



# CBSE Syllabus

Class XI

## AGRICULTURE



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# AGRICULTURE

## Course Structure

Part	Section	Unit	Topics	Marks
I	A		<b>Agriculture and Crop Production</b>	30
		1	Scope and Importance	
		2	Physical Environment	
	B	3	Agriculture Economics	15
		4	Genetics, Plant Breeding and Microbiology	
II			<b>Livestock Production</b>	25
	5	Scope and Importance		
	6	Care and Management		
	7	Bio-waste Management and Government Schemes		
III			<b>Practical</b>	30

## Course Syllabus

### SECTION - I

#### PART A - Agriculture and Crop Production

##### Unit I: Scope and Importance

- Definition of agriculture
- Branches of agriculture
- Scope of agriculture in the national economy and employment

## **Unit II: Physical Environment:**

- Climate and Weather
- Elements of Weather:
  - Rainfall
  - Temperature
  - Humidity
  - Wind
  - Sunshine
- Climate Change
- Global warming
- Soil:
  - Soil texture
  - Soil structure
  - Soil types
  - Soil distribution
  - Soil area
  - Soil erosion
  - Soil conservation
  - Reclamation of problematic soils acidic and alkali
- Tillage definition and types:
  - Concept of conservation and tillage

## **Unit III: Agriculture Economics and Crop Production**

- Agricultural economics
- Cooperative system in Agriculture
- Crop Insurance
- Kissan Credit Cards
- Marketing of Agricultural Products (supply chain, retailing, wholesale), haats
- Package & practices like:

- Important varieties
- Seed rate
- Sowing time
- Intercultural operations
- Yield and marketing of:
  - Rice
  - Wheat
  - Maize
  - Mustard
  - Sunflower
  - Soybean
  - Groundnut
  - Black gram
  - Red gram
  - Pea
  - Jute
  - Sugarcane
  - Sorghum
  - Pearl millet
  - Finger millet
- Introduction, distribution and economic importance of fruit:
  - Mango
  - Banana
  - Guava
  - Lime
  - Grape
  - Apple
  - Pomegranate
- Introduction, distribution and economic importance of Vegetables:
  - Potato
  - Tomato

- Cauliflower
- Cabbage
- Spinach
- Brinjal
- Bottle gourd
- Pumpkin
- Cucumber
- Introduction, distribution and economic importance of Flowers:
  - Rose
  - Gladiolus marigold
- Types of seed-foundation and certified and methods of plant propagation layering and cutting, and Tissue culture.
- Important farm implements and their maintenance

## **PART B - Genetics, Plant Breeding and Microbiology**

### **Unit IV: Genetics, Plant Breeding and Microbiology**

- Cell:
  - Cell structure
  - Cell Division-Mitosis and Meiosis
  - significance in plant growth and development
- Introduction to - DNA, RNA, and their differences.
- Genetics:
  - Role of Genetics in Plant breeding
  - self and cross-pollinated crops
  - methods of breeding in field crops-introduction
  - selection
  - Hybridization
  - Mutation
- Mendel's laws of Inheritance:

- Illustrative depiction of the experiments
- Their importance in plant breeding
- Introduction to:
  - Algae
  - Fungi
  - Bacteria
- Decomposition and Fermentation

## **Section - II: Livestock Production**

### **Unit V: Scope and Importance**

- Importance of livestock in Agriculture
- National Economy and Nutritional security
- Important animal based food products and their role in our diet
- Important animal breeds of our country (cow and buffalo)
- Exotic breeds of cows and their milk production and quality

### **Unit VI: Care and Management**

- Principles of feeding:
  - Feeding practices
  - Important fodder crops
  - Silage and Hay preparation
  - Balanced ratio-definition and ingredients
- Concept of grazing and stall feeding including poultry feeding
- Systems of milking by hand and by machine:
  - Important considerations in both these methods
- Concept of:
  - Clean milk production
  - Processing

- Value added products from milk
- Milk pasteurization
- Packaging and milk marketing in india
- Concept of AMUL cooperative system of milk procurement and marketing
- Production of:
  - Meat
  - Egg
  - Wool/Fur
- Management of:
  - Calves
  - Bullocks
  - pregnant and milch animals
  - chicks and layers
- Animal body structure and functions
- System of animal health and hospital management in India
- Diseases:
  - Signs of sick animals
  - symptoms of common diseases in cattle and poultry
  - Rinderpest
  - Black quarter
  - Foot and Mouth
  - Mestitusand Haemorrhagic Septicaemia
  - Fowl Pox
  - Ranikhet
  - Prevention and control of disease

## **Unit VII: Bio-Waste Management and Government Schemes**

- Utilization of animals in Bio-wastes and Biogas plant
- Important government schemes for livestock production in India
- The important features and eligibility criteria