

**Unit 1.Global Food crises,**

1.1 Threats to food security 1.2 Inequitable distribution of resources, disparity in developed and developing nations. 1.3 Climate change and Food security 1.4 Land as natural resources. Condition of the words land surface Importance of Soil, Roles of Microorganisms and Worms in soil, 1.5 State of the world's soil, Status of India's soil

**Unit 2. Food and Agriculture.**

2.1. Food security and agriculture 2.2 Effects of modern agriculture, Green revolution, story of Punjab, chemical fertilizer/ pesticide problems, water logging and salinity,2.3 monopoly of corporate, Debt trap, Farmers suicide.

**Unit 3.Biotechnology and Genetically Modified Crops**

3.1. Biotechnology and Genetically Modified Crops boon or bane, 3.2 BT cotton, BT Brinjal, BT mustard. 3.3 Status of GM crops in various countries

**Unit 4.Sustainable agriculture,**

4.1. What is sustainable agriculture 4.2 Organic farming, organic manure, mulching, bio-pesticides 4.3 Natural farming, permaculture, 4.4 Case studies Organic farming in Cuba, Bhutan and India. 4.5 Agro biodiversity-Multi cropping and its benefits

**Unit 5.Policy interventions.**

5.1 Indian policies related to agriculture.5.2 Other interlinkages of agriculture with water, energy, health, population, inequitable distribution, 5.3 Food security related policies and regulations and implementation

**Unit 6 Food and Nutrition,**

6.1 Importance of organic and natural food. 6.2 Food processing, different, low cost techniques of food processing

**TEXT BOOKS/ REFERENCES:**

SC Panda Organic farming for Sustainable Agriculture

Masanobu Fukuoka, The natural way of farming

Amitabh Singh and Rakshit, ABC of organic farming

R. Rajagopalan "Environmental Studies-From Crisis to Cure", Oxford University Press.

Kavitha Kuruganti, Ecological Agriculture in India by Alliance for Sustainable and Holistic Agriculture