Name of Solution:

Prototype design for sowing minor millets for effective sowing

Submitter: (ICRISAT)

Solution Overview

What is it, and what problem does it solve? Brief 2–3 sentence description.

Mechanization in millets is essential for enhancing productivity, reducing human drudgery, and lowering cultivation costs. It improves input efficiency, worker safety, and product quality. However, the lack of scale-appropriate mechanization solutions in minor millets for smallholder farmers and trained personnel is a major barrier to making agri-food systems more productive, profitable, resilient, and efficient.

Key Features & Benefits

Main components and why it is useful? Bullet points summarizing methods, tools, and value added.

- The farm mechanization options refined/ designed and promoted by ICRISAT are suitable for smallholder farmers' field sizes and limited resource endowments and support sustainable intensification/diversification in agri-food systems.
- The prototype redesigned by ICRISAT for minor millet sowing (finger millet, foxtail millet, kodo millet etc) is the game changer for line sowing of millets in dryland ecologies.
- This significantly replaces broadcasting of millets with line sowing and thus helps maintain optimum plant population and contributes to enhanced millet productivity.
- This prototype helps improve resource (soil, labor, water, nutrient, energy) use and provides social benefits like rural entrepreneurship opportunities, increased income, and less drudgery.

Where It Works and Where It Can Work

Existing and potential target regions, agroecologies, or farming systems. Include examples if available.

The redesigned prototype was introduced in eight districts of south Bihar as well as 7 districts of Odisha for sowing millets and it has shown great potential for its adoption at landscape level. Thus, this prototype can be promoted across millet growing states in India as well as holds good promise to pilot and scale in Africa.

Evidence & Impact

What results has it shown? Stats, pilot outcomes, or testimonials.

The adoption of this prototype for sowing small millets in Odisha and Bihar resulted in increased productivity of millets by 10-20 per cent compared to traditional broadcasting practice.

Scalability & Adoption Support

Why it can be scaled and what's needed to adopt it?

Low-cost, adaptable, partner-ready, etc.

ICRISAT has expertise in adapting and promoting scale-appropriate mechanization for various crops (inlcluding small millets), cropping systems, and farm types for sustainable agriculture and food supply development.

Partners & Contact

Info Who's involved and how to connect? List of key contact and partners + email / phone.

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Partners: OUAT, Odisha; RPCAU and BAU, Bihar