Chapter II
Medicinal plants of Fabaceae
2. Medicinal plants of Fabaceae

Family Fabaceae is third largest family of seed-plants, containing about 600 genera with 12,000 species.

In Amravati region there are many genera. Out of these we report only 22 species belonging to 20 genera in Amravati. There has been much contribution made in publishing record of family Fabaceae by various researchers (Dhar, 1961; Mahajan, 1971; Umalkar, 1977; Duke, 1981; Pande, 1981; Fuzellier, 1982; Caius, 1986; Rastogi, 1985-1989; Basile, 1988; Esposito, 1991; Kirtikar, 1993; Tambe, 1996; Bisaria, 1997; Khan, 1997; Rai, 1997; Shalini, 1997; Bhattacharjee, 1999; Ivan, 1999; Kamboj, 2000; Kaushik, 2000; Mishra, 2000; Prakash, 2001; Phillipson, 2001; Atul, 2002; Uniyal, 2002; Bhattachary, 2004 and Gill, 2004).

Important plants of family Fabaceae occurring in Amravati have been identified. The accepted name of the species has been followed by flowering and fruiting period. The morphological characters of the plants are described. Moreover, distribution, medicinal value are also discussed.

The list of the plants have been prepared alphabetically.

Systematic Enumeration
**Abrus precatorius** Linn.

Fl/ Fr- September to January

A much branched, perennial climber with woody stem. Leaves are paripinnate; leaflets opposite, deciduous, oblong, ligulate, membranous, glabrous or thinly silky beneath. The rose to purple flowers are crowded at the end of the stalk. Fruits are short, inflated pods, splitting open when mature to reveal the round, hard and shiny seeds. Seeds ovoid or sub-globose, generally two-third scarlet or white and the rest jet black giving appearance of a black eye.

**Distribution:** It occurs commonly near the ravines of miscellaneous forest, waysides.

**Medicinal value:**

- The seeds are used for ringworm, cure for malaria.
- It is also used in cases of venereal diseases and for urinary troubles.
- The root is taken for sore throat and rheumatism.
- The leaves are taken for purifying the blood.
- The plant is used together with limes for cough and irritation of the chest.
Acacia nilotica Linn.

Fl/ Fr- Oct-Dec / March- June.
A moderate sized tree with a large spreading crown, bark dark-brown almost black, much fissured, spines long, straight white, sharply pointed. Leaves 2.5-5.0 cm long, rachis and pinnate downy pinnate 3-6 pairs. Flowers bright-yellow, fragrant in axillary, globose heads. Calyx 1-2 mm long, sub-glabrous to pubescent. Corolla 2.5-3.5 mm long, glabrous or pubescent. Pods especially variable, linear, indehiscent, 8-17(-24) cm long, 1.3-2.2 cm broad, straight or curved, glabrous or gray velvety, turgid, blackish, about 12-seeded. Seeds deep blackish-brown, smooth, sub-circular, compressed, areole 6-7 mm long, 4.5-5 mm wide.

Distribution: It is found in throughout the warmer regions of India.

Medicinal value

- Various plant-parts are used against hairfall, leprosy, and cholera.
- The juice of the fresh bark is given in gonorrhea.
- The powdered and mixed with water used in conjunctivitis.
- The wood is used as a remedy in chest affections.
**Albizzia lebbek** (L.)

Fl/ Fr- March- July

A large tree with a spreading crown, bark pale. Leaves abruptly bipinnate. Main rachis 7-30 cm long with a large gland near the base and also between the upper most one or more pairs of pinnæ. Pinnae 2-4 pairs, 8-15 cm long. Leaflets 3-9 pairs, 2-5 cm long, shortly petioled, oblong, unequal sided, obtuse, glabrous. Flowers white or greenish-white, fragrant, shortly pedicelled, in globose umbellate heads. Calyx campanulate, teeth short. Corolla twice the length of calyx, lobes lanceolate. Pod 10-30 cm long, thin. Linear-oblong, straw-yellow, 4-12 seeded.

Distribution: It is found throughout India, usually planted.

**Medicinal value:**

- The bark and seeds are astringent, given in piles, diarrhea.
- The flowers are used as a cooling medicine and also externally applied in boils, eruption and swellings.
- The leaves used in ophthalmia.
- The bark is applied to injuries to the eye.
**Alhagi camelorum** Fischer.

Fl/ Fr- March-April / Aug.

Branches slender, glabrous or nearly so, pale-green, spines, 5”- 1” long, hard, pungent. Leaves at the base of the spines small, flowers small 1-6 on the spines, shortly pedicel late. Calyx glabrous, teeth short, triangular. Corolla reddish, 3-times as long as the calyx. Seeds dark-brown, smooth shining. Pod long, falcate or straight, turgid, contracted between the seeds, glabrous.

