

# Green Revolution in India

The **Green Revolution in India** began in the mid-1960s marking a transition from traditional agriculture in India and the introduction of high-yielding varieties of seeds and the associated agricultural techniques. The need for introducing the Green Revolution in India arose due to a shortage of food-grains in part due to the legacy of colonial regime. The government of India post-independence wanted to make India self-dependent in terms of food-grain production and these efforts coincided with the development of high-yielding varieties of seeds of wheat developed by Norman Borleng and his associates in Mexico. These seeds also necessitated changes in farming techniques such as the addition of fertilizers and pesticides and greater use of irrigation. High yielding varieties of seeds were first introduced in India in the states of Punjab, Haryana and parts of western Uttar Pradesh.

The green revolution did effectively solve India's problem of food-grain shortage after it was introduced in India, although in the second wave of the Green Revolution in the 1980s, there was however, a slight reduction in production as compared to the first wave. Although many scholars are in favour of the Green Revolution as a boon to India's agricultural production, some scholars also take opposing views against the Green Revolution. These scholars often cite the adverse ecological effects of the resources employed in growing high-yielding varieties of seeds such as fertilizers and pesticides for instance as well as criticise certain socio-economic effects of the Green Revolution in India such as social conflict due to a growing

socio-economic divide. Although the Green Revolution in India started with great promise and made immense contributions in boosting agricultural productivity with high-yielding seeds and the introduction of new methods of agriculture in India, its aura is somewhat disappearing in contemporary times.

With the introduction of high yielding varieties of seeds, it can be said that the need to increase crop yield and improve production can be particularly felt in a country like India, being the 2<sup>nd</sup> most populous country in the world wherein corresponding nutrition needs can be anticipated. The Food & Agriculture Organization (FAO) of the United Nations (UN) states that India in contemporary times is self-sufficient in terms of wheat and rice production (FAO, 2018) but great issues of food security also exist in the country.

The situation in terms of fulfilling nutritional needs of Indians was worse before the green revolution in India, with grain supply in the British colonial period being dependent on British trade and high trade prices leading to affordability issues for Indian people in accessing food. The period post-independence for India was a period when food shortages were common along with the government making attempts to make grain supply self-dependent (MIT, Undated). There was as such a pressing need to make food supply meet the demands of India's growing population in the first few decades post-independence in India.

The strongest argument in favour of the green revolution in India thus is that the green revolution effectively solved the problems of food shortages in India. Many would however, argue that there were many

negative impacts of implementing the green revolution in India as well. They mostly argue for example that the imposition of modern methods of agriculture have impacted traditional agriculture in India, socio-economic inequalities in India have increased as a result of the green revolution in India, agricultural practices are shifting towards favouring principally high-yielding varieties of crops, the toxic effects of introducing chemicals such as pesticides on the environment, depletion of soil nutrients due to planting of high-yielding crop varieties, and so on.