Agriculture is the prime and traditional occupation for the people of Tamil Nadu. The practice of growing plants on a large scale for food and other purposes is known as agriculture. Agriculture includes not only cultivation of crops, but also rearing of animals, birds, forestry, fisheries, and other related activities.

Find proper word for each of the following:
- Cattle rearing
- Rearing of birds
- Rearing of silkworms
- Rearing of honeybees
- Growing fruits
- Growing flowers
- Growing grapes

(sericulture, agriculture, animal husbandry, orchard farming, viticulture, floriculture, poultry)

Can you redefine agriculture using the terms learnt in previous activity? About 56% of the people of Tamil Nadu are farmers. Agricultural sector supplies food and fodder to the people and cattle, respectively. It is the source of raw material for many of the industries.

Subsistence intensive farming

Farming that is carried on small land holdings that produce food crops for local consumption and not for external trade is known as subsistence intensive farming. Most farmers in Tamil Nadu practice subsistence intensive farming.

With the availability of water for cultivation, farming methods are classified into three types, namely:
- Wet farming
- Dry farming (maanavari)
- Irrigation farming

<table>
<thead>
<tr>
<th>Wet farming</th>
<th>Dry farming (maanavari)</th>
<th>Irrigation farming</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farming which get water supply throughout the year both from rainfall and irrigation is known as wet farming.</td>
<td>Farming carried out only during rainy season with out irrigation is known as dry farming.</td>
<td>Drier regions of Vellore, Thiruvannamalai, Ramanathapuram and Thirunelveli practice this type of farming.</td>
</tr>
<tr>
<td>Crops cultivated are rice and sugarcane.</td>
<td>Crops cultivated are ragi and other millets.</td>
<td>Most river basins of Tamil Nadu practice this type of farming.</td>
</tr>
</tbody>
</table>
Irrigation farming

- Irrigation farming is the practice of growing crops with supply of water through various sources of irrigation like wells, lakes, and canals.
- Rice, cotton and sugarcane are grown with irrigation farming in most part of Tamil Nadu.
- Most of the farmers in Tamil Nadu practice subsistence intensive and irrigation farming.
- As water requirements for each crop varies and irrigation plays a major role in agricultural development of Tamil Nadu.

Plantation Farming

- Plantation farming is yet another type of farming where crops are grown on large farms or estates.
- Plants like Tea, Coffee, rubber and pepper are grown as plantation crops on the hill slopes of Tamil Nadu.

Mixed Farming

- Mixed farming is one wherein land is allotted for more than one activity along with agriculture.
- The farmer grows two or three varieties of crops along with cattle rearing, poultry and fishing on a large land holding.
- Mixing farming method is profitable to the farmer as it provides regular and continuous income.
- This kind of farming is much prevalent in the Kaveri delta region.

Market gardening
Market gardening includes horticulture and floriculture, (growing fruits vegetables and flower) in large scale for supply to the urban markets and also for export purposes. Districts such as Madurai, Nilgiris, Thiruvallur and kancheepuram practice this type of farming.

### Cropping seasons of Tamil Nadu

- Farmers select particular crops to be cultivated in a season, to suit soil and availability of water in that season.
- Thus most farmers in Tamil Nadu cultivate crops in three different seasons as given below:

#### Sornavari (Kharif Season) (Chitthirai pattam)

- **Sornavarai** is otherwise known as Kharif season.
- The seeds are sown during May and coincides with the Tamil month, Chitthirai it is also known as

#### Samba (Summer Season) (Adipattam)

- **Samba** is otherwise known as summer season.
- This seeds are sown in the month of July which coincides with the month Tamil month of Aadi and harvested in January.
- Samba season is referred to as Adipattam in Tamil Nadu.

#### Navarai (Winter Season -Rabi) (Karthigai Pattam)

- The seeds are sown in the month of November and harvested in March. This season is known as Karthigai pattam in Tamil Nadu as the Tamil month Karthikgai coincides with the month of November.
Factors influencing agriculture

- The factors influencing agriculture may be classified as **physical, social and economic factors**.
  - Physical factors include soils, temperature, rainfall, humidity, climate and slope of land.
  - The social factors include traditional knowledge, belief and myths of farmers, farm size and holdings and farmer’s acceptance towards innovation.
  - Economic factors are market, loan assistance, Government subsidy and incentives.

