure (2024-25)	Balance as on 31.03.2025
Karaikal	19.42	11.19	13.93
Puducherry	51.81	3.97	65.36
Total	71.23	15.16	79.29



Nursery unit of KVK Kurnool (Yagantipalle), Andhra Pradesh

2.5 Scientific Advisory Committee (SAC) Meetings

The Scientific Advisory Committee meetings are conducted by KVKs to get necessary guidance and support to carry out the mandated activities of KVK in a more planned and scientific manner. A total of

72 Scientific Advisory Committee meetings were conducted by KVKs for the year 2024-25 (Table 2.5.1).

2.5.1. Details of SAC meetings conducted in Zone-X

State	No. of operational KVKs	No. of SAC meetings conducted
Tamil Nadu	31	31
Andhra Pradesh	23	23
Telangana	16	16
Puducherry	2	2
Total	72	72



Field view of KVK Mahabubnagar (Palem), Telangana



3. Achievements

3.1. Technology Assessment

During the year, KVKs in Zone X conducted 1054 and assessed 1821 technologies in 5228 trials conducted at different locations on farmers' fields (Table 3.1.1) through On-farm Trials (OFT). The technologies included 1382 on crops, 265 on animals 46 on women empowerment, 65 technologies on Enterprises 26 on farm machinery and 37 others. KVKs of Tamil Nadu, Andhra Pradesh, Telangana, and Puducherry assessed 865, 642, 268 and 46 technologies in 2109, 2028, 979 and 112 trials, respectively.

A total of 796 OFTs were conducted on 1382 technologies at 3430 locations on crops of which 248 OFTs were on 479 new and improved crop varieties (Table 3.1.2.). Among the other crop production and protection technologies assessed, 130 OFTs on 204 technologies were on IPM, 85 OFTs on 157 technologies were on INM, 71 OFTs on 120 technologies on IDM, 58 OFTs on 105 Technologies were on ICM and 27 OFTs on 30 technologies were on IPDM. Out of 143 OFTs conducted on 265 technologies at 720 locations, 35 OFTs were on disease management and 26 OFTs were production and management. Thirty seven OFTs were conducted at 299 locations to assess

65 technologies on various enterprises. Twenty six farm machineries and tools were assessed through 17 OFTs at 117 locations. In women empowerment 46 technologies were assessed through 36 OFTs at 319 locations.

In Tamil Nadu, 378 OFTs were conducted to assess 720 crop-based technologies at 1578 locations of which 134 OFTs were on the assessment of 287 new varieties. Fifty-six OFTs were conducted to assess 113 technologies related to animals at 248 locations. The KVKs of Andhra Pradesh assessed the suitability of 430 crop-based technologies through 224 OFTs in 1205 locations, 114 animal-based technologies in 57 OFTs at 315 locations, 48 technologies on enterprises in 26 OFTs at 216 locations and 30 technologies in 15 OFTs at 243 locations for women empowerment. In Telangana, 202 crop-based technologies were assessed for their suitability through 179 OFTs at 569 locations, 22 animal-based technologies in 123 locations, 16 technologies on farm machinery, 16 technologies for the empowerment of women at 76 locations. In Puducherry, 30 crop-based technologies were assessed through 15 OFTs at 78 locations and 16 technologies were assessed through eight OFTs on farm animals at 34 locations.



Field day - Assessment of paddy varieties DRR Dhan 53 and ADT 54-KVK Karur, Tamil Nadu



Assessment of marigold hybrids Arka Abhi and Arka Bhanu - KVK Kurnool, Andhra Pradesh

Table 3.1.1.1. Abstract of technologies assessed in OFTs by KVKs in Zone X

Category	Tamil Nadu			Andhra Pradesh			Telangana			Puducherry			Total		
	OFTs	Tech.	Trials	KVKs	OFTs	Tech.	Trials	KVKs	OFTs	Tech.	Trials	KVKs	OFTs	Tech.	Trials
Agricultural Crops	226	405	884	31	129	243	655	22	98	110	303	15	10	20	55
Horticultural Crops	152	315	694	30	95	187	550	22	81	92	266	16	5	10	23
Total Crops	378	720	1578	31	224	430	1205	22	179	202	569	16	15	30	78
Animals	56	113	248	18	57	114	315	21	22	22	123	4	8	16	34
Women empowerment	0	0	0	0	15	30	243	5	21	16	76	7	0	0	0
Enterprises	6	12	24	4	26	48	216	9	5	5	59	3	0	0	0
Farm Machinery	1	2	3	1	4	8	20	2	12	16	94	5	0	0	0
Others	10	18	256	5	8	12	29	3	7	7	58	5	0	0	0
Total	451	865	2109	31	334	642	2028	23	246	268	979	16	23	46	112

OFTs = No. of OFTs; Tech. = No. of Technologies; Trials = No. of Trials; KVKs = No. of KVKs

Table 3.1.2. Details of thematic area wise technologies assessed in OFTs by KVKs in Zone X

Thematic Area	Tamil Nadu			Andhra Pradesh			Telangana			Puducherry			Total		
	OFTs	Tech.	Trials	KVKs	OFTs	Tech.	Trials	KVKs	OFTs	Tech.	Trials	KVKs	OFTs	Tech.	Trials
Agricultural Crops															
Biological control	2	4	10	2	3	6	9	3	0	0	0	0	0	5	10
Canopy Management	0	0	0	0	0	0	0	0	2	3	6	2	0	2	3
Cropping Systems	6	12	26	3	4	10	20	2	9	13	28	6	0	19	35
Drudgery Reduction	0	0	0	0	0	0	0	0	1	1	3	1	0	1	3
Farm Machineries	2	4	8	1	5	10	23	2	6	7	19	6	0	13	21
Fodder and Nursery raising	1	2	5	1	0	0	0	0	0	0	0	0	0	1	2
ICM	24	51	116	11	8	14	34	6	0	0	0	0	0	32	65
IDM	18	28	66	10	12	24	48	7	11	13	45	8	0	41	65
INM	40	73	158	15	16	32	71	10	2	2	8	2	2	60	111
IPDM	5	3	5	1	6	6	12	3	11	11	35	7	0	22	20
IPM	30	38	82	11	14	28	83	8	19	20	60	9	2	65	90
Nutritional Security	0	0	0	0	1	3	3	1	0	0	0	0	0	1	3
Post Harvest Technology / Value addition	0	0	0	0	1	1	3	1	0	0	0	0	0	1	3
Protected Cultivation	0	0	0	0	3	6	9	1	0	0	0	0	0	3	6
Resource Conservation Technology	1	2	5	1	5	11	19	4	1	2	5	1	0	7	15
Seed / Plant production	1	2	5	1	0	0	0	0	8	8	8	1	0	9	10
Small Scale Income Generation Enterprises	0	0	0	0	2	2	100	1	0	0	0	0	0	2	100

Thematic Area	Tamil Nadu				Andhra Pradesh				Telangana				Puducherry				Total			
	OFTs	Tech.	Trials	KVKs	OFTs	Tech.	Trials	KVKs	OFTs	Tech.	Trials	KVKs	OFTs	Tech.	Trials	KVKs	OFTs	Tech.	Trials	KVKs
Soil health management	2	4	10	1	8	14	50	6	1	1	3	1	0	0	0	0	11	19	63	8
Varietal Assessment	79	166	353	25	23	43	99	13	18	19	63	10	4	8	20	2	124	236	535	50
Water management	0	0	0	0	1	2	5	1	0	0	0	0	1	2	5	1	2	4	10	2
Weed Management	14	14	30	5	11	20	47	10	7	8	14	4	0	0	0	0	32	42	91	19
Others	1	2	5	1	6	11	20	5	2	2	6	1	1	2	5	1	10	17	36	8
Total (Agricultural Crops)	226	405	884	31	129	243	655	22	98	110	303	15	10	20	55	2	463	778	1897	70
Horticultural Crops																	0	0	0	0
Biological control	10	20	50	7	0	0	0	0	0	0	0	0	1	2	5	1	11	22	55	8
Canopy Management	0	0	0	0	0	0	0	0	1	2	3	1	0	0	0	0	1	2	3	1
Cropping Systems	3	6	15	1	0	0	0	0	11	16	40	9	0	0	0	0	14	22	55	10
Drudgery Reduction	0	0	0	0	0	0	0	0	1	1	3	1	0	0	0	0	1	1	3	1
Farm Management	1	2	5	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2	5	1
Fertigation Technique	0	0	0	0	0	0	0	0	1	1	3	1	0	0	0	0	1	1	3	1
ICM	15	29	57	9	3	3	15	1	8	8	24	6	0	0	0	0	26	40	96	16
IDM	20	40	84	11	4	9	18	4	6	6	10	2	0	0	0	0	30	55	112	17
INM	19	37	95	11	3	6	15	1	3	3	14	2	0	0	0	0	25	46	124	14
IPDM	5	10	23	5	0	0	0	0	0	0	0	0	0	0	0	0	5	10	23	5
IPM	23	48	107	15	19	37	80	13	21	25	71	12	2	4	10	2	65	114	268	42
Kitchen Gardening	0	0	0	0	0	0	0	0	1	1	5	1	0	0	0	0	1	1	5	1
Labour saving	0	0	0	0	3	15	15	1	0	0	0	0	0	0	0	0	3	15	15	1
Post Harvest Technology / Value addition	0	0	0	0	5	7	27	2	0	0	0	0	0	0	0	0	5	7	27	2
Production Technology	0	0	0	0	0	0	0	0	1	1	3	1	0	0	0	0	1	1	3	1
Seed / Plant production	0	0	0	0	3	6	15	1	0	0	0	0	0	0	0	0	3	6	15	1
Storage Technique	0	0	0	0	0	0	0	0	6	3	6	1	0	0	0	0	6	3	6	1
Varietal Assessment	55	121	253	21	49	96	203	20	18	22	72	11	2	4	8	1	124	243	536	53
Water management	0	0	0	0	0	0	0	0	1	1	6	1	0	0	0	0	1	1	6	1
Weed Management	1	2	5	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2	5	1
Others	0	0	0	0	6	8	162	4	2	2	6	1	0	0	0	0	8	10	168	5
Total (Horticultural Crops)	152	315	694	30	95	187	550	22	81	92	266	16	5	10	23	2	333	604	1533	70
Total Crops																	0	0	0	0
Biological control	12	24	60	7	3	6	9	3	0	0	0	0	1	2	5	1	16	32	74	11
Canopy Management	0	0	0	0	0	0	0	0	3	5	9	3	0	0	0	0	3	5	9	3
Cropping Systems	9	18	41	3	4	10	20	2	20	29	68	13	0	0	0	0	33	57	129	18
Drudgery Reduction	0	0	0	0	0	0	0	0	2	2	6	1	0	0	0	0	2	2	6	1
Farm Machineries	2	4	8	1	5	10	23	2	6	7	19	6	0	0	0	0	13	21	50	9



Thematic Area	Tamil Nadu					Andhra Pradesh					Telangana					Puducherry					Total				
	OFTs	Tech.	Trials	KVKs		OFTs	Tech.	Trials	KVKs		OFTs	Tech.	Trials	KVKs		OFTs	Tech.	Trials	KVKs		OFTs	Tech.	Trials	KVKs	
Farm Management	1	2	5	1		0	0	0	0		0	0	0	0		0	0	0	0		1	2	5	1	
Fertigation Technique	0	0	0	0		0	0	0	0		1	1	3	1		0	0	0	0		1	1	3	1	
Fodder and Nursery raising	1	2	5	1		0	0	0	0		0	0	0	0		0	0	0	0		1	2	5	1	
Horticultural Crops	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
ICM	39	80	173	13		11	17	49	7		8	8	24	6		0	0	0	0		58	105	246	26	
IDM	38	68	150	16		16	33	66	9		17	19	55	9		0	0	0	0		71	120	271	34	
INM	59	110	253	19		19	38	86	10		5	5	22	3		2	4	15	2		85	157	376	34	
IPDM	10	13	28	6		6	6	12	3		11	11	35	7		0	0	0	0		27	30	75	16	
IPM	53	86	189	21		33	65	163	17		40	45	131	14		4	8	20	2		130	204	503	54	
Kitchen Gardening	0	0	0	0		0	0	0	0		1	1	5	1		0	0	0	0		1	1	5	1	
Labour saving	0	0	0	0		3	15	15	1		0	0	0	0		0	0	0	0		3	15	15	1	
Nutritional Security	0	0	0	0		1	3	3	1		0	0	0	0		0	0	0	0		1	3	3	1	
Post Harvest Technology / Value addition	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		6	8	30	3	
Production Technology	0	0	0	0		0	0	0	0		1	1	3	1		0	0	0	0		1	1	3	1	
Protected Cultivation	0	0	0	0		3	6	9	1		0	0	0	0		0	0	0	0		3	6	9	1	
Resource Conservation Technology	1	2	5	1		5	11	19	4		1	2	5	1		0	0	0	0		7	15	29	6	
Seed / Plant production	1	2	5	1		3	6	15	1		8	8	8	1		0	0	0	0		12	16	28	3	
Small Scale Income Generation Enterprises	0	0	0	0		2	2	100	1		0	0	0	0		0	0	0	0		2	2	100	1	
Soil health management	2	4	10	1		8	14	50	6		1	1	3	1		0	0	0	0		11	19	63	8	
Storage Technique	0	0	0	0		0	0	0	0		6	3	6	1		0	0	0	0		6	3	6	1	
Varietal Assessment	134	287	606	27		72	139	302	22		36	41	135	14		6	12	28	2		248	479	1071	65	
Water management	0	0	0	0		1	2	5	1		1	1	6	1		1	2	5	1		3	5	16	3	
Weed Management	15	16	35	6		11	20	47	10		7	8	14	4		0	0	0	0		33	44	96	20	
Others	1	2	5	1		12	19	182	9		4	4	12	1		1	2	5	1		18	27	204	12	
Total (Crops)	378	720	1578	31		224	430	1205	22		179	202	569	16		15	30	78	2		796	1382	3430	71	
Animals																									
Composite fish culture	0	0	0	0		1	1	6	1		0	0	0	0		0	0	0	0		0	0	0	0	
Disease Management	21	43	103	14		7	13	42	6		5	5	21	3		2	4	10	1		35	65	176	24	
Evaluation of Breeds	5	9	25	3		5	9	31	6		0	0	0	0		2	4	8	2		12	22	64	11	
Feed and Fodder management	9	19	43	7		15	32	71	13		1	1	4	1		0	0	0	0		25	52	118	21	
Fish Production	10	20	24	6		4	7	19	3		2	2	6	1		1	2	3	1		17	31	52	11	
Nutrition Management	5	10	23	4		11	23	51	9		7	7	63	3		2	4	10	2		25	44	147	18	
Production and Management	6	12	30	5		12	26	71	10		7	7	29	2		1	2	3	1		26	47	133	18	
Small Scale Income Generation Enterprises	0	0	0	0		2	3	24	1		0	0	0	0		0	0	0	0		2	3	24	1	
Total (Animals)	56	113	248	18		57	114	315	21		22	22	123	4		8	16	34	2		143	265	720	45	

Thematic Area	Tamil Nadu				Andhra Pradesh				Telangana				Puducherry				Total			
	OFTs	Tech.	Trials	KVKs	OFTs	Tech.	Trials	KVKs	OFTs	Tech.	Trials	KVKs	OFTs	Tech.	Trials	KVKs	OFTs	Tech.	Trials	KVKs
Enterprises																				
Energy conservation	0	0	0	0	1	2	12	1	0	0	0	0	0	0	0	0	1	2	12	1
Entrepreneurship Development	0	0	0	0	2	4	5	1	0	0	0	0	0	0	0	0	2	4	5	1
Health and Nutrition	0	0	0	0	8	16	51	4	1	1	12	1	0	0	0	0	9	17	63	5
Mechanization	0	0	0	0	1	2	15	1	0	0	0	0	0	0	0	0	1	2	15	1
Organic farming	0	0	0	0	1	1	5	1	0	0	0	0	0	0	0	0	1	1	5	1
Post Harvest Management	0	0	0	0	2	4	11	2	0	0	0	0	0	0	0	0	2	4	11	2
Post Harvest Technology / Value addition	0	0	0	0	2	2	6	1	0	0	0	0	0	0	0	0	2	2	6	1
Processing and value addition	3	6	13	3	5	10	64	3	2	2	12	1	0	0	0	0	10	18	89	7
Small scale income generation	2	4	6	1	1	1	2	1	2	2	35	2	0	0	0	0	5	7	43	4
Waste Management	1	2	5	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2	5	1
Others	0	0	0	0	3	6	45	1	0	0	0	0	0	0	0	0	3	6	45	1
Total (Enterprises)	6	12	24	4	26	48	216	9	5	5	59	3	0	0	0	0	37	65	299	16
Farm Machinery																				
Drudgery reduction	1	2	3	1	0	0	0	0	1	2	6	1	0	0	0	0	2	4	9	2
Cost saving	0	0	0	0	2	4	10	1	2	3	9	2	0	0	0	0	4	7	19	3
Value Addition	0	0	0	0	2	4	10	1	0	0	0	0	0	0	0	0	2	4	10	1
Labour saving	0	0	0	0	0	0	0	0	7	9	72	4	0	0	0	0	7	9	72	4
Time saving	0	0	0	0	0	0	0	0	1	1	3	1	0	0	0	0	1	1	3	1
Resource conservation	0	0	0	0	0	0	0	0	1	1	4	1	0	0	0	0	1	1	4	1
Total (Farm Machinery)	1	2	3	1	4	8	20	2	12	16	94	5	0	0	0	0	17	26	117	8
Women empowerment																				
Drudgery Reduction	0	0	0	0	0	0	0	0	2	2	15	2	0	0	0	0	2	2	15	2
Entrepreneurship Development	0	0	0	0	2	4	10	2	0	0	0	0	0	0	0	0	2	4	10	2
Health and Nutrition	0	0	0	0	4	8	68	3	14	8	27	3	0	0	0	0	18	16	95	6
Value Addition	0	0	0	0	9	18	165	4	4	4	29	3	0	0	0	0	13	22	194	7
Others	0	0	0	0	0	0	0	0	1	2	5	1	0	0	0	0	1	2	5	1
Total (Women Empowerment)	0	0	0	0	15	30	243	5	21	16	76	7	0	0	0	0	36	46	319	12
Others																				
Others	10	18	256	5	8	12	29	3	7	7	58	5	0	0	0	0	25	37	343	13
Total (Others)	10	18	256	5	8	12	29	3	7	7	58	5	0	0	0	0	25	37	343	13
Grand Total	451	865	2109	31	334	642	2028	23	246	268	979	16	23	46	112	2	1054	1821	5228	72

OFTs = No. of OFTs, Tech. = No. of Technologies, Trials = No. of Trials, KVKs = No. of KVKs



Performance of Technologies

3.1.1. Varietal Assessment

I. Field Crops

a. Cereals

Rice varieties ADT 54, ADT 56, ADT 58, ADT 59, BPT 2846, BPT 2856, CO 55, CO 56, CO 58, CSR 36,

CSR 56, CSR 60, DRR Dhan 47, DRR Dhan 53, KKM 1, KNM 1638, KNM 1639, KPS 2874, MTU 1271, MTU 1275, MTU 1293, RNR 15048, TPS 5 and TRY 5 were assessed by KVKs of Andhra Pradesh, Tamil Nadu, Puducherry and Telangana and were found superior to Farmer's Practice with an average yield increase of 21 per cent and higher economic returns (Table 3.1.3).

Table 3.1.3. Performance of rice varieties in On Farm Trials of Zone

State and KVK	Treatment					Farmers practice		
	Variety	No. of Trials	Yield (q/ha)	% increase	BCR	Variety	Yield (q/ha)	BCR
Andhra Pradesh								
East Godavari (Kalavacharla)	MTU 1275	3	67.50	12	1:2.16	MTU 1010	60.25	1:1.86
East Godavari (Kalavacharla)	MTU 1293	3	77.25	18	1:1.92	MTU 1010	65.25	1:1.74
Kurnool (Yagantipalle)	BPT 2856	5	90.93	26	1:1.70	BPT 5204	72.18	1:1.60
Kurnool (Yagantipalle)	MTU 1271	5	96.55	34	1:1.67	BPT 5204	72.18	1:1.60
West Godavari (Undi)	MTU 1293	3	71.25	19	1:2.00	MTU 1121	60.10	1:1.67
West Godavari (VR Gudem)	MTU 1275	5	48.00	12	1:1.62	MTU 7029	43.00	1:1.52
Puducherry			51.50					
Karaikal	ADT 58	5	48.90	18	1:2.59	ADT 37	43.60	1:2.27
Karaikal	KNM 1638	5	56.60	12	1:2.47	ADT 37	43.60	1:2.27
Puducherry	ADT 54	5	49.70	30	1:2.28	BPT 5204	43.70	1:2.08
Puducherry	CO 58	5	47.80	14	1:2.20	BPT 5204	43.70	1:2.08
Puducherry	CSR 60	5	50.20	15	1:1.88	ADT 37	41.40	1:1.53
Puducherry	TRY 5	5	59.40	21	1:1.98	ADT 37	41.40	1:1.53
Tamil Nadu			50.30					
Ariyalur	CO 55	3	63.50	14	1:2.32	ADT 43	52.20	1:2.00
Ariyalur	CSR 56	3	53.50	10	1:2.24	ADT 39	45.60	1:2.14
Ariyalur	RNR 15048	3	71.25	22	1:2.57	ADT 43	52.20	1:2.00
Ariyalur	TRY 5	3	48.00	17	1:2.39	ADT 39	45.60	1:2.14
Kanyakumari	TPS 5	5	51.50	21	1:2.09	ASD 16	56.00	1:2.03
Karur	ADT 54	3	48.90	28	1:1.86	BPT 5204	40.48	1:1.47
Karur	DRR Dhan 53	3	44.35	10	1:1.81	BPT 5204	40.48	1:1.47
Krishnagiri	ADT 54	5	56.58	16	1:1.79	Amman and Super Amman	48.89	1:1.55
Krishnagiri	RNR 15048	5	59.13	21	1:1.96	Amman and Super Amman	48.89	1:1.55
Perambalur	ADT 58	5	57.65	36	1:2.41	BPT 5204	42.30	1:1.84
Perambalur	KNM 1638	5	54.36	29	1:2.32	BPT 5204	42.30	1:1.84
Sivagangai	CO 56	5	58.00	20	1:2.81	BPT 5204	48.50	1:2.03
Theni	ADT 58	5	62.17	20	1:3.26	Goraknath 509	51.73	1:2.55
Theni	KNM 1638	5	61.18	18	1:3.17	Goraknath 509	51.73	1:2.55

State and KVK	Treatment					Farmers practice		
	Variety	No. of Trials	Yield (q/ha)	% increase	BCR	Variety	Yield (q/ha)	BCR
Thiruvallur	ADT 59	5	60.20	13	1:2.44	ADT 37	53.25	1:2.08
Thiruvarur	CSR 36	3	60.00	54	1:1.46	Local variety	39.00	1:1.01
Thiruvarur	TRY 5	3	51.00	31	1:1.27	Local variety	39.00	1:1.01
Tiruchirappalli	BPT 2846	3	50.00	19	1:1.92	BPT 5204	42.00	1:1.62
Tiruchirappalli	DRR Dhan 47	5	51.35	13	1:1.68	Traditional varieties	45.50	1:1.57
Tiruchirappalli	KKM 1	3	55.00	31	1:2.22	BPT 5204	42.00	1:1.62
Vellore	ADT 56	5	60.29	25	1:2.15	Mahindra 606	48.23	1:1.72
Vellore	RNR 15048	5	59.16	23	1:2.75	Mahindra 606	48.23	1:1.72
Villupuram	ADT 58	5	58.00	23	1:2.40	ADT 39	47.00	1:1.98
Villupuram	KNM 1638	5	67.00	43	1:2.68	ADT 39	47.00	1:1.98
Virudhunagar	CO 55	5	58.60	11	1:2.60	JGL 3844	52.80	1:2.08
Virudhunagar	KNM 1639	5	57.90	10	1:2.14	JGL 3844	52.80	1:2.08
Telangana			61.40					
Nalgonda (Kampasagar)	KPS 2874	3	58.75	30	1:2.10	Mahindra Chintu	47.10	1:1.77
Nizamabad	KPS 2874	2	60.29	10	1:2.57	Local Variety	53.50	1:2.10

b. Millets

New varieties of barnyard millet, finger millet, foxtail millet, little millet, pearl millet and sorghum were assessed by KVKs in the Zone (Table 3.1.4).

On average, new varieties of millets gave 46, 32, 30, 62, 55 and 30 per cent higher yield than the farmers varieties.

Table 3.1.4. Performance of millet varieties in On Farm Trials of Zone X

State and KVK	Treatment					Farmers practice		
	Variety	No. of Trials	Yield (q/ha)	% increase over FP	BCR	Variety	Yield (q/ha)	BCR
Barnyard millet								
Tamil Nadu								
Madurai	ATL 1	5	17.70	51	1:3.24	Local variety	11.70	1:2.55
Madurai	MDU 1	5	16.50	41	1:3.13	Local variety	11.70	1:2.55
Finger millet								
Andhra Pradesh								
East Godavari (Pandirimamidi)	CFMV 1	5	9.60	54	1:1.53	Local variety	6.25	1:1.27
East Godavari (Pandirimamidi)	VR 929	5	8.75	40	1:1.45	Local variety	6.25	1:1.27
Prakasam (Kandukur)	CFMV 4	10	14.50	22	1:1.97	Gowthami	11.85	1:1.57
Prakasam (Kandukur)	VR 1099	10	13.45	14	1:1.87	Gowthami	11.85	1:1.57
Tamil Nadu								
Ariyalur	ATL 1	3	25.10	17	01:02.7	Paiyur 2	21.50	01:02.2
Dindigul	ATL 1	5	19.30	27	01:02.3	Local variety	15.20	01:01.9
Nilgiris	ATL 1	3	11.50	12	01:01.9	Local variety	10.30	01:01.7
Perambalur	ATL 1	5	24.75	26	01:02.4	CO 14	19.65	01:01.9



State and KVK	Treatment					Farmers practice		
	Variety	No. of Trials	Yield (q/ha)	% increase over FP	BCR	Variety	Yield (q/ha)	BCR
Salem	ATL 1	5	32.41	47	01:03.4	Local variety	22.00	01:02.4
Tiruchirappalli	ATL 1	3	35.50	65	01:04.4	Local variety	21.50	01:02.9
Dharmapuri	ATL 2	5	28.30	32	01:02.5	Local variety	21.50	01:02.1
Namakkal	ATL 2	5	22.10	30	01:02.4	Local variety	17.00	01:02.1
Thiruvallur	ATL1	5	33.18	57	01:03.2	Karunsurutai	21.12	01:02.5
Ariyalur	CFMV 1	3	23.50	9	01:02.5	Paiyur 2	21.50	01:02.2
Dindigul	CFMV 1	5	17.90	18	01:02.1	Local variety	15.20	01:01.9
Salem	CFMV 1	5	32.58	48	01:03.0	Local variety	22.00	01:02.4
Thiruvallur	CFMV 1	5	29.56	40	01:02.9	Karunsurutai	21.12	01:02.5
Dharmapuri	CMFV 4	5	26.75	24	01:02.3	Local variety	21.50	01:02.1
Namakkal	KMR 530	5	24.60	45	01:02.6	Local variety	17.00	01:02.1
Nilgiris	KMR 630	3	12.20	18	01:02.0	Local variety	10.30	01:01.7
Perambalur	KMR 630	5	22.66	15	01:02.2	CO 14	19.65	01:01.9
Tiruchirappalli	Paiyur 2	3	30.00	40	01:03.7	Local variety	21.50	01:02.9
Foxtail millet								
Tamil Nadu								
Villupuram	ATL 2	5	18.00	33	1:4.00	Local variety	13.50	1:3.29
Villupuram	SiA 3088	5	17.00	26	1:3.89	Local variety	13.50	1:3.29
Little millet								
Tamil Nadu								
Krishnagiri	ATL 1	3	11.03	62	1:2.24	Local variety	6.81	1:1.33
Krishnagiri	CLMV 1	3	10.98	61	1:2.13	Local variety	6.81	1:1.33
Pearl millet								
Andhra Pradesh								
East Godavari (Pandirimamidi)	ABV 04	5	8.60	42	1:1.49	Local variety	6.05	1:1.35
Tamil Nadu								
Tiruchirappalli	AHB 1269 Fe	3	29.60	57	1:2.51	Local variety	18.80	1:1.65
Tiruchirappalli	HHB 311	3	31.20	66	1:2.53	Local variety	18.80	1:1.65
Sorghum								
Tamil Nadu								
Dharmapuri	CO 34	5	22.30	33	1:2.23	Thalaivirichan cholan	16.80	1:1.83
Dharmapuri	CSV 41	5	21.50	28	1:2.06	Thalaivirichan cholan	16.80	1:1.83
Tirunelveli	CSV 41	5	32.50	13	1:2.14	Tenkasi local	28.75	1:2.00
Tirunelveli	K 13	5	34.50	20	1:2.30	Tenkasi local	28.75	1:2.00
Telangana								
Adilabad	CSV 41	3	25.00	25	1:4.67	Pedda Jonna	20.00	1:3.50
Mancherla	NTJ 5	3	14.88	61	1:3.22	Gadda jonna	9.23	1:2.10

c. Pulses

New varieties of Blackgram, greengram, horse gram and red gram were assessed by KVKs in the

Zone (Table 3.1.5). New varieties yielded 33, 23, 27 and 28 per cent higher than the farmers varieties.

Table 3.1.5. Performance of pulses varieties in On Farm Trials of Zone X

State and KVK	Treatment					Farmers practice		
	Variety	No. of Trials	Yield (q/ha)	% increase over FP	BCR	Variety	Yield (q/ha)	BCR
Blackgram								
Tamil Nadu								
Madurai	CO 7	5	8.35	58	01:02.3	VBN 11	5.30	01:01.9
Virudhunagar	CO 7	5	8.20	28	01:02.4	VBN 10	6.40	01:01.9
Perambalur	Co9	5	7.05	16	01:02.2	VBN 2	6.06	01:02.0
Krishnagiri	LBG 884	3	6.12	22	01:01.5	VBN 6	5.01	01:01.2
Perambalur	LBG 884	5	9.36	44	01:02.6	VBN 8	6.48	01:02.0
Madurai	NUL 7	5	7.76	46	01:02.3	VBN 11	5.30	01:01.9
Theni	NUL 7	5	8.31	30	01:03.1	VBN 4	6.41	01:02.3
Virudhunagar	NUL 7	5	7.80	22	01:02.3	VBN 10	6.40	01:01.9
Krishnagiri	VBN 11	3	6.82	36	01:01.7	VBN 6	5.01	01:01.2
Perambalur	VBN 11	5	8.65	33	01:02.5	VBN 8	6.48	01:02.0
Theni	VBN 11	5	8.66	35	01:03.3	VBN 4	6.41	01:02.3
Perambalur	VBN 5	5	7.43	23	01:02.4	VBN 2	6.06	01:02.0
Greengram								
Tamil Nadu								
Perambalur	CO 7	5	7.98	21	01:02.3	VBN4	6.58	01:01.9
Salem	CO 9	5	8.16	44	01:02.5	Naatu pachaipaiyru	5.67	01:01.9
Thiruvallur	CO 9	5	9.80	11	01:02.3	CO 7	8.80	01:01.9
Tirunelveli	CO 9	5	7.50	14	01:02.5	VBN (Gg) 2	6.60	01:02.0
Virudhunagar	CO 9	5	10.00	18	01:02.5	CO 8	8.50	01:02.1
Tiruppur	CO9	5	8.10	21	01:01.9	Local variety	6.70	01:01.7
Virudhunagar	GAM 7	5	7.60	23	01:02.3	CO 8	6.20	01:01.9
Perambalur	GBG1	5	8.32	26	01:02.4	VBN4	6.58	01:01.9
Kanyakumari	LGG 574	5	6.50	23	01:02.7	Local variety	5.30	01:02.5
Kanyakumari	VBN 5	5	5.90	11	01:02.6	Local variety	5.30	01:02.5
Salem	VBN 6	5	7.72	36	01:02.4	Naatu pachaipaiyru	5.67	01:01.9
Virudhunagar	VBN 7	5	8.10	31	01:02.5	CO 8	6.20	01:01.9
Tiruppur	VBN7	5	8.60	28	01:02.0	Local variety	6.70	01:01.7
Telangana								
Mahabubnagar (Palem)	MGG 385	3	14.50	14	1:2.95	Vishnu	12.70	1:2.38
Horse gram								
Andhra Pradesh								
Kadapa (Utukur)	ATPHG 11	3	12.95	26	1:2.42	Local variety	10.25	1:1.93
Kadapa (Utukur)	CRIDA 18 R	3	14.53	42	1:2.60	Local variety	10.25	1:1.93



State and KVK	Treatment					Farmers practice		
	Variety	No. of Trials	Yield (q/ha)	% increase over FP	BCR	Variety	Yield (q/ha)	BCR
Tamil Nadu								
Krishnagiri	ATPHG 11	5	5.23	34	1:1.69	Paiyur 1	3.91	1:1.36
Vellore	ATPHG 11	5	9.09	10	1:2.27	Paiyur 2	8.26	1:2.07
Krishnagiri	Paiyur 2	5	4.38	12	1:1.35	Paiyur 1	3.91	1:1.36
Vellore	CRHG 19	5	11.39	38	1:2.85	Paiyur 2	8.26	1:2.07
Redgram								
Andhra Pradesh								
Kurnool (Banavasi)	LRG 105	3	6.80	13	1:1.19	Nirmal	6.00	1:1.09
Kurnool (Banavasi)	LRG 105	3	7.20	20	1:1.22	Nirmal	6.00	1:1.09
Tamil Nadu								
Cuddalore	CO 9	5	14.42	47	1:1.73	Local variety	9.80	1:1.15
Cuddalore	LRG 133-33	5	13.56	38	1:1.50	Local variety	9.80	1:1.15
Telangana								
Adilabad	TDGR 59	3	20.00	33	1:6.13	Local variety	15.00	1:4.22
Nalgonda (Kampasagar)	TDRG 59	3	19.70	15	1:2.65	Durga	17.20	1:2.20

d. Oilseeds

Groundnut varieties CO 8, GG 40, Girinar 4, K 1812, TCGS 1157, TCGS 1694, VRI 10 and VRI 9 performed better than local varieties with 11 to 64 per cent higher yield and economic returns (Table 3.1.6). Sesamum varieties CUMS 17, DS

5, JCS 1020, JLT 408, TMV(Sv) 7, VRI 4 and VRI 5 performed better than farmers varieties with 11 to 62 per cent higher yield. Soybean varieties AISb 50 and KDS 753 and sunflower varieties CO 3 and RSFH 700 were assessed and found to perform better than the farmers varieties in terms of yield and economic returns.

Table 3.1.6. Performance of oilseed varieties in On Farm Trials of Zone X

State and KVK	Treatment					Farmers practice		
	Variety	No. of Trials	Yield (q/ha)	% increase over FP	BCR	Variety	Yield (q/ha)	BCR
Groundnut								
Andhra Pradesh								
Kadapa (Vonipenta)	K 1812	5	19.0	36	1:4.19	TAG 24	14.0	1:2.08
Kadapa (Vonipenta)	TCGS 1157	5	18.0	29	1:3.62	TAG 24	14.0	1:2.08
Tamil Nadu								
Cuddalore	CO 8	5	24.30	14	01:02.7	GG 7	21.30	01:02.3
Theni	GG 40	5	21.70	27	01:02.7	JL 24	17.20	01:02.1
Cuddalore	Girinar 4	5	22.60	39	01:03.8	VRI 2	16.30	01:02.8
Namakkal	K 1812	5	23.50	31	01:02.6	TCGS 1043	18.00	01:02.3
Perambalur	K 1812	5	22.70	20	01:02.5	TMV 10	19.00	01:02.1
Salem	K 1812	5	17.40	20	01:01.7	TMV 7	14.50	01:01.5
Ariyalur	TCGS 1694	3	22.90	11	01:02.4	GJG 9	20.60	01:02.1
Krishnagiri	TCGS 1694	3	19.80	14	01:02.4	TCGS 1043	17.40	01:01.9
Krishnagiri	TCGS 1694	3	24.40	37	01:02.5	VRI 6	17.90	01:01.6



State and KVK	Treatment					Farmers practice		
	Variety	No. of Trials	Yield (q/ha)	% increase over FP	BCR	Variety	Yield (q/ha)	BCR
Thiruvannamalai	TCGS 1694	5	22.60	64	01:02.6	VRI 2	13.70	01:01.5
Tirunelveli	TCGS 1694	5	32.70	18	01:02.5	TMV 6	27.80	01:02.1
Villupuram II	TCGS 1694	5	24.10	27	01:02.8	TMV 7	19.00	01:02.5
Ariyalur	VRI 10	3	24.50	19	01:02.6	GJG 9	20.60	01:02.1
Krishnagiri	VRI 10	3	21.90	22	01:02.2	VRI 6	17.90	01:01.6
Namakkal	VRI 10	5	20.10	11	01:02.6	TCGS 1043	18.00	01:02.3
Perambalur	VRI 10	5	23.10	22	01:02.7	TMV 10	19.00	01:02.1
Salem	VRI 10	5	17.60	21	01:01.8	TMV 7	14.50	01:01.5
Theni	VRI 10	5	23.80	39	01:02.9	JL 24	17.20	01:02.1
Tirunelveli	VRI 10	5	34.70	25	01:02.8	TMV 6	27.80	01:02.1
Villupuram II	VRI 10	5	27.50	45	01:03.2	TMV 7	19.00	01:02.5
Cuddalore	VRI 9	5	22.60	39	01:03.8	VRI 2	16.30	01:02.8
Thiruvannamalai	VRI 9	5	20.60	50	01:02.3	VRI 2	13.70	01:01.5
Telangana								
Karimnagar (Jammikunta)	TCGS 1694	3	29.3	44	1:3.34	Local Variety	20.4	1:2.51
Nalgonda (Gaddipally)	TCGS 1694	4	26.5	13	1:2.57	Local Variety	23.5	1:2.33
Sesamum								
Puducherry								
Karaikal	DS 5	5	3.1	11	1:2.50	TMV 3	2.8	1:2.21
Karaikal	VRI 5	5	3.3	18	1:2.66	TMV 3	2.8	1:2.21
Tamil Nadu								
Villupuram II	CUMS 17	5	9.10	28	01:02.8	TMV 4	7.10	01:02.3
Salem	JLT 408	5	7.90	31	01:03.1	Naattu ellu	6.00	01:02.4
Tiruchirappalli	JLT 408	5	7.10	38	01:01.8	Local variety	5.20	01:01.7
Dindigul	TMV(Sv) 7	5	7.00	23	01:02.3	Local variety	5.70	01:01.9
Villupuram II	VRI 4	5	10.30	45	01:02.9	TMV 4	7.10	01:02.3
Dindigul	VRI 5	5	6.50	14	01:02.2	Local variety	5.70	01:01.9
Kanyakumari	VRI 5	5	6.60	20	01:02.9	Local variety	5.50	01:02.5
Salem	VRI 5	5	7.40	23	01:02.9	Naattu ellu	6.00	01:02.4
Tiruchirappalli	VRI 5	5	7.90	53	01:01.8	Local variety	5.20	01:01.7
Telangana								
Kammam (Wyra)	JCS 1020	3	6.1	62	1:3.00	YLM	3.8	1:1.77
Soybean								
Andhra Pradesh								
Ananthapuram (Reddipalli)	AISb 50,	5	21.7	23	1:5.43	JS 335	17.7	1:3.30
Telangana								
Adilabad	KDS 753	3	22.5	29	1:3.04	JS 335	17.5	1:2.29
Mancheria	AISb 50	5	21.1	17	1:2.52	JS 335	18.1	1:2.10
Sunflower								
Tamil Nadu								
Tirunelveli	CO 3	5	19.2	32	1:2.94	KBSH 78	14.5	1:2.01
Tirunelveli	RSFH 700	5	18.4	27	1:2.91	KBSH 78	14.5	1:2.01



II. Horticultural Crops

a. Vegetables

Bhendi varieties Arka Anamika, Arka Nikita, CO Bh 4, Kashi Chaman and Punjab Suhavani gave 10 to 83 per cent higher yield than farmers varieties. Brinjal varieties Arka Keshav, Arka Neelanchal Shyama, CO 3, Lalitha and PLR 2; chillies varieties and hybrids H 41, Arka Dhriti, Arka Haritam, Arka Khyati, Arka Swetha, Arka Tanvi, CO 1, LCA 657,

LCA 684 and Arka Amogh; Dolichosbean varieties and hybrids Arka Amogh, Arka Bhavani, Arka Krishna, Arka Sambharam and CO(Gb) 16; ridge gourd varieties and hybrids Arka Prasan, Arka Vikram, KRH 1, MDU 1 and tomato varieties and hybrids Arka Abhed, Arka Adithya, Arka Samrat, COTH 4 and Saaho were assessed and found to give 10 to 175 per cent higher yield than the farmers varieties and hybrids (Table 3.1.7).

Table 3.1.7. Performance of vegetable varieties in On Farm Trials of Zone X

State and KVK	Treatment					Farmers practice		
	Variety	No. of Trials	Yield (q/ha)	% increase over FP	BCR	Variety	Yield (q/ha)	BCR
Bhendi								
Kurnool (Banavasi)	Arka Anamika	3	162	10	1:3.49	Local Variety	148	1:3.10
Ananthapuram (Kalyandurg)	Arka Nikita	5	198	33	1:3.29	Local Variety	149	1:2.35
Pudukkottai	Arka Nikita	5	200	67	1:3.17	Local Variety	120	1:2.27
Madurai	Arka Nikita	5	229	29	1:2.89	Local Variety	178	1:2.46
Ananthapuram (Kalyandurg)	CO Bh 4	5	178	19	1:2.98	Local Variety	149	1:2.35
Ariyalur	CO Bh 4	3	177	35	1:2.01	Local Variety	131	1:1.4
Madurai	CO Bh 4	5	248	39	1:2.98	Local Variety	178	1:2.46
Pudukkottai	CO Bh 4	5	220	83	1:3.50	Local Variety	120	1:2.27
Tirunelveli	CO Bh 4	5	19	35	1:4.00	Local Variety	142	1:3.05
Chittoor (Kalikiri)	CO Bh 4	3	91	44	1:1.85	Saransh	63	1:1.31
Kurnool (Yagantipalle)	CO Bh 4	5	174	14	1:2.90	Local Variety	153	1:2.44
Krishna (Ghantasala)	Kashi Chaman	3	145	16	1:2.43	Local Variety	126	1:2.04
Ariyalur	Kashi chaman	3	162	24	1:1.80	Local Variety	131	1:1.40
Krishna (Ghantasala)	Punjab Suhavani	3	139	10	1:2.30	Local Variety	126	1:2.04
Brinjal								
Prakasam (Kandukur)	Arka Keshav	5	45	13	1:1.84	Private hybrid	40	1:1.71
Theni	Arka Neelanchal shyama	5	345	68	1:3.30	Local Variety	205	1:2.51
Tirunelveli	Arka Neelanchal shyama	5	320	19	1:4.16	Vasu	270	1:3.51
Theni	CO 3	5	415	102	1:3.68	Local Variety	205	1:2.51
Mahabubnagar (YFA)	Lalitha	4	869	175	1:1.75	Lalitha	316	1:1.50
Coimbatore	PLR 2	5	449	14	1:2.48	Local Variety	393	1:1.79
Tiruchirappalli	PLR 2	5	623	100	1:1.75	Local Variety	312	1:1.64
Tiruchirappalli	PLR 2	5	547	75	1:1.66	Local Variety	312	1:1.64
Villupuram	PLR 2	5	530	33	1:2.48	Local Variety	400	1:2.35
Chillie (Green)								
Mancherial	H 41	3	77	26	1:1.81	Mahyco Yasaswini	61	1:1.38

State and KVK	Treatment					Farmers practice		
	Variety	No. of Trials	Yield (q/ha)	% increase over FP	BCR	Variety	Yield (q/ha)	BCR
Ariyalur	Arka Dhriti	3	198	15	1:3.23	Private hybrid	173	1:2.76
Coimbatore	Arka Dhriti	5	216	13	1:2.80	Jothi	191	1:1.98
Villupuram	Arka Harita	5	150	25	1:3.04	Local Variety	120	1:2.38
Karaikal	Arka Khyati	5	212	19	1:2.69	Bullet	178	1:2.47
Tirunelveli	Arka Khyati	5	240	33	1:4.39	VNR 145	180	1:3.27
Ranga Reddy	Arka Khyati	5	152	22	1:2.29	Teja	125	1:1.66
Ranga Reddy	Arka Swetha	5	151	21	1:2.27	Teja	125	1:1.66
Nagapattinam	Arka Tanvi	5	257	19	1:2.67	VNR	216	1:2.28
Karaikal	CO 1	5	223	25	1:2.75	Bullet	178	1:2.47
Ariyalur	CO 1	3	211	22	1:3.45	Private hybrid	173	1:2.76
Nagapattinam	CO 1	5	273	27	1:2.81	VNR	216	1:2.28
Tirunelveli	CO 1	5	215	19	1:3.86	VNR 145	180	1:3.27
Nellore (Pariyavaram)	LCA 657	5	64	11	1:1.48	Local Variety	57	1:1.41
Visakhapatnam (BCT)	LCA 657	5	164	24	1:1.48	Sidhardh	133	1:1.33
Vizianagaram	LCA 657	5	137	19	1:2.84	Private hybrid	116	1:2.04
Vizianagaram	LCA 684	5	128	11	1:2.65	Private hybrid	116	1:2.04
Chittoor (RASS)	Arka Amogh	5	75	10	1:1.32	Reethu	68	1:1.82
Dolichos bean								
Perambalur	Arka Amogh	5	116	25	1:2.48	Local Variety	93	1:1.92
Thiruvallur	Arka Amogh	5	118	28	1:3.00	Local Variety	92	1:2.88
Karimnagar (Jammikunta)	Arka Amogh	3	186	24	1:2.31	Local Variety	150	1:1.82
Adilabad	Arka Bhavani	3	149	16	1:3.85	Local Variety	129	1:2.94
Kammam (Wyra)	Arka Bhavani	3	238	11	1:1.91	Local Variety	215	1:1.77
Nellore (Pariyavaram)	Arka Krishna	5	220	16	1:1.63	Local Variety	190	1:1.53
Dindigul	Arka Sambhram	5	129	15	1:3.00	Local Variety	112	1:2.56
Villupuram II	Arka Sambhram	7	93	16	1:2.89	Local Variety	80	1:2.25
Dindigul	CO(Gb)16	5	133	18	1:3.20	Local Variety	112	1:2.56
Perambalur	CO(Gb)16	5	115	24	1:2.18	Local Variety	93	1:1.92
Thiruvallur	CO(Gb)16	5	125	36	1:3.40	Local Variety	92	1:2.88
Thiruvarur	CO(Gb)16	5	184	21	1:2.29	Local Variety	152	1:1.89
Villupuram II	CO(Gb)16	7	120	50	1:3.59	Local Variety	80	1:2.25
Ridge gourd								
Kurnool (Banavasi)	Arka Prasan	3	269	10	1:2.11	Local Variety	245	1:1.72
Ariyalur	Arka Prasan	3	162	29	1:2.54	Local Variety	126	1:1.94
Coimbatore	Arka Prasan	5	171	23	1:3.37	Novel	140	1:2.37
Perambalur	Arka Prasan	5	169	28	1:2.50	Local Variety	133	1:1.89
Pudukkottai	Arka Prasan	5	175	119	1:3.45	Local Variety	80	1:2.20
Thiruvallur	Arka Prasan	5	217	38	1:4.02	Local Variety	158	1:2.96
Kurnool (Banavasi)	Arka Vikram	3	293	19	1:2.64	Local Variety	245	1:1.72
Karur	KRH 1	3	156	18	1:2.86	Local Variety	133	1:2.54
Coimbatore	MDU 1	5	167	20	1:3.26	Novel	140	1:2.37
Karur	MDU 1	3	171	29	1:3.16	Local Variety	133	1:2.54

State and KVK	Treatment					Farmers practice		
	Variety	No. of Trials	Yield (q/ha)	% increase over FP	BCR	Variety	Yield (q/ha)	BCR
Perambalur	MDU 1	5	155	17	1:2.33	Local Variety	133	1:1.89
Thiruvallur	MDU 1	5	19	23	1:3.59	Local Variety	16	1:2.96
Thiruvannamalai	MDU 1	5	188	19	1:2.38	Private hybrid	158	1:1.89
Tomato								
Salem	Arka Abhed	5	400	33	1:2.01	Sivam	300	1:1.25
Medak (DSS)	Arka Abhed	3	250	47	1:1.63	U S 440	170	1:1.47
Ranga Reddy	Arka Abhed	5	402	20	1:2.73	US 440	335	1:1.88
Vellore	Arka Adithya	5	899	30	1:1.45	Sivam	694	1:1.32
Madurai	Arka Aditya	5	798	11	1:2.21	Local Variety	722	1:2.17
Tiruchirappalli	Arka Aditya	5	467	14	1:1.63	Abhinav	409	1:1.58
Tirunelveli	Arka Aditya	5	870	21	1:3.69	Sivam	720	1:3.14
Ranga Reddy	Arka Samrat	5	398	19	1:2.70	US 440	335	1:1.88
Madurai	COTH 4	5	923	28	1:2.80	Local Variety	722	1:2.17
Salem	COTH 4	5	500	67	1:2.26	Sivam	300	1:1.25
Thiruvannamalai	COTH 4	5	816	26	1:2.81	Private hybrid	650	1:2.23
Tiruchirappalli	COTH 4	5	584	43	1:1.70	Abhinav	409	1:1.58
Tirunelveli	COTH 4	5	950	32	1:3.88	Sivam	720	1:3.14
Vellore	COTH 4	5	785	13	1:1.59	Sivam	694	1:1.32
Karimnagar (Ramagirikhilla)	Saaho	3	321	15	1:3.73	Local Variety	280	1:3.30

b. Flowers fruits, spices and condiments

Chrysanthemum varieties Poornima White and Poornima Yellow were assessed and were found to yield 53 per cent higher than the farmers' varieties. Marigold varieties Arka Abhi and Arka Bhanu gave 21 and 14 per cent higher yield than that of farmers varieties. The varieties of the Chillie (red)

LCA 643, LCA 657 and LCA 684 were assessed and were found to give an average of 26 per cent higher yield than the farmers varieties and hybrids. Ginger varieties Mahima, Nadia and Varada gave an average of 52 per cent higher yield than the farmers varieties (Table 3.1.8).

