Shoolini University

Course Code– ECON(H)221

Lecture 21: Green Revolution

Green Revolution

- A general term used to refer to the technological improvements in the field of agriculture
- Green Revolution was a response to dismal situation of agricultural production in the 60s
- Green Revolution was centred around the work being done by Norman Borlaug doing research in Mexico in the early 1960s

GREEN REVOLUTION

A large increse in food production in Developed and Developing countries achieved by using modern agricultural techniques.

www.greenrevolutionoxforddictionaries.com



Components of Green Revolution

- Timely and adequate supply of crucial inputs

High Yielding Varieties (HYVs)

- Use of High Yielding Varieties (HYVs) – mostly dwarf varieties of wheat and later rice. The seeds were also not too much dependent on sun rays for photosynthesis and hence, yields were not influenced much. This gave a boost of about 250% to the productivity.

HYVs – seeds and chemical fertilizers

- Use of chemical fertilizers: the green revolution varieties required additional nutrients to plants (mainly urea (N), phosphate (P) and potash (K)

Irrigation

- Adequate Irrigation – for controlled growth of plants and dilution of fertilizers, this required development of irrigation facilities

Components of Green Revolution .....

- Use of chemical pesticides and germicides
- Use of chemical herbicides and weedicides
- Adequate and timely credit facilities
- Need for adequate storage facilities
- Efficient marketing and distribution facilities
- (mostly concentrated in wheat growing areas in the beginning)

Impact of Green Revolution

➢ Socio-economic Impacts:

- output of wheat and rice increased tremendously and many countries became food self-sufficient (wheat in 1960s and rice by 1970s)
- Inter regional and inter-personal discrepancies because of differential incomes in India
- Rise in incidence of malaria, to some extent, is also linked to Green Revolution because of water logging and because of drastic change in cropping pattern in favour of wheat and rice based cropping patterns.
- The new cropping pattern put crops like pulses, oilseeds, barley and maize etc. at a disadvantage.

Green Revolution

➢ Ecological Impacts:

- Degradation of soil fertility as the use of more and more of chemicals became common
- Falling down of water table – because the HYVs required more water than the traditional varieties (it is estimated that 1 kg of rice requires 3-5 thousand litres of water!)
- Environmental degradation – due to encroachments of common lands (clearing of forests)
- Toxics in food chain