# Madhuban Gajar: Biofortified Variety



## Why in News

**Madhuban Gajar,** a **biofortified carrot variety,** is benefitting more than 150 local farmers in Junagadh, Gujarat.

- It is being planted in an area of over 200 hectares in Junagadh, and the average yield, which is 40-50 tonne/hectare (t/ha), has become the main source of income to the local farmers.
- It is used for various value-added products like carrot chips, juices, and pickles.

## Key Points

- **Biofortified Variety:** The Madhuvan Gajar is a highly nutritious carrot variety developed through the selection method with higher **β-carotene content** (277.75 mg/kg, source of Vitamin A) and **iron content** (276.7 mg/kg).
- **Developed By: Shri Vallabhhai Vasrambhai Marvaniya,** a farmer scientist from Junagadh district, Gujarat.
    - He was conferred with a **National Award by the President of India** at Rashtrapati Bhavan, New Delhi during **Festival of Innovation (FOIN)–2017.**
    - He was also conferred with **Padma Shri** in the year 2019 for his extraordinary work.
- **Tested By: National Innovation Foundation (NIF) – India,** an autonomous institute under the Department of Science and Technology during 2016-17. It was found that the Madhuban Gajar carrot variety possesses a significantly **higher root yield** (74.2 t/ha) and **plant biomass** (275 gm per plant).
- **Areas of Cultivation:** The variety is being cultivated in more than 1000 hectares of land in Gujarat, Maharashtra, Rajasthan, West Bengal, Uttar Pradesh.

**Biofortification**

- **Fortification** is the practice of **deliberately increasing the content of an essential micronutrient,** i.e. vitamins and minerals in a food, so as to improve the nutritional quality of the food supply and provide a public health benefit with minimal risk to health.
- **Biofortification** is the process by which the nutritional quality of food crops is improved through agronomic practices, conventional plant breeding, or modern biotechnology.
- **Biofortification differs from conventional fortification** in that biofortification aims to increase **nutrient levels in crops during plant growth rather than through manual means during processing of the crops.**
- Increased nutritional quantity through biofortification will further support India's **National Nutrition Mission.**
    - Indian government launched the **National Nutrition Mission (renamed as Poshan Abhiyaan)** in March 2018.
    - The National Nutrition Mission is backed by a **National Nutrition Strategy** prepared by the NITI Aayog with the goal of attaining **"Kuposhan Mukt Bharat"** or malnutrition-free India, by 2022.

**Festival of Innovation**

- The **Festival of Innovation & Entrepreneurship (FINE)** {previously known as Festival of Innovation FOIN)} is a unique initiative of the **Office of the President of India** to recognise, respect and reward **grassroots innovations and foster a supportive ecosystem.**
- Hosted in the month of March at the President's House, the FINE has become a national celebration of **creativity and innovation at and for the grassroots.**

**Source: PIB**