General Studies-3; Topic – Indian Agriculture

Zero Budget Natural Farming (ZBNF)

1) Introduction
   - Across the world, agriculture is facing multiple setbacks, in the form of extreme weather events like floods and droughts or factors such as soil degradation, soil salinity and water shortage.
   - To feed the global population of 9.6 billion by 2050, as projected by a United Nations report, scaling up food production is important.
   - Ensuring food security, producing more with less resources and building the resilience of smallholder farmers are also important in creating a food-secure future.

2) Background
   - The neoliberalization of the Indian economy led to a deep agrarian crisis that made small scale farming an unviable vocation.
   - Privatized seeds, inputs, and markets are inaccessible and expensive for peasants.
   - Indian farmers increasingly find themselves in a vicious cycle of debt, high production costs, high interest rates for credit, and volatile market prices of crops.
   - Under such conditions, ‘zero budget’ farming promises to end a reliance on loans and drastically cut production costs.
   - The phrase ‘Zero Budget’ means without using any credit, and without spending any money on purchased inputs.
   - ‘Natural farming’ means farming with Nature and without chemicals.
   - Everything required for the crop comes from nature itself.

3) Need for ZBNF
   - Ensuring food security and producing more with less resources.
   - For building the resilience of smallholder farmers for creating a food-secure future.
   - ZBNF is the right solution to fight climate change and create resilient food systems.
   - Fighting drought is one of the main objectives of ZBNF.
   - The Food and Agriculture Organization (FAO) of the UN advocates environmentally-friendly farming methods that can take us to a more sustainable future.
   - Importance for chemical free food consumption is growing rapidly.
   - Chemical farming has made food a poison and also has reduced the yield by making lands barren.
   - Farmers’ welfare and sustainable practices are vital for a sustainable and productive economy.
   - ZBNF constitutes an effective strategy for achieving SDGs targets.

4) ZBNF in India
   - ZBNF is a set of farming methods, and also a grassroots peasant movement.
   - It has attained wide success in southern India, especially the state of Karnataka where it first evolved.
   - Farmers in Andhra Pradesh have practised ZBNF and have witnessed good results.
   - Himachal Pradesh Government has launched ZBNF project which aims to increase agriculture produce and the income of farmers by the year 2022.
5) **Features of ZBNF**
   - It is a farming practice that believes in natural growth of crops without adding any chemical fertilizers and pesticides.
   - The four wheels of ZBNF are Bijamrita, Jiwanmita, Mulching and Waaphasa.
   - Bijamrita is a natural way of seed treatment using local cow urine and cow dung.
   - Jiwanmita is made using water, local cow dung, local cow urine, jaggery, dal flour and soil.
   - Waaphasa is the aeration in the soil.
   - ZBNF is different from organic farming.
   - Intercropping is an important feature of ZBNF.
   - Practising composting on the farm itself, so that soil organic matter increases.
   - Storing water in the farm ponds for use in adverse conditions.
   - Insects and pests are managed using neem leaves, neem pulp and green chillies.
   - Establishing farmers’ federations and self-help groups, and placing farmers at the forefront of knowledge creation and dissemination.

6) **Advantages**
   - Besides reduced input cost, farmers practising ZBNF gets higher yields.
   - Elimination of chemical pesticides and promotion of good agronomic practices.
   - Promote regenerative agriculture, improve soil biodiversity and productivity.
   - Ensure decent livelihoods to smallholder farmers.
   - Restore ecosystem health through diverse, multi-layered cropping systems.
   - Anyone who is having half an acre of land can start ZBNF.
   - Using ZBNF techniques, one can convert even the most infertile land into a fertile one.
   - Women’s empowerment and nutrition.

7) **Conclusion**
   - Agricultural scientists in India have to rework their strategy so that farming is in consonance with nature.
   - We need a global transition to a more resilient and sustainable agriculture that is less dependent on agrochemicals and draws more on natural biological and ecosystem processes.