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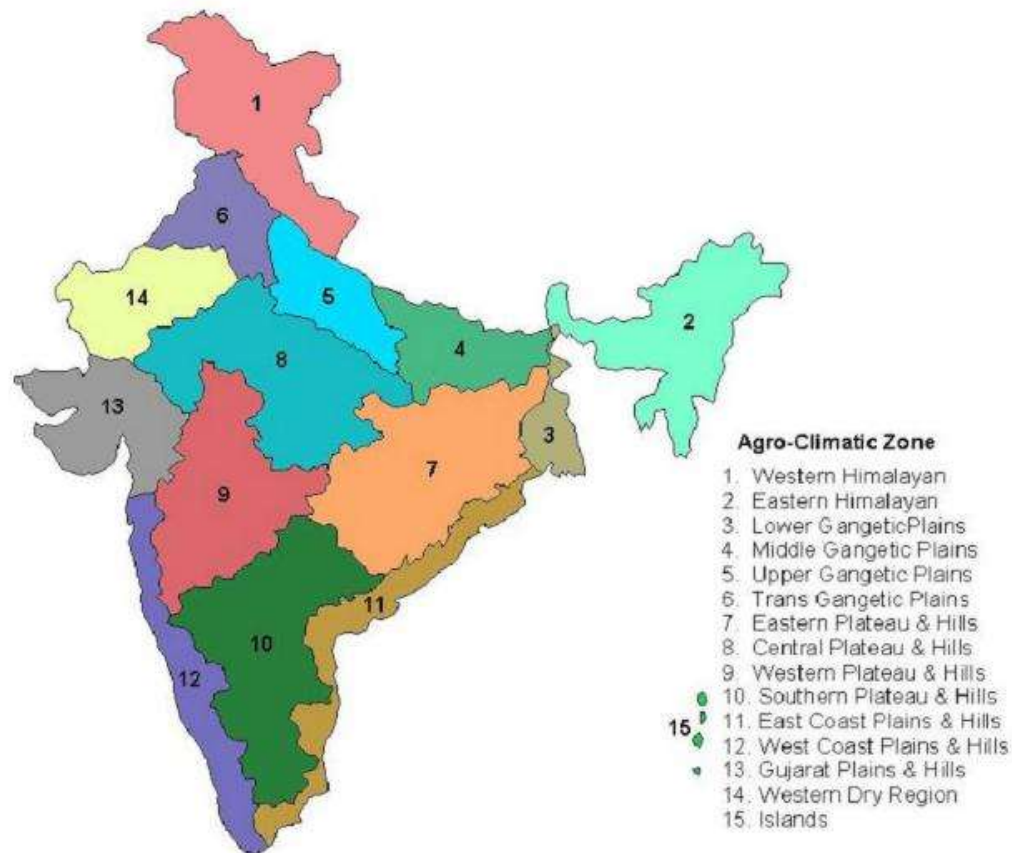
Advances in Horticulture

Fruit Culture

- To increase fruit production of a country to meet requirements
- Deals with cultivation, harvesting, post-harvest handling and processing fruits.
- India – 15 agroclimatic regions – best for growing some fruit crops.
- Therefore almost all types of fruits – tropical, sub-tropical, temperate fruits can be grown.

- An “Agro-climatic zone” is a land unit in terms of major climates, suitable for a certain range of crops and cultivars. The planning aims at scientific management of regional resources to meet the food, fiber, fodder and fuel wood without adversely affecting the status of natural resources and environment. Crop yield is (FAO, 1983). Agro-climatic conditions mainly refer to soil types, rainfall, temperature and water availability which influence the type of vegetations. An agro-ecological zone is the land unit carved out of agro-climatic zone superimposed on landform which acts as modifier to climate and length of growing period.
- Planning of Agro climatic zones of India

Agro-climatic zones of India



- India is the second largest producer of fruits next to china.
- India –ranks first in production of Mango, banana, sapota.
- 3.35 million hectares area – fruit cultivation.
- Tamil nadu – 1.6 lakh hectares
- Major fruit crops cultivated in TN – Mango, Banana, lime, lemon, grapes, guava, sapota.