Table 3.1.8. Performance of varieties of flowers, fruits, and spices in On Farm Trials of Zone X

State and KVK	Treatment					Farmers practice		
	Variety	No. of Trials	Yield (q/ha)	% increase over FP	BCR	Variety	Yield (q/ha)	BCR
Flowers								
Chrysanthemum								
Andhra Pradesh								
Kadapa (Vonipenta)	Poornima White	2	10.0	25	1:1.21	Local Variety	8.0	1:1.13
Visakhapatnam (BCT)	Poornima White	5	95.0	9	1:1.55	Ashoka Yellow	87.0	1:1.31
Kadapa (Vonipenta)	Poornima Yellow	2	9.0	13	1:1.21	Local Variety	8.0	1:1.13

State and KVK	Treatment					Farmers practice		
	Variety	No. of Trials	Yield (q/ha)	% increase over FP	BCR	Variety	Yield (q/ha)	BCR
Visakhapatnam (BCT)	Poornima Yellow	5	96.0	10	1:1.59	Ashoka Yellow	87.0	1:1.31
Jasmine								
Karaikal	Star Jasmine	3	28.5	16	1:3.48	Local Variety	24.6	1:2.97
Karaikal	CO1	3	31.8	29	1:3.17	Local Variety	24.6	1:2.97
Marigold								
Krishna (Garikapadu)	Arka Abhi	3	260.0	30	1:1.75	Indus 27	200.25	1:1.68
Prakasam (Darsi)	Arka Abhi	5	12.5	23	1:1.83	Ashok yellow	10.16	1:1.63
Srikakulam	Arka Abhi	5	86.4	21	1:3.14	Ashoka Yellow	71.4	1:2.59
Vizianagaram	Arka Abhi	5	101.0	11	1:3.42	Prive hybrid	90.8	1:2.57
Dindigul	Arka Abhi	5	215.7	26	1:3.58	US 502	171.3	1:2.76
Kanyakumari	Arka Abhi	5	88.0	17	1:2.53	Local Variety	75.0	1:2.18
Coimbatore	Arka Abhi	5	164.5	21	1:3.73	Indus	136.3	1:2.81
Chittoor (Kalikiri)	Arka Bhanu	3	236.5	15	1:4.83	Vakkal	205.7	1:4.29
Krishna (Garikapadu)	Arka Bhanu	3	220.0	10	1:1.68	Indus 27	200.3	1:1.68
Kurnool (Banavasi)	Arka Bhanu	3	237.8	11	1:3.89	Maxima yellow	214.5	1:3.47
Kurnool (Yagantipalle)	Arka Bhanu	5	240.5	11	1:3.95	Liril Yellow	217.5	1:3.54
Prakasam (Darsi)	Arka Bhanu	5	11.3	11	1:1.76	Ashok yellow	10.2	1:1.63
Srikakulam	Arka Bhanu	5	83.3	17	1:3.02	Ashoka Yellow	71.4	1:2.59
Vizianagaram	Arka Bhanu	5	103.0	13	1:3.42	Prive hybrid	90.8	1:2.57
Kanyakumari	Arka Bhanu	5	96.0	28	1:2.83	Local Variety	75.0	1:2.18
Dindigul	Arka Bhanu	5	189.3	10	1:3.19	US 502	171.3	1:2.76
Coimbatore	Arka Vibha	5	158.6	16	1:3.58	Indus	136.3	1:2.81
Fruits - Banana								
Krishnagiri	CO 3	3	374.1	12	1:2.98	Karpooravalli	334.6	1:2.63
Krishnagiri	Kavery Kalki	3	399.3	19	1:3.28	Karpooravalli	334.6	1:2.63
Spices and Condiments								
Chillie (Red)								
West Godavari (VR Gudem)	LCA 643	5	11.5	10	1:1.37	Rudra	10.5	1:1.25
Ananthapuram (Kalyandurg)	LCA 643	5	25.4	14	1:2.54	HPH-2043	22.3	1:1.97
Prakasam (Kandukur)	LCA 643	5	33.2	14	1:1.23	Pvt Hybrid	29.0	1:1.19
Srikakulam	LCA 684	5	40.0	25	1:3.12	Kurakula	32.0	1:2.53
Chittoor (Kalikiri)	LCA 657	3	51.2	54	1:3.50	Budda Mirapa	33.2	1:2.40
East Godavari (Pandirima-midi)	LCA 657	5	32.3	23	1:1.53	Private company variety	26.3	1:1.17
Prakasam (Kandukur)	LCA 657	5	35.1	21	1:1.25	Pvt Hybrid	29.0	1:1.19
Srikakulam	LCA 657	5	41.6	30	1:3.25	Kurakula	32.0	1:2.53
Chittoor (Kalikiri)	LCA 684	3	50.6	52	1:3.46	Budda Mirapa	33.2	1:2.40
East Godavari (Pandirima-midi)	LCA 684	5	30.0	14	1:1.38	Private company variety	26.3	1:1.17
Ginger								

State and KVK	Treatment					Farmers practice		
	Variety	No. of Trials	Yield (q/ha)	% increase over FP	BCR	Variety	Yield (q/ha)	BCR
Srikakulam	Mahima	5	158.4	51	1:3.52	Konda Allam	104.6	1:2.51
Visakhapatnam (BCT)	Nadia	5	14.7	61	1:2.74	Local Variety	9.1	1:1.75
Srikakulam	Varada	5	152.8	46	1:3.40	Konda Allam	104.6	1:2.51
Visakhapatnam (BCT)	Varada	5	13.5	48	1:2.57	Local Variety	9.1	1:1.75
Turmeric								
Kadapa (Utukur)	Lam Swarna	3	51.0	10	1:2.78	Mydukur	46.5	1:2.26
Tubers – Elephant Foot Yam								
Kanyakumari	Gajendra	5	14.3	16	1:3.53	0	12.3	1:3.11
Tapioca								
Villupuram II	Sree Athulya	5	437.5	62	1:2.34	White Thailand	270.0	1:1.37
Villupuram II	Sree Reksha	5	420.0	56	1:2.17	White Thailand	270.0	1:1.37
Ariyalur	YTP 2	3	368.5	20	1:2.83	Thailand White	307.5	1:2.33
Tirunelveli	YTP 2	5	413.7	19	1:3.19	Mulluvadi Local	347.1	1:2.43

3.1.2 Crop Production Technologies

a. Integrated Nutrient Management

The integrated nutrient management practices assessed by KVKs include Soil Test Based fertilizer management, organic farming, bio-fertilizers, nutrient solubilizers and mobilizers, crop specific nutrient mixture for soil application and foliar spray, nano fertilizer formulations. A total of 166 technologies on INM including 123 on agricultural crops and 43 on horticultural crops were assessed by 39 KVKs in the Zone. In agricultural crops, 55 INM technologies were assessed for paddy by 20 KVKs wherein average yield was 50.88 q/ha as against 44.71 q/ha in farmer's practice (13.8% higher). INM for groundnut gave an average yield of 19.90 q/ha which was 18.69 per cent higher than farmers practice. The average yield in the INM plots of tomato was 482.80 q/ha while in farmer's practice, it was 421.48 q/ha.

b. Integrated Crop Management

KVKs in the Zone assessed 69 Integrated Crop Management technologies 20 crops. In paddy the ICM technologies gave an average grain yield of 58.38 q/ha while in farmer's practice, it was 50.03 q/ha. ICM practices in cotton gave 14 per cent higher yield than farmer's practice. ICM technologies gave

17.11 per cent higher yields in vegetables than farmers with higher economic returns.



Assessment of Sorghum Variety CSV 41 R - KVK Mancherial, Telangana

3.1.3 Integrated Pest and Disease Management

a. Integrated Pest Management

A total of 208 Integrated Pest Management technologies were assessed for 90 agricultural and 118 horticultural crops. The mean increase in yield due to integrated pest management technologies assessed by KVKs in the Zone was 18.81 per cent with higher economic returns. IPM for paddy gave an average yield of 55.55 q/ha as against 50.30 q/ha in farmer's practice. In cotton, integrated pest management practices gave an average yield



**Assessment of IPM module for Tomato Pinworm
KVK Dharmapuri, Tamil Nadu**

of 24.13 q/ha which was 24.06 per cent higher than farmer's practice. IPM technologies in fruits increased the yield at an average of 16.55 per cent over farmer's practice. The average yields of brinjal and green chillies were 174.36 and 84.52 q/ha, respectively while in farmer's practice, the average yields were 150.15 and 74.44 q/ha, respectively.

b. Integrated Disease Management

Integrated Disease Management practices assessed by KVKs included chemical control, microbial control, intercropping and tolerant / resistant varieties. Integrated disease management technology packages for agricultural and horticultural crops resulted in an average yield increase of 15.20 per cent over farmer's practice. In paddy, IDM technologies gave an average grain yield of 62.18 q/ha while in farmer's practice, it was 58.70 q/ha. IDM package in cotton increased the yield by 20.56 per cent over farmer's practice.



**Assessment of ERI silkworm rearing
KVK Chittoor, RASS, Andhra Pradesh**

3.1.4. Livestock, Poultry and Fishery

KVKs in the zone assessed disease management technologies like Allgone N - Herbal anti tick, Anionic Mishran AFS, Bioteat dip, CSWRI milk replacer, Healex-FR, Helmokil, Herbolact, Mastirek gel, Mastrick Gel (Herbel based), Megatex Spray, Nano Heal cream, Nano methicone lotion, Nano Methicone spray, NIANP Milk replacer, NIF Polyherbal spray, Polyherbal extract, TANUVAS Bio test dip solution spray (Nano polymer based), TANUVAS PAM 21, Tix Killer, Wormivet powder *etc.* New breeds and production methods of cat fish, Catla/rohu, composite fish culture, inland fish culture, scampi, shrimp, Vannamei, piggery, poultry, goats and lambs were assessed.



**Assessment of nano-cream for cattle
KVK Thiruvannamalai, Tamil Nadu**

3.1.5 Women and Children

Technologies for drudgery reduction, health and nutrition like finger millet biscuit, grader,



**Assessment of Groundnut variety VRI 10
KVK Cuddalore, Tamil Nadu**

harvesting bags, infant food mixtures, guava juice, millet bar, cookies, millet flakes, millet milk, multigrain atta, nutri bar, pearl millet, protein cookies, sprouted finger millet were assessed.

3.1.6. Enterprises

Enterprises on production of value added products from banana, chillie, coconut, finger millet, fish, mango, millets, multiple grains, seaweed, sorghum, tomato, vegetables, whey etc. were assessed by 16 KVKs in the zone.



**Assessment of solar drier for grapes
KVK Theni, Tamil Nadu**

3.1.7. Farm Machinery

Farm machinery and tools like Drone, paddy drum seeder, power weeder, pneumatic planter, cotton shredder, seed cum fertilizer drill, subsoiler were assessed for their performance in intercultural operations, land preparation, plant protection, postharvest processing, sowing and planting and total mechanization in farmers' fields.



**Sowing of HDPS cotton by pneumatic planter in
Siddipet district, Telangana**



Assessment of genetically improved freshwater prawn in polyculture-KVK KAncheepuram, Tamil Nadu

3.2. Frontline Demonstrations

Frontline Demonstrations were organized by the KVKs to demonstrate the potential of crop varieties, crop and animal husbandry technologies and agricultural implements at several location-specific farming and agro-ecological situations. Training programmes and field days were organized for extension workers and farmers for rapid dissemination of improved technologies.

A total of 11676 demonstrations were conducted in 3472.5 ha on field crops, horticultural crops, tools and implements, livestock, enterprises and women and children welfare by 72 KVKs in Zone X (Table 3.2.1). In crops, 7849 demonstrations were conducted by 72 KVKs in Zone-X covering cereals, millets, pulses, oilseeds, commercial crops, fodder crops, vegetables, fruits, flowers, spices, plantation crops and medicinal plants in 3194.5 ha. Among the crops, 4493 demonstrations were conducted on field crops and 2992 on horticultural crops. A total of 364 demonstrations were conducted on hybrids, 564 on tools and implements, 2085 on livestock, 557 on various enterprises and 621 on women and children related demonstrations. Among agricultural crops, 1623 demonstrations were conducted on rice varieties and other production and protection technologies (Table 3.2.2). In millets out of 455 demonstrations, 120 were on finger millet, 95 on sorghum, 85 on Barnyard millet, 80 on foxtail millet and 45 on pearl millet. In pulses (other than CFLD), out of 934 demonstrations, 370 were on blackgram, 178 on greengram, 141 on redgram, 125 on chickpea, 50 on cowpea 30 each on horse gram and rajmah and 10 on moth bean. Out of 559 demonstrations in oilseeds (other than CFLD), 409 were on groundnut, 85 on sesamum, 35 on castor and 25 on sunflower. In cotton under fibre crops, 321 demonstrations were conducted in 124 ha by 30 KVKs. Among commercial crops, 51 were in sugarcane and 32 in mulberry. Among 178 demonstrations on fodder crops, 90 were on CN grass and 45 on mixed fodder. Out of 85 demonstrations on green manure crops 60 were on sunnhemp.

Among 1284 demonstrations in vegetables, 165 were on brinjal, 161 on tomato, 147 on green chilli, 111 on ridge guard, 106 on onion, and 90 on Amaranthus. Out of 145 demonstrations on tuber crops, 65 were on tapioca. Out of 612 demonstrations in fruits, 181 were on banana and 169 on mango. In total, 273 demonstrations were conducted on flowers including chrysanthemum, gerbera, jasmine, marigold and tuberose.

Among 354 demonstrations on spices and condiments, 123 were on turmeric (raw and dry), 81 on dry chillies and 70 on pepper. Among 96 demonstrations on plantation crops, 25 each were on Betelvine and cahshew. Coconut was demonstrated at 218 locations in 75.2 ha area.

a. Crops

In crops category, out of 4338 demonstrations on Tamil Nadu, 1330 were on cereals and 723 in vegetables (Table 3.2.2). In Andhra Pradesh, out of 1891 demonstrations on crops, 379 were on pulses, 287 on cereals, and 216 on vegetables. Out of 1021 demonstrations in Telangana, 295 were on vegetables, 176 on Cereals, 126 on oil seeds, and 106 on cotton. In Puducherry, out of 235 demonstrations on crops, 75 were on cereals, 45 on pulses and 20 on fruits.

b. Hybrids

A total of 364 demonstrations were conducted on crop hybrids, out of which 230 were by KVKs of Tamil Nadu, 83 by Andhra Pradesh, 31 by Telangana and 20 by Puducherry (Table 3.2.3). Among the crops, 61 demonstrations were on maize, 51 on tomato, 40 on bhendi, 37 on ridge guard, 36 on marigold, 35 on Castor and 30 on cotton.

c. Tools and Implements

Out of 564 demonstrations conducted on tools and implements, 156 were by KVKs of Tamil Nadu, 190 by Andhra Pradesh, 148 by Telangana and 70 by Puducherry (Table 3.2.4).



d. Livestock, poultry and fishery

KVKs in the Zone conducted 2085 demonstrations on livestock, poultry and fishery involving 846619 animals, poultry birds and fish fingerlings (Table 3.2.5). Among them, 1032 demonstrations were conducted by KVKs in Tamil Nadu, 908 by Andhra Pradesh, 89 by Telangana and 56 by Puducherry.

e. Enterprises

A total of 547 demonstrations were conducted on drudgery reduction, sericulture, value addition,

vegetable production and vermicompost. A total of 923 enterprise units were established by 34 KVKs in the Zone (Table 3.2.6).

f. Women empowerment

A total of 621 demonstrations on drudgery deduction, entrepreneurship development, health and nutrition, kitchen gardening, storage and value addition were conducted, and 3693 enterprise units were established by 32 KVKs in the Zone for women empowerment (Table 3.2.7).

Table 3.2.1. Details of FLDs conducted by KVKs in Zone X

Category	Tamil Nadu			Andhra Pradesh			Telangana			Puducherry			Total		
	Demos	Area (ha)	KVKs	Demos	Area (ha)	KVKs	Demos	Area (ha)	KVKs	Demos	Area (ha)	KVKs	Demos	Area (ha)	KVKs
Crops															
Field Crops	2692	1001.4	31	1091	455.3	22	545	252.5	16	165	62.4	2	4493	1771.6	71
Horticultural Crops	1646	923.7	31	800	317.5	23	476	163.7	15	70	18.1	2	2992	1422.9	71
Total (Crops)	4338	1925.1	31	1891	772.8	23	1021	416.2	16	235	80.5	2	7485	3194.5	72
Hybrids															
Field Crops	100	39.0	8	31	12.4	5	0	0	0	10	2.0	1	141	53.4	14
Horticultural Crops	130	41.0	8	52	21.8	6	31	7.0	3	10	2.0	1	223	71.8	18
Total (Hybrids)	230	80.0	15	83	34.2	8	31	7.0	3	20	4.0	1	364	125.2	27
Crops + Hybrids	4568	2005.1	31	1974	807.0	23	1052	423.2	16	255	84.5	2	7849	3319.7	72
Tools and implements	156	56.1	9	190	45.1	10	148	36.5	9	70	15.1	2	564	152.8	30
	Demos	Nos.	KVKs	Demos	Nos.	KVKs	Demos	Nos.	KVKs	Demos	Nos.	KVKs	Demos	Nos.	KVKs
Livestock	1032	74511	24	908	729636	20	89	34898	5	56	7574	2	2085	846619	51
Enterprises	315	401	18	174	453	11	68	79	6	0	0	0	557	933	35
Women and Children	129	532	12	326	2952	14	147	190	5	19	19	1	621	3693	32
Grand Total	6200	2061.2	31	3572	852.1	23	1504	459.7	16	400	99.5	2	11676	3472.5	72
Total No of animals/Enterprises		75444			733041			35167			7593			851245	

Demos = No. of Demonstrations, KVKs = No. of KVKs

Table 3.2.2. Details of category wise FLDs on crops in Zone-X

Category	Tamil Nadu			Andhra Pradesh			Telangana			Puducherry			Total		
	Demos	Area(ha)	KVKs	Demos	Area(ha)	KVKs	Demos	Area (ha)	KVKs	Demos	Area (ha)	KVKs	Demos	Area (ha)	KVKs
Field Crops															
Cereals															
Maize	155	52.8	11	65	27	6	25	10	5	0	0	0	245	89.8	22
Paddy (Rice)	1175	432.7	29	222	98.4	16	151	73.2	12	75	28	2	1623	632.3	59
Total (Cereals)	1330	485.5	30	287	125.4	18	176	83.2	13	75	28	2	1868	722.1	63
Millets															
Barnyard millet	85	34.0	9	0	0.0	0	0	0.0	0	0	0.0	0	85	34.0	9
Finger millet	105	38.0	9	15	6.0	3	0	0.0	0	0	0.0	0	120	44.0	12
Foxtail millet	35	17.0	4	40	12.4	5	5	2.0	1	0	0.0	0	80	31.4	10
Kodo millet	20	8.0	2	0	0.0	0	0	0.0	0	0	0.0	0	20	8.0	2
Little millet	10	4.0	1	0	0.0	0	0	0.0	0	0	0.0	0	10	4.0	1
Pearl millet	20	7.0	2	25	10.0	2	0	0.0	0	0	0.0	0	45	17.0	4
Sorghum	55	18.4	6	10	4.0	2	20	8.0	3	10	4.0	1	95	34.4	12
Total (Millets)	330	126.4	18	90	32.4	11	25	10.0	4	10	4.0	1	455	172.8	34



Category	Tamil Nadu			Andhra Pradesh			Telangana			Puducherry			Total		
	Demos	Area(ha)	KVKs	Demos	Area(ha)	KVKs	Demos	Area (ha)	KVKs	Demos	Area (ha)	KVKs	Demos	Area (ha)	KVKs
Pulses															
Blackgram	205	75.0	13	120	46.0	12	10	4.0	2	35	14.0	2	370	139.0	29
Chickpea	0	0.0	0	90	30.0	6	35	14.0	5	0	0.0	0	125	44.0	11
Cowpea	35	14.0	4	15	6.0	2	0	0.0	0	0	0.0	0	50	20.0	6
Greengram	130	50.0	9	38	15.2	3	0	0.0	0	10	2.0	1	178	67.2	13
Horse gram	30	12.0	3	0	0.0	0	0	0.0	0	0	0.0	0	30	12.0	3
Moth bean	10	4.0	1	0	0.0	0	0	0.0	0	0	0.0	0	10	4.0	1
Rajmah	0	0.0	0	30	12.0	2	0	0.0	0	0	0.0	0	30	12.0	2
Redgram	20	8.0	2	86	31.0	8	35	24.0	4	0	0.0	0	141	63.0	14
Total (Pulses)	430	163.0	20	379	140.2	19	80	42.0	9	45	16.0	2	934	361.2	50
Oilseeds															
Castor	10	4.0	1	25	10.0	3	0	0.0	0	0	0.0	0	35	14.0	4
Groundnut	213	83.2	17	100	45.6	9	91	39.3	10	5	2.0	1	409	170.1	37
Safflower	0	0.0	0	5	2.0	1	0	0.0	0	0	0.0	0	5	2.0	1
Sesamum	25	10.0	3	30	12.0	2	20	14.0	3	10	2.0	1	85	38.0	9
Sunflower	10	4.0	1	0	0.0	0	15	6.0	3	0	0.0	0	25	10.0	4
Total (Oilseeds)	258	101.2	17	160	69.6	11	126	59.3	13	15	4.0	2	559	234.1	43
Fibre Crops															
Cotton	145	54.0	12	70	28.0	6	106	42.0	12	0	0.0	0	321	124.0	30
Total (Fibre Crops)	145	54.0	12	70	28.0	6	106	42.0	12	0	0.0	0	321	124.0	30
Commercial Crops															
Mulberry	0	0.0	0	20	8.0	1	12	2.0	1	0	0.0	0	32	10.0	2
Sugarcane	39	16.0	5	2	1.0	1	10	4.0	1	0	0.0	0	51	21.0	7
Tobacco	0	0.0	0	10	4.0	1	0	0.0	0	0	0.0	0	10	4.0	1
Total (Commercial Crops)	39	16.0	5	32	13.0	2	22	6.0	2	0	0.0	0	93	35.0	9
Fodder Crops															
10 Cent model	10	2	1	0	0	0	0	0	0	0	0	0	10	2	1
Fodder Cowpea	0	0	0	8	1.2	1	0	0	0	0	0	0	8	1.2	1
Cumbu/Bajra Napier grass	45	18.5	5	35	35	4	5	5	1	5	5	1	90	63.5	11
Lucerne	10	4	1	0	0	0	0	0	0	0	0	0	10	4	1
Fodder Maize	0	0	0	10	4	1	0	0	0	0	0	0	10	4	1
Mixed fodder	20	0.8	2	10	2.5	1	0	0	0	15	5.4	2	45	8.7	5
Fodder Sorghum	0	0	0	0	0	0	5	5	1	0	0	0	5	5	1
Total (Fodder Crops)	85	25.3	9	63	42.7	6	10	10	1	20	10.4	2	178	88.4	18
Green Manure															
Daincha	25	10.0	3	0	0.0	0	0	0.0	0	0	0.0	0	25	10.0	3
Sunnhemp	50	20.0	6	10	4.0	1	0	0.0	0	0	0.0	0	60	24.0	7
Total (Green Manure)	75	30.0	8	10	4.0	1	0	0.0	0	0	0.0	0	85	34.0	9
Total (Field Crops)	2692	1001.4	31	1091	455.3	22	545	252.5	16	165	62.4	2	4493	1771.6	71
Horti															
Vegetables															
Amaranthus	90	24.6	8	0	0	0	0	0	0	0	0	0	90	24.6	8
Beetroot	5	5	1	0	0	0	0	0	0	0	0	0	5	5	1
Bhindi/Okra	15	6	2	0	0	0	0	0	0	5	2	1	20	8	3
Bitter gourd	5	5	1	0	0	0	0	0	0	0	0	0	5	5	1
Bottle gourd	0	0	0	10	4	1	0	0	0	0	0	0	10	4	1
Brinjal	90	36	8	20	5	2	35	14	5	20	8	1	165	63	16
Cabbage	0	0	0	10	4	1	5	2	1	0	0	0	15	6	2
Carrot	10	9	1	0	0	0	15	5	1	0	0	0	25	14	2
Cauliflower	0	0	0	0	0	0	5	2	1	0	0	0	5	2	1
Chilli (green)	70	422	8	35	14	2	37	13.3	6	5	2	1	147	451.3	17



Category	Tamil Nadu			Andhra Pradesh			Telangana			Puducherry			Total		
	Demos	Area(ha)	KVKs	Demos	Area(ha)	KVKs	Demos	Area (ha)	KVKs	Demos	Area (ha)	KVKs	Demos	Area (ha)	KVKs
Cluster Bean	70	21.2	8	0	0	0	0	0	0	0	0	0	70	21.2	8
Cocoponic	10	0.05	1	0	0	0	0	0	0	10	0.05	1	20	0.1	2
Coriander	25	6	3	0	0	0	5	2	1	0	0	0	30	8	4
Cucumber	10	4	1	0	0	0	0	0	0	0	0	0	10	4	1
Cucurbits	0	0	0	10	1	1	0	0	0	0	0	0	10	1	1
Dolichos Bean	10	4	1	5	2	1	15	6	2	0	0	0	30	12	4
Drumstick	30	10	3	5	2	1	5	1	1	0	0	0	40	13	5
French Bean	10	2	1	0	0	0	6	1	1	0	0	0	16	3	2
Lablab	45	14.2	5	0	0	0	0	0	0	0	0	0	45	14.2	5
Nutri-farm	10	1	1	20	2.9	2	20	2	1	0	0	0	50	5.9	4
Onion	60	14.4	5	15	6	2	31	9	4	0	0	0	106	29.4	11
Onion (Aggregatum)	55	18.5	6	0	0	0	0	0	0	0	0	0	55	18.5	6
Radish	5	1	1	0	0	0	0	0	0	0	0	0	5	1	1
Ridge gourd	35	12	4	41	18	4	25	10	4	10	2	1	111	42	13
Snake gourd	10	4	1	0	0	0	0	0	0	0	0	0	10	4	1
Solanum nigrum	20	1.2	2	0	0	0	0	0	0	0	0	0	20	1.2	2
Spine Gourd	0	0	0	0	0	0	5	2	1	0	0	0	5	2	1
Tomato	30	8.4	3	45	18	5	86	29.5	7	0	0	0	161	55.9	15
Vallarai	3	1	1	0	0	0	0	0	0	0	0	0	3	1	1
Total (Vegetables)	723	630.55	29	216	76.9	15	295	98.8	14	50	14.05	2	1284	820.3	60
Tubers															
Chinese Potato	10	1.0	1	0	0.0	0	0	0.0	0	0	0.0	0	10	1.0	1
Coleus	10	0.4	1	0	0.0	0	0	0.0	0	0	0.0	0	10	0.4	1
Colocasia	0	0.0	0	20	8.0	2	0	0.0	0	0	0.0	0	20	8.0	2
Elephant foot yam	5	2.0	1	10	4.0	1	0	0.0	0	0	0.0	0	15	6.0	2
Potato	5	5.0	1	0	0.0	0	0	0.0	0	0	0.0	0	5	5.0	1
Sweet potato	0	0.0	0	20	8.0	1	0	0.0	0	0	0.0	0	20	8.0	1
Tapioca (Cassava)	65	26.0	4	0	0.0	0	0	0.0	0	0	0.0	0	65	26.0	4
Total (Tubers)	95	34.4	6	50	20.0	3	0	0.0	0	0	0.0	0	145	54.4	9
Fruits															
Acid lime	10	4.0	1	34	14.0	2	12	3.9	1	0	0.0	0	56	21.9	4
Banana	115	33.0	10	66	30.2	8	0	0.0	0	0	0.0	0	181	63.2	18
Citrus	0	0.0	0	5	2.0	1	0	0.0	0	0	0.0	0	5	2.0	1
Grapes	5	2.0	1	0	0.0	0	0	0.0	0	0	0.0	0	5	2.0	1
Guava	40	16.0	4	16	6.4	2	20	8.0	3	0	0.0	0	76	30.4	9
Mango	30	10.0	3	76	30.4	5	53	16.9	6	10	2.0	1	169	59.3	15
Papaya	10	0.5	1	30	14.0	4	5	2.0	1	0	0.0	0	45	16.5	6
Pomegranate	0	0.0	0	29	13.0	3	0	0.0	0	0	0.0	0	29	13.0	3
Watermelon	20	5.0	2	10	4.0	1	6	1.0	1	10	2.0	1	46	12.0	5
Total (Fruits)	230	70.5	14	266	114.0	14	96	31.8	9	20	4.0	1	612	220.3	38
Flowers															
Chrysanthemum	10	4.0	1	31	12.8	4	6	2.4	1	0	0.0	0	47	19.2	6
Gerbera	10	1.0	1	0	0.0	0	0	0.0	0	0	0.0	0	10	1.0	1
Jasmine	140	37.6	14	0	0.0	0	0	0.0	0	0	0.0	0	140	37.6	14
Marigold	5	2.0	1	16	6.4	2	5	2.0	1	0	0.0	0	26	10.4	4
Tuberose	30	12.0	4	20	8.0	2	0	0.0	0	0	0.0	0	50	20.0	6
Total (Flowers)	195	56.6	18	67	27.2	6	11	4.4	2	0	0.0	0	273	88.2	26
Spices and Condi-ments															
Ajwain	0	0.0	0	5	2.0	1	0	0.0	0	0	0.0	0	5	2.0	1
Arecanut	10	4.0	1	0	0.0	0	0	0.0	0	0	0.0	0	10	4.0	1
Chilli (Red)	10	4.0	1	15	4.0	2	56	21.5	7	0	0.0	0	81	29.5	10
Coriander (seed)	20	4.4	2	20	8.0	2	0	0.0	0	0	0.0	0	40	12.4	4
Garlic	5	2.5	1	0	0.0	0	0	0.0	0	0	0.0	0	5	2.5	1

Category	Tamil Nadu			Andhra Pradesh			Telangana			Puducherry			Total		
	Demos	Area(ha)	KVKs	Demos	Area(ha)	KVKs	Demos	Area (ha)	KVKs	Demos	Area (ha)	KVKs	Demos	Area (ha)	KVKs
Ginger	0	0.0	0	20	8.0	2	0	0.0	0	0	0.0	0	20	8.0	2
Pepper	60	15.5	4	10	4.0	1	0	0.0	0	0	0.0	0	70	19.5	5
Turmeric (Dried)	30	10.0	3	20	8.0	2	8	3.2	2	0	0.0	0	58	21.2	7
Turmeric (Raw)	25	9.0	3	35	16.0	4	5	2.0	1	0	0.0	0	65	27.0	8
Total (Spices and Condiments)	160	49.4	13	125	50.0	11	69	26.7	9	0	0.0	0	354	126.1	33
Medicinal Crops															
Rosemary	10	7.0	2	0	0.0	0	0	0.0	0	0	0.0	0	10	7.0	2
Total (Medicinal crops)	10	7.0	2	0	0.0	0	0	0.0	0	0	0.0	0	10	7.0	2
Plantation crops															
Bamboo	10	1.0	1	0	0.0	0	0	0.0	0	0	0.0	0	10	1.0	1
Betelvine	10	4.0	1	15	5.0	2	0	0.0	0	0	0.0	0	25	9.0	3
Cashew	25	6.5	2	0	0.0	0	0	0.0	0	0	0.0	0	25	6.5	2
Coffee	0	0.0	0	10	4.0	1	0	0.0	0	0	0.0	0	10	4.0	1
Oil palm	0	0.0	0	16	6.4	2	5	2.0	1	0	0.0	0	21	8.4	3
Tea	5	2.5	1	0	0.0	0	0	0.0	0	0	0.0	0	5	2.5	1
Total (Plantation Crops)	50	14.0	5	41	15.4	4	5	2.0	1	0	0.0	0	96	31.4	10
Coconut															
Coconut	183	61.2	13	35	14.0	4	0	0.0	0	0	0.0	0	218	75.2	17
Total (Coconut)	183	61.2	13	35	14.0	4	0	0.0	0	0	0.0	0	218	75.2	17
Total (Horticultural Crops)	1646	923.7	31	800	317.5	23	476	163.7	15	70	18.1	2	2992	1422.9	71
Grand Total (Crops)	4338	1925.1	31	1891	772.8	23	1021	416.2	16	235	80.5	2	7485	3194.5	72

Demos = No. of Demonstrations, KVKs = No. of KVKs

Table 3.2.3. Details of category wise FLDs on crop hybrids in Zone-X

Category	Tamil Nadu			Andhra Pradesh			Telangana			Puducherry			Total		
	Demos	Area (ha)	KVKs	Demos	Area (ha)	KVKs	Demos	Area (ha)	KVKs	Demos	Area (ha)	KVKs	Demos	Area (ha)	KVKs
Field Crops															
Cereals															
Maize	55	21	5	6	2.4	1	0	0	0	0	0	0	61	23.4	6
Millets															
Pearl millet	15	6	2	0	0	0	0	0	0	0	0	0	15	6	2
Oilseeds															
Castor	10	4	1	25	10	4	0	0	0	0	0	0	35	14	5
Fibre Crops															
Cotton	20	8	2	0	0	0	0	0	0	10	2	1	30	10	3
Horticultural Crops															
Vegetables															
Bhindi/Okra	40	14	3	0	0	0	0	0	0	0	0	0	40	14	3
Bottle gourd	10	4	1	0	0	0	0	0	0	0	0	0	10	4	1
Brinjal	0	0	0	0	0	0	5	1	1	0	0	0	5	1	1
Chilli (green)	15	6	1	0	0	0	0	0	0	0	0	0	15	6	1
French Bean	0	0	0	0	0	0	6	1	1	0	0	0	6	1	1
Ridge gourd	30	8	3	0	0	0	7	1	1	0	0	0	37	9	4
Tomato	20	6	2	31	12.4	4	0	0	0	0	0	0	51	18.4	6
Spices and Condi-ments															
Chilli (Red)	5	1	1	5	3	1	5	2	1	0	0	0	15	6	3
Flowers															
Marigold	10	2	1	16	6.4	2	0	0	0	10	2	1	36	10.4	4
Fruits															
Mango	0	0	0	0	0	0	8	2	1	0	0	0	8	2	1
Total	230	80	22	83	34.2	12	31	7	5	20	4	2	364	125.2	41

Demos = No. of Demonstrations, KVKs = No. of KVKs

**Table 3.2.4. Details of category wise FLDs on Tools and implements in Zone-X**

Category	Tamil Nadu			Andhra Pradesh			Telangana			Puducherry			Total		
	Demos	Area (ha)	KVKs	Demos	Area (ha)	KVKs	Demos	Area (ha)	KVKs	Demos	Area (ha)	KVKs	Demos	Area (ha)	KVKs
Land preparation	0	0	0	25	4.2	3	15	4.4	2	0	0	0	40	8.5	5
Sowing and Planting	41	12.9	4	85	22.2	6	46	8.9	4	30	9.8	1	202	53.9	15
Intercultural operations	10	3.1	1	15	3.1	2	35	4.6	1	0	0	0	60	10.8	4
Plant protection	14	3.0	2	45	9.2	4	5	1.9	1	0	0	0	64	14.2	7
Farm Mechanization	3	4.6	1	0	0	0	0	0	0	0	0	0	3	4.6	1
Total Mechanization	4	1.7	1	20	6.4	2	0	0	0	0	0	0	24	8.2	3
Harvesting	66	25.8	6	0	0	0	10	4.0	1	40	5.2	1	116	35.1	8
Postharvest technology	14	3.7	2	0	0	0	29	11.1	4	0	0	0	43	14.8	6
Irrigation	0	0	0	0	0	0	8	1.6	1	0	0	0	8	1.6	1
Mechanization of Fishery	4	1.2	1	0	0	0	0	0	0	0	0	0	4	1.2	1
Total	156	56.1	9	190	45.1	10	148	36.5	9	70	15.1	2	564	152.8	30

Demos = No. of Demonstrations, KVKs = No. of KVKs

Table 3.2.5. Details of category wise FLDs on Livestock, poultry and fisheries in Zone-X

Category	Tamil Nadu			Andhra Pradesh			Telangana			Puducherry			Total		
	Demos	Nos.	KVKs	Demos	Nos.	KVKs	Demos	Nos.	KVKs	Demos	Nos.	KVKs	Demos	Nos.	KVKs
Cattle	587	1231	22	182	228	8	16	238	2	20	21	2	805	1718	34
Buffalo	0	0	0	248	1488	9	36	100	4	0	0	0	284	1588	13
Goat	100	830	9	30	260	3	0	0	0	10	3	1	140	1093	13
Sheep	50	260	5	106	545	8	5	10	1	0	0	0	161	815	14
Poultry	180	3895	15	254	2360	11	11	1550	2	20	50	1	465	7855	29
Duckery	15	200	2	0	0	0	0	0	0	0	0	0	15	200	2
Quail	20	0	1	1	250	1	0	0	0	0	0	0	21	250	2
Piggery	5	10	1	0	0	0	0	0	0	0	0	0	5	10	1
Rabbitry	5	15	1	0	0	0	0	0	0	0	0	0	5	15	1
Fish	70	68070	6	87	724505	6	21	33000	2	6	7500	1	184	833075	15
Total	1032	74511	24	908	729636	20	89	34898	5	56	7574	2	2085	846619	51

Nos. = No. of animals/fish/fingerlings, KVKs = No. of KVKs

Table 3.2.6. Details of category wise FLDs on enterprises in Zone-X

Category	Tamil Nadu			Andhra Pradesh			Telangana			Puducherry			Total		
	Demos	Nos.	KVKs	Demos	Nos.	KVKs	Demos	Nos.	KVKs	Demos	Nos.	KVKs	Demos	Nos.	KVKs
Drudgery Reduction	0	0	0	0	0	0	17	21	2	0	0	0	17	21	2
Sericulture	0	0	0	20	20	1	0	0	0	0	0	0	20	20	1
Value addition	265	351	16	134	413	11	45	52	5	0	0	0	444	816	32
Vegetable Production	30	30	3	20	20	2	6	6	1	0	0	0	56	56	6
Vermicompost	10	10	1	0	0	0	0	0	0	0	0	0	10	10	1
Total	305	391	17	174	453	11	68	79	6	0	0	0	547	923	34

Demos = No. of Demonstrations, Nos. = No. of enterprise units, KVKs = No. of KVKs

Table 3.2.7. Details of category wise FLDs on women empowerment in Zone-X

Category	Tamil Nadu			Andhra Pradesh			Telangana			Puducherry			Total		
	Demos	Nos.	KVKs	Demos	Nos.	KVKs	Demos	Nos.	KVKs	Demos	Nos.	KVKs	Demos	Nos.	KVKs
Drudgery Reduction	10	10	1	10	10	1	10	10	1	5	5	1	35	35	4
Entrepreneurship Development	35	50	3	5	10	1	5	25	1	9	9	1	54	94	6
Health and Nutrition	6	15	2	77	218	6	1	10	1	0	0	0	84	243	9
Kitchen Gardening	78	457	9	56	2411	7	91	105	5	0	0	0	225	2973	21
Storage	0	0	0	1	2	1	10	10	1	0	0	0	11	12	2
Value Addition	0	0	0	177	301	6	30	30	1	5	5	1	212	336	8
Total	129	532	12	326	2952	14	147	190	5	19	19	1	621	3693	32

Demos = No. of Demonstrations, Nos. = No. of enterprise units, KVKs = No. of KVKs

3.2.1. Performance of Technologies in Frontline Demonstrations

A total number of 1623 FLDs on varieties, IPM and IDM technologies were conducted on rice crop with an average yield increase of 13.49% and BCR of 1:2.17 as against 1:1.92 in farmers practice (Table 3.2.8). The average yield advantages in the 120 demonstrations on finger millet, 95 demonstrations on sorghum, 85 demonstrations on barnyard millet and 80 demonstrations on foxtail millet were 14.26, 17.44, 21.94 and 13.54 per cent, respectively and the BCR was 1:2.39, 1:2.63, 1:2.35 and 1:2.27, respectively. Among pulses, an average yield increase of 23.99 per cent was observed in 370 demonstrations on blackgram varieties and technologies while in the 178 demonstrations on greengram, the average yield increase was 18.98 per cent. Among the oilseeds, the average yield enhancement in 409 demonstrations on groundnut was 18.99 per cent and the BCR was 1:2.17. Cotton technologies were demonstrated at 321 locations with an average yield enhancement of 19.76 per cent. Among the vegetable crops, brinjal varieties and technologies were demonstrated at 165 locations with an average yield enhancement of 21.01 per cent, tomato in 161 demonstrations with an average yield enhancement of 19.71 per cent and green chilli at 147 locations with an average yield increase of 13.4 per cent. Among the fruit crops, banana varieties and technologies were demonstrated at 181 locations with an average yield increase of 15.50 per cent. Mango was demonstrated at 169 locations with an average yield enhancement of 27.67 per cent. Guava was demonstrated at 76 locations with an average yield increase of 19.53 per cent. Red chilli was demonstrated at 81 locations with an average yield increase of 16.17 per cent. Turmeric (raw) was demonstrated at 65 locations with an average yield enhancement of 15.82 per cent. Pepper was demonstrated at 70 locations with an average yield increase of 38.51 per cent. Among plantation crops, an average yield of increase of 22.99 per cent was observed in 218 demonstrations on coconut.

Among hybrids maize, tomato, bhindi, ridge gourd, marigold, castor and cotton were demonstrated at 61, 51, 40, 37, 36, 35 and 30 locations presented in Table 3.2.9.

Tools and implements for sowing and planting, intercultural operations, harvesting equipment and post-harvest processing tools and equipment were demonstrated at 564 locations. The performance of technologies in terms of income and benefit cost ratio are presented in Table 3.2.10.

KVKs in the Zone conducted 2085 demonstrations involving 846619 animals, birds and fish fingerlings on breed evaluation, disease management, production management, feed and fodder management, nutrition management composite fish culture and other themes (Table 3.2.11).

