

## TilhanTec Til-1 (IIOS-1101)

- Sesame (*Sesamum indicum* L.) is an ancient oilseed crop with a long history of cultivation in India.
- Sesame seeds/oil is a rich of energy and has a nutty flavor, making it a common ingredient in cuisines around the world.
- During 2022-23, in India the area under sesame was 15.23 lakh ha with a production of 8.02 lakh tons and productivity of 527 kg/ha.
- In ICAR- Indian Institute of Oilseeds research, Hyderabad efforts were made to develop superior plant type of sesame suitable for cultivation during *rabi*-summer season under irrigated conditions for cultivation across the country.
- During the last 5 years, only one white seed sesame variety JCS-2454 was released for all India cultivation during summer season.
- TilhanTec Til-1 is a white seeded variety developed by Indian Institute of Oilseeds research, Hyderabad.
- It was released and notified by the CVRC, Department of Agriculture, Cooperation & Family Welfare vide Notification number S.O. 1560 (E) dated 26<sup>th</sup> March, 2024 for cultivation during *rabi*-summer in Karnataka, Maharashtra, Telangana, Odisha, West Bengal and Tamil Nadu



Field view of Tilhan Tec Til-1

- Tilhantec Til-1 recorded a potential yield of 1700kg/ha in Mandya region of Karnataka state.
- It recorded an average oil yield of 350 kg/ha which is 9 % higher than the white seed national check TKG-22 (321 kg/ha).
- It recorded an average oil content of 45% with a range of 44.6 to 46.4%, whereas TKG-22 recorded 46.8% oil content.

### Few characteristic features of TihanTech Til-1

- TilhanTec Til-1 matures within 92-95 days and takes 44-46 days for 50% flowering.
- The variety attains an average height of 102 cm with 4 productive branches and 71 productive capsules during *rabi* summer.
- TilhanTec Til-1 is a light green plant type bearing alternate oblong capsules with sparse hairs on the capsule and white seed resembles local check Swetha til except for capsule hairiness.



- Seed coat colour is shiny white seed with the thousand seed weight of 3.1 g.

### Suitable climate and soil

- TilhanTec Til-1 is suitable for *rabi*-summer sesame growing regions of Zone I (Karnataka, Maharashtra, and Telangana), and Zone III (Odisha, West Bengal, and Tamil Nadu).

- Long sunshine hours with optimum temperature of 25-35°C during crop growth favours sesame crop
- This variety is suitable for cultivation for wide variety of well- drained soils with optimum pH range is 5.5-7.5
- TilhaneTec Til-1 performs best on sandy loam with adequate soil moisture.
- Preparation of land to fine tilth with 1 or 2 ploughings followed by planking and harrowing is needed
- Avoid water logged/acidic/alkaline soils to grow sesame

### Seed treatment

- Treat the seed with Thiram or Captan (2-3 g/kg) to protect from seed-borne diseases.
- Seed treatment with *Trichoderma viride* (5 g/kg of seed)
- Seed treatment with imidacloprid (70 WS @ 7.5 g/kg seed) to prevent sucking pests.

### Sowing time

- Second fortnight of January (Remaining areas) & First fortnight of March (West Bengal, Odisha & Karnataka)

### Seed rate & Spacing

- Seed rate of 5 kg/ha (2 kg/acre) is recommended
- To facilitate easy seeding and even distribution, seed is mixed with either sand or dry soil or well sieved farm yard manure in 1:20 ratio.
- Spacing of 30 cm x 10 cm (3.33 lakh plants/acre) or 45 cm x 15 cm (1.33 lakh plants/plant)
- Seed drill: Seed rate of 3 kg/ha is optimum when seed drill is used for line sowing

### Fertilizer doses & time of fertilizer's application

- Incorporate FYM (2 t/acre) and neem cake or castor cake (0.4 t/acre) well before sowing.
- General dose of is 16:16:8 N:P2O5:K2O kg/acre. State wise recommendation differs and fertilizer dose should be subjected to soil test-based fertilizer application.

- TilhanTec Til-1 recorded 761 kg/ha of seed yield and responded favorably to 125% recommended dose of fertilizer (RDF) during rabi/summer.

### Weed control

- The crop is very sensitive to weed competition during the first 20-25 days.
- Manual weeding should be done twice at 15-20 days after sowing (DAS) and 40-45 DAS.

### Diseases and pest control

TilhanTec Til-1 is tolerant to *Macrophomina* root and shoot rot, *Alternaria* and *Cerospora* leaf spot. Other important pest & diseases include

### Leaf webber or capsule borer:

- Treat the seed with imidacloprid 70WS @ 7.5 g/kg or thiamethoxam 25 WG @ 5 g/kg.
- Spray NSKE 5% or neem oil @ 5 ml/l or neem gold 0.3% @ 5 ml/l or spray profenofos 50EC @ 2 ml/l or spinosad 45SC @ 0.2 ml/l or chlorpyrifos 20EC @ 2 ml/l or quinalphos 25EC @ 2 ml/l at 30 and 45 DAS.
- **Sesame leafhoppers:** Spray NSKE 5% or spray dimethoate 30EC @ 1.5 ml/l or imidacloprid 17.8 SL @ 0.3 ml/l or acetamiprid 20SP @ 0.3 g/l or thiamethoxam @ 0.3 g/l or thiacloprid 21.7SC @ 1 ml/l or oxydemeton-methyl 25EC @ 1.5 ml/l.



Leaf webber/capsule borer



Leaf hopper

**Powdery mildew:** Spray wettable sulphur (2 g/l) or tilt (1 ml/l) or karathane (1 g/l) two times at 10 days interval.

**Phyllody:** Rogue out diseased plants and Spray neem oil (5 ml/l) or dimethoate (1.5 ml/l) at 30, 40 and 60 DAS.



Powdery Mildew

Phyllody

### Irrigation schedule

- Irrigate the crop at sowing, 30-35 DAS (flowering), and 45-55 DAS (seed filling) and 55-65 DAS (Seed ripening).
- Avoid water logging in the field.

### Harvesting and threshing

- When leaves and capsules turn to yellow and defoliation starts, harvest the crop. After harvest, bundles should be stacked in threshing floor for five to six days before threshing.
- Seeds should be well dried (8-9% moisture content) for storage
- Yield potential: 1700 kg/ha; Average yield: 950 kg/ha

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## TilhanTec Til-1 (IIOS-1101) A white seeded Sesame Variety for Summer-rabi season



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