POP of Fenugreek

Fenugreek

- **Botanical name: *Trigonella* foenum graecum**
- **Family: Fabaceae**
- **Vernacular name: Fenugreek, Methi**

Introduction

- Popular spice and leafy vegetable crop
- Grown in Rajasthan, Gujrat, Uttar Pradesh, Madhya Pradesh and Punjab
- Green leaves are rich source of minerals, protein, vitamin A and C
- Dried seed is used as spice for flavouring the food preparations
- The bitter content is due to di- alkaloid, Trigonella
- It has lots of medicinal properties
- Total area under fenugreek in India is 218’000Ha and production is 220’000MT

Types of methi: common and *kasuri methi*

Difference between common and *kasuri methi*

S.No.	Non- scented or Common Methi (desi methi)	Scented or Kasuri Methi
1.	Trigonella foenum- graecum L.	Trigonella corniculata
2.	Plants are quick growing	Slow growing
3.	Produce upright shoots	Remain in rosette condition during vegetative growth
4.	Flowers are pinkish white, bigger and borne in the axil of leaves	Flowers are bright orange –yellow and borne on long stalks
5.	Pods are 6-7cm long and straight	Pods are 2-3cm long and sickle shaped
6.	Seeds are bigger in size than kasuri methi and non scented	Seeds are smaller and scented

Varities

Name	Source
Pusa Early Bunching, Kasuri Methi	IARI, New Delhi
Gujrat Methi-1	GAU, Junagarh
Co-1, Co-2	TNAU, Coimbatore
Lam selection-1, Parbha, UM-112, Um-50, IC-74, Barbara	APAU, Guntur
Methi No.47, Methi No. 42	Deptt. of Agric., Maharashtra State
Rajendera Kranti	RAU, Campus-Dholi
RMt-1, RMt-305, RMt-303	SKNCOA, Jobner
Ajmer Fenugreek -3 (AFg-3), Ajmer Fenugreek -4 (AFg-4)	NRC on seed spices Tabiji, Ajmer
Hisar Sonali, Hisar Madhavi, Hisar Mukhta, Hisar Suvarna	HAU, Hisar

Climate

- Fenugreek is a Rabi crop
- It require cool climate during vegetative growth and warm dry climate during maturity.
- Scented type(Kasuri methi) is fairly tolerant to freezing and frost and requires comparatively cooler climate
- High rainfall deteriorates the quality.
- High humidity and cloudy weather favours diseases and insect pest attack.

Soil and Field Preparation

- Well drained loamy soil suits(ph6-7) though can be raised in all types of soils
- Soil should be rich in organic matter with good drainage.
- Soil should be brought to fine tilth by one deep ploughing followed by 2-3 light ploughings followed by planking
- Pre-sowing irrigation should be given

Manures and Fertilizers

- At the time of field preparation FYM (farmyard manure) or compost @ 150-200q/ha is added to enrich soil fertility.
- Basal dose(N:P:K)kg/ha : 40: 40: 40 when crop is raised for leaf production then N should be top-dressed in two- three splits after alternate cuttings.
- Seed inoculation with *Rhizobium* may be done @ / 100g seed
- A soil test may be done to know the inherent fertility status of the soils.

Sowing Time

- Ideal sowing time in India for grain and seed production is last week of October to first week of November

Sowing Method

- Fenugreek is cultivated by broadcasting in falt bed at 20-25 cm distance in line.
- Also it is cultivated in flat bed of size 3 ×5-7.5 m
- Needs full sunlight and requires watering during dry periods.
- Seed should not be sown more than 4.0cm depth

Seed Rate

- Recommended seed rate is 25-30 kg /ha

Irrigation

- First light irrigation immediately after sowing.
- Subsequently 4-6 days interval depending upon moisture condition of the soil.
- Fenugreek can be irrigated by surface-irrigaton system.
- Other methods viz. flooding from ditch, check basin, ring basin, border strio and furrow.

Weed Control

- Critical stage is initial stage as growth of weeds is much faster than the crop.
- First hoeing and weeding is recommended at the time of thinning i.e.25–30 days after sowing and second weeding is recommended at 50–60 days after sowing.
- Herbicides may also be used for weed control.
- Pre- emergence application of Pendimethalin/Stomp @ 1kg/ha followed by one hand weeding at 25 days after sowing.

Harvesting

- Ideal time for harvesting is the stems become yellow and leaves fall
- Crop is ready for first cutting 3-4 weeks after sowing when plants attain height of 15-20cm
- Cutting should be done with sickle leaving 2-3 cm stub to produce new shoots.
- Subsequent cuts may be made after 15-20 days
- Delay in harvest leads to more bitterness
- About 5-6 cuttings may be obtained at 15-20 days interval
- Seed crop matures of common methi in 150-160 days after sowing and kasuri methi in 160-170
- Uprooting of plants and threshing later on should not be done instead cutting by sickles is recommended

Yield

Green yield:

Its average green yield of common methi is 70-80q/ha and kasuri methi 90-100 q/ha.

Seed yield:

Its average seed yield of common methi is 12-15q/ha and kasuri methi 6-7q/ha.

Post harvest

- **Threshing-** It is a process by which seeds are separated from plants. Manual threshing is normally done on clean cemented floor.

- **Cleaning and grading-** Separated seeds are heaped together on the floor which is then cleaned of dust and straw by using winnowing fans.

- **Storage-** Properly disinfected jute bags are used for packing fenugreek seeds and these bags are stored in damp-free aerated stores.

Major insect pests and diseases of fenugreek

Insects	Scientific Name	Control
Aphid	Myzus persicae	Spray endosulphon35 EC@ 0.07%
Mite	Petrobia latens	Spray Ethion 50 EC@ 0.02%
Diseases		
Powdery mildew	Erysiphe polygoni, Levelliula taurica	Spray sulphur based fungicide
Downy mildew	Peronospors trigonella	Spray Bavistin @0.1% or Dithane M-45 @ 0.2%
Leaf spot	Cercospora traversinia	Spray Blitox @0.3%
Root rot	Rhizoctonia sp. and Fusarium sp.	Follow crop rotation for 2-3 years Deep ploughing in summer months Seed treatment with Thiram or Captan @ 2-3g/kg seed

Health Benefits and Uses

- Grown for dry and fresh leaves for flavoring.
- Culinary preparations.
- Used as a spice.
- Used in confectionery in making curries.
- Used to make plasters reputed equal in virtue toquinine for fever.
- Mucilaginous material from soaking in water is usedfor inflamed stomachs and intestines.
- Decrease Nauseating.
- Gripping effects of purgatives.
- Plant and seed used as fodder in veterinary medicines.


THANK YOU