Technologies like Bioteat dip solution, BoviMastrt Cup, Ethno veterinary practices, Healex Ointments, Herbal acaricide, Herbal anthelmintic bolus (Helmokil), Jesh Heal, Ketocheck, Ketoquant, Masti guard, Teat protectant spray, SCC Kit, Megatex Spray, Nano dermal cream, Nano Methicone, Oil emulsion treatment, Ovisynch protocol in buffalo heifers, Phyto-supplement, Sex sorted semen, SFMT Reagent, Summer stress, management, Tick shield, Double PGF2 alpha protocol, 10 cent multi crop fodder model, Amino Biotic Mix powder, Anionic mineral mixture, Area specific mineral mixture, Azolla, Bypass fat, Creep feed supplement, De-oiled rice bran feed, Fodder sorghum CoFS 33, CO-FS-31, GNC juice, Goatmin mineral mixture, Grain sprout, Improved GRAND supplement, Kid Milk Replacer, Maize silage, Mash feeding, NIANP Milk replacer, NIANP Small ruminants mineral mixture, Cattle Probiotic, Sheepmin, Sodium Bicarbonate, Super Napier grass, CO 4 CN grass, TANUVAS GRAND, TANUVAS sheep and goat mineral mixture, TANUVAS Smart Mineral mixture, TANUVAS-VIC biofoam, Total Mixed Ration (TMR), Vit A injectable, Vit E & Selenium, Vitamin supplementation, Fish Carp Grower Floating Feed, Indian major carps culture, Inland Pisciculture with Gift Tilapia, Labeo rohita, Monoculture of GIFT Tilapia, grass carp, milk fish,



Demonstration of disease management in betel vine using bourdex mixture-KVK Visakhapatnam, Andhra Pradesh



Demonstration of Drought tolerant sorghum - KVK Kurnool (Yagantipalle), Andhra Pradesh



Demonstration of yellow sticky trap in paddy-KVK Thiruvannamalai, Tamil Nadu



Field day on paddy variety CO58-KVK Dindigul, Tamil Nadu

Mrigala, Common Carp, Pacu fish culture, Rohu, Grass Carp, Stunted fish fingerlings, Composite fish culture, Duck Cum GIFT Tilapia, Dyke & Bird fencing, Floating fish feed, GI Freshwater Prawn (GI Scampi), GIFT Tilapia Fish Culture, Grass Carp, Koduva fish culture, Mussel – Lamellidens, Prawn - Macrobrachium rosenbergii, Molasses coated mineral brick, Aseel bird. Vanashree, Poultry Naked Neck Nandanam Broiler, Namakkal Gold Quail, Nandhanam 4 chicken, Probeads EC beads, Rajasri, Kadaknath, Gaghus, TANUVAS Aseel, TANUVAS star Chicken, New Zealand White Rabbit, TANUVAS KPM Gold pigs, *etc.*, were demonstrated

(Table 3.2.11). Performance of various enterprises sericulture, value addition of agricultural and horticultural produces, vegetable cultivation and vermicompost production were demonstrated and compared with farmers practice in terms of production, income, quality, benefit cost ratio *etc.* (Table 3.2.12.). Enterprises suitable for small business-like value-added products from millets, vegetables, mushroom, *etc.*, drudgery reduction machines and tools like weeders, planters *etc.*, were demonstrated to women farmers for their empowerment (Table 3.2.13).

Table 3.2.8. Performance of crop varieties and technologies in the FLDs of Zone X

Crop	Demos	Area (ha)	KVKs	Yield (q/ha)			Economics					
				Demo	Check	%	Demonstration			Check		
							Gross Cost (Rs.)	Net Returns (Rs.)	BCR	Gross Cost (Rs.)	Net Returns (Rs.)	BCR
Field Crops												
Cereals												
Maize	245	89.80	22	58.33	51.06	14.23	62498	84155	1:2.35	63022	64447	1:2.02
Paddy (Rice)	1623	632.30	59	55.51	48.91	13.49	63782	74705	1:2.17	65041	59840	1:1.92
Total (Cereals)	1868	722.10	63									
Millets												
Barnyard millet	85	34.00	9	41.38	33.94	21.94	31881	43014	1:2.35	33812	35903	1:2.06
Finger millet	120	44.00	12	25.06	21.93	14.26	41058	57129	1:2.39	44946	45925	1:2.02
Foxtail millet	80	31.40	10	17.68	13.54	30.58	42197	53709	1:2.27	36691	43111	1:2.17
Kodo millet	20	8.00	2	17.78	13.70	29.74	33983	39259	1:2.16	35218	30423	1:1.86
Little millet	10	4.00	1	16.76	13.78	21.63	17840	21037	1:2.18	20040	11843	1:1.59
Pearl millet	45	17.00	4	28.41	23.97	18.49	32171	43866	1:2.36	32009	30608	1:1.96
Sorghum	95	34.40	12	29.83	25.40	17.44	36585	59788	1:2.63	37069	45870	1:2.24
Total (Millets)	455	172.80	34									
Pulses												
Blackgram	370	139.00	29	10.42	8.41	23.99	41292	50540	1:2.22	40178	40086	1:2.00
Chickpea	125	44.00	11	18.23	14.86	22.68	53055	56604	1:2.07	51105	38227	1:1.75
Cowpea	50	20.00	6	10.91	8.97	21.73	28952	33160	1:2.15	29745	21194	1:1.71
Greengram	178	67.20	13	8.04	6.76	18.98	31371	40440	1:2.29	29908	27099	1:1.91
Horse gram	30	12.00	3	15.51	11.74	32.05	20533	53733	1:3.62	20267	33729	1:2.66
Moth bean	10	4.00	1	12.00	9.00	33.33	17000	67000	1:4.94	20000	43000	1:3.15
Rajmah	30	12.00	2	4.78	3.79	25.92	24583	28190	1:2.15	21800	18380	1:1.84
Redgram	141	63.00	14	16.34	13.70	19.33	40427	61245	1:2.51	42350	42481	1:2.00
Total (Pulses)	934	361.20	50									
Oilseeds												
Castor	35	14.00	4	14.10	11.95	17.94	34403	42278	1:2.23	32125	32175	1:2.00
Groundnut	409	170.05	37	22.92	19.26	18.99	71293	83381	1:2.17	70453	58311	1:1.83
Safflower	5	2.00	1	2.95	2.72	8.46	18700	15050	1:1.80	19870	9830	1:1.49
Sesamum	85	38.00	9	12.12	8.87	36.62	41690	71001	1:2.70	43723	38064	1:1.87
Sunflower	25	10.00	4	16.58	13.05	27.01	57250	121747	1:3.13	53500	82098	1:2.53
Total (Oilseeds)	559	234.05	43									



Crop	Demos	Area (ha)	KVKs	Yield (q/ha)			Economics					
				Demo	Check	%	Demonstration			Check		
							Gross Cost (Rs.)	Net Returns (Rs.)	BCR	Gross Cost (Rs.)	Net Returns (Rs.)	BCR
Fibre Crops												
Cotton	321	124.00	30	30.36	25.35	19.76	75747	88717	1:2.17	78335	64390	1:1.82
Total (Fibre Crops)	321	124.00	30									
Commercial Crops												
Mulberry	32	10.00	2	179.38	151.50	18.40	29706	114532	1:4.86	30688	74479	1:3.43
Sugarcane	51	21.00	7	760.77	664.65	14.46	131657	181333	1:2.38	134310	141048	1:2.05
Tobacco	10	4.00	1	18.70	17.50	6.86	375000	93750	1:1.25	375000	62500	1:1.17
Total (Commercial Crops)	93	35.00	9									
Fodder Crops												
10 Cent model	10	2.00	1	252.75	94.50	167.46	19580	56242	1:3.87	8550	15075	1:2.76
Fodder Cowpea	8	1.20	1	174.80	130.60	33.84	5550	17800	1:4.21	5650	10300	1:2.82
Cumbu/Bajra Napier grass	90	63.50	11	739.94	607.35	21.83	44126	75595	1:2.71	43022	55798	1:2.30
Lucerne	10	4.00	1	40.12	32.00	25.38	18400	32740	1:2.78	17500	21300	1:2.22
Fodder Maize	10	4.00	1	12.00	8.00	50.00	276000	211000	1:1.76	184000	104000	1:1.57
Mixed fodder	45	8.70	5	172.22	115.28	49.39	40217	67726	1:2.68	29745	32465	1:2.09
Fodder Sorghum	5	5.00	1									
Total (Fodder Crops)	178	88.40	18									
Green Manure												
Diancha	25	10.00	3	46.93	40.52	15.84	14333	24017	1:2.68	13333	14567	1:2.09
Sunnhemp	60	24.00	7	16.91	14.30	18.26	27869	43451	1:2.56	27300	29196	1:2.07
Total (Green Manure)	85	34.00	9									
Total (Field Crops)	4493	1771.55	71									
Horti												
Vegetables												
Amaranthus	90	24.60	8	245.28	174.00	40.96	44733	91401	1:3.04	43175	72781	1:2.69
Beetroot	5	5.00	1	171.80	159.70	7.58	308000	293300	1:1.95	316000	242950	1:1.77
Bhindi/Okra	20	8.00	3	178.61	151.03	18.26	80333	246100	1:4.06	76667	163043	1:3.13
Bitter gourd	5	5.00	1	98.30	81.10	21.21	185000	159050	1:1.86	189500	94350	1:1.50
Bottle gourd	10	4.00	1	38.75	26.00	49.04	155000	232500	1:2.50	158000	82000	1:1.52
Brinjal	165	63.00	16	277.58	229.38	21.01	231860	427544	1:2.84	191707	285193	1:2.49
Cabbage	15	6.00	2	569.10	472.20	20.52	156210	269550	1:2.73	139850	209250	1:2.50
Carrot	25	14.00	2	226.71	201.76	12.37	182929	234069	1:2.28	198470	185135	1:1.93
Cauliflower	5	2.00	1	230.00	213.00	7.98	223740	236260	1:2.06	233770	192230	1:1.82
Chilli (green)	147	451.30	17	100.52	88.65	13.40	152283	200976	1:2.32	159432	147455	1:1.92
Cluster Bean	70	21.20	8	164.97	142.02	16.16	67343	86942	1:2.29	54107	54778	1:2.01
Cacophonic	20	0.10	2	107.93	86.13	25.30	90872	126554	1:2.39	85091	101595	1:2.19
Coriander	30	8.00	4	123.24	96.11	28.23	35175	98763	1:3.81	32475	72840	1:3.24
Cucumber	10	4.00	1	168.50	146.60	14.94	100000	148000	1:2.48	100000	132000	1:2.32
Cucurbits	10	1.00	1	210.00	195.00	7.69	135000	95000	1:1.70	135000	88200	1:1.65
Dolichos Bean	30	12.00	4	94.54	86.28	9.57	178365	159585	1:1.89	167100	133790	1:1.80
Drumstick	40	13.00	5	239.35	164.49	45.51	95097	215836	1:3.27	112414	110681	1:1.98
French Bean	16	3.00	2	163.50	129.35	26.40	91519	292331	1:4.19	90868	209268	1:3.30
Lablab	45	14.20	5	86.74	65.47	32.48	98236	169036	1:2.72	95159	116568	1:2.22
Nutri-farm	50	5.90	4	217.17	164.25	32.22	138312	67902	1:1.49	117706	124903	1:2.06
Onion	106	29.40	11	117.34	101.47	15.63	113002	214469	1:2.9	126424	178470	1:2.41
Onion (Aggregatum)	55	18.50	6	113.23	88.59	27.81	128383	210901	1:2.64	129820	134917	1:2.04



Crop	Demos	Area (ha)	KVKs	Yield (q/ha)			Economics					
				Demo	Check	%	Demonstration			Check		
							Gross Cost (Rs.)	Net Returns (Rs.)	BCR	Gross Cost (Rs.)	Net Returns (Rs.)	BCR
Radish	5	1.00	1	315.80	293.60	7.56	54800	103100	1:2.88	62000	84800	1:2.37
Ridge gourd	111	42.00	13	195.02	165.47	17.86	170807	325479	1:2.91	170550	245002	1:2.44
Snake gourd	10	4.00	1	152.50	128.80	18.40	90200	184300	1:3.04	92300	113780	1:2.23
Solanum nigrum	20	1.20	2	212.50	141.00	50.71	40000	120000	1:4.00	35000	70000	1:3.00
Spine Gourd	5	2.00	1	450.70	341.20	32.09	221500	258100	1:2.17	152100	124500	1:1.82
Tomato	161	55.90	15	358.36	299.35	19.71	169400	349621	1:3.06	176821	284382	1:2.61
Vallarai	3	1.00	1	20.20	12.70	59.06	22800	47800	1:3.10	19000	21500	1:2.13
Total (Vegetables)	1284	820.30	60									
Tubers												
Chinese Potato	10	1.00	1	174.46	149.36	16.81	98534	355062	1:4.60	90742	237850	1:3.62
Coleus	10	0.40	1	164.46	149.36	10.11	98534	230278	1:3.34	98534	170217	1:2.73
Colocasia	20	8.00	2	62.51	53.00	17.94	158280	125430	1:1.79	145750	94450	1:1.65
Elephant foot yam	15	6.00	2	225.50	204.00	10.54	127345	197925	1:2.55	128675	131955	1:2.03
Potato	5	5.00	1	21.14	19.42	8.86	333500	406400	1:2.22	338300	341400	1:2.01
Sweet potato	20	8.00	1	93.53	86.78	7.78	60580	96971	1:2.60	56080	84543	1:2.51
Tapioca (Cassava)	65	26.00	4	405.68	337.15	20.33	130438	185435	1:2.42	129649	132502	1:2.02
Total (Tubers)	145	54.40	9									
Fruits												
Acid lime	56	21.90	4	130.49	111.73	16.79	744200	465621	1:1.63	185824	172107	1:1.93
Banana	181	63.20	18	289.13	250.34	15.50	213716	392928	1:2.84	222822	303467	1:2.36
Citrus	5	2.00	1	200.00	162.50	23.08	250000	450000	1:2.80	250000	318750	1:2.28
Grapes	5	2.00	1	179.00	152.00	17.76	168552	457948	1:3.72	163544	368456	1:3.25
Guava	76	30.40	9	205.05	171.54	19.53	120416	234927	1:2.95	127640	163828	1:2.28
Mango	169	59.30	15	226.63	177.51	27.67	118211	170329	1:2.44	106463	116346	1:2.09
Papaya	45	16.50	6	446.26	377.00	18.37	323544	507195	1:2.57	299545	385464	1:2.29
Pomegranate	29	13.00	3	577.81	519.76	11.17	431443	1595406	1:4.70	362518	1224537	1:4.38
Watermelon	46	12.00	5	328.10	301.67	8.76	140176	260354	1:2.86	154595	205940	1:2.33
Total (Fruits)	612	220.30	38									
Flowers												
Chrysanthemum	47	19.20	6	112.19	95.58	17.38	282127	558774	1:2.98	249912	355409	1:2.42
Gerbera	10	1.00	1	180.00	120.00	50.00	30000	24000	1:1.80	30000	6000	1:1.20
Jasmine	140	37.60	14	47.83	41.14	16.27	282175	488255	1:2.73	265770	318321	1:2.20
Marigold	26	10.40	4	145.46	113.41	28.26	146196	208273	1:2.42	133791	128353	1:1.96
Tuberose	50	20.00	6	110.42	91.62	20.53	187895	291935	1:2.55	186573	208346	1:2.12
Total (Flowers)	273	88.20	26									
Spices and Condiments												
Ajwain	5	2.00	1	5.50	4.00	37.50	36000	52000	1:2.44	64000	22000	1:1.34
Arecanut	10	4.00	1	35.00	13.20	165.15	7400	10100	1:2.36	5800	800	1:1.14
Chilli (Red)	81	29.50	10	49.60	42.70	16.17	308553	433218	1:2.40	353866	335221	1:1.95
Coriander (seed)	40	12.40	4	34.69	30.42	14.03	72929	65819	1:1.90	67763	48278	1:1.71
Garlic	5	2.50	1	13.20	13.00	1.54	9650	6190	1:1.64	9950	5050	1:1.51
Ginger	20	8.00	2	78.70	75.29	4.52	163800	249760	1:2.52	181519	198301	1:2.09
Pepper	70	19.50	5	53.40	38.55	38.51	240396	409496	1:2.70	223117	274940	1:2.23
Turmeric (Dried)	58	21.20	7	102.99	86.30	19.34	181912	248086	1:2.36	187598	187882	1:2.00
Turmeric (Raw)	65	27.00	8	243.92	210.61	15.82	155721	279088	1:2.79	151028	232939	1:2.54
Total (Spices and Condiments)	354	126.10	33									



Crop	Demos	Area (ha)	KVKs	Yield (q/ha)			Economics					
				Demo	Check	%	Demonstration			Check		
							Gross Cost (Rs.)	Net Returns (Rs.)	BCR	Gross Cost (Rs.)	Net Returns (Rs.)	BCR
Medicinal Crops												
Rosemary	10	7.00	2	102.50	90.00	13.89	121875	111042	1:1.91	136656	72976	1:1.53
Total (Medicinal crops)	10	7.00	2									
Plantation crops												
Bamboo	10	1.00	1	150.00	100.00	50.00	20000	10000	1:1.50	20000	5000	1:1.25
Betelvine (No. of leaves)	25	9.00	3	19859	14639	35.66	393180	242990	1:1.62	331465	162048	1:1.49
Cashew	25	6.50	2	61.08	56.16	8.77	29239	47285	1:2.62	30640	34610	1:2.13
Coffee	10	4.00	1	5.73	5.27	8.73	42715	160440	1:4.76	36465	147630	1:5.05
Oil palm	21	8.40	3	228.90	197.50	15.90	301067	213067	1:1.71	229550	106033	1:1.46
Tea	5	2.50	1	7.90	7.50	5.33	80000	78000	1:1.98	85000	65000	1:1.76
Total (Plantation Crops)	96	31.40	10									
Coconut												
Coconut (No/ha)	218	75.21	17	11980	9741	22.99	68365	123122	1:2.80	106994	83341	1:1.78
Total (Coconut)	218	75.21	17									
Total (Horticultural Crops)	2992	1422.91	71									
Grand Total (Crops)	7485	3194.46	72									

Demos = No. of Demonstrations, KVKs = No. of KVKs; Demo = Demonstration; Check = Farmer's Practice; % = Per cent increase in demonstration over check; BCR = Benefit-Cost Ratio

Table 3.2.9. Performance of hybrids in the FLDs of Zone X

Crop	Demos	Area (ha)	KVKs	Yield (q/ha)			Economics					
				Demo	Check	%	Demonstration			Check		
							Gross Cost (Rs.)	Net Returns (Rs.)	BCR	Gross Cost (Rs.)	Net Returns (Rs.)	BCR
Maize	61	23.40	6	62.21	53.46	16.37	56698	78358	1:2.38	59407	55349	1:1.93
Cotton	30	10.00	3	26.51	20.73	27.86	78472	121833	1:2.55	83976	60554	1:1.72
Pearl millet	15	6.00	2	26.72	19.61	36.29	25178	59131	1:3.35	25535	36660	1:2.44
Castor	35	14.00	5	16.81	13.49	24.63	46449	48488	1:2.04	44445	31056	1:1.70
Marigold	36	10.40	4	146.64	117.48	24.82	254116	310947	1:2.22	204366	217426	1:2.06
Mango	8	2.00	1	59.00	37.00	59.46	115535	31695	1:1.27	102325	31695	1:1.31
Chilli (Red)	15	6.00	3	39.61	34.91	13.44	201832	510495	1:3.53	217145	418669	1:2.93
Bhindi/Okra	40	14.00	3	174.39	146.65	18.92	259472	284007	1:2.09	184786	184460	1:2.00
Bottle gourd	10	4.00	1	36.41	29.83	22.06	81101	54635	1:1.67	82505	23043	1:1.28
Brinjal	5	1.00	1	337.40	271.20	24.41	194670	142730	1:1.73	209762	63438	1:1.30
Chilli (green)	15	6.00	1	124.12	104.60	18.66	85954	152447	1:2.77	84206	118091	1:2.40
French Bean	6	1.00	1	124.50	116.20	7.14	24900	236550	1:10.50	27010	217010	1:9.03
Ridge gourd	37	9.00	4	159.93	130.03	22.99	371793	245015	1:1.66	144696	155088	1:2.07
Tomato	51	18.40	6	565.63	479.44	17.98	170221	435363	1:3.56	184235	331334	1:2.80
Total	364	125.20	41									

Demos = No. of Demonstrations, KVKs = No. of KVKs; Demo = Demonstration; Check = Farmer's Practice; % = Per cent increase in demonstration over check; BCR = Benefit-Cost Ratio



Demonstration of IPM in Banana - KVK Coimbatore, Tamil Nadu



**Demonstration of Nutri Health Mix
KVK Dindigul, Tamil Nadu**



**Demonstration of striped catfish and indigenous carps
in pond system-KVK Kancheepuram, Tamil Nadu**



Demonstration of Masti prevent spray (Herbal) for mastitis-KVK Villupuram II, Tamil Nadu

**Table 3.2.10. Performance of tools and implement in the FLDs of Zone X**

Tool/ Implement/ Machinery	Demos	Area (ha)	KVKs	Economics					
				Demonstration			Check		
				Gross Cost (Rs.)	Net Returns (Rs.)	BCR	Gross Cost (Rs.)	Net Returns (Rs.)	BCR
Agriculture Drone	64	23.0	7	85571	66165	1:1.77	87026	47013	1:1.54
Banana soil augur	10	4.0	1	52000	47800	1:1.92	55000	32200	1:1.59
Bhendi vegetable dibbler	10	4.0	1	15000	35000	1:3.33	19000	30000	1:2.58
Castor chisel plough	5	2.0	1	47700	4553	1:1.10	43300	722	1:1.02
Castor seed to seed mechanization	10	4.0	1	21402	39065	1:2.83	25196	26660	1:2.06
Chilli power weeder	10	2.0	1	370000	134000	1:1.36	375000	129000	1:1.34
Coconut multi tree climber	76	18.0	5	14707	26373	1:2.79	16264	24322	1:2.50
Coconut shredder cum pulverizer	4	1.0	1	5500	6500	1:2.18	480	70	1:1.15
Cotton shredder	10	4.0	2	62035	108009	1:2.74	68545	81497	1:2.19
Cotton SVPP Planter	20	10.0	1	90666	62478	1:1.69	76676	45148	1:1.59
Fish de scaler	4	1.0	1	3900	700	1:1.18	3200	400	1:1.13
Ground nut seed drill	20	6.0	2	69500	107875	1:2.55	78875	74000	1:1.94
Groundnut blade guntaka	5	2.0	1	32800	24388	1:1.74	29020	20454	1:1.70
Groundnut decorticator	10	4.0	1	54141	29358	1:1.54	56911	15511	1:1.27
Groundnut digger	5	2.0	1	51720	41640	1:1.81	47350	32020	1:1.68
Groundnut hand push seed drill	23	8.0	3	90339	67760	1:1.75	90554	53366	1:1.59
Groundnut seed cum ferti drill	6	2.0	1	56400	108100	1:2.92	56750	87590	1:2.54
Groundnut seed to seed mechanization	4	1.0	1	36304	26913	1:1.74	43627	8313	1:1.19
Groundnut stripper	10	4.0	1	54141	29358	1:1.54	56911	15511	1:1.27
Groundnut tractor drawn seed drill	5	1.2	1	54600	73640	1:2.35	51360	17240	1:1.34
Improved mango harvester	10	0.0	1	12000	65000	1:6.42	15000	35200	1:3.35
Maize hand push seed drill	20	7.0	2	50190	93481	1:2.86	69458	90711	1:2.31
Mango side shift rotator	5	2.0	1	89890	98495	1:2.10	96729	29745	1:1.31
Millet planter	10	4.0	1	15000	40000	1:3.67	18000	35000	1:2.94
Onion rain drip micro irrigation	8	4.0	1	166500	107000	1:1.64	170000	92000	1:1.54
paddy auger plough	10	4.0	1	64375	83055	1:2.29	70625	75425	1:2.07
Paddy baler	16	20.0	1	65000	300000	1:5.62	68000	290000	1:5.26
Paddy drum seeder	10	4.0	1	22000	40000	1:2.82	25000	36000	1:2.44
Paddy modified drum seeder	3	1.2	1	28640	63004	1:3.20	32800	41288	1:2.26
Paddy roto puddler	10	4.0	1	65650	51720	1:1.79	67650	44150	1:1.65
Paddy seed cum ferti drill	20	8.0	2	55541	79350	1:2.43	59958	67044	1:2.12
Paddy seed drill	10	4.0	2	98249	91447	1:1.93	98017	79094	1:1.81
Paddy seed to seed mechanization	20	6.0	2	47042	104311	1:3.22	68071	64385	1:1.95
Palmyrah multi tree climber	23	8.0	2	4850	17360	1:4.58	5751	10925	1:2.90
Pigeonpea nine row planter	15	10.0	1	30000	20548	1:1.68	35000	15500	1:1.44
Redgram harvester	5	2.0	1	26780	32670	1:2.22	31210	27530	1:1.88
Sugarcane In-situ trash Shredder	10	5.0	1	75000	155000	1:3.07	72000	125000	1:2.74
Tobacco subsoiler	10	2.0	1	390000	100000	1:1.26	375000	89800	1:1.24

Tool/ Implement/ Machinery	Demos	Area (ha)	KVKs	Economics					
				Demonstration			Check		
				Gross Cost (Rs.)	Net Returns (Rs.)	BCR	Gross Cost (Rs.)	Net Returns (Rs.)	BCR
Triple-layer hermetic bags	3	0.0	1	3000	-	-	1000	-	-
Vegetables mulching sheet layer	20	5.0	1	285000	350000	1:2.23	290000	300000	1:2.03
Vegetables rain pipe	15	5.0	1	146180	200000	1:2.37	150000	190000	1:2.27
Total	564	208.4	30						

Demos = No. of Demonstrations, KVKs = No. of KVKs; Demo = Demonstration; Check = Farmer's Practice; % = Per cent increase in demonstration over check; BCR = Benefit-Cost Ratio

Table 3.2.11. Performance of livestock, poultry and fishery technologies in the FLDs of Zone X

State/Technology	Demos	No. of animals	KVKs	Economics					
				Demonstration			Check		
				Gross Cost (Rs.)	Net Returns (Rs.)	BCR	Gross Cost (Rs.)	Net Returns (Rs.)	BCR
Cattle									
U Disease Management	342	950	21	19346	27172	1:2.40	18323	15413	1:1.84
Evaluation of Breeds	60	70	2	8267	7863	1:1.95	7750	10358	1:2.34
Feed and Fodder management	97	266	10	7970	12555	1:2.58	7631	9267	1:2.21
Nutrition Management	71	96	6	35382	40095	1:2.13	29367	20331	1:1.69
Production and Management	235	336	15	16866	20497	1:2.22	14023	11822	1:1.84
Total (Cattle)	805	1718	34						
Buffalo									
Feed and Fodder management	80	1220	5	13604	17056	1:2.25	9575	10865	1:2.13
Nutrition Management	91	200	6	16361	16369	1:2.00	12136	9360	1:1.77
Production and Management	113	168	8	21551	20035	1:1.93	15867	11440	1:1.72
Total (Buffalo)	284	1588	13						
Goat									
Disease Management	20	220	2	3850	5074	1:2.32	4007	2779	1:1.69
Nutrition Management	90	273	9	5603	8459	1:2.51	6075	6138	1:2.01
Production and Management	30	600	3	9153	12029	1:2.31	7821	4603	1:1.59
Total (Goat)	140	1093	13						
Sheep									
Disease Management	10	20	1	16800	22440	1:2.34	13230	4150	1:1.31
Nutrition Management	126	665	10	2762	4983	1:2.80	2317	3247	1:2.40
Production and Management	25	130	3	3220	3748	1:2.16	3167	2763	1:1.87
Total (Sheep)	161	815	14						
Poultry									
Disease Management	10	100	1	145	245	1:2.69	140	190	1:2.36
Evaluation of Breeds	285	5035	16	4505	7815	1:2.73	4526	4454	1:1.98
Feed and Fodder management	25	125	4	4097	11757	1:3.87	3732	9744	1:3.61
Nutrition Management	40	410	4	1548	1134	1:1.73	1343	665	1:1.50
Production and Management	105	2185	10	5045	8549	1:2.69	4381	3958	1:1.90
Total (Poultry)	465	7855	29						
Duckery									
Production and Management	5	100	1	721	698	1:1.97	513	187	1:1.36
Small Scale Income Generation Enterprises	10	100	1	112600	451040	1:5.01	-	-	-
Total (Duckery)	15	200	2						
Quail									
Evaluation of Breeds	21	250	2	3653	4727	1:2.29	3110	2657	1:1.85
Total (Quail)	21	250	2						



State/Technology	Demos	No. of animals	KVKs	Economics					
				Demonstration			Check		
				Gross Cost (Rs.)	Net Returns (Rs.)	BCR	Gross Cost (Rs.)	Net Returns (Rs.)	BCR
Piggery									
Production and Management	5	10	1	30488	25000	1:1.82	15217	3500	1:1.23
Total (Piggery)	5	10	1						
Rabbitry									
Production and Management	5	15	1	4118	2100	1:1.51	3065	521	1:1.17
Total (Rabbitry)	5	15	1						
Fishery									
Composite fish culture	17	15500	3	177900	91299	1:1.51	151867	48441	1:1.32
Disease Management	26	15000	4	630818	266971	1:1.42	515040	130860	1:1.25
Evaluation of Breeds	3	15000	1	215000	149750	1:1.70	57500	38000	1:1.66
Feed and Fodder management	21	18000	4	124606	112649	1:1.90	70568	32874	1:1.47
Fish Production	30	107500	4	68074	103714	1:2.52	62893	42036	1:1.67
Nutrition Management	9	0	1	83333	75333	1:1.90	75667	55000	1:1.73
Production and Management	73	62075	8	148202	131443	1:1.89	132839	54045	1:1.41
Others	5	600000	1	315000	193300	1:1.61	315000	60000	1:1.19
Total (Fishery)	184	833075	15						
Grand Total	2085	846619	51						

MM= Mineral mixture; Demos = No. of Demonstrations, Nos.=No. of animals/birds/fish; Demo = Demonstration; Check = Farmer's Practice, % = Per cent increase in demonstration over check; BCR = Benefit Cost Ratio; ICF=Inland Fish Culture; CFC = Composite Fish Culture

Table 3.2.12. Performance of enterprises in the FLDs of Zone X

State/Technology	Demos	No. of units.	KVKs	Economics					
				Demonstration			Check		
				Gross Cost (Rs.)	Net Returns (Rs.)	BCR	Gross Cost (Rs.)	Net Returns (Rs.)	BCR
Drudgery reduction	17	21	2	47000	30400	1:1.65	38500	18000	1:1.47
Sericulture	20	20	1	30963	103597	1:4.35	27282	76312	1:3.80
Value addition	444	816	32	10491	13271	1:2.26	6894	4092	1:1.59
Vegetable Production	56	56	6	4988	5197	1:2.04	2498	2567	1:2.03
Vermicompost	10	10	1	15800	39800	1:3.52	5600	7600	1:2.36
Total	547	923	34						

Demos = No. of Demonstrations, Nos.= No. of enterprise units, Demo = Demonstration, Check = Farmer's Practice, % = Per cent increase in demonstration over check; BCR = Benefit Cost Ratio

Table 3.2.13. Performance of enterprises on women empowerment in the FLDs of Zone X

State/Technology	Demos	No. of enterprises	KVKs	Economics					
				Demonstration			Check		
				Gross Cost (Rs.)	Net Returns (Rs.)	BCR	Gross Cost (Rs.)	Net Returns (Rs.)	BCR
Drudgery Reduction	35	35	4	-	-	-	-	-	-
Entrepreneurship Development	54	94	6	5538	10353	1:2.87	777	621	1:1.80
Health and Nutrition	84	243	9	1357	2928	1:3.16	501	988	1:2.97
Kitchen Gardening	225	2973	21	2976	5876	1:2.97	2682	1292	1:1.48
Storage	11	12	2	-	-	-	-	-	-
Value Addition	212	336	8	893	1455	1:2.63	376	301	1:1.80
Total	621	3693	32						

Demos = No. of Demonstrations, Nos.= No. of enterprise units, Demo = Demonstration, Check = Farmer's Practice, % = Per cent increase in demonstration over check BCR = Benefit Cost Ratio



Demonstration of dry seeding with ICM practices in paddy - KVK Ramanathapuram, Tamil Nadu



Demonstration of Palmyrah processing and value addition-KVK Ramanathapuram, Tamil Nadu



Demonstration on dry direct seeded rice with seed drill KVK Mancherial, Telangana



Demonstration of Hand push seed drill for Maize KVK Visakhapatnam, Andhra Pradesh



Shri Napa Srinivasulu of **Nellore, Andhra Pradesh** adopted NTJ-5 a short-statured, drought-tolerant, non-lodging white Jowar variety and achieved a yield of 4,478 kg/ha, compared to 3,730 kg/ha from earlier hybrids and got an additional net return of ₹26,511 per hectare. "I am impressed by the performance of the Jowar variety NTJ 5 and I recommend the variety to my fellow farmers".



3.3. Trainings

Training is one of the important mandates of Krishi Vigyan Kendras which plays a pivotal role in capacity development of farmers and extension personnel to update their knowledge and skills on improved agricultural technologies. Accordingly, KVKs assess the training needs, prioritize, and conduct various training programmes for farmers and farmwomen primarily focused on knowledge and skills, while it is entrepreneurship development for rural youth and knowledge on frontier areas of science and technology for extension personnel. During the reporting period, KVKs in Zone-X conducted 8162 training programmes to 312410

beneficiaries (Table 3.3.1) including farmers, rural youth extension functionaries, sponsored trainings, and vocational trainings.

A total of 7234 training programmes on agricultural and allied technologies to increase the production and productivity of crops, dairy and others were organized for 262887 farmers and farm women, rural youth, and extension functionaries by KVKs in the Zone. Sponsored training was conducted for 40512 beneficiaries and vocational training for 9011 beneficiaries through 659 and 269 programmes, respectively. Clientele wise details conducted by KVKs of different states in Zone X are furnished in Table 3.3.2.

Table 3.3.1. Details of client wise training programmes organized by KVKs in Zone-X

Category	Tamil Nadu		Andhra Pradesh		Telangana		Puducherry		Total	
	NC	NP	NC	NP	NC	NP	NC	NP	NC	NP
Need-based trainings										
Farmers and Farm Women	2765	89144	1648	61956	932	45158	67	1795	5412	198053
Rural Youth	499	13770	307	9742	122	4060	8	174	936	27746
Extension Personnel	306	11184	401	18845	177	7007	2	52	886	37088
Total need-based trainings	3570	114098	2356	90543	1231	56225	77	2021	7234	262887
Sponsored Trainings	486	33480	107	3511	55	3267	11	254	659	40512
Vocational Trainings	174	5577	59	2332	33	1017	3	85	269	9011
Grand total	4230	153155	2522	96386	1319	60509	91	2360	8162	312410

NC = No. of courses NP = No. of Participants

Table 3.3.2. Details of client wise training programmes organized by KVKs in Zone-X

Clientele	No. of Courses	Other Beneficiaries			SC/ST Beneficiaries			Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Tamil Nadu										
FFW	2765	37604	24946	62550	12725	13869	26594	50329	38815	89144
RY	499	4936	4554	9490	1865	2415	4280	6801	6969	13770
EF	306	5379	4340	9719	629	836	1465	6008	5176	11184
Total	3570	47919	33840	81759	15219	17120	32339	63138	50960	114098
Sponsored	486	6383	7167	13550	7493	12437	19930	13876	19604	33480
Vocational	174	1899	2042	3941	524	1112	1636	2423	3154	5577
Grand Total	4230	56201	43049	99250	23236	30669	53905	79437	73718	153155
Andhra Pradesh										
FFW	1648	29363	15340	44703	9991	7262	17253	39354	22602	61956
RY	307	3642	3100	6742	1601	1399	3000	5243	4499	9742
EF	401	8845	6506	15351	1883	1611	3494	10728	8117	18845
Total	2356	41850	24946	66796	13475	10272	23747	55325	35218	90543
Sponsored	107	1367	942	2309	550	652	1202	1917	1594	3511
Vocational	59	947	651	1598	263	471	734	1210	1122	2332
Grand Total	2522	44164	26539	70703	14288	11395	25683	58452	37934	96386
Telangana										
FFW	932	19123	7755	26878	11481	6799	18280	30604	14554	45158

Clientele	No. of Courses	Other Beneficiaries			SC/ST Beneficiaries			Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
RY	122	1497	735	2232	1247	581	1828	2744	1316	4060
EF	177	3191	1500	4691	1337	979	2316	4528	2479	7007
Total	1231	23811	9990	33801	14065	8359	22424	37876	18349	56225
Sponsored	55	1074	343	1417	1187	663	1850	2261	1006	3267
Vocational	33	196	89	285	325	407	732	521	496	1017
Grand Total	1319	25081	10422	35503	15577	9429	25006	40658	19851	60509
Puducherry										
FFW	67	911	298	1209	332	254	586	1243	552	1795
RY	8	53	47	100	59	15	74	112	62	174
EF	2	0	39	39	0	13	13	0	52	52
Total	77	964	384	1348	391	282	673	1355	666	2021
Sponsored	11	42	145	187	18	49	67	60	194	254
Vocational	3	42	27	69	7	9	16	49	36	85
Grand Total	91	1048	556	1604	416	340	756	1464	896	2360
Grand total for Zone -X										
FFW	5412	87001	48339	135340	34529	28184	62713	121530	76523	198053
RY	936	10128	8436	18564	4772	4410	9182	14900	12846	27746
EF	886	17415	12385	29800	3849	3439	7288	21264	15824	37088
Total	7234	114544	69160	183704	43150	36033	79183	157694	105193	262887
Sponsored	659	8866	8597	17463	9248	13801	23049	18114	22398	40512
Vocational	269	3084	2809	5893	1119	1999	3118	4203	4808	9011
Grand Total	8162	126494	80566	207060	53517	51833	105350	180011	132399	312410

FFW=Farmers and Farm Women, RY=Rural Youth, EF=Extension Functionaries

Thematic area wise trainings offered to farmers and farm women are furnished in Table 3.3.3. A total of 5412 training courses were organized for 198053 farmers in Tamil Nadu, Andhra Pradesh, Telangana, and Puducherry. Among the various thematic areas, 1391 courses were on crop

production, 747 on horticulture, 484 on soil health, 546 on livestock, 655 on women empowerment, 155 on agricultural engineering, 660 on plant protection, 161 on fisheries, 226 on production of seeds and other inputs, 288 on capacity building and 99 on agro-forestry.

3.3.1. Farmers and Farm women

Table 3.3.3. Details of subject area wise training programmes conducted for farmers in Zone-X

Thematic area	No. of courses	Participants								
		Others			SC/ST			Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
I. Crop production										
Crop Diversification	70	1567	753	2320	558	484	1042	2125	1237	3362
Cropping Systems	70	1279	593	1872	674	374	1048	1953	967	2920
Integrated Crop Management	452	8827	3120	11947	3440	2119	5559	12267	5239	17506
Integrated Farming	82	1302	621	1923	552	374	926	1854	995	2849
Integrated nutrient management	145	2368	936	3304	1097	561	1658	3465	1497	4962
Micro Irrigation/irrigation	24	417	244	661	196	127	323	613	371	984
Nursery management	32	487	305	792	387	190	577	874	495	1369
Production of organic inputs	77	1062	872	1934	629	434	1063	1691	1306	2997
Resource Conservation Technologies	62	1145	472	1617	255	220	475	1400	692	2092
Seed production	96	1763	657	2420	532	382	914	2295	1039	3334
Soil & water conservation	38	537	235	772	335	155	490	872	390	1262
Weed Management	63	1023	612	1635	344	276	620	1367	888	2255
Others	180	4487	1435	5922	1863	831	2694	6350	2266	8616
Total of Crop Production	1391	26264	10855	37119	10862	6527	17389	37126	17382	54508



Thematic area	No. of courses	Participants								
		Others			SC/ST			Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
II Horticulture										
a) Vegetable Crops										
Exotic vegetables	8	105	37	142	29	6	35	134	43	177
Export potential vegetables	10	221	53	274	46	14	60	267	67	334
Grading and standardization	11	126	92	218	61	46	107	187	138	325
Nursery raising	53	837	411	1248	271	154	425	1108	565	1673
Off-season vegetables	28	625	206	831	125	119	244	750	325	1075
Production of low value and high-volume crops	62	773	461	1234	277	207	484	1050	668	1718
Protective cultivation	45	820	412	1232	362	199	561	1182	611	1793
Others in vegetable crop	42	549	337	886	395	230	625	944	567	1511
Others	93	1878	610	2488	532	366	898	2410	976	3386
Total of vegetable crops	352	5934	2619	8553	2098	1341	3439	8032	3960	11992
b) Fruits										
Cultivation of Fruit	53	1184	318	1502	395	174	569	1579	492	2071
Export potential fruits	5	118	46	164	29	30	59	147	76	223
Layout and Management of Orchards	8	147	51	198	76	34	110	223	85	308
Management of young plants/orchards	17	292	109	401	223	85	308	515	194	709
Micro irrigation systems of orchards	10	144	61	205	14	27	41	158	88	246
Plant propagation techniques	9	171	73	244	57	23	80	228	96	324
Rejuvenation of old orchards	19	162	46	208	80	22	102	242	68	310
Training and Pruning	18	324	138	462	54	22	76	378	160	538
Others	25	438	203	641	161	118	279	599	321	920
Total of fruits	164	2980	1045	4025	1089	535	1624	4069	1580	5649
c) Ornamental Plants										
Export potential of ornamental plants	6	62	43	105	17	46	63	79	89	168
Management of potted plants	1	12	10	22	2	3	5	14	13	27
Nursery Management	14	189	160	349	103	51	154	292	211	503
Propagation techniques of Ornamental Plants	6	68	62	130	23	44	67	91	106	197
Others in Ornamental Plants	0	0	0	0	0	0	0	0	0	0
Others (Specify)	13	161	49	210	108	44	152	269	93	362
Total in Ornamental Plants	40	492	324	816	253	188	441	745	512	1257
d) Plantation crops										
Plantation crops	0	0	0	0	0	0	0	0	0	0
Processing and value addition	8	108	55	163	58	52	110	166	107	273
Production and Management technology	61	1548	407	1955	429	227	656	1977	634	2611
Others	11	76	71	147	245	76	321	321	147	468
Total of Plantation crops	80	1732	533	2265	732	355	1087	2464	888	3352
e) Tuber crops										
Processing and value addition	1	19	12	31	3	3	6	22	15	37
Production and Management technology	20	193	87	280	157	44	201	350	131	481
Others (Specify)	3	78	17	95	0	0	0	78	17	95
Total of tuber crops	24	290	116	406	160	47	207	450	163	613
f) Spices										
Spices	0	0	0	0	0	0	0	0	0	0
Processing and value addition	8	185	50	235	37	16	53	222	66	288
Production and Management technology	40	708	275	983	411	146	557	1119	421	1540
Others	8	84	11	95	104	43	147	188	54	242
Total of spices	56	977	336	1313	552	205	757	1529	541	2070
g) Medicinal and Aromatic Plants										
Nursery management	6	122	40	162	96	45	141	218	85	303
Post harvest technology and value addition	4	55	30	85	37	7	44	92	37	129
Production and management technology	19	217	164	381	118	84	202	335	248	583
Others	2	18	20	38	0	6	6	18	26	44
Total of medicinal plants	31	412	254	666	251	142	393	663	396	1059
Grand Total of Horticulture	747	12817	5227	18044	5135	2813	7948	17952	8040	25992
III Soil Health and Fertility Mangmt.										
Balance use of fertilizers	50	787	385	1172	210	224	434	997	609	1606
Integrated Nutrient Management	112	1702	779	2481	439	456	895	2141	1235	3376
Integrated water management	16	301	199	500	33	22	55	334	221	555



Thematic area	No. of courses	Participants								
		Others			SC/ST			Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Management of Problematic soils	26	365	229	594	64	43	107	429	272	701
Micronutrient deficiency in crops	18	254	152	406	54	40	94	308	192	500
Nutrient Use Efficiency	20	312	139	451	115	129	244	427	268	695
Production and use of organic inputs	39	817	409	1226	195	178	373	1012	587	1599
Soil and Water Testing	80	2230	1115	3345	600	327	927	2830	1442	4272
Soil fertility management	70	1364	561	1925	476	254	730	1840	815	2655
Others	53	1180	541	1721	210	183	393	1390	724	2114
Total of Soil Health	484	9312	4509	13821	2396	1856	4252	11708	6365	18073
IV Livestock Production and Mangmt.										
Animal Nutrition Management	63	939	525	1464	282	305	587	1221	830	2051
Dairy Management	84	1063	824	1887	445	526	971	1508	1350	2858
Disease Management	48	603	568	1171	339	358	697	942	926	1868
Feed & fodder technology	70	916	691	1607	443	416	859	1359	1107	2466
Piggery Management	8	145	58	203	67	32	99	212	90	302
Poultry Management	122	1246	1024	2270	712	1147	1859	1958	2171	4129
Production of quality animal products	14	200	202	402	140	82	222	340	284	624
Rabbit Management	4	67	41	108	19	10	29	86	51	137
Goat farming	87	1193	792	1985	326	303	629	1519	1095	2614
Others	46	649	343	992	339	189	528	988	532	1520
Total of livestock	546	7021	5068	12089	3112	3368	6480	10133	8436	18569
V Home Science/Women empowerment										
Design and development of low/minimum cost diet	30	136	602	738	48	205	253	184	807	991
Designing and development for high nutrient efficiency diet	28	95	309	404	45	250	295	140	559	699
Gender mainstreaming through SHGs	13	13	191	204	3	201	204	16	392	408
Household food security by kitchen gardening and nutrition gardening	107	779	1498	2277	278	1231	1509	1057	2729	3786
Location specific drudgery reduction technologies	22	212	406	618	67	161	228	279	567	846
Minimization of nutrient loss in processing	5	3	101	104	2	95	97	5	196	201
Processing and cooking	26	91	439	530	31	211	242	122	650	772
Rural Crafts	3	11	41	52	0	34	34	11	75	86
Storage loss minimization techniques	17	93	143	236	30	111	141	123	254	377
Value addition	269	1759	4366	6125	620	2365	2985	2379	6731	9110
Women and childcare	67	230	1096	1326	132	867	999	362	1963	2325
Women empowerment	37	200	518	718	130	311	441	330	829	1159
Others	31	189	391	580	72	300	372	261	691	952
Total of home science	655	3811	10101	13912	1458	6342	7800	5269	16443	21712
VI Agril. Engineering										
Farm Machinery and its maintenance	55	978	406	1384	452	244	696	1430	650	2080
Installation and maintenance of micro irrigation systems	24	427	169	596	137	55	192	564	224	788
Post Harvest Technology	15	291	131	422	70	51	121	361	182	543
Production of small tools and implements	7	130	60	190	42	30	72	172	90	262
Repair and maintenance of farm machinery and implements	16	328	145	473	129	62	191	457	207	664
Small scale processing and value addition	6	108	71	179	39	22	61	147	93	240
Use of Plastics in farming practices	6	96	47	143	50	28	78	146	75	221
Solar powered farm devices	26	636	233	869	156	69	225	792	302	1094
Others	0	0	0	0	0	0	0	0	0	0
Total of Agril engineering	155	2994	1262	4256	1075	561	1636	4069	1823	5892
VII Plant Protection										
Bio-control of pests and diseases	76	1546	764	2310	481	358	839	2027	1122	3149
Integrated Disease Management	190	3276	1133	4409	1129	693	1822	4405	1826	6231
Integrated Pest Management	264	4628	1719	6347	1698	761	2459	6326	2480	8806
Production of bio control agents and bio pesticides	39	571	392	963	184	151	335	755	543	1298



Thematic area	No. of courses	Participants								
		Others			SC/ST			Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Seed treatment techniques	91	2852	827	3679	1268	360	1628	4120	1187	5307
Storage pest management	0	0	0	0	0	0	0	0	0	0
Others	0	0	0	0	0	0	0	0	0	0
Total of plant protection	660	12873	4835	17708	4760	2323	7083	17633	7158	24791
VIII Fisheries										
Breeding and culture of ornamental fishes	8	54	37	91	63	53	116	117	90	207
Carp breeding and hatchery management	8	89	40	129	94	52	146	183	92	275
Carp fry and fingerling rearing	7	71	35	106	38	25	63	109	60	169
Composite fish culture	40	489	171	660	210	145	355	699	316	1015
Edible oyster farming	3	38	0	38	22	0	22	60	0	60
Fish processing and value addition	9	118	69	187	27	55	82	145	124	269
Hatchery management and culture of freshwater prawn	1	0	0	0	22	18	40	22	18	40
Integrated fish farming	16	119	115	234	85	123	208	204	238	442
Pearl culture	1	0	0	0	18	20	38	18	20	38
Pen culture of fish and prawn	2	19	32	51	21	22	43	40	54	94
Portable plastic carp hatchery	0	0	0	0	0	0	0	0	0	0
Shrimp farming	7	51	38	89	31	54	85	82	92	174
Others	59	707	378	1085	275	173	448	982	551	1533
Total of Fisheries	161	1755	915	2670	906	740	1646	2661	1655	4316
IX Production of Inputs at site										
Apiculture	19	273	151	424	160	111	271	433	262	695
Bio-agents production	8	111	86	197	26	68	94	137	154	291
Bio-fertilizer production	5	73	6	79	20	8	28	93	14	107
Bio-pesticides production	6	49	28	77	40	120	160	89	148	237
Mushroom Production	38	586	338	924	189	157	346	775	495	1270
Organic manures production	60	979	461	1440	347	353	700	1326	814	2140
Planting material production	2	40	14	54	0	0	0	40	14	54
Production of Bee-colonies and wax sheets	8	152	96	248	43	24	67	195	120	315
Production of Fish feed	3	34	36	70	0	9	9	34	45	79
Production of fry and fingerlings	0	0	0	0	0	0	0	0	0	0
Production of livestock feed and fodder	0	0	0	0	0	0	0	0	0	0
Seed Production	7	97	56	153	19	36	55	116	92	208
Small tools and implements	1	21	3	24	13	2	15	34	5	39
Vermi-compost production	51	851	456	1307	254	260	514	1105	716	1821
Others	18	391	161	552	72	28	100	463	189	652
Total of inputs	226	3657	1892	5549	1183	1176	2359	4840	3068	7908
X Capacity Building and Group Dynamics										
Entrepreneurial development of farmers/ youths	80	921	824	1745	679	502	1181	1600	1326	2926
Formation and Management of SHGs	21	292	143	435	97	109	206	389	252	641
Group dynamics	25	484	199	683	207	145	352	691	344	1035
Leadership development	14	55	92	147	38	289	327	93	381	474
Mobilization of social capital	4	40	35	75	22	26	48	62	61	123
WTO and IPR issues	0	0	0	0	0	0	0	0	0	0
Others	144	3364	1685	5049	1878	1024	2902	5242	2709	7951
Total of capacity building	288	5156	2978	8134	2921	2095	5016	8077	5073	13150
XI Agro-forestry										
Integrated Farming Systems	37	580	335	915	383	200	583	963	535	1498
Nursery management	7	132	44	176	100	30	130	232	74	306
Production technologies	30	344	151	495	106	48	154	450	199	649
Others in agroforestry	4	36	52	88	17	36	53	53	88	141
Others	21	249	115	364	115	69	184	364	184	548
Total of agroforestry	99	1341	697	2038	721	383	1104	2062	1080	3142
GRAND TOTAL	5412	87001	48339	135340	34529	28184	62713	121530	76523	198053



Training on fish cutlet preparation KVK Karaikal, Puducherry



**Training on Mushroom cultivation
KVK Visakhapatnam (BCT), Andhra Pradesh**



**Training on post harvest management in Banana
KVK Coimbatore, Tamil Nadu**



**Training on silage making feeding and disease
management in cattle KVK Salem, Tamil Nadu**



**Training on value addition in fruits
KVK Visakhapatnam (BCT), Andhra Pradesh**



Training on IPDM in rice-KVK Kanyakumari, Tamil Nadu

3.3.2. Rural Youth

Various training programmes on entrepreneurship development, employment creation and income generation in agriculture and allied areas among rural youth were conducted by the KVKs in Zone-X. A total of 936 courses were organized for 27746 rural

youth in Tamil Nadu, Andhra Pradesh, Telangana and Puducherry. The training areas included value addition in agriculture, dairy, fisheries, animal husbandry products, mushroom production, production of organic inputs, integrated farming, bee keeping, nursery management, dairying, poultry production, *etc.*, (Table 3.3.4).



