

Morinda citrifolia L.: A new domesticated horticultural crop for better livelihood and health in tropics

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Noni (*Morinda citrifolia* L.; Rubiaceae) is 'wonder plant' which is being used as source of medicine in many of the traditional health management systems. The NONI can be elaborated as N – Natural, O - Oxidative stress reducer, N - Nutritional supplement, I - Immune enhancer. Around 200 bioactives were reported in Noni which contribute in curing skin diseases, cancer, cardiovascular diseases, respiratory disorders, immune system problems, gastrointestinal and urinary disorder, high blood pressure, mental depression, atherosclerosis, arthritis and so on. Its market spread across the 50 countries through more than 200 companies. It is also found effective biopesticides, antimicrobial agent and stimulant for other crops. It has strong tolerance to various biotic and abiotic stresses including high levels of salinity. The Noni was known to primitive tribes of Andaman & Nicobar Islands (India) from centuries but scientific efforts were required for developing suitable technologies for its commercial exploitation to benefit the region and tribes. The systematic research experiments were started on genetic diversity assessment, development of sustainable production technologies, development of suitable products and processes related to its commercial tapping and bioprospecting through bioactive compound analysis. During past five years, seven superior genotypes viz., CARI-TRA-1, CARI-TRA-2, GAH-1, SGP-2, HD-6, PBAY-13 and HBAY-13 were identified. The suitable crop production practices viz. crop geometry (4m x 4m), plant geometry (5 pairs of primary branches for open and 4 pair of primary branches for Noni as inter-crop), nutrient organic source (5.0kg/plant/year), intercropping with coconut and arecanut plantations. The sea water experiment (in tsunami affected lands) revealed that the CARI SN-1, CARI SN-2 and CARI SN-3 were promising for salinity tolerance, plant growth and fruit yield. The information generated on this new domesticated medicinal fruit tree can be useful for providing better livelihood and health to the people in tropical regions.

Biography

D. R. Singh, Head and Principal Scientist, Division of Horticulture & Forestry, Central Agricultural Research Institute, Port Blair. His major research area is Island horticultural biodiversity. He pioneered the domestication and research achievements on *Morinda* in Islands. With his efforts on this crop, the ICAR, New Delhi awarded him the prestigious Dr. Fakhruddin Ali Ahmed Award (2011), Noni Scientist 2010 by World Noni Research Foundation, Chennai and Fellow of Horticultural Society of India and Confederation of Horticulture Association of India.

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