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Editorial

The importance of crop and diversity

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EDITORIAL NOTE

A crop is a plant or animal product that can be grown and harvested extensively for profit or subsistence. Crops may refer either to the harvested parts or to the harvest in a more refined state. Most crops are cultivated in agriculture or aquaculture. A crop may include macroscopic fungus (e.g. mushrooms), or alga.

Most crops are harvested as food for humans or fodder for livestock. Some crops are gathered from the wild (including intensive gathering, e.g. ginseng).

Important non-food crops include horticulture, floriculture and industrial crops. Horticulture crops include plants used for other crops (e.g. fruit trees). Floriculture crops include bedding plants, houseplants, flowering garden and pot plants, cut cultivated greens, and cut flowers. Industrial crops are produced for clothing (fiber crops), biofuel (energy crops, algae fuel), or medicine (medicinal plants).

Crops are plants grown by the farmers. Agriculture plays a very important role in the Indian economy. It is the backbone of our country. 70% of the Indian population depends on agriculture for food and money. It is the major occupation in the rural areas. The cultivation of crops depends primarily on the weather and soil conditions.

Crop diversity is the variance in genetic and phenotypic characteristics of plants used in agriculture. Over the past 50 years, there has been a major decline in two components of crop diversity; genetic diversity within each crop and the number of species commonly grown.

Crop diversity loss threatens global food security, as the world's human population depends on a diminishing number of varieties of a diminishing number of crop species. Crops are increasingly grown in monoculture, meaning that if, as in the historic Great Famine of Ireland, a single disease overcomes a variety's resistance, it may destroy an entire harvest, or as in the case of the 'Gros Michel' banana, may cause the commercial extinction of an entire variety. With the help of seed banks, international organizations are working to preserve crop diversity.

Crop diversity is an aspect of biodiversity important for food security. The loss of biodiversity is considered one of today's most serious environmental concerns by the Food and Agriculture Organization. If current trends persist, as many as half of all plant species could face extinction. Among the many threatened species are wild relatives of our crops – the wild and weedy cousins of domesticated plants that possess valuable traits for crop breeding, such as pest and disease resistance. Some 6% of wild relatives of cereal crops such as wheat, maize, rice, and sorghum are under threat, as are 18% of legumes (Fabaceae), the wild relatives of beans, peas and lentils, and 13% of species within the botanical family (Solanaceae) that includes potato, tomato, eggplant (aubergine), and peppers (Capsicum). In 2016, 29% of wild relative plant species were completely missing from the world's genebanks, with a further 24% represented by fewer than 10 samples. Over 70% of all crop wild relative species worldwide were in urgent need of further collecting to improve their representation in genebanks, and over 95% were insufficiently represented with regard to the full range of geographic and ecological variation in their native distributions. While the most critical priorities for further collecting were found in the Mediterranean and Near East, Western and Southern Europe, Southeast and East Asia, and South America, crop wild relatives insufficiently represented in genebanks are distributed across almost all countries worldwide.

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