Skill training to rural youth on Mushroom cultivation-KVK Visakhapatnam (BCT), Andhra Pradesh

Table 3.3.4. Details of training programmes for rural youth in Zone-X

Area of training	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Bee-keeping	59	635	454	1089	536	172	708	1171	626	1797
Cold water fisheries	1	0	6	6	0	24	24	0	30	30
Commercial fruit production	5	78	45	123	21	12	33	99	57	156
Composite fish culture	17	285	28	313	108	45	153	393	73	466
Dairying	33	481	167	648	197	134	331	678	301	979
Fish harvest and processing technology	5	51	51	102	22	38	60	73	89	162
Freshwater prawn culture	1	0	0	0	10	20	30	10	20	30
Fry and fingerling rearing	4	38	8	46	27	10	37	65	18	83
Integrated farming	48	667	445	1112	207	223	430	874	668	1542
Mushroom Production	68	778	643	1421	267	306	573	1045	949	1994
Nursery Management of Horticulture crops	54	688	471	1159	357	210	567	1045	681	1726
Ornamental fisheries	4	34	21	55	39	6	45	73	27	100
Pearl culture	0	0	0	0	0	0	0	0	0	0
Piggery	4	40	7	47	18	9	27	58	16	74
Planting material production	13	139	41	180	70	35	105	209	76	285
Post Harvest Technology	13	123	148	271	84	109	193	207	257	464
Poultry production	29	383	283	666	146	120	266	529	403	932
Production of organic inputs	55	612	497	1109	212	151	363	824	648	1472

Area of training	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Production of quality animal products	5	19	68	87	18	6	24	37	74	111
Protected cultivation of vegetable crops	14	261	90	351	88	39	127	349	129	478
Quail farming	6	49	57	106	18	17	35	67	74	141
Rabbit farming	1	0	0	0	20	11	31	20	11	31
Repair and maintenance of farm machinery and implements	12	129	16	145	90	101	191	219	117	336
Rural Crafts	1	12	8	20	2	6	8	14	14	28
Seed production	16	228	106	334	59	56	115	287	162	449
Sericulture	15	229	75	304	103	39	142	332	114	446
Sheep and goat rearing	36	459	177	636	199	170	369	658	347	1005
Shrimp farming	2	22	9	31	3	2	5	25	11	36
Small scale processing	5	46	76	122	7	15	22	53	91	144
Tailoring and Stitching	10	10	98	108	70	99	169	80	197	277
Training and pruning of orchards	9	159	92	251	36	32	68	195	124	319
Value addition	121	480	1606	2086	280	623	903	760	2229	2989
Vermi-culture / Vermicomposting	76	890	648	1538	386	431	817	1276	1079	2355
SRI production technologies	4	65	24	89	11	4	15	76	28	104
Nutrient management in pandal cultivated crops	11	163	65	228	80	55	135	243	120	363
Bio-floc fish farming	5	80	13	93	6	2	8	86	15	101
Others (Specify)	174	1795	1893	3688	975	1078	2053	2770	2971	5741
TOTAL Youth Trainings	936	10128	8436	18564	4772	4410	9182	14900	12846	27746

3.3.3. Extension Functionaries

Capacity Development Programmes for district level extension functionaries were organized by KVKs in Tamil Nadu, Andhra Pradesh, Telangana, and Puducherry states. A total of 886 training

courses were conducted in which 37088 Extension Functionaries participated and benefited (Table 3.3.5). Among various areas of training, the highest number of 164 training courses were conducted on integrated pest management.

Table 3.3.5. Details of trainings for Extension Functionaries in Zone-X

Area of training	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Capacity building for ICT application	43	906	479	1385	259	147	406	1165	626	1791
Care & maintenance of farm machinery & implements	19	454	118	572	179	64	243	633	182	815
Formation and Management of SHGs	11	166	113	279	79	49	128	245	162	407
Gender mainstreaming through SHGs	4	101	50	151	18	8	26	119	58	177
Group Dynamics and farmers organization	23	716	249	965	170	66	236	886	315	1201
Household and Food Security	26	264	590	854	20	149	169	284	739	1023
Information networking among farmers	15	756	517	1273	19	47	66	775	564	1339

Area of training	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Integrated Nutrient management	75	2405	1608	4013	396	286	682	2801	1894	4695
Integrated Pest Management	164	3990	2208	6198	748	391	1139	4738	2599	7337
Livestock feed and fodder production	36	586	322	908	146	143	289	732	465	1197
Low cost and nutrient efficient diet designing	16	68	400	468	0	227	227	68	627	695
Management in farm animals	22	218	239	457	77	105	182	295	344	639
Production and use of organic inputs	29	495	382	877	182	84	266	677	466	1143
Productivity enhancement in field crops	86	1806	1086	2892	467	314	781	2273	1400	3673
Protected cultivation technology	24	494	291	785	72	43	115	566	334	900
Rejuvenation of old orchards	15	272	102	374	134	71	205	406	173	579
Women and Childcare	47	38	1315	1353	5	585	590	43	1900	1943
Integrated farming system	41	683	704	1387	153	86	239	836	790	1626
Preparation of bankable projects	1	0	21	21	0	9	9	0	30	30
Cage fish culture	1	0	0	0	20	17	37	20	17	37
Others (Specify)	188	2997	1591	4588	705	548	1253	3702	2139	5841
TOTAL Extension Functionaries	886	17415	12385	29800	3849	3439	7288	21264	15824	37088

3.3.4 Sponsored Trainings

KVKs conducted sponsored training programmes from ATMA, MANAGE and other agencies in addition to regular training programmes. A total of 659 sponsored training programmes were conducted for 40512 youth in Zone-X (Table 3.3.6).

A maximum number of courses were conducted on crop production and management (287) followed by production and value addition (115), Livestock and fisheries (114), Home science (59), Post harvest technology (35) and Agricultural extension (29) (Table 3.3.7).



Sponsored training for Krishi Sakhis on Natural Farming - KVK Tiruvavur, Tamil Nadu



Sponsored training by Coconut Development Board - KVK Karaikal, Puducherry



Sponsored training on FMD vaccination-KVK Karimnagar (Ramagirikhilla), Telangana



**Sponsored training on Home made soap preparation
KVK Coimbatore, Tamil Nadu**



**Sponsored training on fabric printing and dyeing
technics - KVK Prakasam (Darsi), Andhra Pradesh**

**Table 3.3.6. Details of state wise sponsored training programmes in Zone-X**

State	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Tamil Nadu	486	6383	7167	13550	7493	12437	19930	13876	19604	33480
Andhra Pradesh	107	1367	942	2309	550	652	1202	1917	1594	3511
Telangana	55	1074	343	1417	1187	663	1850	2261	1006	3267
Puducherry	11	42	145	187	18	49	67	60	194	254
Total	659	8866	8597	17463	9248	13801	23049	18114	22398	40512

Table 3.3.7. Details of sponsored training programmes in Zone-X

Area of training	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop production and management										
Commercial production of vegetables	31	865	288	1153	334	155	489	1199	443	1642
Increasing production and productivity of crops	75	1601	770	2371	769	321	1090	2370	1091	3461
Others	181	2089	2346	4435	6152	9889	16041	8241	12235	20476
Total crop production trainings	287	4555	3404	7959	7255	10365	17620	11810	13769	25579
Production and value addition										
Fruit Plants	1	16	9	25	5	7	12	21	16	37
Methods of protective cultivation	1	20	10	30	0	0	0	20	10	30
Ornamental plants	0	0	0	0	0	0	0	0	0	0
Production of Inputs at site	9	140	87	227	10	16	26	150	103	253
Soil health and fertility management	26	458	594	1052	60	33	93	518	627	1145
Spices crops	1	147	10	157	41	3	44	188	13	201
Others	77	413	548	961	291	697	988	704	1245	1949
Total Production and Value Addition Trainings	115	1194	1258	2452	407	756	1163	1601	2014	3615
Post harvest technology and value addition										
Processing and value addition	29	88	155	243	291	359	650	379	514	893
Others	6	19	44	63	22	79	101	41	123	164
Total PHT and VA	35	107	199	306	313	438	751	420	637	1057
Farm machinery										
Farm machinery, tools and implements	6	130	55	185	45	12	57	175	67	242
Others	14	173	106	279	38	71	109	211	177	388
Total FM	20	303	161	464	83	83	166	386	244	630
Livestock and fisheries										
Animal Disease Management	7	84	85	169	23	42	65	107	127	234
Animal Nutrition Management	8	290	290	580	77	68	145	367	358	725
Fisheries Management	10	178	70	248	28	35	63	206	105	311
Fisheries Nutrition	0	0	0	0	0	0	0	0	0	0
Livestock production and management	18	535	809	1344	238	446	684	773	1255	2028
Integrated farming	50	450	595	1045	78	69	147	528	664	1192

Area of training	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Others	21	222	734	956	107	349	456	329	1083	1412
Total LS and F	114	1759	2583	4342	551	1009	1560	2310	3592	5902
Home Science										
Drudgery reduction of women	0	0	0	0	0	0	0	0	0	0
Economic empowerment of women	21	33	269	302	8	331	339	41	600	641
Household nutritional security	4	0	70	70	0	100	100	0	170	170
Others	34	156	328	484	439	478	917	595	806	1401
Total HS	59	189	667	856	447	909	1356	636	1576	2212
Agricultural Extension										
Capacity Building and Group Dynamics	7	149	53	202	24	11	35	173	64	237
Others	22	610	272	882	168	230	398	778	502	1280
Total AE	29	759	325	1084	192	241	433	951	566	1517
GRAND TOTAL SPONSORED TRAININGS	659	8866	8597	17463	9248	13801	23049	18114	22398	40512

3.3.5 Vocational Training

Krishi Vigyan Kendras in Tamil Nadu, Andhra Pradesh, Telangana, and Puducherry conducted vocational training courses for farmers, rural youth, school dropouts and women to create self-employment and income generation in the rural areas. A total of **269** vocational training

courses were conducted in which **9011** farmers, women, rural youth, and extension functionaries participated (Table 3.3.8) in Zone X. Maximum number of courses were conducted on income generation activities (**95**) followed by crop production and management (**78**), Livestock and fisheries (**48**), post-harvest technologies value addition (**45**), etc. (Table 3.3.9).



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Vocational training on vermicompost production from farm waste-KVK Tiruvavur, Tamil Nadu

**Table 3.3.8. Details of state wise vocational training programmes in Zone-X**

State	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Tamil Nadu	174	1899	2042	3941	524	1112	1636	2423	3154	5577
Andhra Pradesh	59	947	651	1598	263	471	734	1210	1122	2332
Telangana	33	196	89	285	325	407	732	521	496	1017
Puducherry	3	42	27	69	7	9	16	49	36	85
Total	269	3084	2809	5893	1119	1999	3118	4203	4808	9011

Table 3.3.9. Details of vocational training programmes in Zone-X

Area of training	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop production and management										
Commercial floriculture	2	11	32	43	0	5	5	11	37	48
Commercial fruit production	0	0	0	0	0	0	0	0	0	0
Commercial vegetable production	4	27	18	45	39	27	66	66	45	111
Integrated crop management	9	257	71	328	48	41	89	305	112	417
Organic farming	39	640	388	1028	100	168	268	740	556	1296
Others	24	229	228	457	99	179	278	328	407	735
Total CPM	78	1164	737	1901	286	420	706	1450	1157	2607
Post harvest technology and value addition										
Value addition	34	190	425	615	85	376	461	275	801	1076
Others	11	76	173	249	47	108	155	123	281	404
Total PHT and VA	45	266	598	864	132	484	616	398	1082	1480
Livestock and fisheries										
Composite fish culture	7	75	82	157	19	27	46	94	109	203
Dairy farming	7	89	99	188	39	48	87	128	147	275
Piggery	1	7	1	8	0	0	0	7	1	8
Poultry farming	9	91	62	153	50	51	101	141	113	254
Sheep and goat rearing	11	149	85	234	56	38	94	205	123	328
Others	13	111	104	215	88	144	232	199	248	447
Total LS and F	48	522	433	955	252	308	560	774	741	1515
Income generation activities										
Agril. para-workers, para-vet training	2	16	12	28	3	13	16	19	25	44
Implements	1	15	0	15	0	0	0	15	0	15
Biofertilizers	4	83	13	96	7	17	24	90	30	120
Mushroom cultivation	10	132	71	203	36	62	98	168	133	301
Nursery, grafting etc.	8	125	53	178	28	18	46	153	71	224
Production of bio-agents, bio-pesticides,	9	16	102	118	39	79	118	55	181	236
Repair and maintenance of farm machinery	4	53	23	76	40	42	82	93	65	158
Rural Crafts	2	0	80	80	0	30	30	0	110	110
Seed production	1	0	20	20	0	10	10	0	30	30
Sericulture	0	0	0	0	0	0	0	0	0	0
Tailoring, stitching, embroidery, dyeing etc.	5	0	0	0	0	191	191	0	191	191

Area of training	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Vermicomposting	20	285	94	379	118	151	269	403	245	648
Others	29	377	538	915	138	169	307	515	707	1222
Total IGA	95	1102	1006	2108	409	782	1191	1511	1788	3299
Agricultural Extension										
Capacity building and group dynamics	2	0	18	18	0	2	2	0	20	20
Others	1	30	17	47	40	3	43	70	20	90
Total AE	3	30	35	65	40	5	45	70	40	110
Grand Total	269	3084	2809	5893	1119	1999	3118	4203	4808	9011



Vocational training on mushroom cultivation
KVK Kadap (Utukur), Andhra Pradesh



Vocational Training on Soil fertility management
KVK Coimbatore, Tamil Nadu



Vocational training on Nursery production-KVK Chittoor (RASS), Andhra Pradesh

3.4. Extension Activities

KVKs organized 46627 extension activities for creating awareness about latest improved agricultural technologies in which 4895966 farmers and 55677 Extension Personnel participated and benefited (Table 3.4.1). The extension activities included advisory services, exposure visits, animal health camps, technology week, group discussions, method demonstrations, soil health camps, Kisan mela, Kisan ghosthi

etc. (Table 3.4.2). KVKs in Tamil Nadu organized 26909 extension activities for 970875 farmers and Extension Personnel (Table 3.4.3). KVKs in Andhra Pradesh organized 9435 extension activities in which 602020 persons participated (Table 3.4.4). In Telangana, 9668 activities were organized for 3241383 participants (Table 3.4.5). In Puducherry 615 extension activities were organized for 137365 participants (Table 3.4.6).

Table 3.4.1. Details of state wise extension activities organized by KVKs in Zone-X

State	No. of programmes	No. of farmers	No. of Extension Personnel	Total
Tamil Nadu	26909	951367	19508	970875
Andhra Pradesh	9435	582228	19792	602020
Telangana	9668	3226535	14848	3241383
Puducherry	615	135836	1529	137365
Total	46627	4895966	55677	4951643

Table 3.4.2. Details of Extension Activities organized by KVKs in Zone-X

Activities	No. of programmes to Farmers	No. of farmers	No. of programmes to Extension Personnel	No. of Extension Personnel	Total Programmes	Total Participants
Advisory Services	19011	3545345	554	10773	19565	3556118
Attended as resource person	2260	88189	759	9706	3019	97895
Awareness programmes on PPV & FRA	78	4562	39	316	117	4878
Celebration of important days	699	46657	251	2068	950	48725
Diagnostic visits	3670	28873	498	3110	4168	31983
Exhibition	415	283727	100	2041	515	285768
Exposure visits	1020	33563	546	1797	1566	35360
Ex-trainees Sammelan	21	2267	29	256	50	2523
Farm Science Club	96	2301	48	225	144	2526
Farmers' seminar/workshop	249	15990	80	1545	329	17535
Field Day	534	21411	106	1125	640	22536
Film Show	565	26294	63	2106	628	28400
Group discussions	1107	30782	199	3363	1306	34145
Kisan Ghosthi	232	21000	31	3275	263	24275
Kisan Mela	133	97107	59	3041	192	100148
Mana Telangana – Mana Vyavasayam	19	778	2	115	21	893
Method Demonstrations	2034	84152	220	2719	2254	86871
Plant/animal health camps	242	13200	74	598	316	13798
Scientists' visit to farmers field	5749	47919	481	2583	6230	50502
Self -help groups	313	9671	38	528	351	10199
Special day celebration	598	28021	65	906	663	28927
Others	3116	464157	224	3481	3340	467638
Total	42161	4895966	4466	55677	46627	4951643

Table 3.4.3. Details of Extension Activities organized by KVKs in Tamil Nadu

Activities	No. of programmes to Farmers	No. of farmers	No. of programmes to Extension Personnel	No. of Extension Personnel	Total Programmes	Total Participants
Advisory Services	11528	49014	344	1874	11872	50888
Attended as resource person	1443	50772	412	2609	1855	53381
Awareness programmes on PPV & FRA	48	3304	32	86	80	3390
Celebration of important days	241	25693	185	677	426	26370
Diagnostic visits	1764	9293	264	833	2028	10126
Exhibition	283	152376	76	1101	359	153477
Exposure visits	818	25064	501	583	1319	25647
Ex-trainees Sammelan	12	1960	21	21	33	1981
Farm Science Club	51	1503	29	32	80	1535
Farmers' seminar/workshop	115	9700	58	833	173	10533
Field Day	236	7588	65	236	301	7824
Film Show	412	19144	43	577	455	19721
Group discussions	270	8715	95	2064	365	10779
Kisan Ghosthi	74	14447	18	2763	92	17210
Kisan Mela	60	20789	10	221	70	21010
Mana Telangana – Mana Vyavasayam	0	0	0	15	0	15
Method Demonstrations	1174	68995	157	1617	1331	70612
Plant/animal health camps	95	6209	46	163	141	6372
Scientists' visit to farmers field	2610	16873	249	998	2859	17871
Self -help groups	89	2014	14	59	103	2073
Special day celebration	162	12689	16	237	178	12926
Others	2579	445225	210	1909	2789	447134
Total	24064	951367	2845	19508	26909	970875

Table 3.4.4. Details of Extension Activities organized by KVKs in Andhra Pradesh

Activities	No. of programmes to Farmers	No. of farmers	No. of programmes to Extension Personnel	No. of Extension Personnel	Total Programmes	Total Participants
Advisory Services	2450	409027	138	1694	2588	410721
Attended as resource person	409	16857	183	5389	592	22246
Awareness programmes on PPV & FRA	5	449	1	55	6	504
Celebration of important days	260	8614	33	692	293	9306
Diagnostic visits	1319	11291	133	1761	1452	13052
Exhibition	67	27575	12	610	79	28185
Exposure visits	124	5032	32	847	156	5879
Ex-trainees Sammelan	4	57	3	85	7	142
Farm Science Club	31	336	1	18	32	354
Farmers' seminar/workshop	83	3864	8	378	91	4242
Field Day	159	5508	18	459	177	5967
Film Show	72	3361	12	1040	84	4401
Group discussions	495	14078	24	997	519	15075
Kisan Ghosthi	78	3148	6	313	84	3461
Kisan Mela	22	25189	25	2474	47	27663
Mana Telangana – Mana Vyavasayam	9	178	0	0	9	178
Method Demonstrations	597	10035	25	752	622	10787

Activities	No. of programmes to Farmers	No. of farmers	No. of programmes to Extension Personnel	No. of Extension Personnel	Total Programmes	Total Participants
Plant/animal health camps	117	5596	20	126	137	5722
Scientists' visit to farmers field	1640	12339	129	1083	1769	13422
Self -help groups	38	1175	8	216	46	1391
Special day celebration	266	6994	24	306	290	7300
Others	354	11525	1	497	355	12022
Total	8599	582228	836	19792	9435	602020

Table 3.4.5. Details of Extension Activities organized by KVKs in Telangana

Activities	No. of programmes to Farmers	No. of farmers	No. of programmes to Extension Personnel	No. of Extension Personnel	Total Programmes	Total Participants
Advisory Services	4832	3082624	71	7200	4903	3089824
Attended as resource person	325	16970	163	1658	488	18628
Awareness programmes on PPV & FRA	25	809	6	175	31	984
Celebration of important days	192	11929	33	699	225	12628
Diagnostic visits	563	8035	95	492	658	8527
Exhibition	58	16076	10	319	68	16395
Exposure visits	75	3315	13	367	88	3682
Ex-trainees Sammelan	5	250	5	150	10	400
Farm Science Club	10	380	18	175	28	555
Farmers' seminar/workshop	49	2359	12	331	61	2690
Field Day	131	8073	23	430	154	8503
Film Show	29	1975	5	248	34	2223
Group discussions	335	7511	80	302	415	7813
Kisan Ghosthi	78	3119	7	199	85	3318
Kisan Mela	49	18714	23	236	72	18950
Mana Telangana – Mana Vyavasayam	10	600	2	100	12	700
Method Demonstrations	213	4393	36	307	249	4700
Plant/animal health camps	30	1395	8	309	38	1704
Scientists' visit to farmers field	1407	18358	99	451	1506	18809
Self -help groups	184	6315	16	253	200	6568
Special day celebration	169	8253	24	356	193	8609
Others	149	5082	1	91	150	5173
Total	8918	3226535	750	14848	9668	3241383



Backyard poultry with desi birds not only empowers rural women with supplemental income and economic independence, but also boosts their self esteem and provides nutritional security to the family"

Table 3.4.6. Details of Extension Activities organized by KVKs in Puducherry

Activities	No. of programmes to Farmers	No. of farmers	No. of programmes to Extension Personnel	No. of Extension Personnel	Total Programmes	Total Participants
Advisory Services	201	4680	1	5	202	4685
Attended as resource person	83	3590	1	50	84	3640
Awareness programmes on PPV & FRA	0	0	0	0	0	0
Celebration of important days	6	421	0	0	6	421
Diagnostic visits	24	254	6	24	30	278
Exhibition	7	87700	2	11	9	87711
Exposure visits	3	152	0	0	3	152
Ex-trainees Sammelan	0	0	0	0	0	0
Farm Science Club	4	82	0	0	4	82
Farmers' seminar/workshop	2	67	2	3	4	70
Field Day	8	242	0	0	8	242
Film Show	52	1814	3	241	55	2055
Group discussions	7	478	0	0	7	478
Kisan Goshthi	2	286	0	0	2	286
Kisan Mela	2	32415	1	110	3	32525
Mana Telangana – Mana Vyavasayam	0	0	0	0	0	0
Method Demonstrations	50	729	2	43	52	772
Plant/animal health camps	0	0	0	0	0	0
Scientists' visit to farmers field	92	349	4	51	96	400
Self -help groups	2	167	0	0	2	167
Special day celebration	1	85	1	7	2	92
Others	34	2325	12	984	46	3309
Total	580	135836	35	1529	615	137365

Table 3.4.7. Details of Other Extension Activities organized by KVKs in Zone-X

Activity	No. of Activities
Animal health camps (No. of animals treated)	475
Bimonthly Newsletters (English, Tamil and Telugu)	145
Electronic Media (CD/DVD)	93
Exhibitions	515
Extension Literature	546
Farmers visit to KVK	20527
Kisan melas	192
Lectures delivered as resource persons	2877
Newspaper coverage	5925
Popular articles	1095
Radio Talks	798
Registration of farmers through AKPS	13083
Research articles	617
Success stories	543
TV Talks	548
Others	598
Total	48577

Table 3.4.8. Details of Other Extension Activities organized by KVKs in Tamil Nadu

Activity	No. of Activities
Animal health camps (No. of animals treated)	101
Bimonthly Newsletters (English, Tamil and Telugu)	80
Electronic Media (CD/DVD)	40
Exhibitions	359
Extension Literature	338
Farmers visit to KVK	16976
Kisan melas	70
Lectures delivered as resource persons	2167
Newspaper coverage	1345
Popular articles	505
Radio Talks	343
Registration of farmers through AKPS	6093
Research articles	463
Success stories	364
TV Talks	127
Others	468
Total	29839

Table 3.4.9. Details of Other Extension Activities organized by KVKs in Andhra Pradesh

Activity	No. of Activities
Animal health camps (No. of animals treated)	352
Bimonthly Newsletters (English, Tamil and Telugu)	39
Electronic Media (CD/DVD)	41
Exhibitions	79
Extension Literature	97
Farmers visit to KVK	1661
Kisan melas	47
Lectures delivered as resource persons	377
Newspaper coverage	2657
Popular articles	296
Radio Talks	279
Registration of farmers through AKPS	1033
Research articles	78
Success stories	95
TV Talks	158
Others	33
Total	7322

Table 3.4.10. Details of Other Extension Activities organized by KVKs in Telangana

Activity	No. of Activities
Animal health camps (No. of animals treated)	22
Bimonthly Newsletters (English, Tamil and Telugu)	26
Electronic Media (CD/DVD)	11
Exhibitions	68
Extension Literature	93
Farmers visit to KVK	886
Kisan melas	72

Technology Week

Technology week celebrations were organized by KVKs in which 190590 farmers participated (Table

Activity	No. of Activities
Lectures delivered as resource persons	291
Newspaper coverage	1843
Popular articles	293
Radio Talks	168
Registration of farmers through AKPS	5957
Research articles	74
Success stories	81
TV Talks	257
Others	93
Total	10235

Table 3.4.11. Details of Other Extension Activities organized by KVKs in Puducherry

Activity	No. of Activities
Animal health camps (No. of animals treated)	0
Bimonthly Newsletters (English, Tamil and Telugu)	0
Electronic Media (CD/DVD)	1
Exhibitions	9
Extension Literature	18
Farmers visit to KVK	1004
Kisan melas	3
Lectures delivered as resource persons	42
Newspaper coverage	80
Popular articles	1
Radio Talks	8
Registration of farmers through AKPS	0
Research articles	2
Success stories	3
TV Talks	6
Others	4
Total	1181

3.4.7). The activities include *gosthies*, lectures, exhibition, film shows, fairs, distribution of inputs etc.

Table 3.4.7. Details of technology week activities organized by KVKs in Zone X

Types of Activities	Tamil Nadu		Andhra Pradesh		Telangana		Total	
	No.	F	No.	F	No.	F	No.	F
Gosthies	29	3450	49	2867	17	1163	95	7480
Lectures organized	231	8820	71	4210	54	2766	356	15796
Exhibition	62	17944	45	5117	30	2812	137	25873
Film show	71	4432	58	4216	12	990	141	9638
Fair	9	1686	6	6926	4	655	19	9267

Types of Activities	Tamil Nadu		Andhra Pradesh		Telangana		Total	
	No.	F	No.	F	No.	F	No.	F
Farm Visit	288	3377	334	4607	57	2080	679	10064
Diagnostic Practical	144	1036	165	1173	50	707	359	2916
Distribution of Literature (No.)	78	18051	414	5987	42	10249	534	34287
Distribution of Seed (q)	714	3403	636	1841	81	601	1431	5845
Distribution of Planting materials (No.)	9599	3166	831425	4268	109813	924	950837	8358
Bio Product distribution (Kg)	7316	1566	532	6387	711	340	8559	8293
Bio Fertilizers (q)	3166	1300	5530	1236	7560	448	16256	2984
Distribution of fingerlings	1	8	57751	30	4500	103	62252	141
Distribution of Livestock specimen (No.)	1205	1071	7194	732	3650	540	12049	2343
Total number of farmers visited the technology week	59	13698	1065	25635	38	6234	1162	45567
Others	0	0	863	1738	0	0	863	1738
Total	22972	83008	906138	76970	126619	30612	1055729	190590

F = No of farmers

Kisan Mobile Advisories

To disseminate the latest technologies on crops and animals, knowledge on weather, market prices of various commodities *etc.* to the farmers, mobile advisories through Kisan Mobile portal and other sources were issued by KVKs through text and voice

messages. During the year, KVKs have sent 47306 messages to 25965356 farmers (Table 3.4.8). Among them, 4092 messages were sent through Kisan Mobile portal to 15925949 farmers (Table 3.4.9) and 43214 messages were sent through other sources to 10039407 farmers (Table 3.4.10).

Table 3.4.8. Details of mobile advisories issued by KVKs in Zone X

Type of message	Tamil Nadu		Andhra Pradesh		Telangana		Puducherry		Total	
	NM	NF	NM	NF	NM	NF	NM	NF	NM	NF
Kisan Mobile Advisories	1016	5989546	1456	6590396	1620	3346007	0	0	4092	15925949
Other Mobile Advisories	26846	3084396	8812	527559	7308	6400997	248	26455	43214	10039407
Total	27862	9073942	10268	7117955	8928	9747004	248	26455	47306	25965356

NM = No. of Messages; NF = No. of Farmers

Table 3.4.9. Details of Kisan Mobile Advisories issued by KVKs in Zone X

Type of message	Tamil Nadu		Andhra Pradesh		Telangana		PY		Total	
	NM	NF	NM	NF	NM	NF	NM	NF	NM	NF
Crop										
Text	555	3601478	834	3857205	828	2495054	0	0	2217	9953737
Voice	0	0	26	2232	309	7540	0	0	335	9772
Text and Voice	0	0	81	922580	140	6596	0	0	221	929176
Total	555	3601478	941	4782017	1277	2509190	0	0	2773	10892685
Livestock										
Text	69	770028	127	108371	63	25589	0	0	259	903988
Voice	0	0	0	0	44	423	0	0	44	423
Text and Voice	0	0	0	0	55	1702	0	0	55	1702
Total	69	770028	127	108371	162	27714	0	0	358	906113
Agro Advisories										
Text	107	504902	79	451097	96	12624	0	0	282	968623
Voice	0	0	0	0	12	10	0	0	12	10



Type of message	Tamil Nadu		Andhra Pradesh		Telangana		PY		Total	
	NM	NF	NM	NF	NM	NF	NM	NF	NM	NF
Text and Voice	0	0	8	184177	14	23	0	0	22	184200
Total	107	504902	87	635274	122	12657	0	0	316	1152833
Critical Technology Inputs										
Text	27	302099	6	12543	10	264727	0	0	43	579369
Voice	0	0	0	0	0	0	0	0	0	0
Text and Voice	0	0	0	0	0	0	0	0	0	0
Total	27	302099	6	12543	10	264727	0	0	43	579369
Farm Implements										
Text	16	78480	3	200009	0	0	0	0	19	278489
Voice	0	0	0	0	0	0	0	0	0	0
Text and Voice	0	0	0	0	0	0	0	0	0	0
Total	16	78480	3	200009	0	0	0	0	19	278489
Awareness										
Text	74	403693	62	294318	0	0	0	0	136	698011
Voice	0	0	0	0	0	0	0	0	0	0
Text and Voice	0	0	0	0	0	0	0	0	0	0
Total	74	403693	62	294318	0	0	0	0	136	698011
KVK-Programmes										
Text	32	179690	70	241894	2	0	0	0	104	421584
Voice	4	2417	0	0	0	0	0	0	4	2417
Text and Voice	0	0	0	0	0	0	0	0	0	0
Total	36	182107	70	241894	2	0	0	0	108	424001
Weather										
Text	73	28988	120	253556	10	264727	0	0	203	547271
Voice	0	0	0	0	0	0	0	0	0	0
Text and Voice	0	0	0	0	0	0	0	0	0	0
Total	73	28988	120	253556	10	264727	0	0	203	547271
Market										
Text	22	65100	11	23462	2	264727	0	0	35	353289
Voice	0	0	0	0	0	0	0	0	0	0
Text and Voice	0	0	0	0	0	0	0	0	0	0
Total	22	65100	11	23462	2	264727	0	0	35	353289
Women and Children										
Text	32	23472	29	38952	18	950	0	0	79	63374
Voice	0	0	0	0	8	1250	0	0	8	1250
Text and Voice	0	0	0	0	9	65	0	0	9	65
Total	32	23472	29	38952	35	2265	0	0	96	64689
Others										
Text	5	29199	0	0	0	0	0	0	5	29199
Voice	0	0	0	0	0	0	0	0	0	0
Text and Voice	0	0	0	0	0	0	0	0	0	0
Total	5	29199	0	0	0	0	0	0	5	29199
Grand Total										
Text	1012	5987129	1341	5481407	1029	3328398	0	0	3382	14796934
Voice	4	2417	26	2232	373	9223	0	0	403	13872
Text and Voice	0	0	89	1106757	218	8386	0	0	307	1115143
Total	1016	5989546	1456	6590396	1620	3346007	0	0	4092	15925949

NM = No. of Messages; NF = No. of Farmers

Table 3.4.10. Details of other mobile advisories

Type of message	Tamil Nadu		Andhra Pradesh		Telangana		PY		Total	
	NM	NF	NM	NF	NM	NF	NM	NF	NM	NF
Crop										
Text	3295	1357481	4062	277534	3293	3682378	18	376	10668	5317769
Voice	625	40299	820	5480	1691	19103	0	0	3136	64882
Text and Voice	858	34841	202	3197	318	94373	0	0	1378	132411
Total	4778	1432621	5084	286211	5302	3795854	18	376	15182	5515062
Livestock										
Text	6844	549962	456	74213	361	126262	2	28	7663	750465
Voice	1243	17444	88	637	79	385	0	0	1410	18466
Text and Voice	383	18160	42	630	145	1142	0	0	570	19932
Total	8470	585566	586	75480	585	127789	2	28	9643	788863
Agro Advisories										
Text	3808	207106	799	55343	304	511767	111	11954	5022	786170
Voice	198	16742	447	858	22	40	0	0	667	17640
Text and Voice	1480	20579	35	1310	155	65659	0	0	1670	87548
Total	5486	244427	1281	57511	481	577466	111	11954	7359	891358
Critical Technology Inputs										
Text	189	108383	79	4595	44	370334	0	0	312	483312
Voice	73	3646	16	27	2	2	0	0	91	3675
Text and Voice	25	8843	0	0	0	0	0	0	25	8843
Total	287	120872	95	4622	46	370336	0	0	428	495830
Farm Implements										
Text	59	18657	61	6422	42	27517	2	45	164	52641
Voice	48	2025	55	177	26	59	0	0	129	2261
Text and Voice	15	1127	0	0	50	48564	0	0	65	49691
Total	122	21809	116	6599	118	76140	2	45	358	104593
Awareness										
Text	309	140884	163	13850	77	31735	0	0	549	186469
Voice	202	7669	78	1177	5	15	0	0	285	8861
Text and Voice	23	3061	5	120	3	3	0	0	31	3184
Total	534	151614	246	15147	85	31753	0	0	865	198514
KVK-Programmes										
Text	470	125717	261	22460	118	256330	8	2512	857	407019
Voice	281	8820	139	996	25	33	0	0	445	9849
Text and Voice	22	6501	12	475	58	69874	0	0	92	76850
Total	773	141038	412	23931	201	326237	8	2512	1394	493718
Weather										
Text	2728	190909	542	36499	274	389903	0	0	3544	617311
Voice	77	4979	60	1351	55	5	0	0	192	6335
Text and Voice	2419	6302	80	890	8	20640	0	0	2507	27832
Total	5224	202190	682	38740	337	410548	0	0	6243	651478
Market										
Text	694	109081	126	10315	23	98833	107	11540	950	229769
Voice	18	3967	15	720	10	10	0	0	43	4697
Text and Voice	9	1241	19	890	14	18060	0	0	42	20191
Total	721	114289	160	11925	47	116903	107	11540	1035	254657
Women and Children										
Text	78	13366	61	3633	23	718	0	0	162	17717
Voice	229	954	62	152	15	135	0	0	306	1241
Text and Voice	5	934	0	0	15	85	0	0	20	1019
Total	312	15254	123	3785	53	938	0	0	488	19977

Type of message	Tamil Nadu		Andhra Pradesh		Telangana		PY		Total	
	NM	NF	NM	NF	NM	NF	NM	NF	NM	NF
Others										
Text	129	51311	6	2258	53	567033	0	0	188	620602
Voice	4	1920	21	1350	0	0	0	0	25	3270
Text and Voice	6	1485	0	0	0	0	0	0	6	1485
Total	139	54716	27	3608	53	567033	0	0	219	625357
Grand Total										
Text	18603	2872857	6616	507122	4612	6062810	248	26455	30079	9469244
Voice	2998	108465	1801	12925	1930	19787	0	0	6729	141177
Text and Voice	5245	103074	395	7512	766	318400	0	0	6406	428986
Total	26846	3084396	8812	527559	7308	6400997	248	26455	43214	10039407

NM = No. of Messages; NF = No. of Farmers



State level farmers day-Exhibition-KVK Nagapattinam, Tamil Nadu



Agricultural exhibition
KVK Medak (DDS), Telangana



DDK programme on Payiruvagaigal Thozhilnutpangal
KVK Puducherry



FFS on Establishment of Nutrigarden-KVK Karaikal, Puducherry



**Animal Health camp
KVK Pudukkottai, Tamil Nadu**



**Exhibition stall during Faramers mela
KVK Cuddalore Tamil Nadu**



Participants in Poshan Maha Abhiyan-KVK Prakasam (Darsi), Andhra Pradesh



Exhibition during Farmers day celebration-KVK-Coimbatore, Tamil Nadu



PRA - KVK Karimnagar (Jammikunta), Telangana



**Field diagnostic visit to Mango during Kisan Diwas
KVK Chittoor (RASS), Andhra Pradesh**



Scientist and Tribal farmers meet-KVK Coimbatore, Tamil Nadu

3.5. Publications

The KVKs of Zone-X brought out 15869 publications, which include 634 research papers,

1008 popular articles, 412 success stories, 179 technical bulletins, 224 Books, *etc.* and provided to the farmers and other clientele. The details are given in Table 3.5.1.

Table 3.5.1. Details of Publications by KVKs

Category	Tamil Nadu	Andhra Pradesh	Telangana	Puducherry	Total
Research Papers	475	85	72	2	634
Popular Articles	476	254	278	0	1008
Books Chapters	152	16	24	2	194
Books	168	29	18	9	224
Conference Papers	126	40	9	0	175
Seminar Papers	64	6	10	0	80
Posters	151	125	58	0	334
Workshop presentations	105	50	37	0	192
Folders	132	30	21	0	183
Leaflets	8023	44	39	2	8108
Pamphlets	2450	31	24	0	2505
Brochures	430	10	16	0	456
Pocket Cards & Dairy	8	5	0	0	13
Success Stories	224	110	78	0	412
Technical Bulletins	126	43	10	0	179
Technical Reports	171	216	89	0	476
Training Manuals	171	25	13	2	211
Proceedings	131	24	17	0	172
Others	287	22	4	0	313
Total	13870	1165	817	17	15869

Twenty-four KVKs in the Zone published monthly, quarterly, half yearly and annual newsletters in

English and local languages and distributed to farmers and other stake holders (Table 3.5.2).

Table 3.5.2 Newsletters published.

State and KVK	Name of newsletter	Periodicity	No of Publications
Andhra Pradesh			
Ananthapuram (Kalyandurg)	Spark bulletin	Monthly	12
Chittoor (RASS)	E-Krishi quarterly Newsletter	Quarterly	4
East Godavari (Pandirimamidi)	Dr YSRHU KVK Newsletter	Monthly	12
Kadapa (Vonipenta)	Dr. YSRHU e-News letter	Fortnightly	24
Kadapa (Vonipenta)	Spark bulletin activity	Monthly	12
Kurnool (Yagantipalle)	e Newsletter	Half yearly	2
Tamil Nadu			
Ariyalur	Seithi Malar	Quarterly	500
Coimbatore	Kovai Velanmai	Quarterly	500
Cuddalore	Erkalam Tamil Newsletter	Quarterly	4
Dharmapuri	Thagadur Media (Seithi Madal)	Quarterly	400
Dindigul	KVK Dindigul Quarterly Newsletter	Quarterly	4

State and KVK	Name of newsletter	Periodicity	No of Publications
Erode	Farm Newsletter "Uzhavar Malar"	Quarterly	4
Erode	KVK Reporter	Quarterly	4
Kanyakumari	Seithi Madal	Half yearly	50
Karur	Newsletter	Half yearly	2
Krishnagiri	Uzhavar Thunaivan	Quarterly	100
Nagapattinam	TNJFU Newsletter English	Monthly	500
Nilgiris	Greenaria	Monthly	6
Nilgiris	Neelamalaicharal	Quarterly	3
Perambalur	KVK Newsletter	Half yearly	1400
Pudukkottai	KVK Pudukkottai Newsletter	Three per year	300
Telangana			
Kammam (Wyra)	ATARI spark bulletin	Monthly	7
Kammam (Wyra)	PJTAU Newsletter	Quarterly	4
Mahabubnagar (Palem)	KVK, Palem E-News letter	quarterly	25
Mahabubnagar (YFA)	e Newsletter	Quarterly	4
Mancheri	KVK Mancheri Newsletter	Monthly	12

3.6 Critical Technology Products

KVKs produce seeds of improved varieties/hybrids of crops, planting materials of selected material of plant species, bio products, improved livestock breeds and species to provide them to the farmers thereby facilitating rapid technology transfer.

3.6.1 Seed

KVKs produced and supplied 9696.85 quintals of seed of cereals and millets, 1852.25 quintals of oilseeds, 3649.22 quintals of pulses and supplied to 27699, 127603 and 97627 farmers, respectively. Also 187.50 quintals of fruit seeds, 245.13 quintals of fodder seeds, 29 quintals of flower seeds, 31 quintals of spices seeds, 48 quintals of green manure seeds, 60.74 quintals of special planting materials 961.61 quintals of commercial crop seeds were produced and supplied to 84498 farmers. (Table 3.6.1).

3.6.2 Planting material

Planting materials including 7812272 vegetable seedlings, 802677 fodder slips, 995059 flowers and ornamental plants, 10394514 fruit saplings,

48946 medicinal and aromatic plants, 165727 forest crops, 571 spices and 18118 special planting materials totaling 10056057 were supplied to 446565 farmers in the Zone. (Table 3.6.2)

3.6.3 Bio-products and bio-agents

A total of 36317 kg of bio fertilizers, 1037523 kg of bio inputs and 66297 kgs of biopesticides were produced supplied to 110412 farmers (Table 3.6.3).

3.6.4 Livestock Species

A total of 1808881 livestock species, comprising of 1698472 fish spawn/seed, 108605 poultry chicks, 702 dairy animals and 1092 sheep and goat were produced and provided to 160635 farmers (Table 3.6.4).

3.6.5 Other inputs

A total of 329706 quintals of other inputs comprising 66327 quintals of crop inputs, 34463 quintals of animal feed and 1183 quintals of poultry feed, 3142 quintals of fish feed and 224590 quintals of other inputs have been produced and provided to 19679 farmers (Table 3.6.5).



