



Cultivation of Isabgol (Psyllium Husk)

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1. Botanical name- *Plantago Ovata*
2. Family- Plantaginaceae
3. Origin-West India
4. Plant part used- Husk+Seed
5. Chemical-Mucilage
6. Active principle- Protein, Polysaccharides

Distribution- India, West Asia, Pakistan, Persia, Mexico, Mediterranean Regions.

India is the largest producer and exporter of this crop in the world. It is grown as a cash crop in Gujarat, Punjab and Uttar Pradesh. Experimental cultivation of Bangalore has shown that this crop comes up well and gives yield comparable to the traditional areas of Gujarat.

Production Technology

Climate:- It requires a cool climate with dry sunny weather during maturity. seed germination requires 20-25° C. and 30 to 25° C for maturity.

Soil:- Comes up well even on marginal lands. Sandy loam to loamy soils which are well drained and with pH between 7-8 are ideal to raise this crop.

Botany

- Isabgol plant grows upto 30-45 cm height. Stemless with hairs (Adventitious roots)
- Isabgol does not have original stem, which is known as pseudo stem.
- Fruit is a capsule which is ellipsoid in shape.
- Inflorescence of isabgol is long and its length may be 1.5-4.0 cm, which is known as Awn.

Cultivation

Land preparation and sowing: The land is brought to fine tilth and laid out into beds of convenient sizes of irrigation. It is preferable to add 15 tonnes of FYM/ha during the preparation of land and mix it well. The seeds are sown in rows at 15 cm apart or broadcasted during the month of October. After sowing they are covered thinly by raking the soil.

Propagation: - Through Seeds

Varieties: - Gujarat -1, Gujarat-2, TS-1-10, EC-124345, Niharika and Haryana isabgol

Crop Rotations

The following crop rotations are being adopted in various parts of India.

- Soybean-Isabgol
- Maize-Isabgol
- Sorghum-Isabgol
- Onion-Isabgol
- Groundnut – Isabgol
- Maize - Isabgol - Greengram

Plant Protection

Major insect:- White grub

Major diseases:- Powdery mildew; Downy mildew and Rhizoctonia wilt.

Seed Rate:- About 3 kg seeds required for one acre.

Irrigation

1. Immediately after sowing, light irrigation is essential.
2. The seeds germinate in 6-7 days.
3. The crop requires totally 6-7 irrigations for its good productivity in medium sandy soils.

Weeding: - Periodical weeding and hoeing is required.

Manuring:- The medicinal plants have to be grown without chemical fertilizers and use of pesticides. Organic manures like, Farm Yard Manure (FYM), Vermi-Compost, Green Manure etc. may be used as per requirement of the species.

Harvesting

Blooming begins two months after sowing and the crop become ready for harvest in February-March (110-130 days after sowing). When mature, the crop turn yellowish and the spikes turn brownish. The seeds are shed when the spikes are pressed even slightly. Hence, the crop should be harvested after 10 am. Harvested seed must be dried to below 12% moisture to allow for cleaning, milling, and storage. Seed stored for future crops has shown a significant loss in viability after 2 years in storage.

Yield:- Seed 900-1500 kg/ha and Husk 225-375 kg/ha.

Use of Isabgol

Husk is used as single drug for cure of constipation and dysentery. The drug is used in inflammatory conditions of the mucous membrane of gastro intestinal and genitourinary tracts and against Irritation. It is also used as demulcent, cooling and diuretic. The proximate composition of Isabgol husk indicates moisture (9.68%), protein (1.13%), fat (0.27%) and ash content (2.07%). The total dietary fibre (TDF) content was 81.28 per cent.

Isabgol uses in the following conditions are beneficial:

1. Irritable bowel problems
2. Inflammatory bowel diseases like Ulcerative Colitis
3. Heart problems
4. Diabetes Mellitus
5. Hypertension
6. Haemorrhoids
7. Constipation
8. Diarrhoea
9. Obesity
10. Urinary disorders



Fig:- 1 Plant of Isabgol



Fig:-2 Husk of Isabgol