Maharashtra farmers develop high yielding onion varieties with better shelf life

While the sharp rise of onion prices were making headlines all over India, two farmers in a quiet village in Maharashtra were celebrating their success in developing novel varieties of onions.

The two varieties Sona 40 and Sandeep Pyaz developed by Shri Babasaheb N. Pisore and Shri Sandeep V Ghole are not only high yielding and disease resistant but also possess quality traits for higher shelf life and storage. The varieties have been shortlisted, recognized, and incubated for their unique qualities by the National Innovation Foundation (NIF), an autonomous institute of the Department of Science and Technology.

The varieties were validated and evaluated at one of the premier Agriculture Research Institute (Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, Maharashtra) and were found significantly superior to other checked varieties (Agrifound light red and Phule Samarth) for yield and their keeping quality or storage life. They have been disseminated to more than 40 villages from 13 states and have received positive feedback from the farmers.

Sandip pyaz was recorded to be superior over other varieties for its yield (38 tons/ha) and other yield contributing traits like average bulb weight (100-150g), the number of rings per bulb (8-10), ring size, a minimum degree of splitting and so on. The keeping quality (40-45 days), firmness of bulb, and retention of outer skin was also found higher than the other varieties.

Similarly, Sona-40 was also found superior in terms of average bulb weight (80-90g), the number of rings per bulb (7-9), ring size, keeping quality, and lower incidence of purple blotch disease as compared to other checked varieties (Agrifound light red and Phule Samarth). The variety also produced significantly higher bulb yield (34 tons/ha) at both locations over the checked varieties.

The grassroots farmers with years of field experience and technical know-how have developed the varieties through conventional breeding methods (Selection method) from local cultivars.

NIF identified and recognized the skill and innovations of grassroots farmers and also value-added and effectively contributed in providing solutions through these transformative agro biodiversity innovations.

The farmers are mostly growing varieties that are similar to each other and not much genetically diverse. Therefore, to create lasting solutions for resilience and climate change adaptation, it has now become indispensable to identify and recognize the innovations of skilled farmer scientists with years of field experience. These farmers' varieties are mostly developed from local old landraces or cultivars and are therefore genetically diverse, climate-resilient, region specific, high yielding with high storage life/keeping quality, and good nutritional value.

NIF has been promoting and disseminating these farmers' innovations through on-farm trials and exhibitions. Encouraging such novel varieties can help preserve genetic diversity, provide climate-resilient options for farmers, and boost nutritional security.