

Fumaria parviflora Lam.

Fam. Fumariaceae

Ayurvedic name	Pittapapra
Unani name	Shahtaraa
Hindi name	Shahatra, Pitpapra
English name	Fumitory
Trade name	Pitpapra
Parts used	Whole Plant



Fumaria parviflora

Morphological Characteristics

It is an annual, much branched, diffusely spreading herb with watery latex. It shows much variation in height; *i.e.* 15-60 cm. Leaves are glaucous, segments linear or oblong linear, pointed at the tip, rarely broader than 1 mm short.

Floral Characteristics

Flowers are small, rose to purple in colour, borne in racemes of 15-20 flowers. Racemes are very often sessile and short. The fruit is slightly elongated and bracts are much longer. Sepals are absent or minute (about 0.5 mm long), triangular-ovate acuminate and whitish. Corolla is very small, about 4 mm long, white; upper petal with narrow wings, inner petals with a purple or greenish tip. Fruit is 2 mm long and slightly broader, subround-obovate, very obtuse or subtruncate, obscurely short articulate, rugose when dry and one seeded. Seeds are dark brown in colour having a bitter acrid and astringent taste.

Distribution

Plant is a native of Europe commonly found over the greater parts of India as a winter season weed, mostly in wheat field.

Climate and Soil

Farm land and sunny situation are favourable for its cultivation. It can be grown successfully



on a wide range of soils. However, it thrives best on well drained, loose and friable sandy-loam soils. The favourable pH of soil is 6.5-7.5. It is a cool weather crop and grows best at mean monthly temperature of 15-25⁰ C. The optimum temperature for germination is about 20-26⁰ C. The plants withstand low temperature, but not below 10⁰ C. Those plants grown in temperature below 10⁰ C, become stunted and bushy in appearance. It can be grown in open sun and lower rainfall areas with irrigation facilities.

Propagation Material

The crop is raised through seed. Mature seeds are collected in the month of March-April.

Agro-technique¹⁵

Nursery Technique

Crop raised by direct sowing.

- **Raising Propagules:** Seeds are directly sown in the field at a distance of 30X15 cm apart at 0.5–1.0 cm depth during November in moist soil. This is followed by irrigation after 8-10 days of sowing. Broadcasting is not recommended due to high seed rate as well as inconvenience in cultural operations and harvesting. The seeds germinate in about 12-15 days after sowing.
- **Propagule Rate and Pretreatment:** Before sowing, the seeds should be treated with Thiram or Captan @ 2-3 gm/kg of seeds to avoid damage from fungal diseases. About 4-5 kg seeds are sufficient for planting one hectare land area.

Planting in the Field

- **Land Preparation and Fertilizer Application:** Pitpapra does not require heavy fertilizers. Well rotten FYM @ 12-15 t/ha should be applied at the time of field preparation. This should be supplemented with a fertilizer dose of 40 kg N, 50 kg P₂O₅ and 20 kg K₂O/ha.
- **Transplanting and Optimum Spacing:** It has been observed at Jobner (Rajasthan) that 2.25 lakhs plants/ha can be accommodated at 30X15cm spacing.
- **Intercropping:** The crop can also be grown as an intercrop with wheat and barley.
- **Interculture Operations:** About two weeding and hoeing are required for proper soil aeration. First weeding and hoeing should be done at 35 days after sowing and second at 60 days. In order to maintain optimum plant population, thinning can be done at the time of first hoeing and weeding.
- **Manure and Fertilizers:** The basal dose 40 kg N, 40 kg P₂O₅ and 40 kg K₂O per hectare should be applied before sowing. Besides basal dose, 40 kg of N should be applied as top dressing after 35-40 days of sowing.

¹⁵ Agro-technique study carried out by SKN College of Agriculture, Rajasthan Agriculture University, Jobner, Rajasthan.



Therapeutic Uses

The plant is bitter in taste, cooling and expectorant. It increases 'Vata', removes indigestion, biliousness, fever, burning of the body, fatigue, urinary discharges, vomiting, thirst, enriches the blood and is useful in leprosy. The leaves are bitter and cooling. They cure bilious fever, blood diseases and allay thirst. The dried plant is regarded as efficacious in low fever, and is also used as an anthelmintic, diuretic, diaphoretic and aperients and to purify the blood in skin diseases.

