

## **DIVISION OF VEGETABLE PRODUCTION**

### **Externally Funded Projects**

**24. Network Project on Precision Agriculture (NePPA)** This ICAR network project develops and validates precision agriculture technologies including sensor-based irrigation scheduling, variable rate fertigation, and automated environmental monitoring for protected cultivation of vegetables. Research optimizes input use efficiency and develops decision support tools. Farmers benefit from reduced water and fertilizer usage while achieving enhanced productivity and produce quality.

**25. NASF - Sensor-based Integrated Vertical Farming for Horticultural Crops and Aquaponic System** This NASF-funded project develops integrated vertical farming systems combining hydroponic vegetable production with aquaculture for urban and peri-urban areas. Research optimizes nutrient cycling, stocking densities, and cropping patterns for system sustainability. The technology offers entrepreneurship opportunities in urban farming while ensuring year-round supply of fresh vegetables and fish protein.

**26. Farmer FIRST Program** This farmer-centric programme facilitates participatory technology development and dissemination through farmer-scientist interface in adopted villages. Activities include on-farm demonstrations, kitchen garden promotion, and capacity building addressing location-specific challenges. Farming communities gain direct access to improved technologies while scientists receive feedback for technology refinement and prioritization of research needs.

**27. Deployment of Agripreneurship through Grafted Vegetables Production (UPCAR)** This Uttar Pradesh Council of Agricultural Research-funded project establishes grafted vegetable seedling production enterprises through training and handholding support to rural youth. Research standardizes grafting protocols and establishes business models for seedling nurseries. The project creates self-employment opportunities while ensuring farmer access to quality grafted seedlings for stress-prone cultivation areas.