Distribution: Dry plain Area. Cultivated in forest.

**Medicinal value:**

- The leaves oil is used as an external application in rheumatism.
- The root is used externally for swellings, abscess.
- The flowers extract is used as remedy of the cough of children.

**Butea monosperma** (Lam.)

Fl/Fr - March/ Feb-May

A moderate sized tree with irregular branches, exuding a red juice when cut. Leaves stipulate, petiole 10-25 cm long tomentose. Leaflets coriaceous, rhomboid or broadly obovate.
from a connate base, the lateral ovate or elliptic oblique, all obtuse, 10-21) by 10-20 cm petiolle up to 1 cm long and flowers 5-8 cm long in 10-18 cm long racemes. Pedicels double the length of calyx. Pedicels and calyx velvety. Calyx teeth short, the upper 2 connate. Petals bright orange-red, standard broad, recurved, keel incurved, beaked, wings falcate. Stamens diadelphous. Ovary stalked, 4-ovuled, style curved, stigma capitate. Pod 10-20 by 2-5 cm ligulate, silky tomentose, 1-seeded and dehiscent up to the seed.

Distribution: Common through the greater part of India.

Medicinal value:

- The seeds are used in medicine.
- Flower extract exhibited antihepatotoxic activity.
- The bark is given in case of snakebite.
- The leaves are astringent, tonic, aphrodisiac and are used to disperse boils and pimples. It is given internally in flatulent colic, worms and piles.
- The paste of seeds used as a remedy for ringworm.

*Cassia alata* Linn.

Fl/Fr- August- September.

A large spreading shrub with irregular angled, glabrous branches. Pods are long, membranous dehiscent with numerous seeds. Flowers bright-yellow in colour.
Distribution: It is found in various parts of India. It is propagated by seeds.

Medicinal value:

- The extract of leaves is used as external application in several cases of ringworm of the body.
- The fresh leaves are given internally for snake-bite.
- The fresh leaf is universally recognized as a remedy for parasitic skin diseases.
- Internally flowers are prescribed as a tonic.

*C. fistula* (L.)

Fl/Fr- March-June/ Ripe in winter.

A moderate sized tree, bark smooth, pale-gray. Leaves paripinnate, 30-45 cm long, rachis terete. Leaflets 4-8 pairs, ovate or ovate-oblong, acuminate, entire, lateral nerves parallel, numerous. Flowers in pendulous axillary racemes, 30-50 cm long, pedicels 0.6-6 cm long. Calyx 5-1 cm long, divided up to the base. Segments oblong, caducous. Petals 5, 5-4 cm long, bright-yellow, clawed, nearly equal. Stamens unequal, the 3 lower the longest with large oblong anthers, the 4 laterals or with diverging anther-cells, the remaining the shortest with indehiscent anthers. Ovary stipitate, style in curved. Pod up to 60 cm long, cylindrical, pendulous,
smooth, indehiscent. dark-brown when ripe, divided into many 1-seeded cells by transverse partitions. Seeds flat, shining and albuminous.

Distribution: It is common throughout India.
Medicinal value:

- The root is generally given as a tonic and febrifuge.
- The juice of the young leaves is used to cure ringworm.
- The fruits are used in cholera and diarrhea.
- The plant is used as a remedy for malaria, fever, blood-poisoning, anthrax, and dysenteries.

_C. tora_ (L.)

Fl/ Fr- Sept.-Dec./ Ncv.-Jan.

An annual fetid herb. slender. Leaves 5-10 cm long, rachis pubescent, with a coriaceous gland between each of the 2 lowest pairs of leaflets. Leaflets 3 pairs, opposite, 2-4 by 1-2.5 cm, increasing in size from the base of the rachis upwards, obovate, rounded. Flowers axillary, usually in pairs. Calyx divided up to the base, segment ovate, acute. Petals 5, yellow, obtuse, standard 2-lobed. Stamens 7 perfect. Pod up to 30 cm long, subterete or 4 angled, many-seeded, seeds green.

Medicinal value:

- The leaves and seeds constitute a valuable remedy in skin diseases, chiefly for ringworm and itch.
- The root is considered bitter, tonic, stomachic.
- The leaves are used as an antiperiodic and anthelmintic.
- The pods are used in dysentery and in diseases of the eye.

*Cicer arietinum* Linn.

FI/Fr- Cold season.


Distribution: largely cultivated in most part in India for food.

Medicinal value:

- The fresh juice of the leaves is useful in diarrhea and dysentery.
- The fresh plant put into hot water is used in the treatment of dysmenorrhoea.
- The seeds are used as a diuretic and as an anthelmintic.

