



General Studies-3; Topic: Major crops cropping patterns in various parts of the country

Role of Millets in Mitigating Malnutrition and Climate Change

Introduction

- Recently the **United Nations General Assembly adopted a resolution declaring 2023 the International Year of Millets**, as proposed by India to the Food and Agriculture Organization (FAO).
- India has 41% market share, and a compound annual growth rate of 4.5% is projected for the global millet market in the coming decade.

Importance of Millets

- Millets possess immense potential in our battles against **climate change and poverty**, and provide food, nutrition, fodder and livelihood security.
- Being hardy crops, they can **withstand extreme temperatures, floods and droughts**.
- They also help mitigate the effects of climate change through their low carbon footprint as compared to wheat and rice.
- Millets can deliver greater returns than maize, while using 40% less energy in processing.
- Millets also offer a **significant cost advantage over maize as a feedstock for bio-ethanol production**.

Government Initiatives

- The Indian government launched its **Millet Mission in 2018** as part of the National Food Security Mission, which has led to the promotion of technological interventions, improvement in seed quality and MSP for bajra and jowar in India.
- Millet Network of India and the M.S. Swaminathan Research Foundation were involved in collective formation efforts to boost the domestic growth of millets.

- Several **farmer organizations** have been set up to help small and marginal farmers overcome hindrances in millet production and marketing.

Concerns / Challenges

- Millets faces several **market and economic barriers**.
- Their demand has been low, especially in urban markets.
- Unjust pricing and value twisting by intermediaries have led to farmer distress.

Cultural connection

- The cultivation of millets is deep-rooted in Indian culture.
- North-East Network in Nagaland organized in 2020 and Mandukiya in Vishakhapatnam celebrated annually, has helped promote the growth of millets.
- Some organisations have formed women's collectives in Telangana and are promoting millets through a culture-centric approach.
- In 2018, the **#LetsMilletCampaign** in Bengaluru saw the new and experimental use of millets in dishes such as risotto and pizza by restaurateurs.

Restoration of ecosystems and sustainability

- Land degradation has been a major problem in India, causing massive economic losses year after year.
- Drought-tolerant crops with low dependence on chemical inputs would put far less pressure on ecosystems.
- The **inter-cropping of millets with other crops** is beneficial because the fibrous roots of millet plants help in improving soil quality, keep water run-off in check and aid soil conservation, thereby restoring natural ecosystems.

Biofuel and climate resilience

- Most bio-ethanol in India is produced using sugar molasses and maize.
- However, a study showed that **bio-ethanol can be created using sorghum (jowar) and pearl millet (bajra)**, and that this fuel could bring down carbon emissions by about half.

Addressing SDGs

- Millets can play a role in India's sustainability policy interventions.
- The value of millets is evident in their relevance to the sustainable development goals (SDGs) of food security, nutrition and poverty eradication.

Way Forward

- The huge potential of millets in bolstering India's food and nutritional security and reducing hunger deserves top-level attention.
- Market dynamics need to favour the growth of millets.
- Incentivizing the adoption of inter-cropping and providing crop insurance and support for storage facilities will foster income and food security.
- **Millet marketing policies** need to be broadened.
- Millet cultivation clearly needs state support. The **Odisha Millet Mission**, for example, has reportedly managed to motivate about 70,000 farmers to take up millet farming as part of this programme.
- Incentives such as these need to be deployed across India for the country to bring its sustainability goals closer within reach.