

Fenugreek

Fenugreek (/ˈfɛnjuɡriːk/; *Trigonella foenum-graecum*) is an annual plant in the family Fabaceae, with leaves consisting of three small obovate to oblong leaflets. It is cultivated worldwide as a semiarid crop, and its seeds are a common ingredient in dishes from the Indian Subcontinent.

1 Regional names

Fenugreek is known as *methi*, Assamese (মেথি) Gujarati (મેથી), Marathi (मेथी), Oriya (ମେଥୀ), Punjabi (ਮੇਥੀ), (xulbad in Somali) or (میتھی), Hindi (मेथी), Urdu (میتھی), Bengali (মেথি) and Nepali (मेथी), as *menthiyam*, and *venthayam* (வெந்தயம்) in Tamil, *menthulu* (మెంతులు) in Telugu, *uluhaal* (حُلْحُل) in Sinhala, *ShOoT* (שׁוֹט) in Hebrew, *çemen otu* in Turkish, *malkhoza* (مَلخوزِه) in Pashto, *helba* (حلبَة) in Arabic and Dari, *alholva* in Spanish, *shanbelileh* (شَنبَلِيلِه) in Persian, *menthya* (ಮೆಂತ್ಯಾ) in Kannada, *uluwa* (ഉലുവ) in Malayalam, *moshoseitaro* (μοσχούταρο, τριγωνέλλα, or τήλις) in Greek, and *abish*.

2 History

Fenugreek is believed to have been brought into cultivation in the Near East. While Zohary and Hopf are uncertain which wild strain of the genus *Trigonella* gave rise to domesticated fenugreek, charred fenugreek seeds have been recovered from Tell Halal, Iraq, (carbon dated to 4000 BC) and Bronze Age levels of Lachish and desiccated seeds from the tomb of Tutankhamen.^[2] Cato the Elder lists fenugreek with clover and vetch as crops grown to feed cattle.^[3]

3 Production

Major fenugreek-producing countries are Afghanistan, Pakistan, India, Iran, Nepal, Bangladesh, Argentina, Egypt, France, Spain, Turkey, and Morocco. The largest producer is India, where the major producing states are Rajasthan, Gujarat, Uttarakhand, Uttar Pradesh, Madhya Pradesh, Maharashtra, Haryana, and Punjab. Rajasthan accounts for over 80% of India's output.^{[4][5]}

4 Use

Fenugreek is used as an herb (dried or fresh leaves), spice (seeds), and vegetable (fresh leaves, sprouts, and microgreens). Sotolon is the chemical responsible for fenugreek's distinctive sweet smell.

Cuboid-shaped, yellow- to amber-colored fenugreek seeds are frequently encountered in the cuisines of the Indian Subcontinent, used both whole and powdered in the preparation of pickles, vegetable dishes, *daals*, and spice mixes such as *panch phoron* and *sambar* powder. They are often roasted to reduce bitterness and enhance flavor.^[6]

Fresh fenugreek leaves are an ingredient in some Indian curries. Sprouted seeds and microgreens are used in salads. When harvested as microgreens, fenugreek is known as *samudra methi* in Maharashtra, especially in and around Mumbai, where it is often grown near the sea in the sandy tracts, hence the name *samudra*, “ocean” in Sanskrit.^[7] *Samudra methi* is also grown in dry river beds in the Gangetic plains. When sold as a vegetable in India, the young plants are harvested with their roots still attached and sold in small bundles in the markets and bazaars. Any remaining soil is washed off to extend their shelf life.

In Turkish cuisine, fenugreek is used for making a paste known as *çemen*. Cumin, black pepper, and other spices are added into it, especially to make *pasturma*.

In Persian cuisine, fenugreek leaves are called *shanbalileh* (شَنبَلِيلِه). They are the key ingredient and one of several greens incorporated into *ghormeh sabzi* and *eshkeneh*, often said to be the Iranian national dishes.

In Egyptian cuisine, peasants in Upper Egypt add fenugreek seeds and maize to their pita bread to produce *aish merahrah*, a staple of their diet.^[8]

Fenugreek is used in Eritrean and Ethiopian cuisine.^[9] The word for fenugreek in Amharic is *abesh* (or *abish*), and the seed is used in Ethiopia as a natural herbal medicine in the treatment of diabetes.^[9]

Yemenite Jews following the interpretation of Rabbi Salomon Isaacides, Rashi, believe fenugreek, which they call *hilbeh*, *hilba*, *helba*, or *halba* (חֵלְבָה) is the Talmudic *rubia* (רוביא). They use it to produce a sauce also called *hilbeh*,^[10] reminiscent of curry. It is consumed daily and ceremoniously during the meal of the first and/or second night of Jewish New Year.^[11]

5 Nutritional profile

Fenugreek leaves contain these nutrients per 100 g of edible portion:^{[12][13]}

- Carbohydrates: 6.0 g
- Protein: 4.4 g
- Fat: 0.9 g
- Calcium: 395 mg
- Phosphorus: 51 mg
- Iron: 1.93 mg
- Total energy: 49 kcal

6 Chemical constituents

Fenugreek contains:^[14]

Steroidal saponins constitute 4-6% of the dried seeds weight.^[14]

The main bioactive compounds are protodioscin, trigoneoside, diosgenin, and yamogenin, which have anticarcinogenic potential in animal models through inhibition of cell proliferation and inhibition of prostaglandin synthesis.^{[15][16]}

Fenugreek oil (aromatic component) contains neryl acetate (17.32%), camphor (16.32%), β -pinene (15.05%), β -caryophyllene (14.63%), 2,5-dimethylpyrazine (6.14%), geranial (4.81%), 6-methyl-5-hepten-2-one (4.48%), 3-octen-2-one (4.32%), α -selinene (4.04%), α -terpineol (2.77%), α -campholenal (2.63%), α -pinene (2.61%), and γ -terpinene (2.08%).^{[16][17]}

7 Safety

Fenugreek sprouts, cultivated from contaminated seeds imported from Egypt in 2009 and 2010, were implicated but not definitively linked to outbreaks of *Escherichia coli* O104:H4 in Germany and France. The *E. coli* outbreak caused 50 deaths in 2011.^{[18][19]}

8 References

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9 External links

- Fenugreek resources
- Fenugreek, Gernot Katzer's spice dictionary

- [About Herbs, Botanicals & Other Products, Memorial Sloan-Kettering Cancer Center](#)
- [Encyclopedia of Spices](#)

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