**Dalbergia sissoo** Roxb.

Fl/Fr- March-June/ Nov.-Feb.

A tree with young parts downy. Leaflets 3-5, alternate, rhomboid or broad-ovate, acuminate. Rachis 5-10 cm long, zigzag. Flowers 0.5-1 cm long, yellowish-white, in racemes arranged in short axillary panicles. Calyx pilose, standard with a long claw. Stamens 9, united into a sheath opening on the top. Ovary stipulate, style very short, stigma large. Pod 5-7 cm long, 2-3 seeded.

Distribution: It is extensively planted throughout India.

Medicinal value:

- The leaves in decoction are esteemed in eruptive diseases.
- Woods are useful for leprosy, boils, eruptions and in allaying vomiting.
- The bark made into pills with aromatic is used to check cholera.

Fl/Fr- April-June/Cold season.

A moderate sized tree. Leaves up to 60 cm long, pinnae 10-18 pairs, opposite. Leaflets 8-22 pairs or more, linear-oblong, rounded, apiculate. Calyx pubescent, segments acute. Petals 5, bright scarlet: with wavy margin. Stamens as long as the petals. Pod up to 60 cm in length and up to 5 cm in width, dehiscent.

Distribution: Planted as an ornamental tree.

Medicinal value:

- The seeds are used in medicine.

**Lablab purpureus** Linn.

Fl/Fr- Aug-Dec.

Climbing shrub. leaves trifoliolate, leaflets large ovate-acuminate, 3-ribbed, glabrous, flowers pink, pod broad, long beaked.

Distribution: Cultivated as vegetable.
Mucuna pruriens (L.) DC.

Fl/ Fr- July- September.

An annual, half-woody, twining herb with long, cylindrical branches. Leaves are alternate, gray-silky beneath, 3-foliate, petioles are long and silky, 6.3 - 11.3 cm, ovate or rhomboid. Leaflets are membranous, terminal leaflets are smaller, lateral very unequal sided. Flowers are solitary or 2-3 together bearing purplish colour, arranged raceme. Fruits are curved, 4-6 seeded. The longitudinally ribbed pod, densely covered with persistent pale-brown or gray trichomes that cause irritating blisters. Seeds are black, ovoid and 12 mm long.

Distribution: The herb is found almost all over India. It is propagated by seeds.

Medicinal value:
- The seeds are useful in cholera, seminal weakness and as a tonic.
- The seeds are used for Parkinson’s disease.
- It is also used for worms, dysentery, diarrhea, snakebite, cough, tuberculosis, impotence, rheumatic disorders, muscular pain, gonorrhea, sterility, gout, delirium, diabetes and cancer.
- It is also used as uterine stimulant, nerve tonic, diuretic and blood purifier.
*Parkinsonia aculeata* L.

Fl- Oct-April

A small tree armed with sharp spines, 0.5-cm long, formed of the rachises. Leaves bipinnate, pinnae 1-4, 15-30 cm long, opposite. Clustered, coriaceous, rachis flattened. Leaflets minute, oblong-obovate or oblongolate, obtuse, petiolules minute. Flowers in 1-12 cm long lax axillary racemes. Calyx 0.6 cm long. Cleft nearly to the base, segments 5, oblong. Petals 6, 5-1.5 cm long, yellow, obovate, with villous claws. Stamens 10, free, filaments flattened at the base. Ovary stipitate, villous, many ovuled, stigma minute. Pod 2-10 cm long, slender, moniliform, attenuated at both the ends, 1-6 seeded.

Distribution: Cultivated.

Medicinal value:
- The seeds and bark are used in skin diseases.
- The seeds are used as a remedy for colic.

*Peltophorum pterocarpus* (DC). Backer

Fl/ Fr- March- May & Sep- Nov./ December onward

A large handsome dark foliaged tree with rusty tomentose shoots and a fairly spreading crown. Leaves are deep-green, leaflets close-oblong flowers showy, seeds 1-3. Frequently
planted as an avenue tree. Pod oblong, copper-coloured, compressed, thinner.

Distribution: Tropical region.

**Pithecolobium dulce** (Roxb).
Fl/ Fr- Jan- May.

Moderately large tree with small stipular spines persistent on the trunk. Bark gray-white or slate coloured. Leaves alternate, 2-pinnate, pinnae 2 pairs. Flowers yellowish white, in globose, axillary heads forming terminal panicles-pods spirally twisted, reddish-brown and 6-8 shining black. Seeds embedded in whitish edible pulp.

Distribution: In open area also along the road sides.

Medicinal uses:
- The bark is used as a febrifuge, the decoction is given as an enema.

