

Man riding power weeder		
Profile of Innovator:		
Name	Shri. Repalle Shanmukha Rao	
Age (in Years)	36	
Education	Matriculate	
Experience (in Years)	25	
Contact Details	At- Kambalapalli , PO: Kambalapalli, Dist- Mahabubabad , State- Telengana, Pin-506103	
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Brief description of Innovation		
Cotton and chilli are major Kharif crops in Mahabubabad district, where weed infestation—both broad- and narrow-leaved species—is a common problem. Farmers mostly rely on manual weeding, often combined with intercultural operations using farm machinery. To reduce labour and costs, a low-cost Main Riding Power Weeder was developed using locally available and repurposed materials.		
Innovation’s Highlights	Farmers in Mahabubabad have used automated weeders for cotton and chilli, but existing 2-wheel models with differential gears often damage crops and cause strain during turning. To solve this, Mr. Shanmukha Rao developed a low-cost (₹35,000) man-riding power weeder using a petrol engine, gearbox, chain, and two iron ploughs. His one-wheel design allows easy turning without shoulder strain, making it comfortable and crop-safe. It’s effective for weeding, interculture, and even wetland ploughing, and can be locally customized with adjustable tynes or discs to suit various row spacings.	
Benefits/Advantages	o overcome these challenges, innovator Shanmukha Rao developed a one-wheel, ride-on power weeder. This design allows the operator to sit while working, reducing fatigue and making turning smooth and effortless. Ideal for cotton and chilli crops, it features laterally adjustable tynes or discs to work between crop rows, stir the soil, break clods, and cultivate the field effectively.	
Scope & Potential of Innovation for Wider Reach/ Out Scaling	Conventional power weeders require the operator to walk behind the machine, often leading to fatigue and back pain. In contrast, this riding model significantly reduces physical strain, particularly benefiting elderly and female operators. Additionally, it can save up to ₹5,000 per acre in weed control costs.	
Scientific Validation required	Needs validation of ergonomic and operator safety, durability & maintainability	
Domain	Improvised design of tool for weed-control in plain land condition.	

