

Hello students

This programme is for Third Year Bachelor of Science Botany students

Semester : VI

Course Code: BOC 110

Course Title: Plant Ecology and Phytogeography

Unit title: Phytogeography

Module Name: Local vegetation – Agriculture

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Outline of the module: is

- ✓ Introduction to agriculture in Goa.
- ✓ Types of agricultural practices.
- ✓ Types of crops grown.

Learning Outcomes:

- ✓ Understand the agricultural scenario in Goa.
- ✓ Describes the different types of agricultural practices.
- ✓ Explains the different types of crops grown.

Agriculture in Goa is one of the most important economic activities in the state. Located between the Arabian Sea and the Western Ghats, Goa faces problems for enough cultivable land to feed its own population. The coastal areas are exposed to salinity and do not qualify as good agricultural areas, while the inland areas are not productive enough.

So for its day-to-day needs of milk, poultry and agricultural produce like vegetables, Goa is dependent on Karnataka and Maharashtra. Approximately one-third of the total land in Goa falls under forest areas and yields substantial profits.

Even though one fourth of the population is sustained by agriculture in Goa, it contributes to only 15 to 16 percent to the income of the state. Due to rapid urbanization the availability of agricultural land is reducing. 78% of the agricultural area is still rain fed, irrigation is insufficient and commercial farming is ruled out as 80 percent of land holdings are below 2 hectares and the sizes of the fields are small.

For high - quality planting material, nurseries and tissue - culture laboratories are being promoted by the government. To recharge the groundwater table and to harvest rainwater, simple watershed techniques are being used.

The coastline of Goa is also rich in fishery resources where the local fishermen usually catch a variety of fish such as sharks, mackerels, sardines, seer fish, silver belly, pomfrets, butter fish, prawns, crabs and squids.

Sometimes one can also see a lot of bamboo poles that put out in the water. These actually have fishing nets below the water line and when the water recedes through the net during the low tide, the fish are trapped.

The government, however, has done much to improve and develop agriculture in Goa to make it more productive, thus enabling the farmers to get a better return for their labour.

TYPES:

(i) INTENSIVE SUBSISTENCE FARMING:

(ii) PRIMITIVE SUBSISTENCE FARMING:

(iii) SHIFTING CULTIVATION (KUMERI CULTIVATION):

(iv) COMMERCIAL FARMING:

(a) COMMERCIAL GRAIN FARMING:

(b) COMMERCIAL MIXED FARMING:

(c) COMMERCIAL PLANTATION FARMING:

INTENSIVE SUBSISTENCE FARMING:

In intensive subsistence agriculture, the farmer cultivates a small plot of land using simple tools and more labour. Farmers use their small land holdings to produce enough for their local consumption, while remaining produce is used for exchange against other goods.

PRIMITIVE SUBSISTENCE FARMING:

This type of farming is practiced on small patches of land. Primitive tools and family/community labour are used in this type of farming. The farming mainly

depends on monsoon and natural fertility of soil. This is also called 'slash and burn' agriculture.

SHIFTING CULTIVATION (KUMERI):

Is a system of cultivation in which a plot of land is cleared and cultivated for a short period of time, then abandoned and allowed to revert to producing its normal vegetation while the cultivator moves on to another plot.

COMMERCIAL FARMING:

In commercial farming crops are grown and animals are reared for sale in the market.

(a) COMMERCIAL GRAIN FARMING:

Is an extensive and mechanized form of agriculture. It was the invention of farm machinery which enabled farmers to cultivate grain on a large scale, and there is a marked specialisation in rice monoculture in many areas.

(b) COMMERCIAL MIXED FARMING:

In mixed farming, the land is used for growing food and fodder crops and rearing livestock.

(c) COMMERCIAL PLANTATION FARMING:

In this type of farming, crops are grown only for commercial purposes. In this type of farming, a single crop is grown on a large area. Labour is employed to work in large tracts of land, using capital intensive devices. e.g.:- Sugarcane cultivation.

Rice and fish being the staple diet of the people, paddy becomes the principal crop in the scenario of agriculture in Goa. It is grown in two seasons, namely Kharif or sorod and the Rabi or vaingan. The monsoon crops are called the kharif crops and the winter crops are called Rabi crops.

The main sources of irrigation for winter crops are the nallahs, rivers and streams, tanks, wells and canals. Crops grown in the Kharif season consist of paddy, ragi (locally called nachani) and some pulses. Crops grown in the Rabi season are comprised of paddy, pulses like horse-gram (kulith), black gram (udid), a variety of beans and some vegetables.

Rice is cultivated in three different topographical situations i.e. rainfed uplands (Morod), rainfed lowlands / midlands (Kherlands) and coastal saline lands/ low-lying wetlands (Khazans). Salt tolerant rice varieties namely, Assgo, Bello, Damgo, Kalo Damgo, Kalo Korgut, Kalo Novan, Khochro, Korgut, Munno and Shiedi are grown in Goa . Cultivation of some of the varieties such as Kalo Novan, kalo damgo, and Bello are becoming rare, due to the introduction of high yielding rice varieties, hence local germplasm and their genetic diversity are being eroded. The rice varieties like Korgut, Munno and Assgo are still popularly cultivated in khazan lands of Goa due to its high salinity tolerance. Korgut, literally means small coloured grains.

Rice that is cultivated in the rains from June to September is the major crop followed by cereals like pulses and small millets. The important crops, apart from paddy, are ragi, maize, jowar, bajra and pulses.

Cash crops like coconut, cashew-nut, areca nut, mango, jackfruit, banana, pineapple are also grown in abundance. Cashew is an important crop in Goa. A

kind of intoxicating drink called Feni is produced from cashew. A variety of mangoes are grown in Goa. Some of the famous Mango varieties are Mancurad, Mussarat, Fernandin, Xavier, Alfanso, Colaco. There are two varieties of jackfruit grown here namely kapo (hard) and rasal (soft).

Other agricultural produces include Brinjal, Lady's fingers, Chillies, Cucumber, Pumpkin, Gourds, Musk Melons, Red amaranthus, Raddish, Knol-Khol, Onions, Drumsticks, Breadfruit, Groundnut, Cabbage, Bottle gourd, Long beans, Cluster beans, Sweet potatoes, Cowpea, watermelons etc.

The forest produce too makes up a significant part of the agriculture in Goa. The Government forest area is approximately around 1224.38 sq. kms, besides this, the forest land owned by private people and institutions is around 200 sq. kms. The important forests products are bamboo canes, Maratha barks, chillar barks and bhirand.

REFERENCES

THANK YOU