**Pisum sativum** Linn.

Fl/ Fr- Jan- March

Suberect or climbing annual leaflets oval to oblong. Flowers colors vary, on long peduncles. Pods broad. Seeds round, white.
Distribution: Urban areas of the district. The pods sold in the market for peas.

Medicinal value:

- Peas are thought good for many complaints, especially for wounds and bruises.

*Pongamia pinnata* (L.) *Derris indica* (Lamk.) Bennet.

Fl/ Fr- April-June/ The whole year

A moderate-sized tree, almost evergreen. Leaves 12-20 cm long, petiole 4-5 cm long. Stipules small. Leaflets opposite, 5-9, 6-12 by 4-8 cm, opposite, ovate or elliptic, acute or short-acuminate, glabrous, base acute or rounded, flowers in short axillary racemes. Calyx purplish, campanulate, pubescent. Corolla 1 cm long, pinkish-white, standard suborbicular, emarginated. Stamens 10, monadelphous, the 10th stamen free at the base. Ovary nearly sessile, 2-ovuled, style incurved. Pod thick, woody, oblong, compressed, acute at both the ends, 1-seeded.

Distribution: Common along the nallas and rivers in Melghat.

Medicinal value:
- The seeds oil is used for burning and in medicine.
- The roots are used for cleaning foul ulcers and closing fistulous sores.
- The fresh bark is used internally in bleeding piles.
- The leaves are used in treatment of diseases of children.
- The plant for the treatment of snake bite and scorpion sting.

**Pterocarpus santalinus** Linn.

Fl/ Fr- June-Nov.

It is a large tree. Leaves are compound with 5 to 7 leaflets. Leaflets are oblong or elliptic upto 12 cm long. Flowers are scented, yellow, upto 1.5 cm long, appear in very large dense bunches. Fruits are round, winged, to 5 cm long. Each fruit possess one seed. The species occurs in Central and Peninsular India in mixed deciduous forest.

**Distribution:** East Indian Red wood.

**Medicinal value:**

- The paste of the wood is used externally in curing inflammation of skin diseases and headache.
- It is also used in fever, boils and to strengthen the sight.
It also acts as a diaphoretic and is applied to the forehead in headache.

*Saraca indica* Linn.

*Fl/Fr* - Jan- April

A medium-sized evergreen tree, reaching up to 10 m with spreading branches. Bark is dark-brown. Leaves are alternate, compound up to 30 cm long with 6-12 leaflets which are oblong lanceolate, acute, short petiolate. Young shoots are pendent. Flowers are yellow or orange and gradually turn vermilion and scented at night.

Distribution: It is propagated by seeds.

Medicinal value:

- Seeds are used to cure urinary discharge.
- The bark is much used in uterine affections and especially in menorrhagia.
- The flowers are used in hemorrhagic dysentery.

*Tamarindus indica* Linn.

*Fl/ Fr* - April- Nov.
A perennial slow growing tree and more or less evergreen in nature. But leaves fall after the harvest of fruits. Leaflets measure upto 15 cm long and 10-20 in pairs. It has spreading branches and grows to a height of 15 m or even taller. Flowers appeared in clusters and take 8-10 months to harvest fruit after flowering.

Distribution: It is native to Africa and grows in India on a commercial scale. It is propagated by seeds or cuttings.

Medicinal value:

- The leaves are applied to reduce inflammatory, swelling and ringworm.
- The seeds are used for diarrhoea.
- The bark is used as an astringent in diarrhoea.
- The fruit is an antidote.

*Trigonella foenum-graecum* Linn.

Fl/ Fr- Jan- March

Fenugreek is an erect annual herb, growing about 2 feet high. Leaves are feather shaped. Flowers are whitish, in colour. The seeds are brownish, about 1/8 inch long, oblong, rhomboidal, with a deep furrow dividing them into two unequal lobes. They are contained, ten to twenty together, in long, narrow, sickle-like pods. Taste, bitter and peculiar, not unlike lovage or celery.
Distribution: It is native to Eastern Europe. It occurs wild in parts of North India. It is propagated by seeds.

Medicinal value:

- The seeds are used for stomach complaints and as preventive in fever.
- It is also used for dysentery.
- An infusion of the seeds is given to small-pox patients as a cooling drink.
Fig. 5. Seeds of A. *Trigonella foenum-graecum*, B. *Cassia fistula*, C. *Pongamia pinnata*, D. *C. tora.*
Fig. 6. Plant of A. *Tamarindus indica*, B. *Cassia tora*, C. *Mucuna pruriens*, D. *Peltophorum pterocarpus*. 
Fig. 7. Plant of A. *Trigonella foenum-graecum*, B. Soxhlet apparatus used for oil extraction, C. *Butea monosperma*. 