- Improved varieties
- Advanced cultural practices
- Cultural practices standardized region wise for each and every fruit to increase the production
- Regional Agricultural Universities and Research Institutes of ICAR – to develop improved techniques.

Mango

- Grown extensively throughout the country except arid and temperate zones.
- Mango – Anacardiaceae
- *Mangifera indica*
- Fruit type – drupe.
- Native of - Indo Burma and spread to various part.

- Rich in Vitamin A and Vitamin C
- Calory - rich
- Mano – national fruit
- 1. 2 million hectare are – India.
- Grown in all parts of sounth india, UP, Bihar, Orissa, MP and so on. I
- In TN almost all districts except Nilgris are suitable
- Salem, Dharmapuri, North Arcot, Kanyakumari and Madurai districts mango cultivation going on.

Soil and Climate

- Mango grow in any type of soil.
- Grow well in alluvial soils of Indo-gangetic plain, laterite soil of west coast, red soils and medium black soils of peninsular India and deep red loams of Tamil Nadu.
- Red loamy soil with good drainage is best for mango cultivation.
- Soil pH should be between 6.5 – 8.0

- Grow well in tropical and sub tropical regions mean temp. 15 and 35°C.
- with annual rain fall 50 -200 cm.
- Grow up to altitude of 1200m, but yield decrease gradually from 600m elevation onwards.

- Irrigation – After establishment the plant is watered once in four days during summer months.
- In rainy months – no irrigation is required.
- After 4 or 5 years, as the plants develop deep root system there no need for irrigation.
- Irrigation during flowering reduces the fruit drop and favors production of large fruits.

- Nutritional requirements:
- Farm yard manure & NPK - depends on the age.

Vegetable crops

- 13 groups based on their mode of cultivation.
- Group 1 – Potato - Plant produce potato like tubers eg. Potato
- Group 2 – Solanaceous vegetables – Solanaceae – giving fruit and vegetables eg. Tomato, brinjal, chilli
- Group 3 - Cole crops – Cabbage, Cauliflower,

- G4 – Root crops – tap root preserves food eg. Carrot, Beet root.
- G5- Bulb crops – all bulb producing plants eg. Onion, garlic
- G6 - Peas and beans eg. Broad bean, peas
- G7 – Cucurbits – Cucumer, muskmelon, snake guard
- G8 – Tuber crops – Plants developing tubers from adventitious roots eg. Sweet potato, tapioca

- G9 – Okra – bhendi
- G10 – Salad crops – eg. Celery, Lettuce
- G11 – Greens - green vegetables eg. Amaranthus, Spinach
- G12 – Other root crops – Corm, rhizome
- G13 – Perennial – eg. Drumstick, Agathi, Curry leaf.

- Soil – Fertile soil is good for growing vegetables.
- Sandy loam soils rich in organic matter with good drainage facilities
- Highly acidic and alkaline soil unsuited for cultivation

Climate

- Hot season vegetables: March - June
- Cool season vegetables: September – February
- Semi-frost Vegetables: higher elevation - Cool climate eg, beet root, carrot
- Frosty weather vegetables: Cauliflower, Potato, cabbage.

- Manure varies with crops.
- NPK fertilizers all crops.
- Farm yard manure

- **Tomato**

- Season – May- June, Nov - Dec
- Planting method – sown in nursery and transplanted 25 days after sowing.
- Spacing 60cm x 60cm
- Manures – FYM 25 tonnes, N- 150 kg, P -100kg and K – 50kg/ha.

- Harvesting – half ripe fruits at 3 days interval
- Yield – 25 – 80 tonnes/ha.
- **Brinjal**
- Season – Dec- Jan and May- June
- Planting – sown in nursery and transplanted 45 days after sowing
- Spacing FYM 25 tonnes, N- 100kg, P 75kg, K- 50Kg/ha

Thank You