

Unit 3: Industrial Crops Production and Management

Oil Crops Production and Management

1. Sesame (*Sesamum indicum* L.)

Introduction: Sesame is an oil crop believed to have originated in Africa. It is primarily cultivated for its oil, which is widely used in cooking, margarine production, and various other foods. Sesame oil is also utilized in making paints, cosmetics like soaps, and its by-products serve as animal feed.

Growing Conditions:

- **Climate:** Sesame thrives in semi-arid, lowland areas with altitudes up to 1200 meters. It requires high temperatures (25-27°C) during its growing season.
- **Water:** The crop is drought-tolerant but sensitive to both excess water and extreme water shortages. High rainfall during flowering can reduce yield due to flower drop.
- **Soil:** Sandy loam soils that do not retain excess moisture are ideal for sesame cultivation.

Land Preparation and Planting:

- Sesame is sensitive to weeds, so the fields should be weed-free during land preparation.
- Seeds are small, so the seedbed needs to be smooth and clean.
- Sesame can be planted by broadcasting or in rows, with a recommended spacing of 50 cm between rows and 10 cm between plants.

Weed Management:

- Early weeding is crucial, especially during the first 4 to 5 weeks of growth when sesame is most vulnerable to weed competition.

Harvesting:

- Sesame takes up to 5 months to mature.
- It is ready for harvest when one-third of the leaves, stems, and pods turn yellow. Delayed harvest can lead to seed loss due to pod shattering.

- The national average yield for sesame is 7.4 quintals (0.74 tons) per hectare.

2. Noug (*Guizotia abyssinica* L.)

Introduction: Noug, an oil crop native to Ethiopia, is the country's most significant source of food oil, contributing to about half of its oil production. Besides its use in cooking, noug oil is used in paint and soap production, and its by-products are used as animal feed.

Growing Conditions:

- **Altitude:** Noug grows well at altitudes between 1800 and 2000 meters.
- **Water:** It can survive with minimal rainfall and even tolerates excess soil moisture.
- **Soil:** Noug prefers clay-dominated soils that retain moisture.

Land Preparation and Planting:

- The seedbed should be well-prepared to ensure good seed germination.
- Noug is commonly sown by broadcasting or in rows with a spacing of 25 cm between rows and a seeding depth of about 2 cm.
- Planting is usually done in June or July.

Weed Management:

- Noug requires at least one weeding during its early growth stages.
- As it grows, noug becomes competitive against weeds, but it is susceptible to parasitic weeds like dodder and orobanche, which should be uprooted and burned to prevent spreading.

Harvesting:

- The crop is ready for harvest when its leaves change from green to brown and yellow.
- Harvesting at the right time is crucial to avoid seed loss or poor seed quality.
- The national average yield for noug is 8 quintals (0.8 tons) per hectare, and it is mainly used for local consumption.