Green Revolution: a package, not just a seed

How high-yielding semi-dwarf seeds combined with irrigation, fertilisers and price support

Green Revolution Package & Impact

01

1 · Improved seeds

- Norman E. Borlaug developed the high-yielding semi-dwarf wheat varieties (Father of the Green Revolution).
- Shorter, sturdier stems reduced lodging when crops received higher fertiliser inputs.
- M.S. Swaminathan led the adaptation and field introduction of these varieties in India in the mid-1960s.

02

2 · Water and cultivation inputs

- HYV seeds required assured and timely irrigation rather than dependence on uncertain monsoon rains.
- Crop protection controlled pests, weeds and diseases as part of the cultivation package.
- Suitable fertiliser inputs helped realise the yield potential of improved seeds.

03

3 · Institutions and markets

- Institutional credit and subsidies helped farmers buy seeds, fertilisers, diesel pumps and tractors.
- Public procurement and buffer stocking by the Food Corporation of India (FCI) fed the PDS network.
- Price support and procurement reduced market risk for participating farmers.

04

4 · Gains and resource pressures

- Higher cereal output strengthened food security and reduced dependence on imports.
- Intensive water and chemical use created groundwater depletion and soil-health challenges over time.
- Initial gains were concentrated in wheat (and later rice) in Punjab, Haryana and western Uttar Pradesh.

REMEMBER The yield gain came from seeds plus water, nutrients, crop protection and institutional support.

Sources & practice · ICAR — Green Revolution and sustainable agriculture · NCERT / IIT Kanpur SATHEE — Indian Economy 1950–1990
mindmapsforupsc.com/mindmaps/pet-green-revolution/?lang=en