Apple variety ‘HRMN-99’ by Hariman Sharma- a ray of hope for non-traditional areas

CSK Himachal Pradesh Krishi Vishvavidyalaya

Apple is traditionally the fruit crop of high hill temperate zone of Himachal Pradesh due to its special requirement of chilling period. It has not been possible to grow apple under low hill conditions of Himachal Pradesh where temperature goes as high as 44°C. The variety evolved by the innovative farmer Mr Hariman Sharma, is named after his name as ‘HRMN-99’, has very low chilling requirement and is suitable for cultivation in warmer climate. It is in great demand throughout the country, particularly in warmer regions. In view of huge demand of this variety, production of apple plants are increasing year after year as the fruits of this apple variety are harvested early in the season and are available in the market in mid June as off-season fruits which fetch very good price. Development of this new apple variety, having very low chilling requirement, has brought “apple revolution” in non-traditional tropical and sub-tropical regions. This is a commendable innovation and great service to the mankind by him.

What makes it different than the usual practices?

Mr Sharma has distributed thousands of plants to hundreds of farmers throughout the country. The National Innovative Foundation (NIF) Gandhi Nagar, Gujarat has extended its support to him for conducting multi-location trials in tropical and subtropical regions. NIF started trials from 2014-2015 on introduction and evaluation aspects of ‘HRMN-99’ apple variety by planting 7572 saplings in different tropical and sub-tropical parts of the country to study the establishment of this apple variety in those areas and bearing of fruit. Plants of this variety are bearing fruits in seven states, viz., Delhi, UP, Uttarakhand, Karnataka, Haryana, Himachal Pradesh and Manipur. The analysis of IARI, New Delhi confirms fruit quality of ‘HRMN-99’ with better nutritive value. Morphological and SSR DNA finger printing got conducted by NIF from Gujarat State Biotechnology Mission confirms its diversity and superiority over other low chilling varieties ‘Anna’ and ‘Dorsett Golden’. NIF has filed the application on behalf of Mr Sharma for the registration of ‘HRMN-99’ variety under PPV & FR Act-2001.

How this innovation works

Mr Hariman Sharma purchased some apples from local market in the year 1998 and after consuming them, he disposed the seeds in his backyard. A year later, he noticed some apple seedlings emerging out there and finally one plant survived. In 2001, he observed some fruits on that tree. As an innovative farmer, he could sense that this apple tree bearing fruits in a warm area, like his village situated at 550 m above mean sea level, was unprecedented and extraordinary. So he preserved this plant and next year he took out some branches and grafted on a plum tree as no apple tree was available there. The grafting was successful and started bearing good quality fruits after three years. During 2004-05, he brought crab apple seedlings from Shimla and grafted his apple on them. He has been an active member of Scientific Advisory Committee (SAC) of Krishi Vigyan Kendra Bilaspur from 2010 to 2013. He has been taking keen interest in KVK’s activities/programmes and constantly remained in contact for new technologies. He established an apple orchard of his own variety ‘HRMN-99’ and is bearing fruits regularly. Now, he obtains crab apple seedlings every year from Kashmir and raises the grafts on those plants. Usually apple can be grown at altitudes of 1500-2600 m above mean sea level in the Himalayan range, which experiences 1000-1500 hours of chilling but the variety developed by Hariman can be grown in low hill/plain areas which are about 550 m above mean sea level or less. The variety does not require much chilling hours and has been named as ‘HRMN-99’, after his ‘Hariman’.

How this innovation can be up-scaled or out-scaled? What is the business potential of this innovation?
During 2014-15, with his personal efforts, Mr Sharma distributed 1,90,000 apple plants for plantation to 6000 farmers in Bilaspur, Hamirpur, Kangra, Una, Mandi and Solan districts of Himachal Pradesh where it has not been possible to grow apple earlier. Besides, he has supplied 6000 plants to research stations and Department of Horticulture and 5000 number to NGOs of the state. With the help of NIF, he has supplied 10790 plants during 2014 to 2017 in 29 states of the country. Till date 2.25 lakh plants have been distributed all over the country. As of now, 8000 farmers and scientists of the country have visited his farm and appreciated the work as recorded in the visitor’s book at his farm. Presently ‘HRMN-99’ variety is in fruiting at Rastrapati Bhawan (New Delhi), Navada (Bihar), Karnal, Hisar, Gurgaon, Sirsa (Haryana), Bengaluru, Balgaon (Karnataka), Hoshiarpur (Punjab), Pillibheet (UP), Haldwani, Kotbag (UK), Scihoor, Hawalpur (MP), Manipur, Chhristgarh, Kerala, Maharashtra, Rajasthan, Dadhar Nagar Hewali, Ahmedabad, Narsari (Gujarat) and six districts of Jammu region (J&K). Now growing mango, litchi, pomegranate and apple in one orchard has become a reality.

