Solution # 4:

High-yielding, machine-harvestable chickpea varieties to improve the incomes, nutrition, and livelihood opportunities of farmers.

Submitter: (ICRISAT)

Solution Overview

ICRISAT, in collaboration with NARES partners, developed and released the following high-yielding, machine-harvestable desi varieties like ICCV 05106 (NBeG 47), ICCV 14108 (NBeG 776), ICCV 08108 (Phule Vikram), and ICCV 08102 (RVG 204) in India. These varieties offer farmers an opportunity to improve their income, nutrition, and livelihoods by significantly reducing harvesting time and labor costs. These varieties and other genotypes in the pipeline could be tested for adaptation and scalability in other countries across Asia, Africa, and Latin America.

Key Features & Benefits

- The machine-harvestable chickpea varieties are erect, tall, and bear the first pod about 30 cm above the ground, which is highly suitable for a combine harvester without damaging the pod
- High-yield, resistance to Fusarium wilt, and machine-harvestable chickpea varieties improve farmers' income by reducing time and labor for harvesting. It saves about INR 2,000 per acre compared to the variety harvested manually.

Where It Works and Where It Can Work:

The machine-harvestable varieties were released in several states of India, including Andhra Pradesh, Maharashtra, Madhya Pradesh, and Rajasthan. The varieties could also be suitable for other chickpea-growing regions in neighboring countries like Myanmar and Bangladesh especially in the semi-arid agro ecologies.

Evidence & Impact

Each of these varieties significantly reduces the time and labor required for harvesting, allowing farmers to process larger acreages more quickly and to avoid losses due to unseasonal rains. It led to substantial cost savings compared to manual labor, especially in areas with labor shortages. It reduced the physical burden of manual harvesting, which is particularly important for female workers.

Scalability & Adoption Support

The two varieties, ICCV 05106 (NBeG 47) and ICCV 14108 (NBeG 776) offer low cost, wide adoption by farmers due to low manpower for harvesting and easy accessibility of combine harvesters to farmers. This variety is more beneficial to farmers as they can harvest the produce very quickly, especially if there are aberrant weather conditions. ARS, Nandyal is promoting this variety in the Andhra Pradesh and Telangana region. MPKV, Rahuri (M.H) is promoting ICCV 08108 (Phule Vikram) in the Maharashtra, Madhya Pradesh, Gujarat, UP, and Rajasthan regions. ICCV 08102 (RVG 204) is being promoted by RVSKVV, AICRP, RAK, Sehore (MP) in Madhya Pradesh, Chhattisgarh, Rajasthan, Gujarat, and Maharashtra regions.

Partners & Contact Info

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