

Unit 4: Coffee, Tea And Spices Production and Management

Coffee

- **History and Origin:** The name "coffee" is believed to originate from the region of Kaffa in Ethiopia. Coffee's history dates back to around 850 CE. According to legend, an Ethiopian goat herder named Kaldi discovered coffee after noticing that his goats became energetic and stayed awake all night after eating berries from a certain tree. The high-quality *Coffea Arabica* species originates from the rainforests in the southwestern highlands of Ethiopia.
- **Production Status:** Coffee is one of the most important agricultural commodities globally, cultivated on about 10.3 million hectares of land. It is produced in over 80 tropical countries, providing livelihoods for approximately 125 million people. The annual production of coffee is estimated at 9 million tons of green beans.
- **Economic Importance:** Coffee is the second most valuable commodity after fuel. It plays a crucial role in the economies of many developing countries. In Ethiopia, coffee accounts for 25-30% of total export earnings and 5% of GDP, making it a vital source of income for producers and traders.

Tea

- **History and Origin:** Tea originated in southwest China, likely in the Yunnan region, during the Shang dynasty. Legend has it that Shen Nung, a Chinese herbalist, discovered tea when leaves from a nearby tree blew into his boiling water. Tea became known to Western civilization through Portuguese priests and merchants in the early 16th century. In Ethiopia, tea production began on a small scale in the 1920s during the reign of Empress Zewditu.
- **Production Status:** Tea is one of the most widely consumed non-alcoholic beverages in the world. The total global production of tea reached about 3.1 billion kilograms in 2005. Ethiopia has three private tea estates, producing around 7,000 tons annually.
- **Economic Importance:** Tea is a significant source of foreign currency for producing countries. It contributes to food security by covering food import bills and provides employment and income opportunities in rural areas.

Spices

- **History and Origin:** Spices have been used since ancient times, with their origin tracing back to Egypt. Spices were highly valued as trade items and spread from Egypt through the Middle East to the Mediterranean and Europe. The spice trade later expanded to India, China, Indonesia, and eventually America in the 17th century.
- **Production Status:** The global production of spices amounted to 12.8 million tons in 2018. India, China, Turkey, Bangladesh, and Indonesia are the top producers. Ethiopia is a significant producer of spices in East Africa, with production reaching 244,000 tons annually.
- **Economic Importance:** Spices are essential for adding flavor and color to food. They also provide income and employment opportunities in rural areas. In Ethiopia, spices contribute significantly to the national economy, with potential for small-scale processing and export opportunities.

Field Establishment and Management Practices for Coffee, Tea, and Spices

Coffee:

- **Field Establishment:**
 - **Land Preparation:** Start preparing the land a year before planting. Key steps include clearing the land, planting windbreaks, marking rows, establishing shade trees, and preparing for irrigation.
 - **Planting:** Dig holes (600x600x600 mm) a month before planting. Add dry farmyard manure (FYM) and Triple Superphosphate (TSP) to the hole. Fill the hole with soil, re-mark the center, and plant the coffee trees.
- **Field Management:**
 - **Weed Control:** Weeds compete with coffee trees for nutrients and water, so it's essential to keep the area around the trees weed-free. Use mulch to reduce the need for frequent weeding.
 - **Irrigation:** Ensure the young plants' roots don't dry out by irrigating them 2-3 times a week, especially in the first few weeks after planting.

Tea:

- **Field Establishment:**
 - **Density and Spacing:** Plant around 15,000-16,000 tea plants per hectare with spacing of 60 cm between plants and 100 cm between rows.
- **Field Management:**
 - **Mulching:** Helps control soil erosion, retain moisture, and inhibit weed growth.

- **Weed Management:** Manual methods like cheeling and sickling are common. Mulching also helps manage weeds.
- **Pruning:** Regular pruning keeps the tea plant at an optimal height of 1.5 meters and encourages fruitful growth.

Spices:

- **Processing:**
 - **Washing:** Clean spices like nutmeg and cardamom by dipping them in water or sodium bicarbonate solution.
 - **Drying:** Spices should be dried quickly to reduce the risk of contamination and ensure good microbial quality. Various dryers can be used, from simple sun drying to gas or kerosene-fired dryers.
 - **Storage:** After drying, pack the spices in heavy-gauge plastic sacks to prevent moisture pickup. Keep samples in airtight bottles for reference.
 - **Grinding and Packaging:** Spices are ground to a fine powder using mills and then packed in suitable containers depending on the climate and market.

4.5. Cultivation Practices of Individual Spices

Ginger:

- **Location:** Predominantly grown in SNNPR, Ethiopia.
- **Uses:** Culinary spice, ginger oil, oleoresin, beverages, and processed foods.
- **Land Preparation:** Soil should be finely tilled for rhizome development.
- **Planting:** Propagated from rhizome portions, planted in March-April with spacing of 15x30 cm or 20x30 cm.
- **Irrigation:** Frequent irrigation required, especially from mid-September to December.

Turmeric:

- **Plant Description:** Herbaceous perennial with orange-colored rhizomes.
- **Land Preparation:** Soil is plowed to a fine tilth with beds or ridges prepared for drainage.
- **Seed Rate:** 2000-2500 kg per hectare of mother rhizomes.
- **Mulching:** Essential for moisture conservation, done after weeding and fertilizer application.

Korerima (*Aframomum corrorima*):

- **Description:** Known as Ethiopian cardamom, used extensively in local cuisine.
- **Land Preparation:** Planting holes of 45-60 cm width and 60-75 cm depth, spaced 3m apart, intercropping possible.
- **Weed Management:** Requires frequent weeding until crop cover is established.

Cardamom (*Elitaria cardamomum*):

- **Description:** Herbaceous perennial, known as the Queen of Spices.
- **Nursery:** Seedlings raised in nursery beds.
- **Planting:** Best done in May-June, seedlings are planted in pits on cloudy days with light drizzle.

Black Pepper (*Piper nigrum*):

- **Description:** Perennial evergreen vine, known as the 'king of spices'.
- **Site Selection:** Well-drained, leveled land or hill slopes preferred.
- **Planting:** Can be directly planted or raised in nurseries, with cuttings rooted in polythene bags.
- **Field Planting:** Spacing of 3m x 3m or 3m x 2m, depending on the slope.