Coconut seedlings distribution-KVK Karur

Table 3.6.1. Production and supply of seed

Category	Tamil Nadu			Andhra Pradesh			Telangana			Puducherry			Total		
	Q	V	F	Q	V	F	Q	V	F	Q	V	F	Q	V	F
Cereals and Millets	1979.61	21377842	8235	4206.46	15522515	9616	3195.11	13088570	9107	315.67	1048245.00	741.00	9696.85	51037172	27699
Oil Seeds	801.73	6312530	3012	945.33	8916520	124244	105.19	1191170	347	0.00	0	0	1852.25	16420220	127603
Pulses	406.51	4392323	2468	2837.34	42305410	91044	405.37	5837000	4115	0.00	0	0	3649.22	52534733	97627
Vegetables	0.77	220770	1946	0.77	85500	31	1.00	80000	25	0.00	0	0	2.54	386270	2002
Fruits	187.50	7202	58	0.00	0	0	0.00	0	0	0.00	0	0	187.50	7202	58
Flowers	0.00	0	0	12.00	67000	11	17.00	100100	0	0.00	0	0	29.00	167100	11
Spices	31.00	9300	9	0.10	0	5	0.00	0	0	0.00	0	0	31.10	9300	14
Fodder	230.03	9246258	19130	0.10	3500	10	15.00	12750	15	0.00	0	0	245.13	9262508	19155
Special Planting Materials	35.74	243866	820	0.00	0	0	25.00	9000	3	0.00	0	0	60.74	252866	823
Green manure	15.54	135148	241	25.00	0	38	7.76	0	62080	0.00	0	0	48.30	135148	62359
Commercial crops	859.99	335172	74	0.00	0	0	101.70	827007	2	0.00	0	0	961.69	1162179	76
Total	4548.42	42280411	35993	8027.10	66900445	224999	3873.13	21145597	75694	315.67	1048245	741	16764.32	131374698	337427

Q=Quantity (quintals), V = Value (Rs.), F = No. of Farmers

Table3.6.2. Production and supply of planting material

Category	Tamil Nadu			Andhra Pradesh			Telangana			Puducherry			Total		
	No.	V	F	No.	V	F	No.	V	F	No.	V	F	No.	V	F
Vegetables	551084	477345	1590	4485520	2649582	402248	2732834	2315742	1212	42834	62134	394	7812272	5504803	405444
Fruits	121474	6409420	8340	58780	1000946	1171	22182	1882070	526	10251	1102078	600	212687	10394514	10637
Flowers and ornamental plants	208711	1302659	9941	540764	1015047	1503	240830	802980	77	4754	74030	306	995059	3194716	11827
Medicinal and aromatic plants	14300	60524	574	33346	833650	194	0	0	0	1300	19500	68	48946	913674	836
Forestry and plantation crops	132838	5705126	11163	30614	519790	1082	0	0	0	2275	22750	80	165727	6247666	12325
Fodder slips	551077	625978	1955	26800	28000	11	120500	20000	28	104300	104500	31	802677	778478	2025
Spices	286	13160	60	160	0	3200	125	25000	125	0	0	0	571	38160	3385
Special Planting materials	68	10490	33	0	0	0	18000	36000	3	50	5000	50	18118	51490	86
Others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1579838	14604702	33656	5175984	6047015	409409	3134471	5081792	1971	165764	1389992	1529	10056057	27123501	446565

No. = Quantity (Numbers) V = Value (Rs.), F = No. of Farmers



Table 3.6.3. Production and supply of bio-products and bio-agents

Category	Tamil Nadu			Andhra Pradesh			Telangana			Puducherry			Total		
	Q	V	F	Q	V	F	Q	V	F	Q	V	F	Q	V	F
Bio Fertilizers	10742	878478	3846	4933	550140	2342	18934	1547410	31535	1707	526425	5261	36317	3502453	42984
Bio-inputs	336125	5846018	29660	426391	3571579	1407	262073	3005065	2285	12934	437085	1780	1037523	12859747	35132
Bio-pesticides	26417	4523354	17623	22518	2464635	2312	8647	1213110	690	8715	2310072	11671	66297	10511171	32296
Total	373285	11247850	51129	453842	6586354	6061	289654	5765585	34510	23357	3273582	18712	1140137	26873371	110412

Q=Quantity (kg), V=Value (Rs.), F = No. of Farmers

Table 3.6.4. Details of production of livestock, sheep and goat, poultry breed and fisheries

Category	Tamil Nadu			Andhra Pradesh			Telangana			Puducherry			Total		
	No.	V	F	No.	V	F	No.	V	F	No.	V	F	No.	V	F
Dairy cattle	6	661139	8	9	170000	8	3	74000	3	684	66402	359	702	971541	378
Goat and Sheep	560	3138917	229	393	1899430	160	116	875950	62	23	128000	17	1092	6042297	468
Poultry	66146	4288785	30170	25791	3048871	1671	15650	1851500	1475	1018	68235	143	108605	9257391	33459
Piggery	0	0	0	11	36000	3	0	0	0	0	0	0	11	36000	3
Fishery	1131667	1982231	125938	236050	615500	167	327072	372200	93	3683	73850	129	1698472	3043781	126327
Total	1198378	10071072	156345	262254	5769801	2009	342841	3173650	1633	5408	336487	648	1808881	19351010	160635

No.=Quantity (Nos.), V=Value (Rs.), F = No. of Farmers

Table 3.6.5. Details of other inputs produced and distributed.

Category	Tamil Nadu			Andhra Pradesh			Telangana			Puducherry			Total		
	Q	V	F	Q	V	F	Q	V	F	Q	V	F	Q	V	F
Crop inputs	42091	9421345	7598	18937	328435	576	5300	0	1170	0	0	0	66327	9749780	9344
Animal feed	30996	802281	3353	2395	339900	272	1072	78971	334	0	0	0	34463	1221152	3959
Poultry feed	1073	33513	77	110	11000	10	0	0	0	0	0	0	1183	44513	87
Fish Feed	1140	46120	58	2002	157800	5	0	0	0	0	0	0	3142	203920	63
Others	26378	1123931	5416	317	290950	267	12533	201441	323	185362	464000	220	224590	2080322	6226
Total	101678	11427190	16502	23761	1128085	1130	18905	280412	1827	185362	464000	220	329706	13299687	19679

Q = Quantity (quintals), V = Value (Rs.), F = No. of Farmers

3.6.6 Soil and water testing

KVKs undertake soil and water testing primarily to ascertain the nutrient status of fields earmarked for technology assessment and refinement to make soil test based nutrient recommendations

in various micro-farming situations in the district. A total number of 52017 samples including soil (44058), water (6706), plant (1001), manure (21) and 231 other samples including fertilizers were analyzed by the KVKs benefiting 38428 farmers of 7904 villages (Table 3.6.6.).

Table 3.6.6. Total Soil and water testing by KVKs of Zone-X

Details	Tamil Nadu			Andhra Pradesh			Telangana			Puducherry			Total		
	N	F	V	N	F	V	N	F	V	N	F	V	N	F	V
Soil Samples analyzed using Mini Soil Testing Kit	3835	3458	1106	2118	2101	66	3468	3478	235	0	0	0	9421	9037	1407
Soil Samples analyzed by traditional lab method	11517	9050	2350	17092	10050	1380	5260	3750	220	768	659	100	34637	23509	4050
Total Soil Samples analyzed	15352	12508	3456	19210	12151	1446	8728	7228	455	768	659	100	44058	32546	5457
Water samples analyzed	4986	4174	1780	1057	822	273	625	542	109	38	27	27	6706	5565	2189
Plant Samples analyzed	125	95	94	0	0	0	840	56	4	36	1	1	1001	152	99
Manure samples analyzed	21	20	10	0	0	0	0	0	0	0	0	0	21	20	10
Others	207	141	149	0	0	0	24	4	0	0	0	0	231	145	149
Total	20691	16938	5489	20267	12973	1719	10217	7830	568	842	687	128	52017	38428	7904

N = Number of samples, F = No. of Farmers, V = No. of villages



Distribution of Planting Materials-KVK Kurnool (Yagantipalle)



3.7 Rainwater Harvesting

A total of 156 training courses and 196 demonstrations were conducted on rainwater harvesting

technologies benefiting 8906 farmers and 877 officials. A total of 195671 planting materials were distributed to the participants (Table 3.7.1).

Table 3.7.1 Activities on rainwater harvesting by KVKs of Zone-X

State and KVK	Details of the Activity	No. of Trainings	No. of Demos	No. of Farmers benefited	No. of Officials Visited	No. of planting materials distributed
Andhra Pradesh						
Ananthapuram (Kalyandurg)	Gound water recharge Techniques	3	1	274	4	1000
Ananthapuram (Kalyandurg)	Integrated Watershed Management programme	4	2	505	6	1200
Ananthapuram (Kalyandurg)	Jal Shakthi Abhiyan: Catch the Rain	3	3	358	9	1000
Ananthapuram (Kalyandurg)	Rainwater harvesting in urban areas	2	2	262	2	850
Ananthapuram (Kalyandurg)	Rainwater Harvesting Techniques	4	2	257	8	3028
Ananthapuram (Kalyandurg)	Water conservation and rainwater harvesting	3	2	287	5	800
Ananthapuram (Reddipalli)	Rainwater harvesting structures and micro irrigation techniques automation	1	1	22	0	0
Prakasam (Kandukur)	Farm ponds	4	4	263	124	5423
Prakasam (Kandukur)	Roof water harvesting	3	3	154	54	2450
Visakhapatnam (Kondempudi)	Importance of rainwater harvesting structures in Tribal Areas	2	1	118	7	0
Visakhapatnam (Kondempudi)	Rainwater Conservation Methods	1	1	760	25	0
Tamil Nadu						
Ariyalur	Rainwater harvesting technologies	3	3	820	12	200
Dharmapuri	Rain Harvesting awareness	5	5	250	21	150
Dindigul	Rainwater harvesting and its importance	4	2	417	14	0
Madurai	Water harvesting technologies	25	25	750	55	52000
Namakkal	<i>In situ</i> moisture conservation and water conservation practice	3	5	78	7	85
Perambalur	Rainwater harvesting system	2	2	57	9	7
Perambalur	Drought management technologies and moisture conservation practices in Maize	3	3	63	0	22
Ramanathapuram	Rainwater harvesting	3	3	159	63	0
Salem	Rainwater conservation and efficient use of rainwater in farming	1	1	44	6	0
Salem	Rainwater harvesting techniques	1	1	52	7	0
Sivagangai	Natural Resource management	4	2	423	14	1421
Sivagangai	Rainwater Harvesting in Saline Water areas	4	0	178	3	0
Sivagangai	Water quality management	2	0	50	4	120000
Theni	Water harvesting method	3	1	98	7	0
Thiruvavur	Rainwater harvesting	1	1	33	4	0
Thiruvavur	Water management	1	1	34	6	0
Thiruvavur	Catch the Rain Campaign 2024	1	1	110	7	215
Thiruvavur	Conservation of water	1	1	48	48	0
Thiruvavur	Water saving techniques- Pani pipe	5	5	150	10	0
Thoothukudi	Soil Moisture Conservation	2	2	86	11	320
Tiruchirappalli	Rainwater harvesting methods	2	0	105	4	0
Tiruppur	Jal shakti Abhiyan	2	1	72	11	0

State and KVK	Details of the Activity	No. of Trainings	No. of Demos	No. of Farmers benefited	No. of Officials Visited	No. of planting materials distributed
Villupuram II	Land configuration technology for <i>in-situ</i> moisture conservation	3	2	52	10	0
Villupuram II	Rainwater harvesting methods	5	3	64	12	0
Villupuram II	Technologies for rainfed farming	3	2	84	13	0
Villupuram II	Water management in Agricultural crops	4	2	40	4	0
Virudhunagar	Farm Pond and its uses	27	69	824	223	0
Telangana						
Adilabad	Raised bed technology in cotton	1	24	350	3	0
Kammam (Kothagudam)	Efficient water management through Farm ponds	2	0	0	0	0
Karimnagar (Jammikunta)	Water conservation & rainwater harvesting	1	2	35	5	5500
Ranga Reddy	<i>In situ</i> and <i>Ex situ</i> water harvesting methods in dryland agriculture	2	5	120	40	0
	Total	156	196	8906	877	195671

Shri. Ramesh Chouhan of **Sangareddy (Medak), Telangana** used bio-acoustic equipment (Kethi Rakshak), safflower bio-fence, egg solution, Azadirachtin, and salt solution for wild boar management. The technology resulted in a yield increase of 21% and reduced the wild boar damage to 6%. *"This non-lethal technology is very useful in wild boar management. I suggest farmers to integrate geo wires with solar-powered bio-acoustic systems".*



Mrs. Pulamma, a Scheduled Caste farmer of **Medak, Telangana** adopted backyard poultry farming guided by KVK DDS. In every 90 day rearing cycle, she earns ₹6,000 through egg and bird and the family gets egg and meat ensuring nutritional security. *"Apart from supplemental income and nutritional security for my family, I feel empowered and economically independent".*

3.8 Technological Backstopping

The responsibility of technology backstopping, capacity building monitoring and review of activities of KVKs is vested with Directorates of Extension of Universities (Agricultural,

Horticultural, Veterinary and Fishery) of the Zone and with ATARI. A total of 105 meetings were conducted by Directorates of Extension of Agricultural, Horticultural, Veterinary, Fisheries Universities in the Zone and ICAR-ATARI with the participation of KVK Staff.

Table 3.8.1. Details of training programmes and meetings conducted by SAUs and ATARI

SAU/ATARI	No. of meetings	No. of participants
ANGRAU, Lam, Guntur	5	182
PJTAU, Hyderabad	8	437
SKLTHU, Mulugu	11	337
Dr.YSRHU, V.R.Gudem	4	85
TNAU, Coimbatore	19	1212
TANUVAS, Chennai	9	151
ATARI, Hyderabad	49	3559
Total	105	5963

The officials of Directorates of Extension of Universities and ICAR-ATARI made 216 visits to 116 KVKs to monitor and review the technological interventions and to take stock of the infrastructural

facilities available and the constraints faced by the KVKs operating in the jurisdiction of their respective universities.

Table 3.8.2. Details of visit by officials of directorate of extension of SAUs to KVKs

SAU/ATARI	No. of Visits	No of KVKs
ANGRAU, Lam, Guntur	27	15
PJTAU, Hyderabad	6	6
SKLTHU, Mulugu	6	1
Dr.YSRHU, V.R Gudem	25	5
PVNRTU, Hyderabad	10	1
TNAU, Coimbatore	39	14
TANUVAS, Chennai	30	4
ATARI, Hyderabad	73	70
Total	216	116

Sri B. V. Ramana Murthy of **Srikakulam, Andhra Pradesh** adopted Mechanized System of Rice Intensification (MSRI) and achieved 33% reduction in seed requirement and 23.8% increase in yield. The cost of cultivation was reduced by 9.3%. Uniform spacing improved crop stand, yield and minimized labour dependency. "As a District Coordinator of the Innovative Farmers Network in Srikakulam, I am motivating and guiding fellow farmers to adopt MSRI for prosperity".



3.9 Agricultural Technology Information Centre (ATIC)

Agricultural Technology Information Centres (ATICs) are functioning in PJTAU, TNAU and TANUVAS. The ATICs have the responsibility of providing farmers with enhanced access to sources of information related to agriculture and

allied sectors and critical technology products like seed, planting material, livestock material and bioproducts. The three ATICs provided technology information, technology products and agro-advisory to 4358, 6371, 3858 farmers respectively. Three books were sold to 581 farmers, and 6 Technical bulletins were sold to 9876 farmers (Tables 3.9.1 and 3.9.2).

Table 3.9.1 Details of visit of farmers to ATICs

Nature of Visit	PJTAU	TANUVAS	TNAU	Total
Technology Information	519	583	3256	4358
Technology Products	47	17	6235	6371
Agro-advisory	198	445	3215	3858

Table 3.9.2 Details of publications by ATICs

Details	PJTAU	TANUVAS	TNAU	Total
Books				
Number	1	1	1	3
Number of Copies	-	320	235	555
Revenue	56850	2020	-	58870
No. of farmers	379	202	-	581
Technical bulletins				
Number	3	3	-	6
Number of Copies	-	-	-	-
Revenue	199490	-	-	199490
No. of farmers	9876	-	-	9876
CD/DVD and Video films				
Number	-	1	-	1
Number of Copies	-	2	588	590
Revenue	-	12	-	12
No. of farmers	-	2	67740	67742

Technology services like soil and water testing, agro-veterinary advisory services were provided to 463 farmers and number of farmers visited ATIC was 5564.

Table 3.9.3 Technology Services Provided by ATICs

Service rendered	No. of farmers
Soil and water testing	18
Agro/Veterinary Advisory Services	445
Farmers visited ATIC	5564

Mr. C. Kannadhasan of **Karaikal, Puducherry** used TNAU Rice Bloom as a foliar spray at 4 kg per acre and noted a marked improvement in grain filling and achieved a higher yield. "Thanks to KVK Karaikal for timely intervention. The TNAU Rice Bloom reduced the chaffy grains and saved from great loss".





3.10 Success Stories

3.10.1. Paavai Mushrooms: A Journey from Friendship to Agripreneurship

O. Koothur, a village in Ariyalur district of Tamil Nadu, has limited livelihood opportunities for women, most of whom rely on daily wages. Mechanization in agriculture has further reduced these opportunities, pushing women to seek alternative sources of income. Four members of local women Self-Help Groups (SHGs) Mrs. Banumathi, Mrs. Arulmozhi, Mrs. Rajakumari, and Mrs. Meena pursued mushroom cultivation after attending training sessions conducted by ICAR-CREED KVK, Ariyalur and RSETI. With an initial investment cost of ₹2,00,000, and financial assistance of Rs.50000 under SCSP the group established a mushroom unit named **Paavai**

Mushrooms with technical support from KVK, Ariyalur.

The unit produces around 2,800 kg of mushrooms annually, generating a gross income of ₹7,00,000 and a net income of ₹5,60,000 per year. Value-added products like mushroom biscuits, pickles, and soup powders were added to the enterprise. With KVK's facilitation, the group availed an additional ₹50,000 subsidy from the Department of Horticulture for branding and packaging.

Paavai Mushrooms stands successful women-led enterprise, earns sustainable livelihood and serves as resource persons for KVK, RSETI, and Mahalir Thittam training programmes. A Joint Liability Group (JLG) is formed for exploring credit options to scale up operations.



3.10.2. Progressive Poultry Entrepreneur from Kancheepuram

Mr. R. Ajith Kumar from Paiyambadi village, Madhuranthagam block, Kancheepuram district was guided by the Animal Science expert on scientific poultry rearing and trained in poultry housing, feeding, disease prevention, and brooding techniques, with a specific focus on TANUVAS Aseel birds, a dual-purpose native breed. TANUVAS Aseel chicks, brooder mash, grower feed were supplied and a deworming and vaccination schedule was provided. Key technologies such as poultry

concentrate feed, water sanitizers, feed additives, and scientific disease management protocols were advocated. He has established a flock of 250 birds



and produces around 105 eggs per day. Monthly, 2,650 eggs are sold for table purposes and 500 are used for chick production. Additionally, 40 live birds are sold for meat per month. With a monthly income of ₹44,500 against a production cost of ₹34,375, his net monthly profit stands at ₹10,125.

3.10.3. Empowering Women through Millet-Based Enterprise Development in Krishnagiri

Mrs. S. Girija, a 49-year-old farm woman from Mathur block, received training from KVK on millet-based bakery items, dehydrated powders, ready-to-eat mixes, moringa value addition, and food licensing procedures. With technical guidance on branding, packaging, and marketing she launched an enterprise under the brand name Giri Traditional Organic Foods, obtaining FSSAI certification (No. 22424103000090) with an initial investment of ₹50,000. Supported by machinery distributed under the ICAR-IIMR SCSP initiative, she increased production to 175 kg/month,



including millet snacks, mixes, papads, and herbal powders. Her monthly income rose from ₹5,000 in 2022 to ₹55,000 in 2024-25. She was recognized by the Department of Agriculture, Asia International Culture Organization Academy, and the Indian Red Cross Society. Her success has motivated over 200 women to take up millet processing as a livelihood. With enhanced confidence and ongoing KVK support, she has approached NABARD to expand her enterprise into a marketing hub within Krishnagiri town. Mrs. Girija's journey reflects how targeted training, institutional support, and local resource utilization can uplift rural women through sustainable agro-based enterprises.

3.10.4. Journey to Dairy Farming Excellence

Mr. Gopi Reddy, a buffalo farmer from Munnangi village in Guntur district, Andhra Pradesh was trained by ICAR-KVK, Pandirimamidi, on scientific buffalo farming including sex-sorted semen technology, area-specific mineral mixture, balanced nutrition, silage preparation, and udder health management. Regular veterinary support, vaccination, and deworming schedules were implemented. KVK also facilitated direct milk marketing in Tadepalli, enabling Mr. Reddy to fetch



₹80 per liter well above the average market rate. As a result, his herd grew from 3 to 30 high-yielding buffaloes. His top buffalo produces 26 liters of milk per day. Monthly milk sales now exceed ₹1,40,000, and he earns additional income through the sale of surplus high-genetic female calves. Fertility issues and calf mortality have markedly declined due to improved nutrition and breeding practices.

Inspired by his success, neighboring farmers adopted sex-sorted semen technology and scientific feeding protocols. His model exemplifies how scientific dairy farming, when supported by institutional guidance, can drive sustainable rural livelihoods and regional prosperity.

3.10.5. Empowering Women through Value Addition of Fish: The “Queen” Brand from Thoothukudi

Mrs. A. Thommai Innasi, a fisherwoman from Vellapatti in Thoothukudi district and a member of the Sorojini Women Self Help Group was trained



on hygienic fish handling, solar drying, packaging, and preparation of value-added fish products such as fish pickles, prawn pickle, massi pickle, cutlets, fish fingers, and nuggets by KVK Thoothukudi. With support from Mahalir Thittam and technical guidance from KVK, a marketing outlet was set up. With a credit assistance of ₹3.5 lakhs she expanded her operations and manufactured fish pickles branded them under the name “Queen.” With an FSSAI license, proper labeling, and market outreach support from KVK and district authorities, her products gained visibility in exhibitions and nearby markets. The enterprise now generates an annual turnover of ₹25 lakhs and provides employment to 5 women and 2 men, 12 of the 18 trained WSHG members earn monthly profits of ₹45,000 to ₹60,000. The group has become a symbol of successful rural women entrepreneurship. Mrs. Innasi was recognized as best entrepreneur by the Fisheries Department, FC&RI, and Kamaraj College.

3.10.6. Gender Mainstreaming in Promotion of Millets for Economic Sustainability: A Success Story from Nandyal, Andhra Pradesh

Smt. P. Lakshmi Devi, a progressive woman agripreneur from Banaganapalle village in Nandyal district, Andhra Pradesh, transformed her entrepreneurial dream into a successful millet processing enterprise. With skill training from KVK Kurnool (Yagantipalle) and technical guidance on equipment selection, processing techniques, and enterprise planning, she invested ₹15 lakh in modern millet processing machinery (destoner, grader-cum-aspirator, dehuller, pulverizer, suji

maker) and ₹25 lakh for shed construction and power supply, supported by bank and SHG loans. She launched her brand “Ayurguna” under the enterprise name “Lakshmi Foods.” With an annual production of 218 quintals, the unit earns a net income of ₹2,39,800. Her success has inspired aspiring agripreneurs, SHG women, FPO members, and students. The unit has become a hub for learning, regularly visited by trainees from agri-clinics, business schools, and agricultural colleges. Smt. Lakshmi Devi’s journey exemplifies how institutional support and entrepreneurial spirit can mainstream women into value chain development, contributing to nutrition, employment, and rural economic sustainability.



3.10.7. Empowering Rural Women through Small-Scale Oil Processing unit under PMFME Scheme-KVK Mahabubnagar (YFA)

Mrs. C. Shobha Rani, a 43-year-old entrepreneur from Madanapuram village in Wanaparthy district, Telangana, with the technical guidance of KVK Mahabubnagar (YFA) and financial assistance under PMFME scheme she availed a bank loan of



₹10 lakhs and established a semiautomated oil extraction unit named “Guru Rangavendra”. The oil unit produces groundnut, coconut, and sesame oils with a total production of 1,617.5 liters, yielding a gross return of ₹4.93 lakhs and a net profit of ₹2.37 lakhs per cycle. The unit has provided employment opportunities and demonstrated the entrepreneurial potential of rural women. Mrs. Shobha Rani’s journey showcases how access to the right support systems, modern technology, and government schemes like PMFME can empower women and boost rural livelihoods. Her success is a powerful model for aspiring entrepreneurs across the region, proving that small-scale food processing units can be a sustainable and profitable venture in rural India.

3.10.8. Diversifying for Success – The Journey of Penta Reddy Inna Reddy with Kashmiri Apple Ber

Mr. Penta Reddy Inna Reddy, a progressive farmer from Gunturpalli village in Ainavolu



mandal of Hanumakonda district, owns 20 acres of agricultural land. With the guidance of KVK Warangal (Mamnoor) cultivated Kashmiri Apple Ber- a long-living fruit crop known for consistent demand and high returns in 2 acres with an initial investment of ₹1.5 lakh. The plants began fruiting within eight months, and by the second year, each tree produced approximately 27 kg of fruit. With a market price of ₹80/kg, he harvests 75 quintals and earns a gross income of ₹11 lakh and net income of ₹7.8 lakh.

His remarkable success was featured in the Eenadu newspaper under the "Rythu Raju" column and televised on ETV’s "Jai Kisan" program, inspiring many fellow farmers. Mr. Inna Reddy's experience proves that diversification with perennial horticulture crops like Kashmiri Apple Ber not only ensures long-term income but also helps restore soil fertility. His transformation from struggling with traditional crops to achieving sustainable profits stands as a motivating example for farmers seeking economic and environmental resilience.

3.10.9. Empowering Rural Livelihoods through Sericulture in Chittoor

Smt. A. Jansi, a 36-year-old marginal woman farmer from Pulimgunta village, Pichatur mandal,



Tirupati district (formerly part of Chittoor), has emerged as a successful entrepreneur in sericulture. She attended the Skill Training of Rural Youth (STRY) programme titled “Latest Technologies in Profitable Sericulture Farming” at KVK Chittoor (RASS) and implemented improved practices like planting high-yielding G-4 mulberry

variety, rearing bivoltine silkworms, applying bio-control agents, waste decomposers, multi-nutrient foliar sprays like Seri Boost and Poshan Seri Boost Plus, and using effective disinfectants (Serifit and Seriswachh). She also introduced microclimate control devices such as foggers and heaters to enhance rearing conditions, especially during summer months.

She is taking 10 crops annually, brushing 1500 DFLs (disease-free layings) and harvesting 1,250 kg of high-quality cocoon and earns a net return of ₹4.15 lakh. Beyond her financial success, Smt. Jansi has become a beacon of inspiration in her village. Three other farmers adopted her model of improved sericulture practices. Additionally, she now provides regular employment to two rural women, contributing to the socio-economic upliftment of her community.

3.10.10. Transforming Paddy Cultivation with Mechanization: A Success Story from Anakapalli, Andhra Pradesh

K. Nageswara Rao, a progressive farmer from Timmarajupeta village in Atchutapuram Mandal

of Anakapalli district, Andhra Pradesh, has exemplified how mechanization can redefine traditional paddy cultivation. With comprehensive training from KVK Visakhapatnam (BCT) Mr. Rao adopted line sowing of paddy using a seed-cum-fertilizer drill, rotavator preparation, power weeder, drone-based spraying and combined harvester. The mechanized approach reduced his cultivation costs from ₹1.56 lakh to ₹94,600 for 2.5 hectares, increased yield from 11,150 kg to 12,230 kg a nearly 10% improvement. Gross returns rose to ₹2.81 lakh, and net income almost doubled, from ₹99,900 to ₹1.86 lakh. His benefit-cost ratio improved from 1.6 to 2.9, highlighting the economic viability of the mechanized system.

Mr. Rao's success story has had a ripple effect in his village, with line sowing technology now adopted on over 25 acres in Timmarajupeta. His journey underscores the crucial role of agricultural mechanization in overcoming labor bottlenecks, reducing costs, and boosting farm profitability. Through his initiative and partnership with KVK, he has inspired a local movement towards more efficient, sustainable, and profitable paddy farming practices.



Distribution of Planting Materilas-KVK Kurnool Yagantipalle

3.10.11. A Successful Leap in Fish Seed Rearing – The Story of Kancharana Ramana

Mr. Kancharana Ramana from Hanumayyapeta village in Burja Mandal, Srikakulam district, faced a challenge of unavailability of quality fingerlings for stocking local tanks. KVK Srikakulam taught Mr. Ramana on improved fish seed rearing techniques, raising spawn to fingerling stage using best practices in feed, health, and pond management. KVK supported him with quality fish spawn, feed, and technical assistance for nursery pond preparation. He adopted regular sampling, nutrient-rich feeding, and acclimatization techniques to improve seed survival and growth. Using a 0.35-acre nursery pond, he stocked 6 lakh spawn. The survival from spawn to fingerling stage was 20.17%, resulting in the production of 1.21 lakh healthy fingerlings with an average size of 5.96 cm. He incurred a cost of ₹66,000 and



earned a gross income of ₹2.42 lakh, realizing a net return of ₹1.76 lakh. It established him as a reliable fingerling supplier for nearby farmers, contributing to local seed availability. Mr. Ramana's success demonstrates the practical utility of localized fish seed rearing in small tanks. With minimal investment and scientific support, he has not only increased his income but also improved the sustainability of fish farming in the region.

3.10.12. Enhancing Cotton Productivity through High-Density Planting System in Adilabad

Cotton remains a key crop in Adilabad district, largely grown under rainfed conditions. However, productivity is often limited by low plant population, erratic weather, and drought. Traditional wider spacing results in excessive vegetative growth with suboptimal yield. The High-Density Planting System (HDPS), using short-duration hybrids and optimized spacing, offers a promising solution to address yield instability and improve water use efficiency in this dryland agro-ecosystem.



Sri Bejjanki Rohith, a progressive farmer from Ghotkuri village, Tamsi Mandal, collaborated with KVK Adilabad to implement HDPS in cotton. Trained by the KVK on closer spacing at 90 × 15 cm (light soils) and 90 × 30 cm (medium/heavy soils) and seed rate of 5 and 4 packets/acre using short-duration hybrids Sri Rohith adopted HDPS in 2 acres using a pneumatic planter and RCH-929 BG II at 90 × 17 cm spacing with improved agronomic practices. He realized 40.5 q/ha compared to 24 q/ha under conventional spacing. Gross returns rose from ₹1,80,480 to ₹3,04,560 per hectare. Net returns improved significantly from ₹99,230/ha to ₹1,84,560/ha. The success of HDPS in Sri Rohith's field, demonstrated during a field day on 30.10.2024 Attracted 132 farmers in Tamsi and nearby mandals towards HDPS of cotton cultivation. The system's advantages, higher yield, better drought resilience, improved water use efficiency, and increased income have positioned it as a scalable solution for dryland cotton farming in the region.



4.

Special Projects

4.1. Farmer FIRST Programme (FFP)

Farmer First Programme (FFP) aims to involve farmers participating research problem identification, prioritization and to conduct experiments in farmers field utilizing the resources available with the farmers. This programme was implemented with the collaboration of four ICAR institutes (IIMR, IIOPR, IIOB and CRIDA) and one University (TANUVAS, Chennai) under ATARI, Hyderabad. Focus of this project is on farmer's Farm, Innovations, Resources, Science and Technology (FIRST). The project is undertaken covering four major components viz., a. Enhancing Farmer Scientist Interface, b. Technology Assemblage, Application and Feedback c. Partnership and Institution Building and d. Content Mobilization.

Enhancing Farmer-Scientist Interface

FFP centres organized 233 programmes involving 17,612 farmers to enhance Farmer-Scientist Interface, which include trainings programmes, awareness campaigns, exposure visits, animal health camps, field days, interface meetings, and other extension activities. These interface meetings enhanced farmer scientist interaction, disseminate knowledge on improved agricultural practices, and address key challenges faced by farmers. These helped the scientists to understand the practical problems of the farmers and provided scope to select and alter technologies to suit the conditions of farmers. During these interactions, scientists identified farm innovators and groom them as technology agents for farmer-to-farmer technology dissemination, up-scaling and out scaling

Technology Assemblage, Application and Feedback

The Farmer FIRST centers undertook 94 interventions covering 947.7 ha area and 3154 households in the operational villages. Thirty-

five crop-based technologies were demonstrated in 687.2 ha. Horticultural interventions on 7 technologies were demonstrated in 5.7 ha. In the livestock module, 25 technologies were demonstrated involving 1142 farm families. Twenty NRM technologies were demonstrated in 231.7 ha. Three enterprises were established for the benefit of 223 households. Four drudgery reduction technologies were demonstrated benefiting 127 households. Some of the successful technologies demonstrated by the centers were discussed below.

The ICAR-IIOPR Farmer FIRST Programme revolutionized oil palm-based farming systems by integrating smart irrigation, precision fertigation, and biological pest and disease control across 1363 ha, achieving up to 94.4% disease suppression and 100% pest reduction. Weather-based irrigation and fertigation saved over 50% of water and inputs, generating additional profits up to ₹3.31 lakh/ha. Pole harvesting innovation halved labour time, enabling the harvesters to earn an annual income up to ₹2 lakh. Intercropping with cocoa, bush pepper, and turmeric nearly doubled farm incomes, while biomass recycling boosted soil organic carbon by 168.7%, reducing fertilizer use and enhancing sustainability. Integrated fish farming in unused ponds yielded ₹2.53 lakh/ha, proving the power of holistic, resource-efficient farming models driven by IIOPR's cutting-edge field interventions.

ICAR-IIMR demonstrated high-yielding cultivars of millets and red gram in 116.57 ha, achieving up to 66% higher yields and substantial income gains for rainfed farmers of Telangana. These varieties exhibited resilience to climate stress, pest resistance, and superior marketability. Intercropping millets with red gram significantly enhanced profitability and sustainability. Livestock interventions with Nellore sheep and

Vanaraja poultry ensured steady income for SHGs and landless families. Enterprise modules like roti-making units empowered rural women with ₹30,070/month income, while kitchen gardens improved household nutrition and saved expenses. Line sowing and strategic R&D partnerships further strengthened technology adoption, demonstrating a replicable model for inclusive and climate-resilient agriculture.

ICAR-CRIDA, through targeted capacity-building programs and multi-sectoral interventions in NRM, crops, horticulture, and livestock empowered about 1200 farmers. A farm innovator's low-cost safflower cultivation method without tillage gained local adoption, conserving soil moisture and reducing costs. Community check dam renovation in Gangupally village extended irrigation for 30 acres, while green manure (Daincha) trials improved rice yields by 15–20%. High-yielding redgram and safflower varieties, along with nano urea demonstrations, led to improved productivity and nutrient efficiency. Staggered sowing in vegetables and BBF planter demonstrations boosted profitability and mechanization access. Women were economically uplifted through backyard poultry and goat health interventions, showcasing ICAR-CRIDA's holistic approach to sustainable rural development.

The ICAR-IIOR Farmer FIRST Programme transformed 491 ha across four villages, benefiting 2,048 households through integrated NRM, crop diversification, and sustainable practices. Redgram, groundnut, sorghum, and green gram interventions achieved yield increases up to 24%, with net returns up to Rs. 94,286/ha. Groundnut-green gram rotations secured ₹82,205/ha system returns for tribal farmers. Paddy cultivars KNM 118 and MTU 1010 gave 59 q/ha yield boosting incomes significantly. Livelihood diversification through sheep units, value addition and tur dhal processing enhanced profitability by ₹7,162/q. Strategic FPO enrolment, market linkages, and partnerships further empowered farmers with institutional and financial resilience.

TANUVAS empowered 273 farmers with their diverse capacity-building activities, mechanization support, and sustainable agriculture interventions. Improved paddy variety Co 55 led to a yield gain of 312 kg/acre and cost savings of ₹6,388/acre, with 33% adoption in target villages. Distribution of 1,862 backyard poultry chicks and alternate poultry strains like turkey, quail, and guinea fowl enhanced nutrition and women's income. Bio-input demonstrations, soil and water testing, and INM practices fostered eco-friendly farming across 85.2 ha. Improved goat and dairy breeds raised income and productivity, while vermicomposting and water-saving micro-irrigation empowered farmers with sustainable livelihoods. Intercropping, crop diversification, and Farmers' Field Schools accelerated innovation adoption and resilience in rural communities.

Content Mobilization

Under the Content Mobilization component, FFP centres actively identified and pooled transferable technologies from various institutions and developed content platforms for offline and online access. ICAR-IIMR developed the Millets FIRST Android app for millet production, processing, and market advisories, accessed by over 98,000 users and supported by WhatsApp and SMS-based advisories. Quality seeds, livestock and poultry management practices, kitchen garden kits, and machines like roti makers and de-hullers were mobilized. ICAR-CRIDA generated soil health cards from farmer field data, published articles, and created knowledge models using institutional recommendations. ICAR-IIOR and other centres disseminated project content through brochures, mass media, farmer meetings, and exchange visits in local languages. TANUVAS facilitated information sharing through WhatsApp (181 members), offline meetings, and farmer-to-farmer exchange. ICAR-IIOPR documented oil palm technologies and created content on irrigation, pest and disease management, cropping systems, and income-enhancing practices like fish farming.



Renovation of Check dam



Demonstration of operational mechanism of thresher at Palvancha village



IIMR scientists monitoring Barnyard millet trials at Dharmapur village



Demonstration on recycling of oil palm biomass by Chaff cutter.



4.2 National Initiative on Climate Resilient Agriculture (NICRA)

The Technology Demonstration Component (TDC) represents the second major pillar of the National Initiative on Climate Resilient Agriculture (NICRA). NICRA is a multi-institutional and multi-disciplinary network project, operational since 2011. The project aims to enhance resilience of Indian Agriculture to climate change and climate variability through strategic research and technology demonstrations. Its primary objective is to demonstrate the efficacy of existing and newly developed technologies in enhancing the resilience of Indian agriculture to climatic variability. The initiative aims to build adaptive capacity among farmers across 150 climatically vulnerable districts in the country. In the year 2024-25, TDC-NICRA was implemented by eight Krishi Vigyan Kendras (KVKs) in Zone X, which included Srikakulam, Kurnool (Yagantipalli), and Anantapur (Reddipalli) in Andhra Pradesh, Adilabad in Telangana, Ramanathapuram, Villupuram-I, and Perambalur in Tamil Nadu and Karaikal in Puducherry (Tables 4.2.1 to 4.2.18).

The selected villages under TDC-NICRA were categorized based on farming system typologies, and tailored technology packages were identified to address the constraints related to soil, water,

crop, and weather within each typology. These packages encompassed modules from Natural Resource Management (NRM), crop production, and livestock production. The technologies were demonstrated at the household level, with their impact assessed through comparisons against previously collected baseline data.

Among the eight KVKs implementing the project, 6 addressed drought and one each addressed floods and cyclones as the major climatic vulnerability of the district. The KVKs conducted 487, 1492, 685 and 1099 demonstrations benefitting 739, 1457, 860 and 1319 farmers under NRM, Crop, Livestock and Institutional interventions modules respectively. A total of 68.16 t of seed and 710.26 t of fodder were supplied to the needy farmers through seed and fodder bank respectively. The KVK also conducted 83 capacity building programs and 58 extension activities benefitting 2729 and 3168 farmers respectively for bringing awareness on climate resilient technologies and for enhancing the climate literacy of the clientele. During 2024-25, Srikakulam and Perambalur experienced drought situation and Anantapur, Kurnool, Ramanathapuram and Karaikal had excess rainfall compared to decennial average.

Table 4.2.1. List of KVKs implementing TDC-NICRA in Zone X

S. No	Name of the KVK	Long term average Rainfall (mm)	Rainfall during 2024-25 (mm)	% Deviation	Major climatic vulnerability
Andhra Pradesh					
1	Anantapur (Reddipalli)	512.4	706.3	37.84	Drought
2	Kurnool (Yagantipalle)	633	774.1	22.29	Drought
3	Srikakulam	1166.4	1059.1	-9.19	Floods
Telangana					
4	Adilabad	1048	1121.1	6.97	Drought and heavy rains
Tamil Nadu					
5	Ramanathapuram	827	1199.5	45.04	Drought
6	Villupuram-I	1012.6	1112.8	9.89	Drought
7	Perambalur	861	473.45	-45.01	Drought
Puducherry					
8	Karaikal	1400	1962.7	40.19	Cyclones



Fish seed distribution at Srikakulam district of Andhra Pradesh



Raised bed technology in cotton -Adilabad district of Telangana



Upscaling zero tillage maize cultivation in rice fallow at Srikakulam, Andhra Pradesh

Table 4.2.2. Natural Resource Management interventions taken up during the year 2024-25

Name of the KVK	No. of Demonstrations/ Interventions	Farmers covered	Area covered (ha)
Anantapur (Reddipalli)	91	165	56
Kurnool (Yagantipalle)	42	42	33
Srikakulam	2	70	20
Adilabad	48	120	48
Ramanathapuram	282	302	110.8
Villupuram-I	20	20	5
Perambalur	2	20	4
Total	487	739	276.8

Table 4.2.3. Crop Production Interventions taken up during the year 2024-25

Name of the KVK	No. of Demonstrations/ Interventions	Farmers covered	Area covered (ha)
Anantapur (Reddipalli)	136	136	58.4
Kurnool (Yagantipalle)	161	143	110
Srikakulam	41	375	150
Adilabad	223	223	89.2
Ramanathapuram	625	265	70
Karaikal	120	120	48
Villupuram-I	185	185	69
Perambalur	1	10	2
Total	1492	1457	596.6

Table 4.2.4. Livestock and Fisheries interventions taken up during the year 2024-25

Name of the KVK	No. of Demonstrations/ Interventions	Farmers covered	No. of animals covered	Area covered (ha)
Anantapur (Reddipalli)	82	82	390	2
Kurnool (Yagantipalle)	200	200	1000	0.8
Srikakulam	25	43	183	0.12
Adilabad	134	192	380	22
Ramanathapuram	176	275	1175	4
Karaikal	60	60	30	0.6
Villupuram-I	8	8	8	0
Perambalur	0	0	0	0
Total	685	860	3166	29.52

Table 4.2.5. Institutional Interventions taken up during the year 2024-25

Name of the KVK	Performance of custom hiring center		Performance of Seed bank		Performance of Fodder bank	
	Farmers covered	Area covered (ha)	Farmers covered	Quantity of seed (t)	Farmers covered	Fodder produced during deficit period (t)
Anantapur (Reddipalli)	12	4.8	3	2.4	10	214
Kurnool (Yagantipalle)	48	112	12	8.7	24	149
Srikakulam	89	54	20	53.4	43	344.5
Adilabad	248	576	67	1.2	0	0
Ramanathapuram	600	174	1	0.58	20	2.36
Karaikal	0	20	0	0	0	0
Villupuram-I	90		2	1.35	0	0
Perambalur	12	5	5	0.536	13	0.4
Total	1099	945.8	110	68.166	110	710.26

Table 4.2.6. Capacity building (HRD) activities taken up during the year 2024-25

Name of the KVK	No. of Training Programmes	Number of beneficiaries
Anantapur (Reddipalli)	6	180
Kurnool (Yagantipalle)	6	148
Srikakulam	31	1423
Adilabad	6	180
Ramanathapuram	13	390
Karaikal	6	87
Villupuram-I	4	151
Perambalur	11	170
Total	83	2729

Table 4.2.7. Extension activities taken up during 2024-25

Name of the KVK	No. of Training Programmes	Number of beneficiaries
Anantapur (Reddipalli)	15	313
Kurnool (Yagantipalle)	9	442
Srikakulam	5	770
Adilabad	6	180
Ramanathapuram	8	600
Karaikal	3	199
Villupuram-I	3	385
Perambalur	9	279
Total	58	3168

Table 4.2.8. Upscaling of technology taken up during 2024-25

Name of the KVK	Technology scaling up/out	No. of farmers reached
Anantapur (Reddipalli)	4	216
Kurnool (Yagantipalle)	5	336
Srikakulam	8	990
Adilabad	3	220
Ramanathapuram	2	175
Karaikal	1	80
Villupuram-I	3	395
Perambalur	4	143
Total	30	2555

Evidence of resilience built through demonstrations during 2024-25

The following is an account of performance of select impactful climate resilient technologies under NRM, Crop, Livestock and institutional interventions modules during 2024-25.

NRM interventions

Several *Ex-situ* and *In-situ* water harvesting, and conservation interventions were demonstrated in NICRA villages during 2024-25. The benefits accrued through some of the impactful demonstrations have been presented in the following tables.

Table 4.2.9. Mulching technology for watermelon crop at Adilabad district of Telangana

Intervention	Fruit yield (kg/ha)	Cost of cultivation (Rs/ha)	Gross income (Rs/ha)	Net income (Rs/ha)	B:C ratio
Farmer's practice (Watermelon without mulching)	34000	98500	234600	136100	1.38
Mulching technology (Watermelon)	43000 (26.47% increase)	110000	296700	186700 (50600 additional)	1.68

Table 4.2.10. Zero tillage cultivation in rice fallows-Srikakulam

Treatments	Seed yield (kg/ha)	Cost of cultivation (Rs/ha)	Gross income (Rs/ha)	Net income (Rs/ha)	B:C ratio
Farmers practice (Private Hybrid)	6442	61250	143,334	82084	2.34
In-situ moisture conservation practice (Private Hybrid)	7290 (13.10 % increase)	56640	1,62,202	105562 (23,478 additional)	2.86

Table 4.2.11. Performance of raised bed method in cotton cultivation-Adilabad, Telangana

Treatments	Seed yield (kg/ha)	Cost of cultivation (Rs/ha)	Gross income (Rs/ha)	Net income (Rs/ha)	B:C ratio
Farmer's practice (Flatbed)	1950	61500	146660	85160	1.38
Raised Bed method of cotton cultivation	2425 (24.35 % increase)	64500	182384	117884 (32724 additional)	1.82

Table 4.2.12. Performance of Sub soiling with chisel plough and conservation furrows - Anantapur, Andhra Pradesh

Treatments	Seed yield (kg/ha)	Cost of cultivation (Rs/ha)	Gross income (Rs/ha)	Net income (Rs/ha)	B:C ratio
Rainfed with Animal					
K-6	975	50885	65617	14732	1.28
K-Lepakshi	1172 (20 % more)	44237	78875	34638 (19906 additional)	2.27
Rainfed without Animal					
K-6	952	52355	64069	11714	1.22
K-Lepakshi	1055 (10.81 % more)	46354	71000	24646 (12932 additional)	1.53

Crop interventions

Table 4.2.13. Performance of drought tolerant Bengal gram variety, NBeG-452-Kurnool

Treatments	Seed yield (kg/ha)	Cost of cultivation (Rs/ha)	Gross income (Rs/ha)	Net income (Rs/ha)	B:C ratio
Farmers practice (JG-11)	1180	36625	64900	28275	1:1.77
Improved varieties (NBeG-452)	1405 (19.06 % increase)	38320	77275	38955 (10680 additional)	1:2.01

Livestock and Fisheries interventions

Table 4.2.14. Influence of mineral mixture on productivity of livestock-Srikakulam

Treatments	Average milk yield/ animal (L/day)	Total milk yield per animal (L/60days)	Cost of feeding (Rs/animal)	Gross Returns (Rs/animal)	Net returns (Rs/animal)
Farmers practice (Green fodder + Paddy straw)	3.9	234.0	9000	10000	1000
FP + Mineral mixture	7.56 (93.84 % increase)	453.6	12000	18144	6144 (5144 additional)

Table 4.2.15. Performance of poultry birds in augmenting farm income Ramanathapuram, Tamil Nadu.

