



# AGRICULTURE

1. **Tamilnadu** has become the first state in the country to enact a law in contract farming with president giving assent to the agriculture produce and livestock contract farming and services (promotion and facilitation) act.
2. The year government has set a target of doubling of farmers' income is **-by 2022**.
3. As per the recent report on farmers income by **NITI AYO**G the growth rate of farmers income on real price is -3.8%/year. In terms of market price the growth rate of farmers income is 11%.
4. The average farm holding in Indian is declined from **2.3 ha (1970-71)** to **1.08 ha (2015-16)**.
5. Total cultivated area in India is **- 141 m ha**
6. First agricultural census was taken in the year **-1971**.
  - The agricultural census is conducted **every five years** to collect data on structural aspects of operational holdings in the country **by ministry of agriculture**. So far, **10 census** has been taken.
7. First livestock census was conducted during **-1919-1920**.
  - Livestock Census conducted once every 5 years. Conducted by conducted by the Ministry of Fisheries, Animal Husbandry and Dairying.
8. Number of Agro-climatic Zones in India- **15**
9. Number of Agro-climatic Zones in India by NARP-**7**
10. Number of Agro-climatic Zones for Horticultural crops-**7**.
  - Among them Tamilnadu falls under 3 Agro-climatic Zones for Horticultural crops-South central tropical region, costal tropical humid region, south hilly zone.
11. The bi-lingual mobile app launched by Tamil Nadu Government in a bid to use technology for benefit of farmers- **Uzhavan app**.
12. In which food product India ranks first position in Production and & also Import-**Pulse (Production-77 m.t, import-3.8 m.t)**
13. Which state has highest productivity in Sugarcane-**Tamilnadu**.
14. In which district First FCI district office was started-**Thanjavur**.
15. Total cropped area divided by net cultivation area is-Cropping intensity.
16. Minimum conversation period required for transforming inorganic field to organic field to get organic certification-**3 years**.
17. National food safety mission (NFSM) launched in-**2007**.
18. Which is the main source of irrigation of agriculture land in India-**Wells?**
19. A Fertilizer for that we fully dependent on import from other countries is-**Pottasium (k)**.



20. The microorganism responsible for conversion of ammonium to nitrate-**Nitrosomonas**.
21. In Indian agriculture year starts from-**July to June**.
22. The term **cropping system** refers to the crops and crop sequences and the management techniques used on a particular field over a period of years.
23. The transgenic crop permitted in India is-**Cotton**.
24. **APEDA** is an apex statutory agro products export promotion organization under the union ministry of commerce and industry.
25. In India land holding size of marginal farmers is -< 1 ha.
26. Seed act passed in the year of - **1996**.
27. First K.V.k (Krishi vigyankendra) was started in **Pondicherry in 1974**.
28. Peasant farming/Individual farming is the type of farming followed by - **70 % of Indian farmers**.
29. National commission on farmers (NCF) was formed under the chairmanship of -**M.S Swaminathan**.
30. The term Protein Revolution was coined by **PM Narendra Modi and FM Arun Jaitley**.
31. Average rainfall of India-**1195 mm**.
32. Kisan day (Farmers day) celebrated every year on-**December 23**.
33. Tag colour for certified seed is-**Azure Blue**.
34. Tag colour for breeder seed-**yellow**.
35. Tag colour for foundation seed-**White**.
36. Which is called as poor man's animal-**Goat**?
37. Insecticides act was passed on - **1968**.
38. Destructive Insects and Pests act was passed on-**1914**.
39. King of vegetable is-**Potato**.
40. Queen of vegetable -**Bhendi**.
41. Study of origin of rock is called-**Petrology**
42. Study of soil-**Pedology**
43. Study of soil Clouds-**Nephology**
44. Draught breed of Tamil Nadu is-**Umblacherry**
45. Explosive fertilizer is-**Ammonium nitrate**
46. Queen of cereal crops -**Maize**
47. King of cereal crops-**Wheat**
48. India and Israel have jointly set up a Centre of Excellence in floriculture at -**Krishnagiri**.
49. Father of genetic engineering- **Paul Berg**
50. Which mechanism of water erosion is known as "Death of Farmers"-**Sheet erosion**.
51. National Centre for Integrated Pest Management (NCIPM) is located at-**New delhi**.
52. Fat percentage in milk can be analyzed using- **Butyrometer**.
53. The repetitive growing of the same sole crop on the same land is termed as-**monoculture**.
54. Father of Soil science-**Dokuchalev**



55. Depth of water table is measured by-  
**Peizometer.**
56. Bee venom contains-**Mellitin**
57. Organic matter contains How much percentage of organic carbon-**58%.**
58. Maximum proportion of irrigation sources in India & Tamil Nadu are respectively **Tank & Wells.**
59. **KUSUM scheme**-aims to incentivise farmers to use of solar water pumps and utilize barren land for generating solar power to have extra income. Launched by the New and Renewable Energy Ministry.
60. **zero budget natural farming**- is a method of **chemical-free agriculture** drawing from traditional Indian practices. It was originally promoted by agriculturist **Subhash Palekar**, who developed it in the mid-1990s as an alternative to the **Green Revolution's methods** that are driven by chemical fertilizers and pesticides and intensive irrigation.

## Scope and importance of agriculture:

### Scope and Importance of Agriculture

- With a 17.2 per cent contribution to the gross domestic product (GDP), agriculture provides livelihood support to about two-thirds of country's population.
- The sector provides employment to 56.7 per cent of country's work force and is the single largest private sector occupation.
- Agriculture accounts for about 14.7 per cent of the total export earnings and provides raw material to a large number of Industries (textiles, silk, sugar, rice, flour mills, milk products).

