

On-Farm Technology Validation at ICAR-IARI Regional Station, Pune

ICAR-IARI, Regional Station, Pune is in the process of developing papaya varieties which are tolerant to *Papaya ringspot virus* type P (PRSV-P). PRSV-P is devastating viral disease affecting papaya cultivation in most part of the world. The station has developed promising PRSV-P tolerant dioecious lines, Pune Selection-1 (PS-1) and Pune Selection-3 (PS-3). PS-1 and PS-3 differ in pulp color. Most fruits of PS-1 have yellow and those of PS-3 have pink/red pulp color. Plants are of medium height. Average time required to first flower is 2-2.5 months under the climatic conditions of Pune. Average yield per plant and fruit weight are 40 Kg and 1.3 kg respectively. Fruit show good marketable characters (More than 10⁰ Brix TSS during summer). These lines have been registered with ICAR-NBPGR, New Delhi as unique germplasm. Both the lines performed better than the checks (cv. Red Lady and Pusa Nanha) under severe virus infection during field trials at IARI RS Pune.

These lines are being tested at farmers' fields in various geographical locations in the country under the "Technology Validation Programme". Papaya line Pune Selection-3 was tested at the fields of 14 farmers in Bihar, Chhattisgarh, New Delhi, Maharashtra, Tamil Nadu and Uttar Pradesh as a part of On-Farm Technology Validation during 2014-15. In the year 2015-16 these lines are being tested at the 38 farmers in eight states, namely, Andhra Pradesh, Bihar, Karnataka, Maharashtra, Delhi, Tamil Nadu, Telangana and Uttar Pradesh. Majority of these on-farm trials are located in Maharashtra and Telangana. The farmers reported that these lines performed better than their present options under severe PRSV-P pressure. These lines performed well consistently, they had certain limitations, like, dioecious nature and short shelf life. These limitations are being addressed by converting these lines into gynodioecious ones. The short shelf-life can be adjusted by cultivating it for vegetable purpose and the local markets only.



On-Farm Technology Validation of Papaya variety Pune Selection-3 (PS-3)