Particulars	Initial wt.(g)	Weight of bird (kg) after one year	No. of eggs/ year	Total expenditure (Rs)	Income from eggs (Rs)	Income from meat (Rs)	Total income (Rs)
Local Breed	115	1.62	83	360	830	648	1478
Improved breed: Aseel	180	2.30 (41.97 % increase)	125 (42 additional)	510	1250 (420 additional)	920	2170

Table 4.2.16. Production and economics of rearing fish in farm pond

Treatments	Yield in kg/ Ha unit size of pond	Cost of production/ unit size of pond	Gross income (Rs/unit)	Net income (Rs/unit)	B:C ratio
Local species (IMC alone)	1240	100000	148824	48824	1.48
Improved species (IMC +Grass carp)	1549.5 (25 % increase)	100000	185947	85947 (37123 additional)	1.85

Institutional interventions**Table 4.2.17. Performance of fodder bank in the village-Srikakulam**

Fodder variety	No. of farmers benefitted	Area (ha)	Fodder seed/ slips procured (kg)	Fodder produced (deficit period) (t)	Fodder sold (t)	Amount realized (Rs)
Fodder crop 1 (CoFs 31)	05	0.3	3	49.5	19.8	19800
Fodder crop 2 (CoFs 33)	20	0.6	4	105	52.5	52500
Napier	10	1	10000 slips	125	40	40000

Convergence efforts for scaling up

The KVKs of the zone attempted to upscale promising climate resilient technologies demonstrated over years through convergence with line departments with an aim to share the benefit of the demonstrations to many clienteles. One such example of upscaling achieved by KVK, Srikakulam is presented in the following table.

Table 4.2.18. Upscaling of technologies achieved by KVK, Srikakulam through convergence

Village name	Technology scaling up/out	No. of farmers reached	Convergence with the programme	Approx amount mobilized from department (Rs)
Sirusuwada, V N puram, Kondavalasa, Isukalapalem	Upscaling of flood tolerant paddy varieties	150	DoA	240000
	Real time contingency in paddy field	150	DoA	179840
	Weed management	150	DoA	215280
	ICM in Zero Tillage Maize	60	DoA	194700
	ICM in Rice fallow pulses	40	DoA	93600
	ICM in Sesamum	35	DoA	44150
	Introduction of improved perennial fodder varieties	35	DoV	20500
	NRM activities	370	MGNREGS	11000000

**Mulching technology in watermelon -Adilabad, Telangana**



4.3. Attracting and Retaining Youth in Agriculture (ARYA)

Attracting and Retaining Youth in Agriculture (ARYA), a project launched by agricultural extension division of ICAR during March 2015 aims to create interest and confidence among rural youth in agriculture by demonstrating the potential of enterprises based on agriculture and allied sectors to be profitable and reliable sources of livelihood in rural areas. This endeavour is expected to result in rural youth being retained in villages and prevention of migration of youth to urban areas in search of livelihood realizing the importance of youth in agricultural development. The main objectives of the project are to attract rural youth to take up various agriculture, allied and service sector enterprises, to enable youth to establish net work groups to take up capital and resource intensive activities like processing, value addition and marketing and to demonstrate linkages with different stake holders for sustainable development of youth. This is envisioned to be achieved through imparting skill training to youth with the right aptitude to be self-reliant and facilitating establishment of enterprise units either singly or in groups by providing necessary critical inputs both general and capital. Skill development of rural youths will help in improving their confidence levels and encourage them to pursue farming as profession, generate additional employment opportunities to absorb under employed and unemployed rural youth in

secondary agriculture service-related activities in rural areas.

The concurrent monitoring, evaluation and midterm correction will be an integral part of project implementation. ARYA has been implemented by three KVKs in Zone 10 viz., Nellore in Andhra Pradesh, Nalgonda (Kampasagar) in Telangana and Kanyakumari in Tamil Nadu since 2015-16 and additional seven KVKs viz., West Godavari (V R Gudem), Kadapa, Warangal (Malyal), Dharmapuri, Sivagangai, Erode and Puducherry were sanctioned during 2018-19.

A total of 93 trainings were conducted on various enterprises viz., apiary, bio inputs production, drone pilot license programme, fishery, goat and sheep farming, integrated farming system, mushroom production, nursery management, poultry, hydroponics, value addition and vermicompost production by ARYA KVKs in which 2242 youth were trained (Table 4.3.1). Out of them, 509 youth have established 459 enterprise units. State, KVK and enterprise wise trainings conducted, youth trained, and enterprises established are furnished in Table 4.3.2. Maximum number of 498 youth were trained in Value addition followed by 357 youth in vermicompost, 310 in poultry, 244 in mushroom production and 211 in Nursery management. A total of 310 youth has established 170 enterprises in Poultry.



Banana Fiber value added products -KVK Erode



Poultry enterprise - KVK Sivagangai

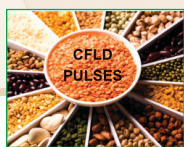
**Table 4.3.1. Enterprise wise youth trained, and enterprise established in ARYA project**

Enterprise	No. of Trainings	No. of Youth trained	No of Youth established units	No. of enterprises established
Apiary	7	139	8	5
Bio inputs production	7	147	1	1
Fishery	4	52	52	52
Goat and sheep farming	1	13	64	64
IFS	5	136	30	36
Mushroom production	8	244	8	6
Nursery management	7	211	19	7
Organic products	4	75	75	75
Poultry	13	310	170	149
Hydroponics	2	60	1	0
Value addition	20	498	13	4
Vermicompost production	15	357	68	60
Total	93	2242	509	459

Table 4.3.2. KVK wise youth trained, and enterprise established in ARYA project

State/KVK/Enterprise	No. of Trainings	No. of Youth trained	No of Youth established units	No. of enterprises established
Andhra Pradesh				
Nellore				
Mushroom production	2	80	3	3
Nursery management	2	60	2	2
Value addition	2	67	0	0
Vermicompost production	2	78	0	0
Total	8	285	5	5
Kadapa (Utukur)				
Mushroom production	4	122	0	2
Nursery management	3	91	2	2
Value addition	4	121	0	0
Vermicompost production	2	60	1	1
Poultry	2	62	0	0
Total	15	456	3	5
West Godavari (VR Gudem)				
Apiary	2	40	3	3
IFS	2	46	24	25
Poultry	1	32	25	25
Value addition	7	140	1	1
Total	12	258	53	54
Total (AP)	35	999	61	64
Telangana				
Nalgonda (Kampasagar)				
IFS	1	30	0	5
Nursery management	1	30	0	0
Value addition	1	30	0	0
Vermicompost production	1	30	0	0
Total	4	120	0	5
Warangal (Malyal)				
Nursery management	1	30	15	3
Poultry	1	30	2	2

State/KVK/Enterprise	No. of Trainings	No. of Youth trained	No of Youth established units	No. of enterprises established
Value addition	1	30	7	2
Vermicompost production	1	30	7	2
Total	4	90	31	9
Total (TG)	8	240	31	14
Tamil Nadu				
Kanyakumari				
Apiary	1	20	3	0
Mushroom production	1	26	5	1
Poultry	1	24	17	2
Value addition in banana	1	32	0	0
Value addition in coconut	1	20	0	0
Vermicompost production	1	20	4	1
Total	6	142	29	4
Dharmapuri				
Goatery	0	0	64	64
Bio inputs production	2	60	0	0
Poultry	0	0	27	21
IFS	2	60	6	6
Hydroponics	2	60	1	0
Total	6	180	98	91
Erode				
Apiary	4	79	2	2
Bio inputs production	5	87	1	1
Poultry	4	65	19	19
Value addition	3	58	5	1
Vermicompost	5	89	6	6
Total	21	378	33	29
Apiary	1	20	3	0
Mushroom production	1	26	5	1
Poultry	1	24	17	2
Value addition in banana	1	32	0	0
Value addition in coconut	1	20	0	0
Vermicompost	1	20	4	1
Total	6	142	29	4
Sivagangai				
Fishery	4	52	52	52
Organic products	4	75	75	75
Poultry	3	80	80	80
Vermicompost	3	50	50	50
Total	14	257	257	257
Total (TN)	47	957	417	381
Puducherry				
Puducherry				
Poultry	1	17	0	0
Mushroom production	1	16	0	0
Goatery	1	13	0	0
Total	3	46	0	0
Grand Total	93	2242	509	459



4.4 Cluster Frontline Demonstrations on Pulses

CFLDs on pulses programme was implemented by 22 KVKs in the Zone during 2024-25 *kharif*, *rabi* and summer seasons in Andhra Pradesh, Telangana and Tamil Nadu. A total of 4892 demonstrations were conducted in 2138.4 ha on blackgram and redgram (Table 4.4.1). The demonstrations were conducted in cluster approach with small and marginal farmers and weaker sections. Latest improved varieties released and notified by Central Varietal Release Committee within the past 10 years, crop production and protection

technologies, bio-fertilizers, bio-pesticides, micro-irrigation were demonstrated. KVKs in Tamil Nadu conducted 1570 demonstrations on Blackgram in *rabi* season in 704 ha area. KVKs in Andhra Pradesh conducted 623 and 1695 demonstrations in 298.8 and 698.8 ha, during *kharif* and *rabi* seasons, respectively. KVKs of Telangana conducted 1004 demonstrations in 436.8 ha area during *kharif* season. Season-wise and Crop-wise number of demonstrations and area are furnished in Table 4.4.2.

Table 4.4.1. Crop wise achievement of CFLDs on Pulses in 2024-25

Crop	Tamil Nadu			Andhra Pradesh			Telangana			Zone		
	Area (ha)		Demo (No)	Area (ha)		Demo (No)	Area (ha)		Demo (No)	Area (ha)		Demo (No)
	T	A		T	A		T	A		T	A	
Redgram (<i>Kharif</i>)	-	-	-	300	298.8	623	800	436.8	1004	1100	735.6	1627
Blackgram (<i>Rabi</i>)	800	704	1570	700	698.8	1695	-	-	-	1500	1402.8	3265
Total	800	704	1570	1000	997.6	2318	800	436.8	1004	2600	2138.4	4892

(T=Target, A=Achievement)

Performance of pulses varieties and technologies under CFLD Pulses (Tables 4.4.2 and 4.4.3)

Tamil Nadu

Blackgram

Blackgram varieties VBN 8, VBN 10 and VBN 11 were demonstrated during *rabi* season (Table 4.4.2). Variety VBN 8 recorded 7.56 q/ha wherein the increase in yield over check variety 29.48 per cent. Variety VBN 11 showed average yield of 6.80 and 23.52 percent over check varieties, respectively. Variety VBN 10 recorded 8.48 q/ha over 7.23 q/ha in check variety. Among the varieties, VBN 11 gave the highest yield of 9.99 q/ha in Namakkal district (Table 4.4.3).

Andhra Pradesh

Blackgram

In *rabi* season, LBG 787, LBG 884, LBG 904, TBG 104 and TBG 129 were demonstrated where in the yields were 44.87, 32.21, 30.50, 35.26 and 19.22

per cent higher than check varieties. Among the varieties, LBG 884 and LBG 904 gave the highest average yields of 20 q/ha. Variety TBG 129 in Nellore, while in West Godavari (Undi) by variety LBG 884 and by LBG 904 in Nellore and West Godavari (Undi).

Redgram

Redgram varieties LRG 105, TRG 59 and PRG 176 were demonstrated during *kharif* season with average yields of 9.79, 10.70 and 13.15 q/ha as against 8.65, 6.80 and 7.94 q/ha in check varieties, respectively. Among the varieties the highest yield of 17.75 q/ha was recorded by PRG 176 in Anantapur (Reddipalli).

Telangana

Redgram

Redgram varieties TDRG 59, WRG 93, GRG 811, WRGe 255 and WRGe 97 were demonstrated by KVKs in Telangana where the average yields in demonstrations were 9.61, 17.53, 9.14, 17.11 and

11.87 q/ha as against 7.45, 12.07, 8.34, 12.00 and 8.93 q/ha. Among the varieties WRGe 97 gave the highest yield of 20.00 q/ha, followed by WRGe 255

and WRGe 93 which recorded 19.50 and 19.00 q/ha, the yields were at par with each other.

Table 4.4.2. Performance of pulses varieties and technologies under CFLD Pulses

State/ Season/ Crop	Variety	KVKs	Average yield (q/ha)		% Increase
			Demo	Check	
Tamil Nadu (Rabi)					
Blackgram	VBN 8	Cuddalore, Namakkal, Tirunelveli, Tiruvannamalai, Thiruvavur	7.56	5.84	29.48
Blackgram	VBN 10	Cuddalore	8.48	7.23	17.35
Blackgram	VBN 11	Cuddalore, Nagapattinam, Namakkal, Tirunelveli, Thiruvavur	6.80	5.51	23.52
Andhra Pradesh					
Kharif					
Redgram	LRG 105	Kurnool (Banavasi), Prakasam (Darsi)	9.79	8.65	13.19
Redgram	PRG 176	Kurnool (Banavasi)	13.15	7.94	65.59
Redgram	TRG59	Anantapur (Reddipalli)	10.70	6.80	57.34
Rabi					
Blackgram	LBG 787	Srikakulam	6.15	4.24	44.87
Blackgram	LBG 884	Nellore, Srikakulam, Visakhapatnam (Kondempudi), Vizianagaram, West Godavari (Undi)	11.91	9.01	32.21
Blackgram	LBG 904	East Godavari (Kalavacherla), Nellore, Srikakulam, Vizianagaram, West Godavari (Undi)	11.87	9.10	30.50
Blackgram	TBG 104	East Godavari (Kalavacherla), Prakasam (Darsi), Vizianagaram	11.21	8.29	35.26
Blackgram	TBG 129	Nellore	15.56	13.05	19.22
Telangana (Kharif)					
Redgram	GRG-811	Medak (DDS)	9.14	8.34	9.51
Redgram	TDRG-59	Mahabubnagar (Palem), Medak (DDS), Medak (Tuniki)	9.61	7.45	28.89
Redgram	WRGe-97	Medak (Tuniki), Nalgonda (Kampasagar), Rangareddy (CRIDA)	11.87	8.93	32.93
Redgram	WRGE-255	Nalgonda (Kampasagar)	17.11	12.00	42.62
Redgram	WRGE-93	Nalgonda (Kampasagar)	17.53	12.07	45.30

Table 4.4.3. Highest yield recorded under CFLD Pulses

State/ Season/ Crop	Variety	Highest yield recorded (q/ha)	KVK/District
Tamil Nadu (Rabi)			
Blackgram	VBN 8	9.04	Namakkal
Blackgram	VBN 10	8.75	Cuddalore
Blackgram	VBN 11	9.99	Namakkal
Andhra Pradesh			
<i>Kharif</i>			
Redgram	LRG 105	14.60	Kurnool (Banavasi),
Redgram	PRG 176	17.75	Anantapur (Reddipalli)
Redgram	TRG 59	13.00	Anantapur (Reddipalli)
<i>Rabi</i>			
Blackgram	LBG 787	7.80	Srikakulam
Blackgram	LBG 884	20.00	West Godavari (Undi)

State/ Season/ Crop	Variety	Highest yield recorded (q/ha)	KVK/District
Blackgram	LBG 904	20.00	Nellore, West Godavari (Undi)
Blackgram	TBG 104	16.25	Vizianagaram
Blackgram	TBG 129	19.95	Nellore
Telangana (Kharif)			
Blackgram	GRG-811	10.04	Medak (DDS)
Blackgram	TDRG-59	15.00	Mahabubnagar (Palem)
Redgram	WRGe-97	20.00	Nalgonda (Kampasagar)
Redgram	WRGE-255	19.50	Nalgonda (Kampasagar)
Redgram	WRGE-93	19.00	Nalgonda (Kampasagar)

Table 4.4.4. Variety wise total seed produced under CFLD Pulses demonstration plots and distributed to other farmers

State	Crop	Season	Variety	Seed produced (q)
Andhra Pradesh	Redgram	Kharif	LRG 105	1468.42
			PRG 176	1309.78
			TRG 59	526.46
Total Kharif				3304.66
Andhra Pradesh	Blackgram	Rabi	LBG 787	582.64
			LBG 884	2338.47
			LBG 904	1880.97
			TBG 104	2121.83
			TBG 129	933.75
Total Rabi				7857.66
Total AP (K+R)				11162.32
Telangana	Redgram	Kharif	GRG-811	274.11
			TDRG-59	2121.16
			WRGe-97	1505.37
			WRGE-255	807.80
			WRGE-93	210.40
Total TG				4918.84
Tamil Nadu	Blackgram	Rabi	VBN 8	1892.17
			VBN 10	381.62
			VBN 11	2780.81
Total TN				5054.60
Blackgram				12915.26
Redgram				8223.50
Grand Total				21135.76



CFLD on blackgram variety LBG 884- KVK Nellore



CFLD on blackgram variety VBN 8 - KVK Cuddalore



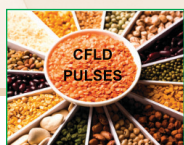
CFLD on redgram variety WRGe 97 - KVK Ranga Reddy



Installation of pheromone trap_Thiruppanamur - KVK Thiruvannamalai



CFLD Pulses on blackgram variety LBG 884 - KVK Srikakulam



4.5 Ensuring pulses sufficiency in India by capitalizing the Model Pulse Village approach

Model Pulses Village programme was implemented by 15 KVKs in the Zone during 2024 -25 *kharif* and *rabi* seasons in Tamil Nadu, Andhra Pradesh, Telangana. A total of 4375 demonstrations were conducted 1567 ha on blackgram and redgram (Table 4.5.1). The demonstrations were conducted in cluster village approach with small and marginal farmers and weaker sections. Latest improved varieties released and notified by Central Varietal Release Committee within the past 10 years, crop production and protection technologies, bio-

fertilizers, bio-pesticides, micro-irrigation were demonstrated. KVKs in Tamil Nadu conducted 2250 demonstrations on blackgram (2200), and redgram (50) in *rabi*. KVKs in Andhra Pradesh conducted 750 and 1125 demonstrations in 267 and 450 ha on blackgram and redgram, during *kharif* and *rabi* seasons, respectively. KVKs of Telangana conducted 250 demonstrations on redgram in 100 ha area during *Kharif*. Season-wise and Crop-wise number of demonstrations and area are furnished in Table 4.5.1.

Table 4.5.1. Crop wise achievement of Model Pulses Village in 2024-25

Crop	Tamil Nadu			Andhra Pradesh			Telangana			Zone		
	Area (ha)		Demo (No)	Area (ha)		Demo (No)	Area (ha)		Demo (No)	Area (ha)		Demo (No)
	T	A		T	A		T	A		T	A	
Redgram (<i>Kharif</i>)	170	0	0	900	267	750	1230	100	250	2300	367	1000
<i>Rabi</i>												
Redgram	1330	20	50	150	150	375	270	0	0	1750	170	425
Blackgram		730	2200	450	300	750		0	0	450	1030	2950
Total Rabi	1330	750	2250	600	450	1125	270	0	0	2200	1200	3375
Grand Total	1500	750	2250	1500	717	1875	1500	100	250	4500	1567	4375

(T=Target, A=Achievement)

Performance of pulses varieties and technologies under Model Pulses Village (Tables 4.5.2 and 4.5.3)

Tamil Nadu

Blackgram

Blackgram varieties VBN8, VBN 10, VBN 11 and CO 7 were demonstrated during *rabi* season (Table 4.5.2). In *Rabi* 12.70 q/ha was recorded by VBN 10 and VBN 11, 8.60 q/ha by variety CO 7, VBN 8 recorded 7.20 q/ha and 6.55 q/ha was recorded by VBN 11 wherein the increase in yield over check varieties were 53.01, 35.22, 50.00 and 32.99 per cent, respectively. The highest yield of 12.70 q/ha was recorded by varieties VBN 10 and VBN 11 in Cuddalore district.

Andhra Pradesh

Blackgram

In *rabi* season, VBN8 and LBG 904 were demonstrated. Among the varieties the highest yield of 21.50 q/ha was recorded by LRG 105 in Guntur (Lam).

Redgram

Redgram varieties PRG 176 and LRG 52 were demonstrated during *kharif* season where in the yields were 13.20 and 8.38 q/ha as against 12.40 and 7.93 q/ha in check varieties, respectively. Among the two varieties the highest yield of 13.20 q/ha was recorded by PRG 176 in Kurnool (Banavasi). Among the varieties, the highest of yield of 2.50 q/ha was recorded by LRG 105 in Guntur (Lan) in *rabi*.

Telangana

Redgram

During *Kharif* season, Redgram varieties WRGE 255 and WRG 97 were demonstrated by KVK Nalgonda

(Kampasagar) where the average yield 10.25 q/ha as against 8.63 q/ha in check. Among the varieties, the highest of yield of 14.13 q/ha was recored by VBN 8 in KVK Kadapa (Utukur).

Table 4.5.2. Performance of pulses varieties and technologies under Model Pulses Village

State/ Season/ Crop	Variety	KVKs	Average yield (q/ha)		% Increase
			Demo	Check	
Tamil Nadu (Rabi)					
Blackgram	VBN 8	Cuddalore	7.20	4.80	50.00
Blackgram	VBN10 & VBN 11	Cuddalore	12.70	8.30	53.01
Blackgram	VBN 11	Thiruvarur, Nagapattinam	6.55	4.93	32.99
Redgram	CO7	Thiruvarur	8.60	6.36	35.22
Andhra Pradesh					
Kharif					
Redgram	PRG 176	Kurnool 1 (Banavasi)	13.20	12.40	6.45
Redgram	LRG 52	Prakasam 1 (Darsi)	8.38	7.93	5.67
Rabi					
Blackgram	VBN 8, LBG 904	Kurnool 1 (Banavasi)	14.50	12.40	16.94
Blackgram	LBG 904	Kadapa 1 (Utukur)	12.60	12.05	4.56
Blackgram	VBN 8	Kadapa 1 (Utukur)	14.13	12.05	17.26
Redgram	LRG 105	Guntur	21.50	17.50	22.86
Telangana (Kharif)					
Redgram	WRGE 255, WRG 97	Nalgonda 2 (Kampasagar)	10.25	8.63	18.84

Table 4.5.3. Variety wise total seed produced under MPV demonstration plots and distributed to other farmers

State/Season/Crop	KVK	Variety	Seed Produced (ha)
Tamil Nadu (Rabi)			
Blackgram	Cuddalore	VBN 8	1080.00
Blackgram	Cuddalore	VBN10 & VBN 11	1905.00
Blackgram	Thiruvarur, Nagapattinam	VBN 11	2816.50
Redgram	Thiruvarur	CO7	172.00
Total Tamil Nadu			5973.50
Andhra Pradesh			
<i>Kharif</i>			
Redgram	Kurnool 1 Banavasi	PRG 176	1544.40
Redgram	Prakasam 1 Darsi	LRG 52	1257.00
Total Kharif			2801.40
<i>Rabi</i>			
Blackgram	Kurnool 1 Banavasi	VBN 8, LBG 904	2175.00
Blackgram	Kadapa 1 Utukur	LBG 904	1008.00
Blackgram	Kadapa 1 Utukur	VBN 8	989.10
Redgram	Guntur	LRG 105	3225.00
Total Rabi			7397.10
Total Andhra Pradesh (K+R)			10198.50
Telangana (Kharif)			
Redgram	Nalgonda 2 (Kampasagar)	WRGE 255, WRG 97	1025.00
Total Telangana			1025.00
Blackgram			9973.60
Redgram			7223.40
Grand Total			17197.00



Field day of MPV (Rabi-Black gram-VBN 8)-KVKKurnool (Banavasi)



Field Day of MPV -KVK Kadapa Utukuru



Field visit to Model pulse village on Demonstration of blackgram KVK Cuddalore



4.6. Cluster Frontline Demonstrations (CFLDs) on Oilseeds

KVKs of the zone conducted cluster front line demonstrations on oilseeds under National Food Security Mission (NFSM) in 2024-2025 during *kharif*, *rabi* and *summer* seasons to demonstrate the production potential of newly released technologies on the farmer's fields at different locations. The crops covered are groundnut, sesame, sunflower,

castor, safflower and niger. A total of 3400 hectares area was allotted to 59 KVKs in Andhra Pradesh, Tamil Nadu, Telangana states and union territory Puducherry. The programme was implemented in 2946.4 ha by organizing 7366 demonstrations through 52 KVKs.

Table 4.6.1. Cluster Frontline Demonstrations (CFLDs) on Oilseeds

Crop	State	Area (ha)		No. of Demonstrations	
		Target	Achievement	Target	Achievement
Kharif					
Groundnut	Andhra Pradesh	260	232	650	580
	Tamil Nadu	180	84.8	450	212
	Sub total	440	316.8	1100	792
Sesame	Andhra Pradesh	20	0	50	0
	Tamil Nadu	40	0	100	0
	Sub total	60	0	150	0
Castor	Andhra Pradesh	90	90	225	225
	Telangana	20	10	50	25
	Tamil Nadu	70	70	175	175
	Sub total	180	170	450	425
Niger	Andhra Pradesh	80	80	200	200
Sunflower	Tamil Nadu	20	10	50	25
Total Kharif Season		780	576.8	1950	1442
Rabi					
Groundnut	Andhra Pradesh	480	492	1200	1230
	Telangana	310	220	775	550
	Tamil Nadu	490	439.6	1225	1099
	Sub total	1280	1151.6	3200	2879
Sesame	Andhra Pradesh	220	240	550	600
	Telangana	100	90	250	225
	Tamil Nadu	120	130	300	325
	Puducherry	20	50	50	125
	Sub total	460	510	1150	1275
Sunflower	Andhra Pradesh	110	100	275	250
	Telangana	30	0	75	0
	Tamil Nadu	70	70	175	175
	Sub total	210	170	525	425
Safflower	Andhra Pradesh	40	48	100	120
	Telangana	40	40	100	100
	Sub total	80	88	200	220
Castor	Andhra Pradesh	30	30	75	75
	Telangana	50	10	125	25
	Sub total	80	40	200	100
Total Rabi Season		2110	1959.6	5275	4899



Crop	State	Area (ha)		No. of Demonstrations	
		Target	Achievement	Target	Achievement
Summer					
Groundnut	Andhra Pradesh	20	10	50	25
	Telangana	20	0	50	0
	Tamil Nadu	70	60	175	150
	Sub total	110	70	275	175
Sesame	Andhra Pradesh	230	140	575	350
	Telangana	50	60	125	150
	Tamil Nadu	120	140	300	350
	Sub total	400	340	1000	850
Summer Season		510	410	1275	1025
Grand Total (Kharif + Rabi + Summer Season)		3400	2946.4	8500	7366

Andhra Pradesh

A total of 3505 Cluster frontline demonstrations on oilseeds were implemented by 19 KVKs in Andhra

Pradesh during 2024-2025 in groundnut, sesame, sunflower, castor, safflower and niger crops in an area of 1010.8 ha.

Table 4.6.2. Performance of CFLDs on Oilseeds in Andhra Pradesh

Crop	Varieties	Name of KVK/District	Average yield (q/ha)		% Increase over check
			Demo	Check	
Kharif Season					
Groundnut	Kadiri Lepakshi	Kalyandurg, Reddipalli	12.28	9.80	24.08
	Visishta (TCGS 1694)	Kalikiri, Chittoor (RASS), Banavasi, Yagantipalli, Kandukur, Vizianagaram, Utukur	19.24	14.40	31.63
	Nithya Haritha	Vizianagaram, Utukur	16.31	13.13	24.38
Castor	ICH-5	Kalyandurg, Banavasi, Yagantipalli	12.01	9.97	20.56
	ICH-66	Reddipalli	10.12	9.27	9.17
Niger	Utkal Niger 150	BCT, Vizianagaram	4.90	2.71	81.73
	JNS 28	Kondempudi, Vizianagaram	5.25	2.99	80.01
Rabi season					
Groundnut	Kadiri Lepakshi	Kalyandurg, Utukur, Periyavaram	32.47	27.32	18.49
	Visishta (TCGS 1694)	Kalikiri, RASS, Vonipenta, Garikapadu, Banavasi, Yagantipalli, Nellore, Kandukur, Srikakulam, Visakhapatnam (BCT), Kondempudi, Vizianagaram, Undi, VR Gudem	27.36	23.21	21.54
	TAG 24	Guntur	36.25	34.20	5.99
	K-Chitravathi	Reddipalli	32.49	28.42	14.32
Safflower	ISF-764	Reddipalli, Yagantipalli	13.54	10.71	25.82
Castor	ICH 5	Banavasi, Darsi	18.48	15.28	27.12
Sesame	YLM 66	Kalavacherla, Garikapadu, Kondempudi, Vizianagaram, Undi, VR Gudem, Visakhapatnam (BCT)	8.96	6.22	47.77
	JCS-1020	Yagantipalli	11.53	9.62	19.85
	YLM 146	Nellore, Kandukur	6.45	5.03	25.86
Sunflower	NDSH 1012 (Prabhat)	Chittoor (RASS), Darsi, Visakhapatnam (BCT), Kondempudi	13.95	11.36	25.17
Summer season					
Sesame	YLM 146	Chittoor (RASS), Utukur, Vonipenta, Darsi, Vizianagaram	12.23	9.02	-26.43

Groundnut: 19 KVKs of Andhra Pradesh conducted 1835 Cluster FLDs on groundnut covering an area of 734 ha in *kharif*, *rabi* and *summer* seasons. Technology demonstrated included improved variety with integrated crop management practices. During *kharif*, improved variety Vishishta increased the yields by 31.63% compared to check plot with 14.40q/ha. During *rabi*, groundnut variety Vishishta recorded 21.54% increase over the farmers yield with 27.36q/ha average yield.

Sesame: 14 KVKs conducted 950 Cluster frontline demonstrations on sesame in 380ha in *rabi* and *summer* seasons together. In *rabi*, improved variety YLM 66 along with other technological interventions resulted in average demonstration yield of 8.96q/ha which is 47.77% higher than the average check yield of 6.22q/ha. During *rabi* season, the varietal demonstration of YLM-146 with recommended package of practices resulted in 25.86% increase in yields compared to check yield.

Castor: A total of 300 cluster frontline demonstrations were conducted in 120ha by 4 KVKs on castor during *kharif* and *rabi* seasons. Technology demonstrated included ICH-5 and ICH-66 with integrated crop management practices. ICH-5 hybrid resulted in average demonstration

yield of 12.01q/ha with 20.56% increase against check yield of 9.97q/ha in *kharif* season.

Sunflower: A total of 250 Cluster frontline demonstrations in 100ha were conducted on sunflower by 4 KVKs during *rabi* season. The technology demonstrated was improved hybrid with integrated crop management practices. Improved hybrid NDSH 1012 resulted in average yield of 13.95q/ha of demo yield with 25.17% increase against check plot yields of 11.36q/ha.

Safflower: A total of 120 CFLDs in 48ha were organized in Safflower in Anantapur and Kurnool districts during *rabi* season under irrigated situation. Safflower hybrid ISF-764 recorded highest average yield of 13.54q/ha against check yield of 10.71q/ha with 25.82% increase in yield over check plot.

Niger: 200 Cluster frontline demonstrations were organized in 80 ha on niger crop by 3KVKs of Vizianagaram and Visakhapatnam districts during *kharif* season. The technology demonstrated was varietal demonstration along with integrated crop management practices. The variety Utkal niger 150 resulted in average yield of 4.90q/ha against check yield of 2.71q/ha with 81.73% increase in yield over check plot.



Disribution of inputs to farmers



Field visit in safflower crop



Field visit in sunflower crop



Fielsd visit in Groundnut crop

Tamil Nadu

A total of 2511 Cluster frontline demonstrations on oilseeds were implemented by 23 KVKs in Tamil

Nadu and one KVK in Puducherry during 2024-25 in groundnut, sesame, sunflower and castor crops in an area of 1004.4ha.

Table 4.6.3. Performance of CFLDs on Oilseeds in Tamil Nadu

Crops	Varieties	Name of KVK/ District	Average yield (q/ha)		% Increase
			Demo	Check	
Kharif Season					
Groundnut	VRI 10	Erode, Vellore	21.26	18.82	13.01
	CO 7 (2013)	Karur	19.70	16.00	23.13
	GJG-32 (JAU)	Namakkal	18.53	13.1	41.45
	Kadiri Lepakshi (K-1812)	Tirunelveli	29.08	22.00	32.18
Castor	YRCH 2 (2019)	Namakkal	16.20	10.30	57.28
	YRCH 1	Salem, Theni, Vellore	21.59	11.75	41.56
Sunflower	Vedha (KSFH-666)	Ariyalur	18.38	15.8	16.33
Rabi Season					
Groundnut	TCGS 1694	Ariyalur, Nagapattinam	24.94	21.10	18.57
	VRI 10, Visishta (TCGS 1694)	Tiruvallur, Cuddalore, Dharmapuri, Virudhunagar, Villupuram-II, Villupuram-I, Salem	26.964	20.097	33.351
	TMV14	Krishnagiri, Tiruvannamalai	20.20	16.64	21.48
	GJG 32	Theni, Trichy	24.25	16.25	49.52
	Girnar 5	Perambalur	23.48	18.43	27.40
	VRI 8	Karur	26.00	19.00	36.84
	Sesame	TMV - 7	Tuticorin	5.80	4.50
	VRI 4	Virudhunagar, Villupuram-II	8.40	5.85	42.12
Sunflower	KBSH 85	Tuticorin, Virudhunagar	13.95	9.85	22.52
Summer Season					
Sesame	TMV 7	Karur	7.07	6.15	14.96
	VRI 4	Perambalur	7.6	6.4	18.75
Groundnut	VRI 10	Tirunelveli	23.43	19	23.32



Demonstration on Foliar spray of Azadirachta indica in sesame crop



Diagnostic visit in sunflower crop



Field day in Groundnut crop



Field visit in Ground nut crop



Field visit in sesame crop

Groundnut: A total of 1461 Cluster FLDs on groundnut were conducted by the 19 KVKs of Tamil Nadu covering an area of 584.4 ha in *Kharif*, *rabi* and *summer* seasons. In *kharif*, the technology demonstrated included improved variety with integrated crop management practices under rainfed situation. The varieties demonstrated were GJG-32 (JAU) and Kadiri Lepakshi. The average demonstration yield of 18.53q/ha was recorded with GJG-32 (JAU) variety with 41.45 % increase in yield compared to check yield. During *rabi*, groundnut demonstrations were conducted with improved variety GJG-32 (JAU), Kadiri Lepakshi,

Girnar-5, VRI-8, TMV14 and VRI-10 following integrated crop management practices. Kadiri Lepakshi (K-1812) variety recorded highest average demonstration yield of 29.08 q/ha, resulting in 32.18 % increased yield compared to check yield of 22q/ha.

Sesame: A total of 675 cluster frontline demonstrations in 270 ha were conducted on sesame in *rabi* season. Varietal demonstration of VRI-4 with recommended package of practices under irrigated conditions resulted in 42.12% increase in yields compared to local check during *rabi* season with the average demo yield of 8.40q/ha.

Castor: A total of 175 cluster frontline demonstrations on castor in 70 ha area during *kharif* season. The technology demonstrated was improved hybrid with integrated crop management practices. In *kharif*, hybrid YRCH-1 resulted in average yield of 21.59 q/ha against 11.75q/ha of check yield with 41.56% increase in yield.

Sunflower: 200 Cluster frontline demonstrations in 80ha on Sunflower were conducted during *kharif* and *summer* seasons. Technology demonstrated included improved hybrid with integrated crop management practices. The hybrid KBSH 85 recorded highest average yield of 13.95q/ha in Tuticorin and Virudhunagar district.

Telangana

A total of 1075 Cluster frontline demonstrations on oilseeds were implemented by 10KVKs in

Telangana during *kharif*, *rabi* and *summer* seasons in groundnut, sesame, safflower, sunflower and castor crops in an area of 370ha.

Table 4.6.4. Performance of CFLDs on oilseeds in Telangana

Crop	Varieties Undertaken	Name of KVK/District	Average yield (q/ha)		%
			Demo	Check	Increase
Kharif Season					
Castor	PCH-111	Palem	21.8	17.6	23.86
Rabi season					
Groundnut	Visishta (TCGS 1694)	Adilabad, Gaddipalli, Kampasagar	30.03	23.77	28.38
	K-6	Palem	22.70	19.60	15.82
	K-9	Malyal	25.00	19.50	28.21
	Kadiri Lepakshi (K-1812)	Jammikunta	32.00	28.00	14.29
Sesame	JCS -1020	Adilabad, Ramagirikhilla, Kampasagar	9.85	7.70	28.10
	JCS-2454	Jammikunta	10.00	9.50	5.26
Castor	PCH -111	Palem	21.20	18.30	15.85
Safflower	ISF-764	Sangareddy (DDS)	18.06	15.88	13.73
Summer season					
Sesame	JCS 1020	Bellampalli, Palem, Rudrur, Kampasagar	9.85	7.36	32.52



Demonstration on installation of pheromone traps in Groundnut crop



Field day in sesame crop

Groundnut: 550 Cluster FLDs on groundnut were conducted covering an area of 220ha in *rabi* season in Telangana. The varieties demonstrated were Visishta, K-6, K-9, and Kadiri Lepakshi, Visishta, along with integrated crop management practices resulted in 28.38% increase in yields over average check yield 23.77 q/ha in Adilabad, Gaddipalli and Kampasagar districts with an average demonstration yield of 30.03q/ha. Kadari Lepakshi resulted in average yield of 21.20/ha in demo plots against the check plots with average yield of 18.30q/ha in Jammikunta district. Demonstrations of K6 and K-9 variety resulted in 22.70 and 25.00% increase in yield over the check plot 19.60 & 19.50 in Palem & Malyal districts.

Sesame: A total of 375 cluster frontline demonstrations on sesame in 150ha were taken up in *rabi* and *summer* season with other technological interventions. JCS-1020 variety resulted in 28.10% increase in yields with a demonstration yield of 9.85q/ha over the check yield of 7.70q/ha during *rabi* season in Adilabad, Ramagirikhilla, Kampasagar and resulted in 32.52% increase in yields with a demonstration yield of 9.85q/ha over

the check yield of 7.36q/ha in Bellampalli, Palem, Rudrur and Kampasagar during summer season. The improved variety JCS-2454 resulted in a 5.26% increase in yield over check plot with 10q/ha of demo plot yield.

Castor: 50 Cluster frontline demonstrations on castor were conducted in 20 ha by KVK Palem during *Kharif* and *rabi* seasons. The technology demonstrated was improved hybrid with integrated crop management practices. During *kharif* the hybrid PCH-111 resulted in an average yield of 21.8q/ha against 17.6q/ha of check with 23.86% increase in yields. During *rabi*, the hybrid PCH-111 resulted in yield of 21.20q/ha against 18.30q/ha of check with 15.85% increase in yields.

Safflower: 100 Cluster frontline demonstrations on safflower were conducted in 40ha by KVK, Sangareddy during *rabi* season. The technology demonstrated was improved hybrid with integrated crop management practices. The hybrid ISF-764 resulted in an average yield of 18.06q/ha with 13.73% increase in yield over the check plot.



Mr. N. Akash of **Adilabad, Telangana** adopted wilt-tolerant redgram variety WRGE 97 and technologies, harvested a good crop under challenging climatic conditions. *"Seeing the performance of this variety friends in nearby villages adopted and benefited. We are thankful to the KVK for providing quality seeds of climate resilient variety and technologies on time".*



4.7. Oilseeds Model Village under NFSM

KVKs of the zone conducted cluster front line demonstrations on oilseeds under Oilseeds model village project by National Food Security Mission (NFSM) in 2024-2025 during *kharif*, *rabi* and *summer* seasons to achieve self-sufficiency in edible oilseeds through institutional and technological innovations by developing Oilseeds Model Villages.

The crops covered are Groundnut, Sesame, Sunflower and Soyabean. A total of **3600** hectares area was allotted to **18** KVKs in Andhra Pradesh, Tamil Nadu and Telangana states. The programme was implemented in **1936.4** ha by organizing **4841** demonstrations by the KVKs.

Table 4.7.1. Progress of Cluster Frontline Demonstrations (CFLDs) in Oilseeds Model Villages

S. No.	Crop	State	Area (ha)		No. of Demonstrations	
			Target	Achievement	Target	Achievement
Kharif						
i	Groundnut	Andhra Pradesh	210	120	525	300
		Telangana	350	200	875	500
ii	Soyabean	Andhra Pradesh	180	149.6	450	374
Total Kharif Season			740	469.6	1850	1174
Rabi						
i	Groundnut	Andhra Pradesh	420	406.8	1050	1017
		Telangana	600	250	1500	625
		Tamil Nadu	730	330	1825	825
ii	Sesame	Andhra Pradesh	180	180	450	450
		Telangana	200	0	500	0
		Tamil Nadu	120	50	300	125
iii	Sunflower	Andhra Pradesh	150	90	375	225
		Telangana	50	0	125	0
		Tamil Nadu	150	100	375	250
Total Rabi Season			2600	1406.8	6500	3517
Summer						
i	Sesame	Tamil Nadu	200	20	500	50
		Andhra Pradesh	60	40	150	100
Total Summer Season			260	60	650	150
Grand Total (Kharif + Rabi + Summer)			3600	1936.4	9000	4841

Andhra Pradesh

A total of 2466 Cluster frontline demonstrations on oilseeds were implemented by 6 KVKs in Andhra

Pradesh during 2024-2025 in Groundnut, Sesame and Sunflower crops in an area of 986.4ha.

Table 4.7.2 Performance of CFLDs in Oilseeds Model Villages of Andhra Pradesh

Crop	Varieties Undertaken	Name of KVK/District	Average Yield(q/ha)		% Increase
			Demo	Check	
Kharif Season					
Groundnut	TCGS 1694 (Visishta)	Reddipalli, Banavasi, Yagantipalli	17.63	12.83	40.07
Soyabean	KDS-726	Reddipalli	20.00	15.30	30.72
	AISb-50	Reddipalli	19.40	15.30	26.80
	Basara	Reddipalli, Yagantipalli	20.40	16.14	26.61

Crop	Varieties Undertaken	Name of KVK/District	Average Yield(q/ha)		% Increase
			Demo	Check	
Rabi season					
Groundnut	Kadiri Lepakshi	Kalyandurgam	40.25	30.85	30.47
	TCGS 1694 (Visishta)	Reddipalli, Banavasi, Chittoor (RASS), Visakhapatnam (BCT)	26.63	22.01	21.87
Sesame	JCS-1020	Yagantipalli	11.76	9.55	23.14
	YLM-66	Visakhapatnam (BCT)	7.93	6.61	19.97
Sunflower	NDSH 1012 (Prabhat)	Chittoor (RASS)	15.37	12.35	28.45
Summer season					
Sesame	YLM 146	Chittoor (RASS)	13.40	9.20	45.65

Groundnut: 6 KVKs of Andhra Pradesh conducted 1317 Cluster FLDs on groundnut covering an area of 526.8 ha in *kharif*, and *rabi* seasons. Technology demonstrated included improved variety with integrated crop management practices. During *kharif*, improved variety Visishta increased the yields by 40.07% compared to check plot with 12.83q/ha. During *rabi*, groundnut variety Kadiri Lepakshi recorded 30.47% increase over the farmers yield with 40.25q/ha average yield.

Soyabean: 374 Cluster frontline demonstrations were organized on crop in 149.6 ha on crop by Reddipalli and Yagantipalli KVKs during *kharif* season. The technology demonstrated was varietal demonstration along with integrated crop management practices. KDS-726 variety resulted in average yield of 20q/ha against check yield of 15.30q/ha with 30.72% increase in yield.

Sesame: A total of 550 Cluster frontline demonstrations on sesame were taken up in 220 ha in rabi and summer seasons together. In *rabi*, improved variety YLM 66 along with other technological interventions resulted in average demonstration yield of 7.93q/ha which is 19.97% higher than the average check yield of 6.61q/ha. During rabi season, YLM 146 variety resulted average yield of 13.40q/ha against check yield of 9.20q/ha with 45.65% increase in yield over check plot.

Sunflower: A total of 225 Cluster frontline demonstrations in 90 ha were conducted on Sunflower in Chittoor district during *rabi* season. The technology demonstrated was improved hybrid with integrated crop management practices. Improved hybrid NDSH 1012 resulted in average yield of 15.37 q/ha of demo yield with 28.45% increase against check plot yields of 12.35q/ha.



Field visit in Groundnut crop



Field visit in Soybean crop

Tamil Nadu

A total of 1250 Cluster frontline demonstrations on oilseeds were implemented by 4KVKs in Tamil

Nadu during 2024-25 in groundnut, sesame and sunflower crops in an area of 500ha.

Table 4.7.3 Performance of CFLDs in Oilseeds Model Villages of Tamil Nadu

Crop	Varieties Undertaken	Name of KVK/District	Average Yield(q/ha)		% Increase over check
			Demo	Check	
Rabi season					
Groundnut	TCGS 1694	Ariyalur	21.91	18.20	20.36
	TMV 14	Tiruvannamalai	20.06	15.09	32.94
	Kadiri 1812	Thoothukudi	19.50	16.20	20.37
	GJG 32	Thoothukudi	19.00	16.00	18.75
Sesame	TMV (Sv) 7	Ariyalur	6.51	5.50	18.36
Sunflower	KBSH-78	Thoothukudi	11.70	9.59	22.00
Summer season					
Groundnut	Kadiri 1812	Dindigul	24.1	19.3	24.87

Groundnut: A total of 875 Cluster FLDs on groundnut were conducted by the 4KVKs of Tamil Nadu covering an area of 350ha in *rabi* and *summer* seasons. In *rabi*, the technology demonstrated included improved variety with integrated crop management practices. The varieties demonstrated were TCGS 1694, TMV 14, GJG-32 (JAU) and Kadiri 1812. The average demonstration yield of 21.91q/ha was recorded with TCGS 1694 variety with 20.36% increase in yield compared to 18.20 check yield. During *summer*, groundnut demonstrations were conducted with improved variety Kadiri Lepakshi following integrated crop management practices. K1812 variety recorded average demonstration yield of 24.1 q/ha, resulting in 24.87% increased yield compared to check yield of 19.3q/ha.

Sesame: A total of 125 Cluster frontline demonstrations in 50 ha were conducted on sesame in *rabi* season. Varietal demonstration of TMV(Sv) 7 with recommended package of practices under irrigated conditions resulted in 18.36% increase in yields compared to local check during *rabi* season with the average demo yield of 11.70q/ha.

Sunflower: 250 Cluster frontline demonstrations in 100ha on Sunflower were conducted during *rabi* seasons. Technology demonstrated included improved hybrid with integrated crop management practices. The hybrid KBSH -78 recorded average yield of 11.70 q/ha in Tuticorin district.



