



Package of Practices of Fennel



Introduction:

- Fennel (*Foeniculum vulgare*) belongs to family Apiaceae native to southern Europe.
- It is mostly grown in Rabi season, the root is white, spindle like and deep penetrating.
- The basic part is tuber (bulb like thickened).
- The foliage is also edible and can be used to decorate warm or cold dishes.
- Due to its anethole content it is used for soft and strong drinks also.
- It has different physiological effects; it stimulates appetite, digestion, intestinal activity and milk secretion.
- It contains 73 Calories, 0.5 gm of fat, 2.9 gm protein, 17 gm carbohydrate and 7 gm of dietary fiber



Climate & Soil:

- Fennel can be cultivated in all type of soils (loamy/black/sandy) that are rich in organic matter; good tolerance to salinity
- pH range 6.5-8.5 is preferable
- Dry and cool weather during the seed set increases seed yield as well as the quality of the produce



Cultivation Practices:

- Prepare the main field to a fine tilth (2-3 Ploughing)
- It can be directly sown in the main field or seedlings can be raised In nursery beds and later transplanted in the main field
- Add FYM 10t/ha before last ploughing,
- Form beds and channels for sowing

Varieties:

- RF 101, RF 125, RF 35, Gujarat Fennel 1, CO 1

Sowing time:

- Direct sowing: ideal sowing time for fennel is mid -September to mid October.
- Transplanting: Seedlings are raised during June or July on well prepared nursery beds
- Afterwards, 7-8 weeks seedlings are transplanted in the field in August-September.



Seed rate and Spacing:

- Seed rate required for direct sowing is 10-12 kg/ha
- For transplanting- 3-4 kg seed/ha
- 8-6 weeks old seedlings are transplanted at 60 x 30 cm spacing
- In direct sown crop thin 4-5 weeks old seedlings to 25-30 cm spacing



Irrigation:

- First irrigation is done soon after seed sowing
- 1-2 light irrigations are required until seed germination
- Afterwards, the crop is irrigated at an interval of 15-20 days
- Water stress must be avoided during flowering and seed formation

Manuring and Weed Management:

- Recommended dose of 25 kg N and 10 kg P can be applied at the time of sowing and rest 25 kg N can be top dress after first hoeing
- Weeds can be controlled by both mechanically and chemically. First hoeing and weeding is recommended at 30 DAS
- In chemical weed control; Pre-emergence application of Pendimethalin @ 1kg a.i/ha is recommended



Disease and Pest management:

➤ **Alternaria blight:** 0.2% Mancozeb or Cu Oxychloride and repeat at 10 days interval

➤ **Powdery mildew:** spraying of wettable sulphur 0.2% at 20 days interval at flowering

➤ **Drooping off:** Soil drenching with Procymidox, Iprodione and Benomyl @ 2g/ha

➤ **Nematode:** use Neem cake 1000 kg/ha

Aphids/thrips/mites:

- Application of yellow/blue sticky card
- Use of neem seed kernel extract 5%, neem oil 2%, Azadiractin 2 ml/lit

- Spraying of Emamectin benzoate @ 10 g ai/ha or Dimethoate 30EC @ 0.03%



Trichogramma spp.



Tetrastichus spp.



Chelonus spp.



Bracon spp



Diaeretiella spp.



Aphidius sp

Harvesting and yield

- Fennel matures in 170-180 days (30-40 days after flowering), seeds are matured but still green in colour- used for chewing purpose
- Harvesting is done by plucking the umbels when seeds are fully developed and matured and turned yellow-used for spice purpose
- Harvesting is done during June to October and plucking can be done 4-5 times at 10 days interval
- The seeds are dried in partial shade and moisture content should be kept to 9%.
- On an average fennel yields 20-25 q/ha





THANK YOU