## Divisions of agriculture

### 24.1 AGRICULTURE

- The term agriculture is derived from two Latin words *ager* or *agri* meaning soil and *cultura* meaning cultivation. Agriculture is a broad term encompassing all aspects of crop production, livestock farming, fisheries, forestry etc.
- Silviculture is the art of cultivating forest trees.
- Sericulture is the rearing of silkworms for the production of raw silk.
- Apiculture is the maintenance of honey bee colonies, commonly in hives, by humans
- Olericulture is the science of vegetable growing, dealing with the culture of non-woody (herbaceous) plants for food.
- Viticulture is the science, production and study of grapes
- Floriculture is a discipline of horticulture concerned with the cultivation of flowering and ornamental plants for gardens
- Arboriculture is the cultivation, management, and study of individual trees, shrubs, vines, and other perennial woody plants
- Pomology is a branch of horticulture which focuses on the cultivation, production, harvest, and storage of fruit, etc.
- Aeroponics is the process of growing plants in an air or mist environment without the use of soil or an aggregate medium

- Hydroponics is a method of growing plants using mineral nutrient solutions, in water, without soil.
- Terrestrial plants may also be grown with their roots in the mineral nutrient solution only or in an inert medium, such as perlite, gravel, mineral wool, expanded clay or coconut husk.
- Geoponic in farming practice, refers to growing plants in normal soil



## Revolutions in agriculture

### Revolutions in Agriculture

Revolution	Related with
Green	Food grain Production
Golden	Fruit Production
Grey	Fertilizer Production
Blue	Fish Production
Black	Petroleum Production
Pink	Prawn Production
Round	Potato Production
Red	Meat/Tomato Production
Silver	Egg/Poultry Production
White	Milk Production
Yellow	Oil seeds Production

## Micro irrigation in agriculture

### Sprinkler Irrigation

- In the sprinkler method of irrigation, water is sprayed into the air and allowed to fall on the ground in a somewhat resembling rainfall. The spray is developed by the flow of water under pressure through small pipes or nozzles.

### Drip irrigation:

- Drip irrigation is also called trickle irrigation and involves dripping water onto the soil at very low pressure from a system of small diameter plastic pipes fitted with outlets called emitters.
- Water is applied close to plants so that only part of the soil in which the roots grow is wetted, unlike surface and sprinkler irrigation, which involves wetting the whole soil profile.

## General terms in agriculture

- **Mulching:** Practice of covering the soil surface with materials like plant residues, straw, leaves or plastic film to reduce evaporation, restrict weed growth and maintain the soil temperature

### Eco-farming:

- It is the farming mutually reinforcing ecological approaches to food production. It aims at the maintenance of soil chemically, biologically and physically the way nature would do if left alone. Soil would then take proper care of plants growing on it. Feed the soil, not the plant is the watchword and slogan of ecological farming.

### Mixed Farming

- Mixed farming is defined as a system of farming on a particular farm which includes crop production, raising live stock, poultry, fisheries, bee keeping etc. to sustain and satisfy as many needs of the farmer as possible. Subsistence is important objective of mixed farming. While higher profitability without altering ecological balance is important in farming system.

### Mixed cropping

- Growing of two or more crops simultaneously intermingled without row arrangement is known as mixed cropping
- It is a common practice in most of dryland tracts in India
- Seeds of different crops are mixed in certain proportion and are sown
- The objective is to meet the family requirement of cereals, pulses and vegetables, it is a subsistence farming
- Ex: Sorghum, Bajra and cowpea are mixed and broadcasted in rainfed conditions (with low rainfall situations) to avoid complete crop failures and with ascertaining the minimum yields

### 24.9 INTEGRATED FARMING SYSTEM

- Integration of farm enterprises such as cropping systems, animal husbandry, fisheries, forestry etc. for optimal utilisation of resources bringing prosperity to the farmer. According to the availability of land, type of land, water, capital, resources, technical skill of the farmer, market facilities etc., and the components of farming system are to be chosen and adopted for better results.



### Ratoon cropping

- Raising a crop with regrowth coming out of roots or stocks of the harvested crop
  - Ex: Sugarcane (8 ratoons in Cuba)
  - Banana - one plant crop followed by two ratoon crops normally
  - Sorghum and Lucerne fodder- many ratoons 1st cutting 70 DAS and thereafter every 35-40 days.
  - Pineapple crop is extensively ratooned.

### Intercropping

- Growing two or more crops simultaneously with distinct row arrangement on the same field at the same time.
  - **Base crop:** primary crop which is planted/ sown at its optimum sole crop population in an intercropping situation.
  - **Intercrop:** This is a second crop planted in between rows of base crop with a view to obtain extra yields with intercrop without compromise in the main crop yields

### Terracing:

- "A terrace is an embankment or ridge of earth constructed across a slope to control runoff and soil erosion".
- It reduces the length of the hill side slope, reducing sheet and rill erosion and prevents formal gullies.

### Sequential cropping

- Growing of two or more crops in sequence on the same field in a year. The succeeding crop is planted after the preceding crop has been harvested
  - The crop intensification is done in time dimension
  - Ex: Rice-rice-cotton
- Relay cropping Growing the succeeding crop when previous crop attend its maturity stage-or-sowing of the next crop immediately before the harvest of the standing crops.

E.g. 1) Paddy-Lucerne.

2) Rice-Cauliflower-Onion-summer gourds.

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- **Hidden hunger:** Is the condition where plants do not exhibit visual symptoms of deficiency for the short supply of particular nutrients but will result in yield losses
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