Sources of irrigation in Tamil Nadu

- The main sources of irrigation are canals, tanks and wells.
- Canals are man-made channels of water taken from a perennial river, dam or lake to supply water to the agricultural fields.
- Canal irrigation is the most prominent type in the basins of Kaveri and Tamiravaruni. 27% of irrigated land in Tamil Nadu cultivates crops using **canal irrigation**.

Important Canals of Tamil Nadu

- Arrakankottai canal, Thadapalli canal and Kalingarayan canal are some of the noteworthy canals on river Bhavani a tributary of River Kaveri.
- Canals taken from Mettur dam provide irrigation for about 2.7 lakh hectares.
- The grand Anicut built across the river Kaveri near Trichirappalli, diverts the water to the entire delta region through canals.
- River Thamiravaruni and its tributaries serve Thirunelveli district with many canals.
- River Tamiravaruni has nine anicuts from which the following channels,
They are:

- North and south kodaimelAlagain canal; Nathiyunni canal
- Kannadian canal kodagan canal palayan canal tirunelveli canal Marudhur canal
- Apart from this, Pachaiyar has nine anaicuts and chittar has seventeen anaicuts.

Canals used for irrigation have the oldest records of two millennia in Tamil Nadu.

Kallanai, built around first century, by karikalan is still in use and considered to be the oldest water regulatory structure in the world.

The state of Tamil Nadu is pioneer in linking rivers of the state as recommended by Ministry of water Resources.

Tanks

- Lakes are natural water bodies. Lakes are converted into tanks by strengthening their bunds to store water for irrigation.
- Tank maintenance and management is a common practice associated with temples. There are about 39,202 tanks in Tamil Nadu which accounts for 19% of the irrigated area.
- Tanks are concentrated in the districts of Kancheepuram, Vellore, Thiruvannamalai, Pudukottai, Ramanathapuram and Thirunelveli.
- At present, Ramanathapuram has the maximum number of tanks.
- Tanks have to be delisted regularly for better storage and supply of water.in Tamil Nadu, tanks are classified as follows: they are system tanks and non-system tanks. System tank are linked to river/canal system of the state, with water filled through supply channels.
- The non-system tanks on the other hand, are dependent on rainfall of that region. Tanks are maintained by either PWD or Panchayat.

Kancheepuram is known as the land of “thousand lakes ” Some important lakes if Tamil Nadu are found in Red Hills, chembarambakkam, Veeranam, Madhurandhagam, Kolavai, Ambattur, ooty and
Well

- Well irrigation is most predominant irrigation system in Tamil Nadu which utilizes groundwater.
- Well irrigation covers 52% if irrigated area in the state.
- Wells may be classified as surface wells and tube wells.
- Surface wells are also known as open wells and are dug to reach the water table lying within a few metres from the surface.
- Tube wells explore the aquifers of great depth with the help of electric motors There are 1, 6, 21,391 surface wells and 2, 87,304 tube wells in Tamil Nadu that are used for the purpose of irrigation.
- In Tamil Nadu a high potential artesian aquifer occurs in the Cuddalore, Chidambaram and Viruthachalam This aquifer named as Neyveli aquifer, Pumps out water regularly from lignite mining area for irrigation and domestic supply.
- There is a considerable amount of spring irrigation in the Kaveri and Vaigai beds. Irrigation from these springs is practiced in a few places of Erode district.

Distribution of crops in Tamil Nadu

- Each crop requires specific climatic condition for its growth.
- Tamil Nadu lies entirely in the tropical zone and therefore almost all tropical crops are grown here.

Food Crops
• Food crops include cereals, pulses, and millets.
• Among the food crop cultivated in all the districts of Tamil Nadu.
• Rice (Paddy) requires level land, high temperature and continuous supply of water for its growth.
• Poni, and Kichadi Samba, are major varieties of paddy grown in Tamil Nadu.
• Jaya IR50 are high yielding varieties grown in Tamil Nadu.
• Districts have maximum acreage as well as production of rice:
  • Thanjavur Thiruvarur Nagapattinam
  • Thus Kaveri delta (especially the undivided Thanjavur district) is known as the Granary of South India.
• Normally Paddy is being raised in Thanjavur district in four seasons for one agricultural year.
• Tamil Nadu Rich Research Institute is in Aduthurai. TNRH 174, developed by the Tamil Nadu Agriculture University Tiruvur Rice Research Station (TRRS), has recorded the highest yield of 4,500 kg per acre.
• Pulses grown in Tamil Nadu are Bengal gram, red gram, green gram, black gram and horse gram.
• Coimbatore leads in the production of Bengal gram, whereas Vellore.