Name: Hariman Sharma
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Awards and Honours received by Mr Hariman Sharma for his skill and creativity

- **State Level Utkrist Prize** cash of Rs 25000/- by Chief Minister of HP (15.8.2008).
- **Prerna Strot Suman** for Apple cultivation Rs 510000/- by Chief Minister of HP (15.8.2009).
- Farmer of the Year **Srav Shresth Hiamchali Kisan Award** by Divya Himachal Newspaper (23.2.2010).
- District level **Utkrist Kisan** Prize Rs 10000/- by Dy. Speaker, Govt. of HP (8.7.2010).
- **Appreciation Letter** to innovative Horticulture Farmer by Director, ICAR-IIHR, Hassarghatta, Bengaluru (18.03.2010).
- **Result of Hariman Apple HRMN-99 in Germany** by email of Mr. Reinhard Schomberg Klee (16.9.2013).
- Participated in **Vibrant Gujarat Global Agriculture Summit** at Gandhi Nagar, Gujarat (9-12.9.2013).
- **Appreciation** for Apple growing in Warmer area by Vice Chancellor, Dr YSP UHF Nauni, Solan (26.03.2014).
- **Apple Grower** Prize for growing low chill variety by Hon’ble Governor, HP (3.2.2016).
- **Innovative Farmer Award** by Sh Radha Mohan, Central Agri. & Farmer Welfare Minister (21.3.2016).
- **Appreciation for developing Low Chilling variety (HRMN-99)** by Hon’ble Chief Minister of HP on the occasion of 32nd Foundation Day of Dr YS Parmar Univ. of Hort. & Forestry, Solan, HP (1.12.2016).
- **National Award** (Second position) by Hon’ble President of India (4.3.2017).
- **Farmer Award** by University of Veterinary Science, Bikaner, Rajasthan (9.3.2017).
- **IARI Fellow Award** by Central Rural Development and Panchyati Raj Minister, Hon’ble Proshotam Rupala at Pusa, New Delhi (17.3.2017).
- **Progressive Farmer Award** on Foundation Day of IFFCO (29.4.2017).
- **National Amit Udyan Rattan Award** presented by Central Rural Development and Panchyati Raj Minister, Hon’ble Proshotam Rupala at Pusa, New Delhi (28.5.2017).
- **National Scientist/ Farmer Award** by Vice Chancellor of Molanna Azad Vishvavidyalaya Jodhpur, Rajasthan (25.8.2017).
- **Proud of Punjab, Haryana and Himachal Pradesh Award** by Hon’ble Governor, HP (4.9.2017) sponsored by Zee News.
- **HRMN-99 Apple - Hope of India**, a documentary by Nitish Yudhvansi of Meerut and this film was shown in International Film Festival 2017 held at Channai (14-16.10.2017).
- **Special Invitee** as **Nav Pravartak Kisan** at the residence of President of India, New Delhi on the occasion of **Nav Pravartak Kisan Utsab** for four consecutive years (2014 to 2017).
- **Sh Jagjivan Ram Innovative Farmer Award-2020**

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Nursery of ‘HRMN-99’ variety at Village Paniyala
Hariman Sharma with his variety having heavy fruiting

Hariman Sharma with the then Chief Minister of Gujarat
-Vibrant Gujarat Global Agriculture Summit in 2013
Hariman Sharma with Dr A P J Abdul Kalam the then President of India (International Conference on Creativity and Innovations Ahmedabad: January 19-22, 2015)

Receiving Innovative Farmer Award from Sh Radha Mohan Singh (21.3.2016)
Receiving IARI Fellow Award from the Hon’ble Union Rural Development and Panchyati Raj Minister, Sh. Proshotam Rupala (17.3.2017)

Receiving Nav Pravartak Kisan Award from H. E. the then President of India, Hon’ble Sh Pranab Mukherjee