Demonstration on Foliar application of *Bacillus thuringiensis* (Bt) in Groundnut



Field visit in Groundnut crop

Telangana

A total of **1125** Cluster frontline demonstrations were conducted by 2 KVKs in Telangana during *kharif*, and *rabi* seasons in groundnut in an area of 450ha.

Table 4.7.4 Performance of CFLDs in Oilseeds Model Villages of Telangana

Crop	Varieties Undertaken	Name of KVK/District	Average Yield(q/ha)		% Increase
			Demo	Check	
Kharif Season					
Groundnut	TCGS - 1694	Gaddipally	26.65	19.60	35.97
Rabi season					
Groundnut	K6	Mamnoor	26.40	24.60	7.32

Groundnut: Cluster FLDs on groundnut were conducted covering an area of ha in *Kharif* and *rabi* season in Telangana. The varieties demonstrated were Vishishta, and K-9, with integrated crop management practices resulted in 35.97%

increase in yields over average check yield 19.60q/ha in Gaddipally district with an average demonstration yield of 26.65q/ha. K6 resulted in average demonstration yield of 26.40/ha in in Mamnoor district during rabi season.



Field visit in Groundnut crop

Mr P. Sasikumar of **Tirupur, Tamil Nadu** started an enterprise for value addition of diverse agri-products with 20 farmers. Now, with 300 farmers, the group also facilitates micro irrigation systems under government subsidy schemes. "*Opportunities are plenty in agriculture-based enterprises. Together, we can win*"





4.8 Seed Hubs

Twelve KVKs of the zone, 6 from Tamil Nadu, 2 from Telangana and 4 from Andhra Pradesh produced 5679.29 q of quality seed of pulses to augment the demand from farmers and government agencies (Table 4.8.1). Among the crops, 3641.57 q of Blackgram followed by 1635.17 q of Redgram,

225.94 q of Bengal gram, 143.20 q Green gram, 30 q of Mothbean and 3.41 q of Cowpea were produced. A total of 3491.33 q of seeds were certified seeds, 2029.04 q were FS I seeds, and 158.92 q were FS II seeds (Table 4.8.2).

Table 4.8.1 Crop wise quantity of Seed Produced and sold in 2024-25

Crop	Quantity of seed produced (q)			Production/Procurement cost (Rs./q)	Processing cost (Rs./q)	Quantity Sold (q)			Sale price (Rs./q)	Qty unsold (q)
	KVK Farm	Farmer's Fields	Total			Farmers	Govt agencies	Others		
Bengal gram		225.94	225.94	7232.00	115.00				11000	225.94
Blackgram		3641.57	3641.57	10722.00	457.00	165.03	1310.14	36.56	12723	2480.51
Cowpea		3.41	3.41	10000.00	457.00		3.41		12500	
Greengram		143.20	143.20	10636.36	564.70	25.00	66.81		13500	50.59
Redgram	52.34	1582.83	1635.17	10612.50	726.36				15000	1635.16
Moth bean		30.00	30.00	11500.00	200.00					
Total	52.34	5626.95	5679.29	60702.86	2520.06	190.03	1380.36	36.56		4392.20

Table 4.8.2 Seed class wise quantity of seed produced and sold in 2024-25

Seed class (FS/CS)	Quantity produced (q)		
	KVK Farm (q)	Farmer's fields (q)	Total (q)
Certified Seeds	3.63	3487.69	3491.33
Foundation Seeds I	48.71	1980.33	2029.04
Foundation Seeds II		158.92	158.92
Total	52.34	5626.95	5679.29



**Dr Himanshu Pathak visiting Seed Hub Centre
KVK Ananthapuram Reddipalli**



**Field inspection under Seed Hub project
KVK Tiruchirappalli**



**Seed certification officer monitored PRG-176 Red gram
seed production plot - KVK Mahabubnagar Palem**



**Seed production plot under Pulses seed hub project -
KVK, Kurnool, Yagantipalle**



4.9. Special Project on Cotton: Targeting technologies to agro-ecological zones-large scale demonstrations of best practices to enhance cotton productivity

Special Project on Cotton is implemented in Public Private Partnership (PPP) mode by ICAR-CICR, Nagpur with the participation of CITI & SIMA; Seed Industry Associations (NSAI and FSII); Extension partners (Cotton Development and Research Associations of CITI and SIMA; Agricultural Technology Application Research Institutes & their Krishi Vigyan Kendra's); State Departments of Agriculture-ATMA) and Textile partners and Cotton Corporation of India (CCI). The aim of this project was to demonstrate technological options available with ICAR-CICR and other relevant research organisations including private industries to overcome productivity bottlenecks in cotton production in the identified agro-ecological domains.

The pilot project comprises of three components viz, High density planting system (HDPS) in low productivity areas with shallow soils with canopy, nutrient, soil health management, Closer Spacing planting system in medium productivity areas with medium deep soils under rainfed cotton ecosystem with canopy, nutrient and soil health management and Production technology for ELS cotton in niche areas under rainfed/irrigated farming situation.

ICAR-ATARI Zone-X has implemented Special Project on Cotton in 21 KVKs of 3 States namely Andhra Pradesh, Telangana, Tamil Nadu. HDPS technology was demonstrated in 2030 ha area conducting 2176 demos. Closer Spacing planting system was demonstrated in 1581 ha area conducting 1889 demos. While Production technology for ELS cotton was demonstrated in 50 ha area conducting 91 demos.

Table 4.9.1. Details of technologies demonstrated under special project on cotton

S. No	State	Details of Interventions					
		HDPS		Closer Spacing		Extra Long Staple (ELS) cotton	
		No. Demos	Area (ha)	No. Demos	Area (ha)	No. Demos	Area (ha)
1	Andhra Pradesh	95	165	494	591	0	0
2	Telangana	2014	1815	1381	980	0	0
3	Tamil Nadu	67	50	14	10	91	50
	Total	2176	2030	1889	1581	91	50

Activities undertaken from June 2024 to January 2025

Different activities have been conducted by ATARI ZONE-X KVKs to increase awareness among farming society about different cotton production technologies like Farmers trainings, Field days, Workshops, Kisan mela, Social media advisories, Distribution of Leaflets, Brochures etc., A total of 91 Farmers training, 72 Field days, 12 Workshop and 9 Kisan melas activities are undertaken during the year with the participation of total 29809 beneficiaries. 134 Young Professionals are recruited under this project.



Sowing of HDPS cotton by pneumatic planter in Siddipet district, Telangana

Table 4.9.2. Details of activities conducted by KVKs

Particulars	No of activities	No of Participants
Farmers trainings	91	9255
Field days	72	6523
Workshops	12	1059
Kisan Mela	9	4136
Number of Monitoring visits by KVK YPs/ DNO	3159	3089
Number of Monitoring visits by external officials of State dept./ ICAR/ Univ./ others	222	646
No. of farmer demonstrations identified / eligible for success stories	170	376
No. of Leaflets/ brochures/folders developed by KVKs	39	4725
Total	3774	29809

High Density Planting System (HDPS)

High Density Planting System includes planting of recommended hybrids/varieties at a spacing of 90x15 cm with the help of pneumatic planter or manual sowing and management of Plant architecture with Mepiquat chloride (Chamatkar) along with other recommended package of practices.

Seven recommended cotton hybrids were demonstrated through 2002 demonstrations

covering 1885.8 ha under High-Density Planting System (HDPS). On an average HDPS demonstrations recorded 39.677% higher yields over the farmer practice indicating significant productivity gains through improved planting geometry and canopy management practices. The hybrid Rasi Swift (RCH 971 BG II) was demonstrated in 1305.78 ha which gave 55.17% higher yield in HDPS. Similarly, RCH 929 BG II, was demonstrated with 55.46% yield advantage in 481.38 ha in this system.

Table 4.9.3. Performance of HDPS technology in demonstrations

Hybrid/variety	No of demos	Area (ha)	Average yield in demo (q/ha)	Average yield in control	Average of % yield increase
Rasi swift (RCH 971 BG II)	1419	1305.78	29.39	19.44	55.17
RCH 929 BG - II	468	481.38	28.79	18.94	55.46
US-4823	57	52.66	25.00	20.00	25.00
Veda platinum (JKCH 8836 BG II)	47	33.80	27.90	23.30	19.87
Others	11.00	12.20	26.62	18.67	42.84
Total/average	2002	1885.82	27.54	20.07	39.67

Closer spacing planting system

Under the system of sowing at a spacing of 90 x 30 cm with canopy management, 1466 demonstrations were conducted across 1268.8 ha area. The average yield under these demonstrations was 27.44 q/ha, which was 45.08% higher than the yield under farmers' practice (19.29 q/ha). All the hybrids outperformed their counterparts of the farmers' practice. The yield enhancement ranged from 24% to 60% depending on the soil condition, management and hybrids used.

**HDPS Field KVK, Adilabad, Telnagana**

Table 4.9.4. Performance of closer spacing technology in demonstrations

Row Labels	No of demos	Area (ha)	Average yield in demo (Q/ha)	Average yield in control	Average of % yield increase
Siri (NCS 927 BG II)	393	396.00	24.63	18.99	31.52
Armita (NCS-27780)	167	181.10	28.44	22.94	24.44
Rasi Swift (RCH 971)	168	110.90	34.00	21.00	59.00
Crystal (CCH 369)	120	108.28	26.23	18.95	42.24
Adhya (NCS 1134)	84	91.80	27.93	18.54	55.17
Sindu	75	75.72	25.18	19.25	35.13
Veda platinum (JKCH 8836 BG II)	72	64.80	27.39	17.45	60.22
Others	387	240.20	25.71	17.17	52.93
Total/average	1466	1268.80	27.44	19.29	45.08

Extra Long Staple (ELS) production technologies for niche areas

ELS cotton production technology standardized by ICAR-CICR was demonstrated in 50 ha by conducting 91 demonstrations in Tamil Nadu. On average, the yield obtained from these demonstrations was 16.31 q/ha, which was 39.43%

higher than the farmers' practice yield of 11.78 q/ha. Among the hybrids, MRC 7918 BG II recorded the highest average yield of 18.98 q/ha, followed by Suraksha (17.7 q/ha). In terms of yield increase over control, the hybrid Kohinoor (Nuziveedu Seeds) showed the highest percentage increase of 47.28%, followed closely by Badshah (43%) and MRC 7918 BG II (37.29%).

Table 4.9.5. Performance of ELS technology in demonstrations

Row Labels	No of demos	Area (ha)	Average yield in demo (Q/ha)	Average yield in control	Average of % yield increase
MRC 7918 BG - II	26	13.6	18.98	13.85	37.29
Suraksha	12	6.4	17.7	13.6	30.15
Badshah (Nuziveedu seeds)	27	15	14.2	9.93	43.00
Kohinoor (Nuziveedu seeds)	26	15	14.36	9.75	47.28
Total/average	91	50	16.31	11.78	39.43

Costs and returns in cotton demonstrations

All three technologies, HDPS, closer spacing, and ELS cotton demonstrated higher net incomes compared to the farmers' practice. In the case of HDPS demonstrations, although the cost of cultivation increased by 27.97%, the gross income nearly doubled (94.91% increase), resulting in a 90.55% higher net income than the control plots. On average, this translated to an additional net income of approximately ₹54,665 per hectare, indicating a strong economic advantage despite

the higher input costs. In the closer spacing demonstrations, the cost of cultivation increased modestly by 6.83%. However, this was offset by a 47.92% increase in gross income, leading to a 44.25% higher net income when compared to farmers' practice. This confirms the economic viability of closer spacing as a strategy to improve returns. For ELS (Extra-Long Staple) cotton, the demonstration plots recorded a gross income of ₹2,73,364/ha and a net income of ₹1,34,811.83/ha, despite a higher cultivation cost of ₹1,07,630.83/ha.



4.10 Formation and Promotion of 10,000 Farmer Producer Organizations (FPOs)

Formation and Promotion of 10000 Farmer Producer Organizations This is a central sector scheme which aims to achieve inclusive and sustainable transformation through the creation of a holistic and supportive ecosystem for the formation of 10000 FPOs and their nurturing, hand holding and capacity building. This scheme is implemented through the National Cooperative Development Corporation (NCDC). Formation and promotion of FPO is based on Produce Cluster Area. NCDC identified 6 Cluster- Based Business Organizations (CBBOs) in this zone of which 4 are KVKs and two are ICAR institutes. Each CBBO established two FPOs under this scheme. No shareholders in each FPO range from 354 to 960. On average, these FPOs have about Rs. 10.48 lakh equity amount. Ten FPOs have office buildings and two are functioning in rented offices. Eight FPOs have owned/hired storage facilities. Eight FPOs have licenses for the marketing of seeds, fertilizers and pesticides. Two FPOs have FSSAI license and the process of getting FSSAI license was initiated by another two FPOs. Eight FPOs have eNAM registration and three FPOs are involved in paddy procurement. Only two FPOs have custom hiring centers. All the FPOs have linkages with Markfed, APMAS, ICRISAT-IFDC, NABARD, IFFCO, FMC, KRIBCO etc.

Table 4.10.1. Performance of CBBOs in zone 10

Particulars	No/ Percent
Number of awareness programs conducted for members/BoDs:	95
No of members participated	371
Number of exposure visits conducted:	38
No of members participated	217
No of institutional trainings been provided to CEOs/BoDs?	34
No of FPO members trained	259
No of FPOs obtained statutory clearances for business activities	12
Percentage of business activities executed as per Business Plans	78.25%
No of FPOs availed first equity grant	12
No of FPOs availed second equity grant	7
No of FPOs registered on e-NAM	12
No of FPOs issued share certificates to its members	12

All the CBBOs completed the identification of training needs and training modules were developed for 10 FPOs, 95 awareness programmes, 38 exposure visits, and 34 trainings were organized by these CBBOs benefiting 850 members of FPOs including CEOs and BoDs. With the support of CBBOs all the 12 FPOs got the first instalment of equity grant and 7 FPOs got second instalment of equity grant. about 78 % of business plans were implemented by the FPOs during the year. e-NAM registration was completed by all the FPOs and two of them started trading.

Mr. B. Jaganathan of Karaikal, Puducherry adopted Pacu fish culture in his 0.5-acre farm pond. Due to faster growth he achieved a harvest of 300 kg in six months. *"Pacu fish culture highlights the potential of fast-growing fish varieties in farm ponds and is very useful for small-scale aquaculture farmers like me".*





4.11. Agricultural Drone Project

With the aim to make drone technology affordable to the stakeholders in a major boost to promote precision farming in India, Union Ministry of Agriculture and Farmers Welfare has initiated this project under “Sub-Mission on Agricultural Mechanization” (SMAM). This project is operational in 21 centers of ICAR institutes, Krishi Vigyan Kendras and State Agriculture Universities in Zone 10. These centers purchased 32 drones and demonstrating drone technologies to the farmers in their fields.

During 2024-25 A total of 2112 demonstrations were conducted in the zone covering 1895 ha area with the participation of 14683 farmers. These demos include insecticide sprays, Micronutrient sprays, weedicide sprays and fungicidal sprays. These demos were conducted in the crops like rice, maize, groundnut, sugarcane etc. a total of 6260 demonstrations were conducted on 7610 ha area with the participation of 42049 farmers during past three years from the beginning of the project.

Table 4.11.1. Details of drone demonstrations conducted during the 2023-24

Details	2024-25	Cumulative
No. of Kisan Drone Demonstration organized	2112	6260
Area Covered under the Kisan Drone Demonstration	1895	7610
Number of farmers participated	14683	42049

Major advantages of drone technology include reduced time of operation, less labour requirement, requirement of less quantity of spray chemical and water as well as uniform spraying. These advantages facilitate timely completion of operations and to overcome labour shortage during the peak seasons. Health hazards to the persons involved in spraying of chemicals is avoided with drones as the contact

with spray is avoided. This is particularly suitable for large farms and spraying operation can be done in inaccessible areas. Though it is a very useful technology it has certain disadvantages like quick discharge of batteries, non-availability of charging points at field level, long periods of charging and high cost of batteries limits the use of drones in rural areas.



4.12 Pradhan Mantri Matsya Sampada Yojana (PMMSY)

Capacity building of fisheries farmers through trainings and awareness programmes was organized by KVKs of Zone-10 with the financial support from National Fisheries Development Board (NFDB), Ministry of Fisheries, Animal Husbandry and Dairying under Pradhan Mantri Matsya Sampada Yojana (PMMSY) scheme.

During 2024-25, 20 training programmes were organized by 8 KVKs of Tamil Nadu and

Telangana states. KVKs conducted 8 training programmes for 60 days benefitting 540 farmers to create awareness on PMMSY Scheme, improved aquaculture practices, management of community tanks, integrated farming systems, ornamental fish culture, nursery rearing, Hygienic handling practices and value addition of fish and fishery products, feed management and enterprise development of rural youth in aquaculture.

Table 4.12.1. Details of progress of the training programmes in Zone-X

State/ UT	District/ KVK	No. of Trainings	Name of training programme	No. of Days	No. of Trainees
Tamil Nadu	Kanchipuram	2	Community tank management for enhanced production	1	30
			Improved aquaculture practices in carp culture	5	25
Tamil Nadu	Sivaganga	2	Improved Aquaculture practice in farm ponds	5	25
			Community tank management for enhanced aquaculture production	1	30
Tamil Nadu	Perambalur	1	Poultry farming with fisheries	5	25
Tamil Nadu	Thiruvannamalai	2	Advanced production technologies of composite fish culture	5	25
			Hygienic handling practices and value addition of fish and fishery products	5	25
Tamil Nadu	Thoothukudi	8	Improved aquaculture practices in crap culture	5	25
			Ornamental fish breeding and culture	5	25
			Fish feed preparation in aquaculture	3	25
			Enterprises for rural youth-Fish farming	3	25
			Inland Shrimp Farming	3	25
			PMMSY Scheme for fishery stakeholders	1	30
			ICT application in the Fisheries sector	1	30
			Hygienic handling practices of fish and fishery products	1	30
Tamil Nadu	Erode	1	Enhancing Inland Fish Farming Productivity through Integrated Farming System in Erode District	3	25
Tamil Nadu	Coimbatore	1	Ornamental fish culture	1	30
Telangana	Mamnoor	3	Nursery Raring of Indian Major Carps	5	25
			Community tank management for enhanced production	1	30
			Hygienic handling practices of fish and fishery products at retail markets	1	30
Total		20		60	540



Awareness programme on Fish rearing



Awareness programme on Ornamental Fish culture



Enterprises for rural youth-Fish farming



Inland shrimp farming

4.13. Skill Training Programmes funded by Agricultural Skill Council of India (ASCI)

The Agriculture Skill Council of India (ASCI), under the Ministry of Skill Development and Entrepreneurship, has consistently promoted skill development in agriculture and allied sectors. In the year 2024, ASCI, in collaboration with Krishi Vigyan Kendras (KVKs) across Tamil Nadu and Puducherry, conducted a range of training programs focusing on empowering rural youth, farmers, and women through practical and theoretical learning. These trainings had a measurable impact on employment, entrepreneurship, and productivity and income gain in Agriculture.

The primary objectives of ASCI's 2024 training programs are to enhance employment

opportunities through hands-on skill development, encourage adoption of organic and sustainable farming practices, and empowering marginalized communities by promoting inclusivity in training and capacity building. The programs also aimed to foster entrepreneurship by equipping participants with knowledge, certification, and practical exposure. During the year, 22 training programs were conducted across Tamil Nadu and Puducherry, covering various job roles such as Organic Cultivator (Small Unit), Garden Keeper, Beekeeping, Vermicompost Producer and Mushroom Grower. A total of 527 participants underwent training, which typically lasted 210 hours (about 25–27 days) per course.

Table 4.13.1. Overview of Training Programs Conducted

Job Role / QP	Duration (Hours)	No. of Trainings	Total Participants
Organic Cultivator (Small Unit)	210	15	336
Garden Keeper	210	3	75
Beekeeping / Honey Bee Farmer	210	1	30
Vermicompost Producer	210	1	35
Mushroom Grower	210	2	51
Total		22	527

The programs were inclusive, with significant participation from women and SC/ST communities.

Out of 527 total participants, 286 were women, and 131 belonged to SC/ST categories.

Table 4.13.2. Social Category and Gender-wise Distribution

Category	Male	Female	Total
SC/ST	41	90	131
Others	200	196	396
Total	241	286	527



Exposure visit to progressive organic farmers field Thedal farm-KVK Thiruvannamalai, Tamil Nadu

All training sessions included expert lectures, hands-on training, exposure visits, assessment and certifications. Specific training activities included preparation of organic inputs, pest repellents, grafting, composting, beekeeping management, bonsai making, and nursery techniques. Participants were assessed through written tests, viva-voce, and practical demonstrations and later were issued ASCI-certified certificates upon successful completion.

The outcome of the training programs

Several KVKs implemented impactful training programs during 2024. At KVK, Dindigul, 25 rural youth were trained in organic cultivation and 5 youth among them became entrepreneurs in vermicomposting. The skill training conducted by KVK, Nilgiris resulted in 10 farmers turning to organic farming and 5 setting up vermicompost

units. At KVK, Karur, 25 participants were trained in organic cultivation, 7 of whom began organic input production units, while 18 adopted organic farming. A unique beekeeping program at KVK Kanyakumari led to 6 participants setting up apiaries, including one who scaled up the activity to over 100 hives. Post training by KVK Karaikal, Puducherry, 7 trainees started organic farming and 16 began preparing organic inputs. KVK Thiruvannamalai's skill training program resulted in 5 farmers starting low-cost input production and 2 launching organic solution units. KVK, Shivaganga reported a dramatic increase in traditional paddy cultivation from 100 to 500 ha after training 25 women, including 12 from the SC community. KVK Villupuram focused on garden keeping, with 26 farmers receiving hands-on training in propagation, bonsai, and grafting.



Garden Keeper Exposure Visit-KVK Tirunelveli Tamil Nadu



A Journey Towards Prosperity Through Integrated Organic Farming : The Story of Mr. K. Mayavan

In the quiet village of Pudupalapattu in Sankarapuram taluk of Kallakurichi district, Tamil Nadu, lives a hardworking farmer named Mr. K. Mayavan, who owns 5.70 hectares of land. For years, he worked hard on his farm cultivating crops like paddy, maize, minor millets, black gram, and coconut, alongside managing a small paddy nursery and two milch cows. However, despite his relentless efforts, the technical knowhow required to transform his traditional farming into a sustainable livelihood farming was missing. The transformation began when Mr. Mayavan enrolled in the Organic Cultivator training (210 hours) under the Agriculture Skill Council of India (ASCI), conducted at KVK Villupuram-II, Kallakurichi. This training became a turning point in his life.

Inspired by the knowledge he gained, Mr. Mayavan embraced Organic and Integrated Farming Systems (IFS). With the guidance from KVK scientists, he began adopting sustainable practices and integrating various agricultural components that complemented each other. His farm gradually evolved into a self-sustained, eco-friendly model. He started cultivating traditional paddy varieties like Mappillai Samba and Karuppu Kavuni, along

with Kodo millet, Foxtail millet, maize, and black gram. In a significant shift from chemical farming, he began producing his own organic inputs such as vermicompost, Panchagavya, Jeevamrutham, NSKE, herbal leaf extracts, and 3G extracts.

To make the best use of available land and resources, he planted crops according to ecological suitability: minor millets in water-scarce areas, traditional paddy in wetlands, and maize in garden land. He also introduced livestock into his system, 5 desi cows and 10 Tellichery goats, using their waste for manure and biogas. Realizing the role of pollinators, he installed beehives in his farm, which not only supported crop yield through pollination but also became an additional source of income. He adopted pest control measures like pheromone traps and yellow sticky traps thereby minimizing chemical use. He also started value addition in millets and began selling traditional rice seed to neighboring farmers, creating a micro-enterprise.

His efforts bore remarkable results. From his 5.70 hectares of land, he earned a total net income of ₹6,12,935 in a year. The detailed breakdown is as follows:

Table 4.13.3. Details of income earned by Mr. K. Mayavan

Enterprise	Area (ha)	Yield	Total Income (₹)	Expenditure (₹)	Net Income (₹)
Traditional Paddy	2.00	51.4 q	2,14,560	65,340	1,49,220
Minor Millets	1.00	10.2 q	96,900	16,700	80,200
Maize	1.50	45.5 q	1,09,200	32,450	76,750
Black Gram	1.00	8.55 q	1,06,875	28,500	78,375
Desi Cows (5)	0.06	16 liters/day	1,45,600	54,670	90,930
Goats (10)	0.06	Annual sales	1,25,000	48,700	76,300
Organic Inputs	0.08	1500 kg/annum	76,500	15,340	61,160
Total	5.70 ha		8,74,635	2,61,700	6,12,935

The success story of Mr. Mayavan is a testament to how training, innovation, and integration can lead to economic stability, ecological balance, and rural prosperity. His farm serves as a live demonstration unit, inspiring fellow farmers in the region to

adopt similar practices. From traditional farming to organic entrepreneurship, Mr. K. Mayavan's journey is a shining example of what empowered farmers can achieve when given the right skills and support.

4.14 Awareness and Demonstrations for Popularization of Fermented Organic Manure (FOM)/Liquid Fermented Organic Manure (LFOM) through KVKs

Fermented Organic Manure (FOM) is a nutrient-rich organic by-product generated from the anaerobic digestion of plant materials, animal waste, and other organic waste in compressed biogas (CBG) plants. Following the extraction of biogas, the remaining digestate is further processed to produce FOM.

In India, the excessive reliance on synthetic fertilizers has resulted in environmental degradation and deteriorating soil health. To counteract these challenges, the adoption of sustainable agricultural practices, such as utilizing Fermented Organic Manure (FOM)/Liquid Fermented Organic Manure (LFOM), is essential. FOM improves soil structure, boosts microbial

activity, and provides key nutrients, reducing reliance on chemical fertilizers. This results in enhanced crop yields, better pest resistance, and long-term soil fertility, fostering sustainable agricultural practices and providing ecological and economic benefits for farmers.

The central sector sponsored “Awareness and Demonstrations for Popularization of Fermented Organic Manure (FOM)/Liquid Fermented Organic Manure (LFOM) through KVKs” has been implemented by 25 KVKs of Zone X (9 in Andhra Pradesh, 4 in Telangana and 12 in Tamil Nadu) with a financial support of Rs.77.795 lakhs from Department of Fertilizers (DoF, Govt. of India).

Table 4.14.1. KVKs involved in the project

State	No. of. KVK	Name of the KVK
Andhra Pradesh	9	East Godavari I (Kalavacharla), East Godavari (Pandirimamidi), West Godavari (VR Gudem), Prakasam (Kandukur), Guntur (Lam), Kadapa (Vonipenta), Nellore II (Periyavaram), Srikakulam, Vizianagaram
Telangana	4	Khammam (Kothagudem), Mahabubnagar I (Palem), Rangareddy, Warangal (Mamnoor)
Tamil Nadu	12	Nagapattinam, Cuddalore, Namakkal, Tiruvallur, Kancheepuram, Vellore, Villupuram I, Salem, Tiruchirappalli, Villupuram II, Tiruvarur, Dharmapuri

The major activities that were taken up by the KVKs under this project during 2024-25 are awareness programmes, technical lectures delivered by CBG personnel, benchmark surveys and soil sample analyses to understand the impact of FOM/LFOM

application on crop performance and productivity in different crops. The accomplishments of the KVKs across different states in relation to the four key activities are outlined below:

4.14.2. Details of the activities conducted under FOM/LFOM project during 2024

State	Awareness Programmes		No. of lectures	Benchmark surveys		No. of soil samples analyzed		
	Number	No. of participants		Demo	Non-Demo	Demo	Non-Demo	KVK plot
Andhra Pradesh	11	667	15	91	91	40	40	4
Telangana	3	208	2	20	30	10	10	1
Tamil Nadu	23	1303	20	74	65	51	47	7
Zone total	37	2178	37	185	186	101	97	12

Activities envisaged under FOM/LFOM:

- Pre-kharif and pre-rabi workshops to be organized for KVK personnel and selected farmers in collaboration with FOM/LFOM manufacturers to enhance understanding and promote adoption.
- **Farmer Awareness Campaign:** Launch Campaigns at KVKs, Conduct Village-Level Meetings, Leverage Media and Technology
- **On-Field Demonstrations:** Conducting demonstrations on FOM at KVK Farms and farmers' fields. Each KVK will conduct one demonstration at KVK farm and 10 demonstrations at farmer's field over a period of one year.
- **Monitoring and Feedback:** Collect Farmer Feedback; Monitor Adoption Rates; Evaluate Program Impact.
- Observations to be recorded both at the KVK farms and farmers' fields are as follows
 - ✓ Changes in soil organic carbon, NPK status
 - ✓ Yield performance
 - ✓ Microbial count and enzymatic studies (at 2-3 selected locations)
 - ✓ Economic returns



Awareness programme on FOM/LFOM
KVK Nagapattinam



CBG Personnel and FACT fertilizer officials delivered the lecture on FOM and LFOM KVK, Guntur, Andhra Pradesh



Soil sample collections at farmers field -KVK, Tiruvallur, Tamil Nadu



4.15. National Mission on Natural Farming (NMNF)

The central sector funded project National Mission on Natural Farming has been implemented by 44 KVKs of the Zone since 2022-23. All the KVKs of Andhra Pradesh, 8 KVKs in Telangana, 12 KVKs from Tamil Nadu and 1 KVK from the UT of Puducherry are involved in the project. All the KVKs in the states of Gujarat, Himachal and AP are included in the project in view of the importance the respective state governments have been giving to natural farming in these states. A total of 425 KVKs are implementing the project in the entire country. The main focus of implementation of the project has been on training, field demonstrations and awareness programs during 2024-25. The KVKs implementing this project established

natural farming blocks of about 2-5 ha area in their instruction farm, took farmers on exposure visits to the KVK, to nearby natural farming blocks of farmers, conducted method demonstrations on the production of natural farming inputs besides distribution of literature related to natural farming. They also conducted demonstrations on natural farming in crops of their choice during last year, the results of which are presented in this section.

The following are the achievements under the project during 2024-25. The KVKs conducted a total of 379 awareness programmes benefiting 13984 farmers on natural farming.

4.15.1. Achievements of the project during 2024-25

State	Awareness Prog.		Trainings		No. of Demos.
	No.	No. of Participants	No.	No. of Participants	
Andhra Pradesh	136	4967	70	2868	65
Telangana	143	1697	37	1251	15
Tamil Nadu	92	6260	68	2198	39
Puducherry	8	1060	5	32	0
Total	379	13984	180	6349	119

In the field demonstrations under natural farming of various crops, it was noticed that there was a reduction in the productivity during 2024-25 too. The reduction was in the range of 2.94 to 26.99 per cent across crops in comparison with inorganic

method of cultivation. Similarly, there was decline in the cost of cultivation too in the range of 8.07 to 72.55. The results of these field demonstrations are presented in the following table.

Table 4.15.2. Percentage change in cost of cultivation and productivity in natural farming demonstrations during 2024-25

Crop	Mean % reduction in cost of cultivation /ha	Mean % reduction in Yield/ha
Cereals		
Paddy	19.75	20.29
Maize	13.48	9.68
Pulses		
Black gram	15.91	17.38
Redgram	16.09	14.29
Bengal gram	72.55	20.75
Green gram	25.28	23.02
Oilseeds		
Groundnut	12.95	18.44
Castor	8.48	21.05

Crop	Mean % reduction in cost of cultivation /ha	Mean % reduction in Yield/ha
Cash Crop		
Cotton	15.12	11.71
Cashew nut	20.00	11.76
Vegetables		
Tomato	34.34	26.99
Brinjal	23.77	2.94
chilli	36.29	25.08
Leafy vegetables	18.06	13.48
Spices		
Turmeric	8.07	9.78
Fruit crops		
Mango	37.19	16.23
Acid lime	48.26	8.13
Banana	21.71	15.15
Flower crops		
Marigold	19.28	27.69



Natural and Organic Farmers Summit
KVK, Medak (Tuniki), Telangana



Demonstration on Egg Amino Acid Preparation for Acid
Lime - KVK, Nellore (Periyavaram), Andhra Pradesh



Natural Farming Training at MANAGE, Hyderabad



4.16. Development action plan for Schedule Tribes (DAPST)

The Development Action Plan for Scheduled Tribes (DAPST), formerly known as the Tribal Sub-Plan (TSP), is being effectively implemented by 20 Krishi Vigyan Kendras (KVKs) across Andhra Pradesh, Telangana, and Tamil Nadu under ICAR-ATARI, Zone-X. These KVKs operate in mandals with predominant tribal population, focusing on inclusive growth, livelihood development, and sustainable agricultural practices. In Andhra Pradesh, the programme is executed by seven KVKs located in Vizianagaram, Srikakulam, Visakhapatnam (BCT and Kondempudi), East Godavari (Pandirimamidi), West Godavari (VR Gudum), and Prakasam (Darsi). In Telangana, nine KVKs are involved, namely Adilabad, Bellampalli (Mancherial), Wyra (Khammam), Khammam (Kothagudem), Nizamabad (Rudrur), Nalgonda (Gaddipalli) and Nalgonda (Kampasagar), Warangal (Malyal) and Warangal (Mamnoor). In Tamil Nadu, four KVKs located in Namakkal, Salem, Nilgiris, and Thiruvannamalai are implementing DAPST initiatives. These KVKs play a pivotal role in reaching tribal communities with targeted interventions, skill training, physical assets, and

technology demonstrations tailored to local needs. The KVK implementing DAPST aim to raise income of the beneficiaries through better agricultural operations, skilling related to agriculture, allied sectors and secondary agricultural activities and also through creation of income generating activities. The objective of achieving higher productivity of crop and livestock production systems is achieved through major mandated activities of the KVK like on farm testing, frontline demonstrations, capacity building, awareness programs, supply of critical inputs and extending Wyra Kothagudem Rudrur Gaddipalli Kampasagar Malyal Mamnoor Namakkal Salem Ooty services (soil testing, diagnostic services and issue of time critical advisory) in the adopted villages of tribal mandals ensuring that the population of tribal people is above 50 per cent in the tribal village / hamlet and that the benefit is realized by tribal people directly. The achievement of the 20 KVKs that implemented DAPST during 2024-25 is presented in the following table in terms of the inputs and services supplied / rendered to the tribal beneficiaries.

Table 4.17.1 Achievements of interventions of KVKs under DAPST during 2024-2025

Activity	Andhra Pradesh		Telangana		Tamil Nadu		Total	
	Value	Farmers (No.)	Value	Farmers (No.)	Value	Farmers (No.)	Value	Farmers (No.)
On -farm trails (No.)	138	203	109	163	48	77	295	443
Frontline demonstrations (No.)	376	517	225	258	135	157	736	932
Farmers training (No.)	93	2826	66	1969	40	921	199	5716
Training of rural youth (No.)	34	826	23	762	18	511	75	2099
Training of Extension Personnel (No.)	34	1045	11	359	9	225	54	1629
Skill training (No.)	30	466	74	792	21	198	125	1456
Extension activities (No.)	260	3968	283	4792	56	1401	599	10161
Production of seed(q)	325.81	2055	180	1362	10.2	346	516.16	3763
Planting supplied (No.)	296226	1475	18620	879	7100	530	321946	2884
Livestock strains and fish fingerlings (No.)	249081	460	2852	465	2503	209	254435	1134
Soil, water, plant, manures samples analyzed	270405	525	1072	1072	445	445	271922	2042
Mobile agro advisories (No.)	2391	95144	1063	27243	253	14900	3707	137287
Micro enterprises/ assets supplied (No.)	2200	1814	637	1029	3593	860	6430	3703

During the year 2024–25, a series of skill training programmes were organized under the Developmental Action Plan for Scheduled Tribes (DAPST) across Andhra Pradesh, Telangana, and Tamil Nadu, with the objective of enhancing the

livelihoods and self-employment potential of tribal youth through capacity building in agriculture and allied sectors. A total of 1,118 trainees were trained across the three states.

Table 4.17.2. Skill training Programmes conducted during 2024-25 under DAPST

Details of the training programmes	Duration	No. of trainees
Andhra Pradesh		
East Godavari (Pandirimamidi)		
Rubber Tapping and Processing	3	20
Preparation of fish and prawn pickles	1	32
Preparation of fish feed with locally available materials	1	30
Fodder management methods	1	35
Prakasam (Darsi)		
Organic farming	1	30
Training programme on Vegetable nursery raising	1	30
Rearing of sheep and goat as a way to entrepreneurship	1	30
Visakhapatnam (Kondempudi)		
Organic Jaggery Making	3	30
Raising of seedlings through Protray technology	3	30
Visakhapatnam (BCT)		
Skill Training programme Rural youth on Vermi compost preparation.	1	25
Skill training on cashew training pruning, nutrient management and value addition	1	24
Training on Sweet Potato Cultivation and pest Management	1	25
Vizianagaram		
Vermicompost	3	20
Value additions to millets	3	20
Srikakulam		
Value addition of Pineapple	3	20
West Godavari (VR Gudem)		
Demonstration of spraying in cashew flowering under natural farming	1	30
Demonstration of spraying in cashew flowering under natural farming	1	15
Application of pesticides through drone in groundnut	1	20
Total Andhra Pradesh		466
Telangana		
Adilabad		
Operation and maintenance of drip irrigation system	2	30
Khammam (Kothagudem)		
Training programme on best management practices in direct seeded rice	1	60
Training programme on Scientific bee keeping	1	60
Warangal (Malyal)		
Sheep and Goat rearing	4	25
Mamnoor		
Natural farming and Preparation of products	3	30
Training programme on Scientific bee keeping	3	20
Dairy Farming Techniques	3	25
Backyard poultry production	3	25
Value addition to millets	3	25

Details of the training programmes	Duration	No. of trainees
Nalgonda (Gaddipally)		
Value Added products to millets	3	27
Scientific Beekeeping	3	25
Nalgonda (Kampasagar)		
Skill training programme on raising of vegetable nurseries under shade nets	3	30
Mancherla (Bellampalli)		
Skill training programme on crop residue management and Vermi compost production	3	30
Training Programme on Production Technology of Apiculture	3	30
Vegetable Kitchen Garden	3	30
Tailoring for youth	3	30
Khammam (Wyr)		
Home stead technologies for sustainable income and livelihood	5	30
Total Telangana		532
Tamil Nadu		
Namakkal		
Banana Shakthi preparation and nutrient management in spices and plantation crops	1	25
On-farm feed management practices for Nile tilapia (<i>Oreochromis niloticus</i>) in Kolli hills	1	25
Entrepreneurship programme on Ready to Eat Millets products	5	25
Diseases of desi poultry and their control	1	20
Salem		
Production of bio inputs for natural farming	2	30
Bee keeping	3	25
Nilgiris		
Cultivation of Azolla animal feed supplement	1	15
Backyard Poultry farming	1	10
Total of Tamil Nadu		120
Total of the Zone		1118

Under the Developmental Action Plan for Scheduled Tribes (DAPST), various physical assets and micro-enterprises were established across tribal areas in Andhra Pradesh, Telangana, and Tamil Nadu to support livelihoods and promote rural entrepreneurship. In Andhra Pradesh, 3,702 assets were distributed to 1,711 beneficiaries, including poultry shelters, farm tools, turmeric processing equipment, sprayers, and solar dryers. In Telangana, 559 facilities and enterprises were created benefitting 839 individuals, with key provisions like flour mills, apiaries, agricultural implements, vermicomposting setups, PPE kits, and tailoring machines. In Tamil Nadu, 3,605 physical assets supported 805 beneficiaries, covering backyard poultry shelters, vermicomposting systems, nursery setups, and value addition equipment. These interventions

significantly enhanced income generation and agricultural sustainability in tribal communities.



Distributed Flour mill to the Tribal farmers under TSP at KVK, Bellampalli on 30.11.2024

**Table 4.17.2. Physical assets/micro-enterprises established in tribal areas during 2024-25**

State, KVK and enterprises	No. of units	No. of Beneficiaries
Andhra Pradesh		
East Godavari (Pandirimamidi)		
IFS Units	2	2
Poultry units	1550	155
Azolla units	10	10
Prakasam (Darsi)		
Poultry	1000	
Farm produce cleaning / drying equipment	35	50
Battery Sprayers	20	35
Visakhapatnam (Kondempudi)		
Turmeric Boilers	1	30
Hermetic storage bags	179	179
Vegetable seed kits	240	240
Hand Push Seed drill	2	20
Spike tooth Rake	25	25
Hand Hoe Blade	25	25
Hand Rake	25	25
Hand Hoe	25	25
Hand Hoe duck foot type	25	25
Vegetable crates	25	50
Battery Operated sprayers	10	100
Garden Hand tools SPS-2000	10	24
Taurplins	10	50
Bill Hook -7005	10	10
Khurpi FKPM – 300	10	10
Falcon sickles - 400	10	10
Hand Hoe (Local)	10	10
Visakhapatnam (BCT)		
weeders	10	100
Ridge maker	1	20
Turmeric polishers	2	50
Solar dryers	2	25
Vizianagaram		
Plastic tarpaulins	44	44
Battery operated sprayers	2	2
Plastic drums	20	20
Agricultural implements	332	332
West Godavari (VR Gudem)		
Mulching rolls	30	8
Total Andhra Pradesh	3702	1711
Telangana		
Adilabad		
Multipurpose floor mill	1	100
Battery sprayers	1	10
Manual hand push seed drills	10	50
Insect probe trap	50	50
Khammam (Kothagudem)		
Apiary	5	20
Primary processing (Mini Rice Mill)	2	20



State, KVK and enterprises	No. of units	No. of Beneficiaries
Small farm implements (Battery Operated Sprayers)	10	20
Rhinoceros beetle traps for Oil Plam crops	10	20
Warangal (Malyal)		
Small Farm Implements for custom hiring centre {Maize Sheller (01), Power weeder (01) Taiwan sprayer (01) per one custom hiring centre}	2	40
Mamnoor		
Goats (Each unit -2F+1M)	5	5
Small farm implements (Kodavallu)	100	100
Medium Equipment (Battery sprayers)	30	30
Nalgonda (Gaddipally)		
Sericulture	2	2
Goatery	2	2
Poultry	4	12
Vermicomposting	10	10
Value addition	2	4
Small farm implements	10	10
Large Farm Equipment	2	40
Nalgonda (Kampasagar)		
Vermibeds	14	2
Hand push seed drill	14	3
Push hoe weeder	14	10
Mancherial (Bellampalli)		
Goatary	6	6
Vermi-composting (Portable vermibeds)	7	7
Farm produce cleaning / drying equipment (tarpaulins)	40	40
PPE Kits (Personal Protection Equipment)	58	58
Khammam (Wyra)		
Stem applicators	125	125
Vermi beds	5	5
Sewing machines	10	30
Tarpaulins	8	8
Total Telangana	559	839
Tamil Nadu		
Namakkal		
Desi poultry night shelter unit	14	14
Vermicomposting	10	10
Small farm implements	15	15
Salem		
Chain saw	1	10
Coffee huller	1	20
Solenoid valve	1	10
Tree pruner	55	55
Pepper ladder	5	25
Dough kneader (Big & small)	2	40
Nilgiris		
Nursery Production Unit (100 Sq ft)	1	300
Backyard Poultry	500	300
Value addition in medicinal plants	3000	6
Total Tamil Nadu	3605	805

4.17 Development Action Plan for Schedule Castes (DAPSC)

During the financial year 2024-25, the Development Action Plan for Schedule Castes (DAPSC) was implemented across all KVKs under ICAR-ATARI Zone-X with the objective of enhancing the income and livelihood security of Scheduled Caste communities in adopted villages. A wide range of targeted interventions were undertaken, directly benefiting Scheduled Caste farmers and rural youth. In addition to core mandated activities such as 446 On-Farm Trials (OFTs), 710 Frontline Demonstrations (FLDs), and 1,244 awareness programmes and exposure visits benefitting 21,308 farmers, the KVKs also organized 177 capacity-building and skill development trainings, covering 5,248 participants through various durations. A special emphasis was placed on promoting Natural Farming through demonstrations, input distribution, and awareness initiatives. Quality seed distribution included 292.2 tonnes of field crop seeds, 957.6 kg of high-value crop and spice seeds, 104.4 tonnes of root and tuber crop seeds, along with 13.4 lakh nursery plants and 2.8 lakh planting materials (cuttings, slips, suckers, etc.). Livelihood support assets such as poultry birds (22,083), night

shelters, fingerlings (84,510), mushroom spawns, bee colonies, animal feed, fodder, medicines, and small and large livestock were provided, alongside equipment and machinery across small, medium, and large farmer categories. Infrastructure development included civil works, seed farms, hatcheries, and land reclamation. Additionally, 8,505 samples were tested for soil, plant, and water quality, and 99 animal health camps, 1,848 artificial inseminations, and 745 veterinary services were delivered. KVKs also promoted entrepreneurship among 8,142 individuals, and initiatives like IFS, Natural Farming, nutri-gardens, and orchards were promoted in 1,559 instances, while market linkage support was extended to 452 farmers. Literature dissemination reached over 55,000 beneficiaries, and employment generation under SCSP accounted for 91,882 man-months. These comprehensive efforts under SCSP contributed significantly to the socio-economic upliftment of Scheduled Caste communities by improving access to knowledge, resources, and sustainable farming practices, thereby fostering inclusive agricultural growth across the zone.

