

Sowing Science, Reaping Resilience: A Woman Farmer's Success with CAZRI's Integrated Farming System approach

Farming in hot, arid ecosystem presents severe challenges, including erratic rainfall, extreme temperatures, and high soil-moisture evaporation. These climate risks often trap traditional farming in cycles of crop failure. Refusing to surrender to this drought-induced vulnerability, Mrs. Vimla Sihag of Chaupasni village in Jodhpur, Rajasthan decided to rewrite the rules of farming in desert. Looking for a sustainable way forward, she turned to the ICAR-Central Arid Zone Research Institute (CAZRI) in Jodhpur—a move that would transform her 3.5-hectare landholding into a profitable and resilient farm.



Mrs. Sihag's transformation began with a training program at CAZRI, where she recognized the untapped potential of arid horticulture crops. In 2012, she dedicated one hectare of her farm to establishing a ber orchard, planting climate-resilient varieties from CAZRI, including **Sev, Gola, Umran, and Tikdi**. Her willingness to experiment and precisely apply scientific recommendations yielded immediate rewards, generating an income of approximately **₹1 lakh in the very first year of bearing**. Expanding her scientific approach, she mastered the art of grafting—upgrading her existing *desi* ber plants with improved varieties of ber and also grafted Rai *gundi* (*Cordia garaf*) with improved Gonda varieties (*Cordia myxa*) to maximize productivity and fruit quality.



To insulate her livelihood from climate shocks, Mrs. Sihag shifted to a diverse, resource-efficient Integrated Farming System (IFS). This model seamlessly blends a thriving orchard of over 230 ber trees yielding an average of 80 kg of fruit per tree with drip-irrigated seasonal vegetable cultivation, including cabbage, tomato, chili, and brinjal, fennel etc. By utilizing her farm's proximity to Jodhpur city, these vegetables generate rapid, additional cash flows. Furthermore, she established a closed-loop livestock management system to sustain her nine cattle of Indigenous Tharparkar and Gir breeds, allocating dedicated area for year round green fodder production including fodder pearl millet, Napier grass, lucerne, and oat, while expanding pearl millet and pulse areas for dry fodder. A self-sustaining vermicomposting unit completes the loop, securing long-term soil health and drastically lowering reliance on costly external inputs.

Mrs. Sihag didn't just innovate on the field; she revolutionized her market approach. By introducing the concept of the "Family Farmer"—analogous to a trusted family doctor—she bypassed traditional middlemen, built direct-to-consumer relationships, and commanded premium prices for her organic products getting sold from farm itself. Today, her integrated approach delivers financial stability, achieving an annual gross income of ₹8.40 lakh and a net profit of ₹4.70 lakh.

Recognizing her extraordinary capability to inspire others, CAZRI proudly inducted Mrs. Sihag as a "CAZRI Kisan Mitra." Her farm now operates as a living laboratory where visiting farmers learn practical climate-smart practices and she actively involves in motivating women farmers around the region. Her achievements have resonated at the highest levels, culminating in a significant milestone where she travelled to Israel to study advanced agricultural technologies and personally shared her success story with the Hon'ble Prime Minister Shri Narendra Modi. Beyond technology transfer, Mrs. Vimla Sihag stands as a premier role model for rural women, proving that when scientific knowledge meets determination, drylands can pave a definitive pathway to economic independence.