### Millets of Tamil Nadu

<table>
<thead>
<tr>
<th>Name of the millet</th>
<th>Leading districts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cholam</td>
<td>Coimbatore, Dindigul and Thiruchirappali</td>
</tr>
<tr>
<td>Cumbu</td>
<td>Villupuram and Thuthukudi</td>
</tr>
<tr>
<td>Maize</td>
<td>Krishnagiri, Dharmapuri and Salem</td>
</tr>
</tbody>
</table>
Korra (thinai)  
Salem and Namakkal

**Tamilnadu - Principal food crops - area and production 2007-2008 (in percentage)**

<table>
<thead>
<tr>
<th>Crops</th>
<th>Percentage of area</th>
<th>Percentage of Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paddy</td>
<td>57.8</td>
<td>76.6</td>
</tr>
<tr>
<td>Other food crops</td>
<td>22.6</td>
<td>20.6</td>
</tr>
<tr>
<td>Pulses</td>
<td>19.6</td>
<td>2.8</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

- Krishnagiri produce red gram.
- The districts of Thiruvarur, Nagapattinam and Toothuthukudi stand first in production of green gram.
- Nagapattinam, Thiruvarur and Cuddalore are noted for black gram Horse gram cultivation is widely seen in Krishnagiri and Dharmapuri.
- Millets are dry crops cultivated in areas having high temperature an less rainfall.

**Non-Food crops Fibre crops**

- Fibre crops include cotton and jute.
- Cotton thrives well in black soil and it is the major fibre crop of Tamil Nadu cultivated on large scale in the districts of Coimbatore, Thirunelveli Cuddalore and
- Mcu4, Mcu5, LRA5166 are the major varieties of cotton cultivated in the state.
Commercial crops

- Commercial crops include all those crops that are cultivated by the farmers to sell and not for their own consumption.
- Sugarcane, tobacco, oilseeds and spices like chilies, turmeric and coriander are examples of commercial crops.
- Sugarcane is the dominant commercial crop cultivated in Tamil Nadu.
- It is a nine-month crop which requires fertile soil, high temperature, and stagnant water till the time of flowering.
- Coimbatore, Karur, Villupuram, Thiruvallur and Cuddalore district show predominance of this crop.
- Tobacco is yet another commercial crop of Tamil Nadu which is widely grown in Dindigul, Theni and Madurai
- Groundnuts, sunflower, safflower (Kusumbavrai), castor and linseed are the major oilseeds cultivated in Tamil Nadu.

Plantation Crops
• **Tea, coffee, rubber, pepper and cashew** are the main plantation crops of Tamil Nadu.
• Tamil Nadu ranks second in area and production of tea next to Assam.
• Tea estates are seen to be concentrated on the hill slopes of the Nilgiris and Coimbatore.
• **Tamil Nadu stands second** in area and production of Coffee next to Coffee is grown in the Western Ghats as well as Eastern Ghats.
• Hill slopes of the *Nilgiris, Theni, Madurai* and *Salem* are the major regions of Coffee cultivation.
• **Andipatti, Sirmalai** and **Shervaroy hills also grow coffee.** Rubber is grown in Kanyakumari.
• Papper is confined to the warm and wet slopes of *Kanyakumari* and *Thirunelveli* of Tamil Nadu district.
• Cashews are extensively cultivated in **Cuddalore Horticulture**
• Cultivating fruits and vegetables on large scale is a recent trend in Tamil Nadu.
• Fruits like mangoes, jackfruits, banana, guava and grapes are widely grown in groves.
• ü *Krishnagiri leads in mango production, Coimbatore and Erode are known for banana production and Theni for grapes.*
• **Dharmapuri** leads the other districts in acreage for horticulture. ü It also specializes in floriculture.