4.16.1. Achievements of DAPSC during 2024-25

Items/Activities	Qty	No. of activities		No. of beneficiaries	
		Target	Achievements	Target	Achievements
Trainings (capacity building/skill Develop. etc.)	No.	1208	177	30955	5248
1-3 days	No.	3355	1235	84168	20872
4-10 days	No.	353	96	6965	2535
2-4 weeks	No.	30	6	690	123
More than 4 weeks	No.	56	16	814	238
On Farm Trials (OFTs)	No.	1501	446	4986	1655
Frontline Demonstrations (FLDs) and other demonstrations	No.	2290	710	23194	4535
Awareness camps, exposure visits etc.	No.	3274	1244	112925	21308
Input Distribution		40	3	198	35
Seeds (field crops)	Tonnes	502.1	292.2	16798	5219
Seeds (High value crop & spices etc)	kg	8645.5	957.6	1495	426
Seeds (Roots & Tuber crops)	Tonnes	6817.1	104.4	1121	313
Nursery plants	No.	4894198	1346675	16534	4880
Cuttings, slips, suckers etc	No.	1899600	287920	13747	4284
Mushroom spawns / Bio-fertilizers	Packets	18629.0	5582.4	8019.8	2991
Honeybee colonies	No.	448	64	226	34
Animals- small (Pig, sheep, Goat etc)	No.	4428	109	818	68
Animals- Large (Cattle/ Buffalo/camel/Horse/Donkey/Mithun/Yak etc)	No.	690	0	105	0
Poultry chicks / Ducklings etc	No.	101309	22083	10121	1972

Items/Activities	Qty	No. of activities		No. of beneficiaries	
		Target	Achievements	Target	Achievements
Fish spawns / Fingerlings	No.	325212	84510	45388	103
Small Equipments (upto Rs.2000)	No.	6859	1412	4004	826
Medium Equipments/ Machinery (\leq Rs. 25000)	No.	17048	339	3616	433
Large Equipments/ Machinery ($>$ Rs. 25000)	No.	214	19	3728	539
Infrastructure / Civil work / Ponds etc	No.	66	7	162	44
Setting up plant nursery / Seed farm / Hatchery	No.	88	12	227	55
Land development / Reclamation / Conservation	ha	96	12	150	30
Fertilizers (NPK) /Secondary fertilizers	Tonnes	18.4	3.5	162	46
Micronutrients	Tonnes	1553.9	357.8	3063	794
FYM / Vermi compost	Tonnes	439.9	92.7	4636	1389
Soil amendments (Gypsum, Lime etc)	Tonnes	900.3	200.6	205	44
Plant protection chemicals	kg	4321.5	1137.4	2683	655
Plant growth promoters etc	kg	2010	552	900	374
Animal Feed	Tonnes	550.6	54.7	837	106
Animal Fodder	Tonnes	360039.8	10002.9	955	89
Animal medicines	Doses	36540	5804	5130	1799
Any others (Specify)		34918.4	5382.9	3725	979
Animal Health Camps	No.	343	99	15091	4037
Artificial insemination / Vaccination	No.	1746	1848	971	566
Veterinary Services (Hospitalization, on-site treatment, PD, Surgery etc)	No.	2471	745	4115	746
Testing samples of soil, plant, water, feed, fodder and livestock	No.	29345	8505	27620	7446
promotion of Agri - entrepreneurship	No.	849	8142	2094	293
Promotion of IFS, IOFS, Natural Farming, Nutri-garden, kitchen garden, orchards etc.	No.	5582	1559	14091	3159
Creation of market links of farm produces	No.	483	151	3304	452
Use of institute facilities (Processing etc.)	Hours	759	266	717	96
Subsidies / Assistance (50% of project cost, Max. rs.10000 / beneficiary)	No.	102	21	540	163
Distribution of literature	No.	177759	61615	260773	55759
Employment generation for livelihood	Man-Months	90072	91882	588	195
Fellowship, Stipend or Scholarships	No.	300	0	0	0
	No. of Projects	54	10	5112	1035
Monitoring & Evolution of DAPSC/ST (upto 3%)	No.	24	7	240	45
Others	No.	1301	312	57073	11908



Conducted training programme on production technologies of Sesamum-KVK,Prakasam(Darsi), Andhra Pradesh

4.18 Mera Gaon Mera Gaurav

“Mera Gaon Mera Gaurav” (MGMG) is an innovative initiative of Indian Council of Agricultural Research (ICAR), planned to promote the direct interface of scientists with the farmers to hasten the lab to land process. The major objective of this scheme is to provide farmers with the required information, knowledge, developing linkages with

line departments, on-spot advisories on regular basis by adopting villages. It was implemented by 8 ICAR- institutes in Andhra Pradesh, Telangana and Tamil Nadu states. 59 teams of scientists have adopted 200 villages and organized 1100 activities benefiting 20992 farmers and rural people.

Table 4.18.1. Details of institutes participating in MGMG programme

S No.	Name of institute/ university	No of Teams	No of Scientists	No. of villages
Andhra Pradesh				
1	Indian Institute of Oil Palm Research (IOPR), Pedavegi	3	14	13
2	Central Tobacco Research Institute (CTRI), Rajahmundry	6	30	12
Telangana				
3	Indian Institute of Oilseeds Research (IIOIR), Hyderabad	7	35	30
4	Indian Institute of Millets Research (IIMR), Hyderabad	4	18	12
5	National Research Centre on Meat (NRCM), Hyderabad	4	15	10
Tamil Nadu				
6	Central Institute of Brackish water Aquaculture, Chennai	12	48	12
7	Sugarcane Breeding Institute (SBI), Coimbatore	18	72	90
8	National Research Centre for Banana (NRCB), Tiruchirappalli	5	17	21
Total		59	249	200

About 249 scientists from ICAR institutes of the zone have made 147 visits to the adopted villages and conducted various activities in the adopted villages involving the farmers and rural people during 2024-25. They have organized 39 interface meetings / *Kisan Ghoshties* in which 2398 farmers have participated. 26 training programmes were conducted on agriculture, fisheries, value addition and other related aspects for 1138 beneficiaries. A total of 127 demonstrations were conducted on various aspects of agriculture, aquaculture, climate change, mechanization, water conservation, new crops, varieties etc. involving 1732 farmers.

Mobile advisories (596 Nos.), literature (121 Nos.) and awareness created (44 Nos.) on improved agricultural practices, soil health, pest and disease management, nutrition, value addition, government schemes etc. were provided to 12740 farmers & rural women. All these efforts by the ICAR-institutes resulted in employment generation, higher yields from the crops and income generation during off season thereby increasing the income levels of the farmers and rural people.

Table 4.18.2. Details of activities conducted under MGMG programme

Name of activity	No. of activities conducted	No. of farmers participated & benefitted
Visit to village by teams	147	3284
Interface meeting/ <i>Goshthies</i>	39	2398
Training organized	26	1138
Demonstrations conducted	127	1732
Mobile based advisories	596	9237
Literature support provided (No)	121	700
Awareness created (No)	44	2803
Total	1100	20992



Field Visit to MGMG Villages CTTRI tobacco variety, (FCJ 11) ICAR-CTTRI, Rajahmundry



Skill demonstration on Insect pest management (Bag worm) in oil palm-ICAR-IIOPR, Pedavegi



Villagers participated on 15th feb 2025 in MGMG programme ICAR IIMR



World Soil Day celebrated by ICAR-IIOR, Hyderabad scientists with farmers in MGMG village



Mrs. Padma, a farmer from **Mahabubnagar, Telangana** transformed her family's livelihood by shifting from exclusive paddy cultivation to diversified vegetable farming on one acre of land, leading to regular weekly income. "My role has expanded from house wife to decision maker in farming and marketing. I am proud of mentoring my fellow village women into vegetable cultivation".



KISAN SARATHI



4.19. Kisan Sarathi

Kisan Sarathi is a digital platform launched on 93rd Foundation Day celebration of Indian Council of Agriculture Research (ICAR) to facilitate farmers to get 'right information at right time' in their desired language. It is a System of Agri-information Resources Auto-transmission and Technology Hub Interface of ICAR powered by Interactive Information Dissemination System (IIDS), Digital India Corporation (DIC), Ministry of Electronics and Information Technology (MeitY), Government of India.

This Information Communication and Technology (ICT) based interface solution supports agriculture at local niche with national perspective. With this digital platform, the farmers are interacting with the KVK scientists, getting information on latest technological interventions and availing personalized advisories on agriculture and allied areas. A total of 1732598 farmers (Andhra Pradesh (637178), Tamil Nadu (575581), Telangana (516891) and Puducherry (2948)) and 433 Krishi Vigyan Kendra (KVK) experts have been registered in the portal under Zone-10.

4.20. New Extension Methodologies and Approaches (NEMA): National Network Project on "Assessing the Digital Competencies of KVKs: Current Status and Future Strategies"

This project aims to evaluate the status of digital strategies in KVKs, assess their efficacy, identify key barriers, and develop a strategic roadmap for digital integration. A nationwide baseline survey will be conducted across all ATARI zones to capture data on digital infrastructure, literacy, tools, and service delivery. KVKs will be ranked based on digital adoption, and a purposive sample of 75 high-performing and 25 low-performing KVKs will undergo in-depth analysis.

For further in-depth analysis, two distinct sets of questionnaires will be developed: one for the high-performing KVKs, focusing on evaluating the efficacy of existing digital strategies using a Digital Strategy Efficacy Index (DSEI) and identifying potential areas for improvement and another for the low-performing KVKs to explore the barriers to digital adoption, assess their specific needs,

and recommend actionable steps to enhance their digital capacity and integration.

Additionally, focus group discussions (FGDs) and brainstorming sessions will be conducted involving KVK staff, beneficiary farmers, and Agri-tech stakeholders. These interactive sessions will generate valuable perspectives on field-level challenges, success stories, user feedback, and potential innovations that could support the transformation of the frontline extension system. The study will culminate in a detailed report outlining current practices, gaps, and opportunities, along with actionable recommendations to optimize digital strategies. It will serve as a guiding document for enhancing digital competencies in KVKs and shaping future-ready, tech-enabled extension services across India.



Mrs. Rajani Vivekandan of **Theni, Tamil Nadu** developed innovative value-added products from GI-tagged Cumbum Grapes. Through impactful interventions she now earns an average monthly income of ₹35,000. *"KVK Theni played a vital role in my success as an entrepreneur and making me a model for aspiring women agri-entrepreneurs".*



5. Awards and Recognitions

Krishi Vigyan Kendras



KVK Kadapa (Vonipenta), Andhra Pradesh received the Outstanding Environmentalist Award and Rising Star Environmentalist Award for its contributions to environmental sustainability.



KVK Erode, Tamil Nadu, received the Best Language Film Award for its outstanding contribution to agricultural communication



KVK Erode, Tamil Nadu, was honored with the National Best Agri Startup Award for its exemplary innovation in agricultural entrepreneurship



KVK Kanyakumari, Tamil Nadu received the Best Stall Award from TNAU during the State-Level Mega Farmers' Day event



KVK Tiruvallur, received the Best KVK Award from the Hon'ble Vice Chancellor of TNAU during the 54th Foundation Day celebration



KVK Krishnagiri, Tamil Nadu, received an Appreciation Certificate from the District Collector for its participation in the 30th All India Mango Exhibition



KVK Kadapa (Vonipenta), Andhra Pradesh, received the Best KVK Award during the 31st Foundation Day celebration of NRC Banana at Trichy, Tamil Nadu



KVK Thiruvannamalai, Tamil Nadu, received the Best Service Provided Award from TVS SST Trust for its exemplary contributions

Farmers



15 Farmers received Best farmers award-MFOI 2024
KVK Krishnagiri



Best progressive farmer award occasion of Diamond Jubilee
Celebrations of PJTAU - KVK Khammam Kothagudem



Mr C Shanmuga sundaram received the best stall award at organic
trade fair held at Chennai-KVK Erode



Mr M Govindhasamy received Best Farmer Award from ICAR_NRCB
Trichy for organic banana cultivation-KVK Krishnagiri



Mr Manoharan received Velan Chermmal award for Organic farming-
KVK Karur



Mr Ponnaiah received 5th National water award on 22-10-2024
KVK Pudukkottai



Mr.Vinoth received award from Hon'ble Minister for Civil Supplies for
Good Maintenance of Terrace garden-KVK Karaikal



Mrs Manjuladevi, received BEST FARMERS INTEREST GROUP award
from Hon'ble Governor of Tamil Nadu Shri RN Ravi-KVK Theni



Mrs Saleema received Singapen award for honey bee keeping and value addition in large scale - KVK Theni



Mrs.Sathya received award for her enterprenurial activities during the Women conference - KVK Karaikal



Shri G Venkateswar Rao receiving Krishi Jagran Millionaire Farmer of India Awards 2023 (MFOI) at Rythu sadassu KVK Khammam Kothagudem



Shri S Meenakshisundarm received Best Banana Bunch Award 2024 from NRCB-KVK Kanyakumari



Shri. S. Ravi from Lachampur Village received Innovative Farmer award at IARI, New Delhi - KVK Adilabad



Smt. M. kalyani (KVK Trainee) Received state Innovative Farmer Award from NAARM, Hyderabad-KVK Nalgonda (Gaddipally)



Sri Devendar Reddy, Singaram(v) recieved Progressive Farmer Award 2024 from AIR Warangal on the occation of Kisan Diwas-KVK Warangal Mamnoor



Sri Manohar received Best FPO award by IIHR to Maldakal FPO on Sweet orange - KVK Mahabubangar YFA



Sri. Venkata Swamy received National level Millionaire Farmers of Telangana from ICAR & Krishi Jagran - TG_Mahabubangar YFA



Women Entrepreneur Mrs Uma received award from DrL Murugan, Hon'ble Minister of state, information and Broadcasting-KVK Theni



Women Entrepreneur Mrs Regina received award from Hon'ble Governor of Tamil Nadu Shri RN Ravi-KVK Theni



Best farmer award, at Kisanmela RARS Anakapalli, Faremr Pentakota Hareram - KVK Visakhapatnam (BCT)



Best farmer award, at Kisanmela RARS Anakapalli, Faremr Thota Ganesh - KVK Visakhapatnam (BCT)

KVK Scientists



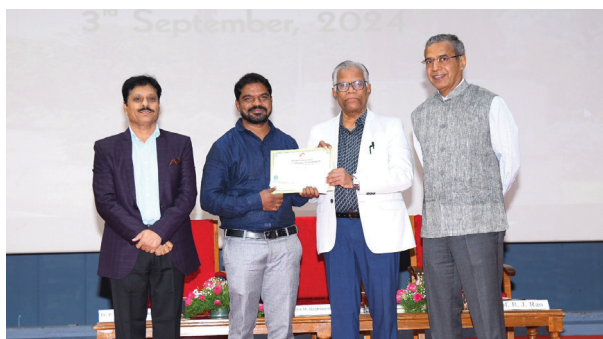
Best teacher award on the occasion of 193rd Birth Anniversary of Savithri Bhai Phule-KVK Kadapa Vonipenta



Dr Adhi Shankar SMS (Horticulture) received Best Employee Award-KVK Mahabubnagar Palem



Dr K Kavitha SMS(PP) Receiving Best Extension worker Certificate from District Collector-KVK Kanyakumari



Dr K Ravi Kumar received Best extension scientist award from PJTAU-KVK Khammam Wyra



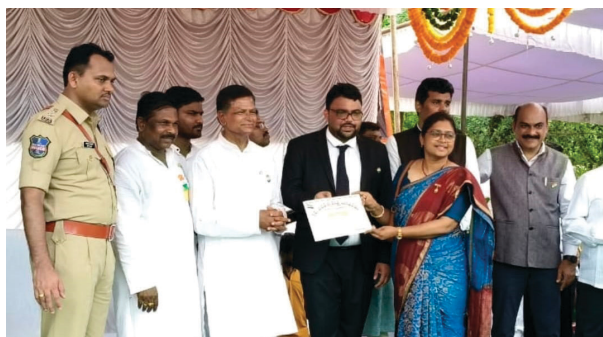
Dr K Sivagamy SMS (Agronomy) receiving Award of Appreciation from the District Collector-KVK Tiruvallur



Dr L Mahesh received Best Employee of the year 2024 award from Shri Duddilla Sridharbabu_ Hon'ble Minister_ Karimnagar District Collector-KVK Karimnagar Jammikunta



Dr L Vimalendran received Kumeran Sivaraman award for Innovative young scientist of TANUVAS in the area of Fodder Production-KVK Sivagangai



Dr O Shaila SMS (Plant Protection) received Best Employee Award-KVK Mahabubnagar Palem



Dr R Srinivasa Rao Mr B Shiva Mr Hanumanthu Mr Satish received Best Employee Appreciation award-KVK Khammam Kothagudem



Dr Sowjanya Lakshmi, Attending SAARC expert meeting at COLOMBO, Sri Lanka-KVK Guntur



KVK staff received Best Extension workers Award from District Collector-KVK Villupuram



Mr Santhakumar receiving ISAF Krishi Vaniki Kisan award from ICAR-KVK Coimbatore



Mr T I Ramesh Babu SMS Horti received Appreciation Shield from NMPB for deliberation on Ashwagandha A Health Promotor KVK Krishnagiri



Mrs. S. Poomathi SMS (Home Science) received Veera Thamizhachi Award -KVK Krishnagiri



Shri A Kiran SMS-Soil Science Received District Level Best Employee Appreciation Award From District Collector of Suryapet KVK Nalgonda Gaddipally



Shri D Naresh Senior Scientist & Head (Ic) Received District Level Best Employee Appreciation Award From District Collector of Suryapet-KVK Nalgonda Gaddipally



Shri G Prabhakar Receiving Best Fishery Technical Advisor Award
from Hon'ble Speaker Shri Gaddam Prasad
KVK Karimnagar Jammikunta



Shri Venkata Raj Kumar received Best Horticulture Scientists Award
from Eruvaka foundation -KVK Nizamabad (Rudrur)



Shri G. Venu Gopal Receiving Dr HB Singh Award (Horticulture) from Dr Neeraja VC SKLTSU-KVK Karimnagar Jammikunta



SMS (Agro) Receiving of Best Scientist Award
KVK Kurnool (Yagantipalli)



Dr. K. Revathi, SMS (Plant Protection) at KVK Krishna (Ghantasala)
received two gold medals for her Ph.D. Achievements



6. Important Events

6.1 Leading from the Front: ATARI Director's Visits 2024

Dr. Shaik N. Meera

Director, ICAR-ATARI Zone X, Hyderabad

Catalysing Change - A Journey of Vision and Action

2024 marked a defining year for ICAR-ATARI Zone X, as I undertook over 50 intensive field visits across five states-Tamil Nadu, Andhra Pradesh, Telangana, Puducherry, and Delhi-to guide, mentor, and mobilize the Krishi Vigyan Kendras (KVKs) into the next frontier of agricultural transformation. These visits were more than reviews-they were catalytic engagements aimed at unlocking the potential of KVKs as hubs of innovation, sustainability, digital agriculture, and social equity.

Beginning with the Viksit Bharat Sankalp Yatra (VBSY) review at CIBA, Chennai (10 January 2024) and the ground-level inspection at KVK Tiruvallur, we emphasized convergence and last-mile delivery. I addressed over 350 farmers at Enampakkam village and underscored the importance of scheme awareness and inclusive participation. The event featured input distributions, drone demonstrations, and multi-departmental stalls, showcasing a holistic outreach approach.

On 1-3 February 2024, I undertook a pivotal tour of three KVKs in Tamil Nadu-Thiruvallur, Virinjipuram, and Tiruvannamalai. Each SAC meeting was an opportunity to shape robust action plans. At VIT, Vellore, I delivered a keynote at the ICEISA-2024 International Conference, outlining a roadmap for AgriTech 5.0, emphasizing AI, blockchain, and drone-led extension. These events collectively reinforced our emphasis on science-driven planning and farmer empowerment.

Empowering Tribes and Transforming Lives

From 5-6 February, my visit to KVK East Godavari (Pandirimamidi) and West Godavari (VR Gudem) in

Andhra Pradesh illuminated the impact of targeted interventions under the Tribal Sub-Plan (TSP). KVK Pandirimamidi's rubber tapping and processing initiative-involving 52 tribal farmers-resulted in a 3-4x increase in seasonal income. I witnessed rubber sheet production, interacted with youth groups, and inaugurated the smoke chamber. With 324 ha of tappable rubber area in Maredumilli, this scalable model could contribute ₹2.2 crore to tribal livelihoods annually.

At KVK VR Gudem, I reviewed institutional infrastructure and demonstration units, including state-of-the-art museums and post-harvest research stations. These visits solidified our vision of KVKs as livelihood launchpads and centers of technological excellence.

From 7-10 February, I toured Madurai, Theni, and Pudukkottai. At KVK Theni, during a State-Level Conference on Women Entrepreneurs, I joined Hon'ble Governor of Tamil Nadu in recognizing SHGs and agri-preneurs. At KVK Pudukkottai, the focus was on millet promotion, input distribution, and grassroots innovation.

Strategic Dialogues and Skilling for the Future

A highlight of February was the Mundu Chilli Farmers Conference at KVK Ramanathapuram (17 February). I urged the development of a global "Ramnad Organic Mundu Chilli" brand, backed by GI status, traceability, and drying innovations. A detailed five-year vision was shared with stakeholders to transform this 15,000-hectare landscape into an export-driven spice economy.

During the National ARYA Workshop (21-23 February) at Gaya, Bihar, I represented ATARI Zone



X and shared impact data, stressing the need for enterprise clustering, incubation linkages, and branding. Our proposal for customized project reports and satellite incubation centers was well received.

The Annual Conference of ICAR Directors and VCs (26-28 February) in New Delhi saw me assist DDG (Extension) in presenting the Digital Delivery Blueprint for KVKs, which I had previously showcased at the Nutri-Garden Inception Workshop (9 April). We proposed next-generation dashboards, data architecture, and AI-powered farmer advisory models-charting the path for Viksit Bharat.

Green KVKs, Skill Missions, and Infrastructure Milestones

In March, I visited KVK Ramagirikhilla (1 March) to inaugurate a drip irrigation system, chilli-turmeric processing unit, and preside over a CSR-funded Skill Development Training. Our model here-integrating SHG-driven horticulture and agribusiness-is replicable across project-affected areas.

From 4-7 March, I undertook a dual mission-KVK site selection in Thanjavur and stakeholder engagement in Puducherry. These efforts culminated in the Golden Jubilee Celebration at KVK Puducherry (21 March), where the Golden Jubilee torch, special postal stamp, and commemorative pylon were unveiled by the Hon'ble Chief Secretary and DDG (Extension). My address captured the 50-year journey of KVKs as "silent revolutions" in rural India.

During May, I presided over the Annual Action Plan Workshop for Andhra Pradesh KVKs (18-19 May) at ANGRAU, Lam, Guntur. Here, I called for "Single Stop Solutions" at KVKs-well-equipped, digitally enabled, convergence-driven centers of excellence. Concurrently, I visited KVK Garikapadu and KVK Lam, identifying the former as the First Clean & Green KVK in the Zone.

Celebrating Progress, Charting the Future

My visit to KVK Rudrur (25 May) was a celebration of innovation and inclusion. I inaugurated the Soil

Testing Lab, launched QR-coded demo units, and participated in the valedictory session of SC Sub-Plan skill training for women. Similarly, at KVK Palem (24 September) and KVK Kampasagar (24 August), we showcased IFS models, drone-enabled DSR systems, and seeders in convergence with NABARD and SBI Foundation, respectively.

The Annual Zonal Review Workshop (25-27 June, CTRI Rajahmundry), co-hosted with YSRHU and CTRI, was a landmark. It featured sessions on ethnic vegetable conservation, GI tagging, CSR mobilization, carbon farming, and digital skilling. A special Writeshop on documenting extension innovations was convened. Dr. U.S. Gautam (DDG Extension) inaugurated the event, stressing transformational leadership by KVKs. His visit to tribal hamlets in Pandirimamidi, where I joined him, emphasized scaling up tribal success stories.

In June, at KVK Jammikunta, I joined Hon'ble Minister of Jal Shakti for PM-KISAN Samman Nidhi celebrations (18 June). Over 546 farmers participated in this event, reinforcing our commitment to central schemes.

In all these journeys-across remote tribal hamlets, policy platforms in Delhi, entrepreneurial fairs in Tamil Nadu, and farm fields in coastal Andhra-I have seen firsthand the incredible power of hope, science, and service.

Deepening Convergence, Launching Flagship Models

July ushered in a renewed focus on institutional convergence and the practical deployment of central sector schemes. On 18 July, I visited KVK Jammikunta in Telangana to review their soil health card campaign, natural farming demonstrations, and azolla production units. With over 540 farmers in attendance, I addressed a session on "Digital Tools for Soil Health Monitoring," laying the groundwork for a soil microbiome-based advisory system.

On 24 August, I launched a CSR-linked *Direct Seeded Rice (DSR) Project* at KVK Kampasagar with support from SBI Foundation. We demonstrated drone-

based seeding, tractor-mounted drills, and manual sowing methods to over 70 farmers. The emphasis was placed on integrated weed management, residue retention, and moisture conservation. The farmers were highly responsive to the mechanized options, especially considering the labour shortage and rainfall unpredictability in the region.

24 September marked another milestone at *KVK Palem (Nagarkurnool)*, where we inaugurated an integrated farming system (IFS) unit showcasing fish-cum-poultry, vermicompost sheds, and mechanical weeders. With support from NABARD and the State Department of Agriculture, we also launched a diet counseling center and an agri-nutrition garden. The visit concluded with the release of video training modules, manuals, and a QR-code-linked demo unit map.

From 16-18 September, I represented Zone X in New Delhi at the *Brainstorming Session on NGO-KVKs*, chaired by DG, ICAR. My presentation focused on two strategic digital innovations: *KVK Precision Farming Parks* and *KVK-SAGE (Smart Agricultural Guidance Engine)*. These initiatives aim to build AI-enabled command centers at selected KVKs, capable of delivering location-specific advisories, real-time alerts, and resource optimization tools to farmers through mobile and voice-based platforms. The proposals were well-received and slated for pilot implementation in 2025.

Celebrating Innovation and Harvesting Impact

October opened with a field mission to *Polepalli Village (Devarakonda)*, where I met Shri Padma Reddy, a progressive organic farmer specializing in soap nut value chains. His indigenous approach to pest control, organic slurry preparation, and soap nut processing is an ideal case for documentation and upscaling. I recommended linking his model with KVK Horticulture Research Station, Kondamallepalli, and initiating an agri-tourism pilot linked to natural farming exposure visits.

On 10 September, I inaugurated the *My Dhimbam Tribal Eco-Tourism Centre* at *KVK MYRADA, Erode*, funded by NABARD. The centre includes tribal

huts, vertical gardens, a poultry-fish integration unit, herbal plant corridors, and a craft exhibition center. I interacted with tribal SHGs, school students, and eco-guides, reinforcing the concept of conservation-linked income generation. The community's pride and ownership were palpable, and I assured sustained support through convergence and capacity building.

On 29-30 November, I visited *KVK Mancherial (Telangana)* to inaugurate HDPS-based cotton demos under the CICR Special Project. Other highlights included the launch of a district-level knowledge center, inauguration of the new soil lab, and hands-on sessions on cotton IPM and intercropping. In my keynote address, I emphasized diversification into high-value crops like vanilla and avocado, especially in light of changing rainfall patterns.

On 5 December (World Soil Day), I participated in a mega event at *KVK Jammikunta* to launch a *Natural Farming Initiative* in collaboration with the Azim Premji Foundation. Over 250 farmers and officials attended demonstrations on Jeevamrut, Bijamrut, and the role of desi cow-based inputs. We also released a manual on microbiome restoration for sustainable soil health management.

23 December marked the grand celebration of *National Farmers Day* at *KVK Malyal (Warangal)*. Over 600 farmers attended this well-orchestrated Kisan Mela. Alongside field visits to HDPS cotton, turmeric curing units, and farmers' vermicomposting units, we inaugurated a Farmer Field School. The school will serve as a farmer-led, peer-learning platform with digital resource support. I encouraged farmers to think beyond staples and tap into markets for niche crops like dragon fruit, moringa oil, and medicinal herbs.

Conclusion: A Transformative Year for ICAR-ATARI Zone X

From the paddy fields of Kampasagar to the tribal homesteads of Dhimbam, and from high-level conferences in New Delhi to the banana valleys of Madurai, 2024 was a year of walking with farmers, dreaming with innovators, and collaborating with

institutions. Each visit was carefully curated-not merely for ceremonial value, but as a catalytic engagement. We redefined review visits into transformation audits, farmer interactions into co-creation labs, and KVKs into digital-first service hubs.

In all, I covered more than 50 KVKs, interacted directly with over 10,000 farmers and extension professionals, launched more than 15 strategic

pilots, and guided over a dozen multi-agency convergence models. Our vision was-and remains-bold: To transform every KVK into a knowledge lighthouse, every rural youth into a digital Krishi sevak, and every farmer into a climate-smart, market-savvy, tech-empowered entrepreneur.

The journey continues in 2025. With deeper resolve. With broader partnerships. And with an unwavering commitment to India's farmers.

Jai Kisan. Jai Vigyan. Jai Anusandhan.



ICEISA-2024 International Conference



Inaugurated an integrated farming system (IFS) unit at KVK Palem



Inauguration of ATARI Hyderabad Zonal Workshop 2024 by the DDG Extension ICAR New Delhi



Inauguration of Eco-Tourism Centre of KVK Erode



Inauguration of Eco-Tourism Centre of KVK Erode-3



Inauguration of Eco-Tourism Centre of KVK Erode



Inauguration of HDPS-based cotton demos under the CICR Special Project at KVK Mancherial



Inauguration programme of My Dhimbam Tribal Eco-Tourism Centre at KVK MYRADA, Erode, funded by NABARD



Launch a Natural Farming Initiative in collaboration with the Azim Premji Foundation at KVK Jammikunta



Mundu Chilli Farmers Conference at KVK Ramanathapuram



National Farmers Day at KVK Malyal (Warangal)
Felicitating the Farmer



National Farmers Day at KVK Malyal (Warangal)



Programme on HDPS-based cotton demos under the CICR Special Project at KVK Mancherial



Releasing publication at KVK Mahabubnagar (Palem)



Releasing special postal stamp during KVK Golden Jubilee Celebrations



SAC Meeting at KVK Kilnelli, Tiruvannamalai 3.2.2024



SAC Meeting at KVK Thiruvallur 01.02.2024



SRT Field showcase during launch a Natural Farming Initiative in collaboration with the Azim Premji Foundation at KVK Jammikunta



State level conference KVK, Theni



Unveiling of Pylon by the Hon'ble Chief Secretary Govt of Puducherry and DDG (Extension) during KVK Golden Jubilee Celebrations



Viksit Bharat Sankalp Yatra (VBSY) review at CIBA



Viksit Bharat Sankalp Yatra (VBSY) review at CIBA2

6.2 Important Events of ICAR-ATARI, Zone X



Annual Zonal Review Workshop of KVKs of Zone X at NIRCA, Rajahmundry from 25 to 27 June 2024



Committee to Review the KVKs Hosted by Non-Government Organizations at ATARI Pune



Curtain raiser event of Golden Jubilee Celebration at KVK Puducherry



Demonstration of drone in the presence of Summit Kumar (Dt Collector)-KVK Chittoor RASS



Dr Himanshu Pathak (ICAR DG) attended inauguration of IIGR-Groundnut - KVK ANANTAPUR II(KALYANDURG)



Dr Himanshu Pathak (ICAR DG) Visited the KVK Rangareddy stall at International Conference in CRIDA



Dr Jagdeep Dhankhar Hon'ble Vice President of India
Dr Sudesh Dhankad Sri Jishnu Dev Verma Governor of Telangana
The Natural and Organic Farmers Summit-KVK Medak Tuniki



Dr Jagdeep Dhankhar Hon'ble Vice President of India
Dr Sudesh Dhankad Sri Jishnu Dev Verma Governor of Telangana
The Natural and Organic Farmers Summit-KVK Medak Tuniki2



Dr Shaik N Meera Director ICAR-ATARI Inaugurating Soil Testing Lab - KVK Nizamabad



Dr Shaik N Meera Participated in Millet Sister Network Workshop-KVK Medak DDS



Dr Uddam Singh Gautam DDG(AE) participated in Millet Food Festival - KVK Thiruvannamalai



Dr Uddham Singh Gautam DDG AE participated in Rythu Sadassu and Agricultural Exhibition on 12-02-2024-KVK Nalgonda Gaddipalli



Golden Jubilee Exhibition at KVK Tiruvallur, Tamil Nadu



Honorable governor of Tamil Nadu Shri RN Ravi Interacting with KVK Theni promoted Entrepreneurs



Hon'ble Governor of Tamil Nadu Shri RN Ravi participated in Farm Women Conference -KVK Theni, Tamil Nadu



Hon'ble minister of state, Information and Broadcasting Dr L Murugan participated in Farm Women Conference KVK Theni, Tamil Nadu



Hon'ble Union Minister for Agriculture and Farmers Welfare
Shri Shivraj Singh Chouhan releasing the publications of
KVK Chittoor (RASS), Andhra Pradesh



Hon'ble Union Minister for Agriculture and Farmers Welfare
Shri Shivraj Singh Chouhan visiting the exhibition
KVK Chittoor (RASS), Andhra Pradesh



Honourable Deputy CM of UP participated in VBSY
KVK Coimbatore on 19-01-2024



Inauguration of Admin building and Farmers Hostel by
Dr US Gautam DDG in presence of Dr Shaik N Meera Director
KVK Villupuram II, Tamil Nadu



Inauguration of Admin building and Farmers Hostel by
Dr US Gautam DDG in presence of Dr Shaik N Meera Director
KVK Villupuram II, Tamil Nadu



Inauguration of IFS unit at KVK Mahabubnagar (Palem)
on 24-09-2024



RAC of ICAR-ATARIs was organized on 19-20 November 2024
at ICAR-NAARM Hyderabad



Shri C DJEACOMAR Hon'ble Agriculture Minister Puducherry
presided over Kisan Diwas - KVK Puducherry



Shri L Murugan, Hon'ble Minister of State in the Ministry of Fisheries Animal Husbandry and Dairying, participated in PM Kisan Samman Nidhi_Participation-KVK Thiruvannamalai



Shri M Kondanda Reddy, Chairman Agriculture and Farmers Welfare commission Telangana participated in the World Soil Day KVK Karimnagar Jammikunta



Shri Surya Pratap Singh Sahi, Hon'ble Minister of Agriculture and Research of UP, visited KVK Chittoor RASS



Smt M Sirisha MLA and Sri K Simhachalam IAS participated in World Tribal Festival-KVK East Godavari Pandirimamidi-



Sri Tummala Nageswara Rao, Hon'ble Minister of Agriculture, Marketing, Co-operation, and Handlooms and Textiles and Sri Jitesh V Patil visited KVK Khammam Kothagudem



State Level Conference on Special Publications released by Thiru.R.N. Ravi Governor of Tamil Nadu



Th S Murasoli, Hon'ble Minister visited KVK Tiruvarur, Tamil Nadu



Th SS Palanimanickam, Hon'ble Minister, Visited KVK Tiruvarur, Tamil Nadu



The Curtain Raiser event for the Golden Jubilee celebration of KVKs was held in Puducherry on March 21 2024



Union Minister of State Jal Shakti and Minister of State Railways Hon'ble Shri V Somanna in PM Kisan Samman Nidhi KVK Karimnagar Jammikunta



Dr. U.S. Gautham, DDG (AE), visited KVK Pandirimamidi and VR Gudem



Workshop cum Training on CSISAs Landscape Diagnostic survey in Pulse crop was held from October 21st to 23rd 2024



Sri Nara Chandra Babu Naidu, Hon'ble Chief Minister of Andhra Pradesh and Sri Nadendla Manohar, Hon'ble Minister of Civil Supplies interacted with farmers -KVK Krishna Ghantasala



Sri Bandi Sanjay, Hon'ble Minister of states for Home, GoI inaugurated on 11th Aug 2024 at KVK Karimnagar (Jammikunta)



Shri Shivraj Singh Chouhan, Hon'ble Minister of Agriculture and Farmers Welfare, GoI Inaugurated the Kisan Ghoshti at KVK Chittoor RASS on 03 Dec 2024 and interacted with farmers



7. Staff Position

Staff Position in ICAR-ATARI, Zone X, Hyderabad (2024)

S. No.	Name	Designation
1.	Dr. Shaik N Meera	Director
2.	Dr. J.V. Prasad	Principal Scientist (Agricultural Entomology)
3.	Dr. A.R. Reddy	Principal Scientist (Agricultural Economics)
4.	Dr. A. Bhaskaran	Principal Scientist (Soil Science)
5.	Dr. B. Malathi	Senior Scientist (Agricultural Economics)
6.	Vacant	Senior Scientist (Agricultural Extension)
7.	Vacant	Senior Scientist (Horticulture/Vegetable Sciences)
8.	Shri. V.V. Ramana	Assistant Administrative Officer
9.	Shri. A. Prem Kumar	Assistant Finance and Accounts Officer
10.	Shri. S. Siva Rama Krishna	Private Secretary
11.	Vacant	Technician T-1
12.	Shri P. Venkatesh	Assistant
13.	Vacant	Assistant
14.	Smt. N. Archana	Upper Division Clerk
15.	Vacant	Lower Division Clerk
16.	Vacant	Lower Division Clerk
17.	Smt. Subbalakshmi	Skilled Supporting Staff



Sri Y. Koti Nagireddy of **Darsi, Andhra Pradesh** transitioned to organic farming, adopted natural inputs, that reduced the cost of cultivation up to ₹.7000/acre and earning ₹.1.00 to 1.35 lakh per acre per year. Supported by 70-80 loyal customers, he ensures quality of the products by testing pesticide residues. *"I am proud to practice sustainable agriculture, and I am thankful for the guidance of KVK Darsi"*



8.

List of KVKS in Zone-X

List of KVKS in Zone-X

S. No.	KVK/ District	Name and address of KVKS
Tamil Nadu		
1.	Ariyalur	Krishi Vigyan Kendra, Cholamadevi Post, Jayamkondam, Udayarpalayam, Ariyalur - 612 902
2.	Coimbatore	Krishi Vigyan Kendra, Vivekananduram, Seeliyur Via, Karamadai Block, Coimbatore - 641 113
3.	Cuddalore	Krishi Vigyan Kendra, Vriddhachalam, Cuddalore - 606 001
4.	Dharmapuri	Krishi Vigyan Kendra, Papparapatti, Dharmapuri - 636 809
5.	Dindigul	Krishi Vigyan Kendra, Gandhigram Rural Institute, Gandhigram, Dindigul - 624 302
6.	Erode	Krishi Vigyan Kendra ,272, Perumal Nagar, Pudukkottai Road, Kalingiyam Post Gobichettipalayam Taluk, Erode - 638 453
7.	Kancheepuram	Krishi Vigyan Kendra, Kattangulathur (P.O.), Kattupakkam, Kancheepuram - 603 203
8.	Kanyakumari	Krishi Vigyan Kendra, Thirupathisaram, Kanyakumari - 629 901
9.	Karur	Krishi Vigyan Kendra, Pulutheri, RT Malai Post, Kulithalai Taluk, Karur - 621313
10.	Krishnagiri	Krishi Vigyan Kendra, Elumichangiri, Mallinayanalli Post, Krishnagiri - 635 120
11.	Madurai	Krishi Vigyan Kendra, Agricultural College and Research Institute, Madurai - 625 104
12.	Nagapattinam	Krishi Vigyan Kendra, Sikkal, Nagapattinam - 611 108
13.	Namakkal	Krishi Vigyan Kendra, VC & RI Campus, Namakkal - 637 002
14.	Nilgiris	Krishi Vigyan Kendra, Woodhouse farm, Dodabetta, Ooty- 643002
15.	Perambalur	Krishi Vigyan Kendra, Valikanduram Distt. Perambalur - 621 115
16.	Pudukkottai	Krishi Vigyan Kendra, Vamban Colony, Pudukkottai - 622 303
17.	Ramanathapuram	Krishi Vigyan Kendra, Coastal Saline Research Centre Collectorate Complex, Ramanathapuram - 623 503
18.	Salem	Krishi Vigyan Kendra, Sandhiyur, Via Mallur, Salem - 636 203
19.	Sivagangai	Krishi Vigyan Kendra, Kundrakudi, Sivagangai - 630 206
20.	Theni	ICAR Krishi Vigyan Kendra, Kamatchipuram (S.O) Theni - 625 520
21.	Tirunelveli	Krishi Vigyan Kendra, Urmelalagian, Ayikudi Post, Tenkasi Taluk, Tirunelveli District, Tamil Nadu - 627 852



S. No.	KVK/ District	Name and address of KVKs
22.	Tiruppur	Krishi Vigyan Kendra, TNAU Farm, Pongalur, Devanampalayam Post, Palladam Taluk, Tiruppur - 641 667
23.	Tiruvallur	Krishi Vigyan Kendra, Tirur, Tiruvallur - 602 025
24.	Tiruvannamalai	Krishi Vigyan Kendra, Kilnelli Village, Chithathur Post, Vembakkam Taluk, District Thiruvannamalai - 604 410
25.	Thiruvarur	Krishi Vigyan Kendra, Needamangalam, Thiruvarur - 614 404
26.	Tiruchirappalli	Krishi Vigyan Kendra, Sirugamani, Tiruchirappalli - 639 115
27.	Tuticorin	Krishi Vigyan Kendra, Mudivaithanendal Vagaikulam, Thoothukudi - 628 102
28.	Vellore	Krishi Vigyan Kendra, Virinjipuram, Vellore - 632 104
29.	Villupuram	Krishi Vigyan Kendra, Tindivanam, Villupuram - 604 002
30.	Villupuram-II	Krishi Vigyan Kendra - Villupuram II, Avian Disease Laboratory, 345 D, Pattuthurai Road, Thalaivasal - 636 112
31.	Virudhunagar	Krishi Vigyan Kendra, Kovilangulam, Aruppukkottai, Virudhunagar - 626 107
Andhra Pradesh		
32.	Anantapur (Reddipalli)	Krishi Vigyan Kendra, Reddipalli (V), B.K. Samudram (Mdl), Ananthapuram (Dist) - 515 701
33.	Anantapur (Kalyandurg)	Krishi Vigyan Kendra, Garudapuram (V), Kalyandurg (M), Anantapur - 515 761
34.	Chittoor (Kalikiri)	Krishi Vigyan Kendra, CLRC Building, Madanapalle Road, Kalikiri. Chittoor District - 517 234
35.	Chittoor (RASS)	Krishi Vigyan Kendra, RASS-KVK, Vanasthali, Karakambadi Post, Renigunta Mandal, Chittoor District - 517 520
36.	East Godavari (Kalavach-erla)	Krishi Vigyan Kendra, Kalavacharla, Rajanagram Mandal, East Godavari - 533 294
37.	East Godavari (Pandiri-mamidi)	Krishi Vigyan Kendra, Pandirimamidi, Rampachodavaram, East Godavari District - 533 288
38.	Guntur (Lam)	Krishi Vigyan Kendra, Lam, Guntur - 520 034
39.	Kadapa	Krishi Vigyan Kendra, Utukur, Kadapa, Y.S.R District - 516003
40.	Kadapa-2	Krishi Vigyan Kendra, Vonipenta, YSR Kadapa district - 516173
41.	Krishna (Garikapadu)	Krishi Vigyan Kendra, Garikapadu, Krishna District - 521 175
42.	Krishna (Ghantasala)	Krishi Vigyan Kendra, Agricultural Research Station, Ghantasala Krishna - 521 133
43.	Kurnool (Banavasi)	Krishi Vigyan Kendra, Near G.L.S. Farm, Banavasi, Yemmiganur Mandal, Kurnool District - 518 360
44.	Kurnool (Yagantipalli)	Krishi Vigyan Kendra, Yagantipalle, Kurnool District - 518 124

S. No.	KVK/ District	Name and address of KVKs
45.	Nellore	Krishi Vigyan Kendra, Mini Bypass Road, A.K. Nagar (Post), B.V. Nagar, Nellore District- 524 004
46.	Nellore (Periyavaram)	Krishi Vigyan Kendra, Periyavaram, Venkatagiri Post, SPSR Nellore District - 524 132
47.	Prakasam (Darsi)	Krishi Vigyan Kendra, Agricultural Research Station, PO : Darsi, Prakasam District - 523 247
48.	Prakasam (Kandukur)	Krishi Vigyan Kendra, Central Tobacco Research Institute, Research Station Premises, Kandukur, Prakasam District - 523 105
49.	Srikakulam	Krishi Vigyan Kendra, Amadalavalasa, Srikakulam District - 532 185
50.	Visakhapatnam	Krishi Vigyan Kendra, BCT, Haripuram, Rambilli Mandal, Visakhapatnam - 531 061
51.	Visakhapatnam (Kondempudi)	Krishi Vigyan Kendra, C/o Jyothirmaya Trust, Amarapuri, Pottidorapalem Post, Butchayyapeta Mandal, Visakhapatnam -531 026
52.	Vizianagaram	Krishi Vigyan Kendra, Rastakuntabai, Vizianagaram - 535 523
53.	West Godavari (VR Gudem)	Krishi Vigyan Kendra, Venkataramannagudem, West Godavari - 534 101
54.	West Godavari (Undi)	Krishi Vigyan Kendra, Undi, West Godavari - 534 199
Telangana		
55.	Adilabad	Krishi Vigyan Kendra, ARS premises, Ramnagar, Adilabad - 504 002
56.	Mancherial (Bellampalli)	Krishi Vigyan Kendra, Bellampalli, Mancherial - 504 251
57.	Karimnagar (Jammikunta)	Krishi Vigyan Kendra, Jammikunta, Karimnagar - 505122
58.	Karimnagar (Ramagirikihilla)	Krishi Vigyan Kendra, Ramagirikihilla, Ratnapu, Ramagiri, Peddapalli District - 505 212
59.	Khammam (Wyra)	Krishi Vigyan Kendra, ARS Wyra, Khammam - 507 165
60.	Khammam (Kothagudem)	Krishi Vigyan Kendra, Garimellapadu Village, Kothagudem Mandal, Khammam - 507165
61.	Mahabubnagar (Madanapuram)	Krishi Vigyan Kendra, Madanapuram (Vill. & Mdl), Wanaparthy, Mahabubnagar - 509 110
62.	Mahabubnagar (Palem)	Krishi Vigyan Kendra, Palem, Mahabubnagar - 509 215
63.	Medak (DDS)	Krishi Vigyan Kendra, Didgi Village, Zaheerabad, Medak - 502 220
64.	Medak (Tuniki)	Krishi Vigyan Kendra, Tunki Village, Kowdipally, Mandal, Medak District - 502 316
65.	Nalgonda (Gaddipally)	Krishi Vigyan Kendra, Gaddipalli, Garedapalli Mandal, Nalgonda -508 201
66.	Nalgonda (Kampasagar)	Krishi Vigyan Kendra, Kampasagar, Babusaipet Post, Tripuraram Mandal, Nalgonda - 508 207

S. No.	KVK/ District	Name and address of KVKs
67.	Nizamabad (Rudrur)	Krishi Vigyan Kendra, Farm Science Centre, Rudrur, Varmi Mandal, Nizamabad - 503 188
68.	Ranga Reddy	Krishi Vigyan Kendra, Near Deer Park, Bhagyalatha Busstop, Hayathnagar Research Farm, Hyderabad - 501 505
69.	Warangal (Malyal)	Krishi Vigyan Kendra, Malyal, Mahabubabad, Warangal - 506 101
70.	Warangal (Mamnoor)	Krishi Vigyan Kendra, Mamnoor, Warangal, Telangana - 506 166
Puducherry		
71.	Karaikal	Krishi Vigyan Kendra, Madur, Sellore Thirunallar, Karaikal - 609 607
72.	Puducherry	Krishi Vigyan Kendra, Kurumbet, Puducherry - 605 009

Th. L. Ananthan, of **Tiruvallur, Tami Nadu** used TNAU Rice Bloom to address spikelet sterility in rice during the samba season, a major cause of yield loss due to low light and high temperature which gave him 26% higher yield, achieving 61.58 q/ha, and a net returns of ₹78,318/ha. *"Timely intervention by the KVK saved me from crop loss. I am recommending TNAU Rice Bloom to my fellow farmers".*



Th.P.Anandhan of **Tiruvallur, Tamil Nadu** adopted high-yielding, pest and disease resistant, early maturing variety COH 10, which significantly enhanced productivity. *"Impressed by the results of this high yielding variety, I am actively participating in hosting MLT and ART trials on my farm".*



Feed Smart with Azolla - Fast, Fresh and Full of Nutrition - KVK - Pudukkottai



Backyard Poultry - Feathers of Fortune Empowering Rural Livelihoods
KVK - Kurnool (Yagantipalle)



KVK Anantapur, (Kalyandurg)



KVK - Mahabubnagr (Palem)

This image shows a single page of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There is no text or other markings on the page.