

## Green Revolution – Concept Classes

### #1 What is the Green revolution?

- (1) Green revolution refers to the transformation of methods/operations in agriculture in order to boost the production and productivity with the introduction + development of HVY seeds.
- (2) Agricultural system converted = industrial system.
- (3) The three important components a) Irrigation facilities b) Chemical fertilizers c) Machines
- (4) Objectives: a) short term – to address India's hunger crises b) long term – agricultural modernisation, industrial development and rural development.
- (5) Rice + Wheat = key crops in India's green revolution.

### #2 What was the historical context?

- (1) Seeds of green revolution → Mexico in 1960s
- (2) Term “green revolution” was coined by William S. Gadd in 1968. But the father of GR = Norman e Borlaug
- (3) India specific → After independence → population rise, wars, inflation, poverty => food insecurity
  - PL 480 programme where India relied on USA for its food needs.
  - 1961-india on brink of mass famines
  - 1960s-beginning of green revolution in India.

### #3 What have we gained from the green revolution? (MERITS)

- (1) Rise in production + productivity → India = “self-reliant” in food grain production.
- (2) Increased exports + reduced imports => Reduced current account deficit.
- (3) Raised farm income + employment diversification => Better socio-economic outcomes in health and education sector.
- (4) Mechanisation and commercialisation of agriculture → Support to Industries => developing inter-industrial linkages. Food processing sector is the sunrise sector.
- (5) Regional development; especially the north-west India.
- (6) PDS-MSP-NFSA system started in later years to ensure food security

### #4 What cost have we paid? (CRITICISMS)

- (1) Reduced inter crop and intra crop diversity → nutrition rich crops (pulses, fruits and vegetables) lagged behind.
- (2) Regional inequalities rose → the western and eastern India.
- (3) Income inequalities rose; small and marginal farmers, landless labourers were at disadvantage.
- (4) Deterioration of natural resources a) depletion of groundwater (rise in uranium, arsenic and fluoride contamination) (b) Soil erosion + land degradation (c) eutrophication
- (5) Environmental pollution due to stubble burning and delaying of sowing of kharif crops.
- (6) Health impacts → imbalanced use of chemicals (NPK) (a) disorders like methemoglobinemia (b) biomagnifications + bioaccumulation (c) rising cases of cancer in states like Punjab
- (7) Food mismanagement due to violation of buffer stock norms.

**Note: Economic survey 2019-2020 has pointed out – “Agriculture growth is stagnant in last 6 years”**

**#5 How to move from green revolution to ever green revolution?**

- (1) Diversification from farming to allied activities – livestock, fisheries, poultry and horticulture.
- (2) Focus on eastern region => bringing green revolution to eastern India (BGREI)
- (3) Implementing government schemes => krishnottijojanaparamparagatkrishtvikasyojna, mission for integrated development of horticulture rashtriyagokul mission.
- (4) Crop Diversification=> pulses, vegetables, fruits etc
- (5) Extension services and intensive farmers awareness programs
- (6) Field trials=> Innovative practices=>natural farming, zero budget farming, lee farming etc.

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