### Animal husbandry

• Rearing animals for the production of milk, meat and hide is known as animal husbandry.
• Tamil Nadu cooperative milk producers’ Federation (Aavin) produces milk and dairy products for the state.
• The federation handles 26.1 million litres of milk per day, processes and supplies milk for the whole state through 7,662 societies.
• The milk production was 55.86 million tons consumption is 233g day The poultry hub of Tamil Nadu is **Namakkal, Erode, Coimbatore** and
• Tamil Nadu produced 8394 million eggs during the year 2007-08 per capita availability is 128 eggs/year.
Fisheries

- Tamil Nadu ranks fourth in fishing among the states of India.
- Long coastline of 1,076km the broad continental shelf favour costal fishing in Tamil Nadu.
- The coastline has 591 fishing villages which are spread over thirteen districts of the state.
- Pearl fishing is predominant in Gulf of Mannar region. Thuthukudi is the leading port in fish export.
- Two more major fishing harbours are Chennai and chinnamutthom in Kanyakumari district and four minor harbours are at Pazhayar, Valinokkam, colachael and Nagapattinam.
- Thiruvarur, Nagapattinam, Thanjavur and Ramanathapuram districts together contribute 40% of marine fish production in the state.
- The estimated marine fish production for the year 2007-08 was 393,266 tonnes (Sources: Commissioner of fisheries Chennai).
- The state has 370 hectares of in land water, 63,000 hectares of estuaries, back waters and swamps.
- Oysters and prawns are cultured n organized nurseries at Ennore and Pulicut Lake for export.
- The estimated inland fish production for the year 2007-08 was 164,504 tonnes.

Vellore district ranks first among the districts with 10% of inland fish production of the state. Cuddalore, Sivagangai and Virudhunagar stands second with 9% of inland fish catch.

### Marine Fishing
- Fishing carried out in the Oceans and Seas.
- Large Mechanized boats are used for fish catching.
- Fish varieties are Sharks, Flying Fish, Counch, cat, Fish, Silver bellies and Carbs

### Inland Fishing
- Fishing carried out in Lakes, rivers, Ponds, estuaries, backwaters and swamps.
- Catamaran (small wooden boats Diesel Boats and floating net cages are used.
- Fish varieties are Catla, Rogue, mirkal, eel and cala baashu.
• Tamil Nadu fisheries department has introduced several programmes for the betterment of fishing
• Aqua culture in farm ponds and irrigation tanks. Fish seed bank
• Fish seed rearing in cages Ornamental fish culture
• Fish farmers development Agency at Karaikal encourages farmers with a slogan “to grow fish and grow with fish”

Agricultural Development

• Before Independence in Tamil Nadu followed traditional method of cultivation.
• After independence, there has been a steady development in all aspects of agriculture. Irrigation facilities were improved with the proper implementation of Five Year Plans in the State.
• Green revolution in terms of hybrid varieties and application of chemical fertilizers increased the production to a greater extent.
• Abolition of Zamindari system, land tenuring, consolidation of farms, introduction of the land ceiling act and co-operative farming were the new agricultural reforms introduced after independence.
• Recently, globalization has influenced the agricultural production positively in Tamil Nadu.

Changing trends in Agriculture
• Traditional method of agriculture is slowly being replaced by scientific and technical methods.
• While doing so, the merits of certain traditional methods are slowly vanishing which are to be valued and practiced through training centres.
• **Agricultural University in Coimbatore and M.S. Swaminathan Research foundation in Taramani**, Chennai actively involved in fusing traditional with modern method.
• This will ultimately produce sustainable agriculture in a long run. Few recent agricultural innovative trends are listed below:
  • Micro – irrigation
  • Integrated pests control Management (IPM)
  • Growing blue algae and azolla
  ü Increase in organic matter will increase the water holding capacity of the soil.
  ü This will support the microbial activity and hasten the nutrient absorption capacity of roods.

**Efforts Taken by Government to improve Agriculture**

• The Government supplies quality and certified seeds to the farmers. Organic matter and micro nutrients are supplied at subsidized rate
• Free electricity is provided to small and marginal farers for about 6 to 8 hours a day. Government fixes the prices for agricultural products to safeguard farmers from financial crisis
• Farmers Market (Uzhavar Santhai) enhance the farmers to get better share of prices and at the same time consumers to get agricultural produced at affordable prices.
• Crop insurance scheme has been introduced.
• Government has set up agricultural export Zones in Nilgiris and Krishnagiri.