

Sesame Cultivation: Tips To Be Adopted By Farmers For Effective Cultivation

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Abstract

Sesame is an important oil seed crop. Sesame is photosensitive and thermosensitive crop. Sesame is highly sensitive crop to microclimate. Irrigation and fertilizer application plays a major role in sesame seed yields. The main objective of this article is to discuss on effective cultivation techniques which helps farmers for high yields.

Keywords: Sesame, temperature, fertilizers, irrigation, cultivation, yield

Introduction

Sesame is an important oil seed crop known as Queen of Oil seeds. Sesame is popularly known as til, Nuvvulu, Beni seed and gingelly. *Sesamum indicum* L. is the most cultivated species. Sesame is originated in Africa and spread early through west Asia to India, China and Japan which are found to be secondary distribution centres (Yamanura, 2008). Sesame seed generally available in white, brown and black seed. Sesame is majorly used for edible oil and confectionaries. Sesame oil used in medicines, cosmetics and industrial uses (Sirisha *et al.*, 2022), (Elleuch, 2007) in spite of its edible use. Sesame oil is used to cure skin diseases. Sesame seed is also used in Rituals in India. Sesame seed contains 50-55 percent oil and 25 % protein. Sesame is a short duration crop ranging from 90-110 days duration. Sesame is warm temperature loving crop. Sesame cannot with stand low temperatures. Sesame is very sensitive crop. Sesame is highly remunerative crop. In farmers point of view, there is belief that, if climate sets up well, sesame gives good yields and fetches high returns with low cost of cultivation within short span of time. Temperatures and moisture play a major role in sesame growth and productivity. Sesame is sensitive to microclimate. Sesame is a thermo sensitive and photo sensitive crop. Sesame is a cash crop in many African countries. Sesame grows well in temperatures ranging from 20- 35 °C. Sesame grows well in warm dry temperatures.



Important points to be taken care in sesame for obtaining higher yield

The present discussion is to enlighten some important cultivation tips to be adopted by the farmers.

Temperature

Temperature plays a major key role in growth of sesame. Sesame is susceptible to cold and frost. Sesame is thermosensitive crop. Micro climate plays a major role in Sesame seed yield. Sesame is mostly suitable to the areas with temperature 20-35°C (Sirisha *et al.*, 2022). Temperature below 20 ° c is not at all suitable for sesame. Low temperatures during seedling stage affects the growth of sesame population. At the time of flowering the temperatures should not be high more than 38 ° c results in reduction in seed yield. Very low temperatures also affect flowering. Hence farmers have to plan the cultivation of crop based on the environment.

Soil

Sesame requires medium to light textured soils. Saline and alkaline soils are not suitable. Sesame comes up well in soils with neutral pH. Germination, growth and yield is affected in problematic soils. Sesame adopts well in well drained soils. Sesame is not suitable to waterlogged soils (Haile 2009).

Tillage and Field preparation

Tillage plays a major role Land with fine tilth is more suitable. Fine tilth helps for good establishment of the crop. As the seed is very small, fine tilth helps for good establishment of sesame crop.

Fertilizers

In Sesame crop, generally farmers neglect the fertilizer application which hampers the seed yield. In final stage of tillage operation, the recommended fertilizers of phosphorus, Potash and half of the Nitrogen fertilizer should be applied (8:8:16). The remaining half dose of Nitrogen



fertilizer should be applied at the time of flowering. Application of recommended fertilizers result in good grain development.

Seeds and Sowing

Generally, sesame seeds are available in brown, black and white. Based on the market demand of the specific locations, the varieties would be selected. Sesame seeds has to mixed along with sand or rice grains in 1:1 ratio and sown. This helps uniform distribution of seed. Due to uniform distribution, the seeds germinate, plants grow spaciouly and yields are improved.

Varieties

State wise suitable sesame varieties

Sate	Varieties
Gujarath	GJT-5, GJT-6, GT-1, GT-2, GT-3, GT-4, GT-10
Madhya Pradesh, Chattisgarh	TKG-21, TKG-22, TKG-55, JTS-8, TKG-306, TKG-308, PKDS-8, PKDS-11, PKDS-12
Rajasthan	RT-46, RT-54, RT-103, RT-125, RT-127, RT-346, RT-351
Maharashtra	JLT-408, AKT-64, AKT-101, JLT-408, PKVNT-11, Phule Til.1
Uttar Pradesh	T-78, Sekhar, Pragati, Tarun
Tamil Nadu	VRI-3, Co-1, TSS-6, PAiyur-1, VRI-1, VRI-2, TMV-7
West Bengal	Rama, Savitri, Tilottama (B-67),
Orissa	Nirmala, Prachi, Amrit, Shubra, Smarak, Usha, Uma, Vinayak
Andhra Pradesh ad Telangana	Sarada, Gautam, Varaha, JCS-1020, Swetha Til, Hima, Rajeswari
Kerala	Thiathara, Thilarani, Thilak, Kayamkulam-1
Karnataka	DS-1, DS-5, DSS-9
Punjab	PT-1, TC-25, TC-289
Bihar	Krishna
Haryana	HT-1, HT-2
Himachal pradesh	Brijeshwari

Source: <https://icar-iior.org.in> Sesame Technology for maximizing production

Seed Treatment

Seed treatment with imidacloprid 5 ml/kg of seed helps to protect the seed from ants, sucking pest in early stages of crop growth. In the areas where disease incidence of sesame is observed, seed treatment with Thiram/Mancozeb/Captan @ 3g per kg of seed is recommended to reduce the incidence of diseases in intial stages of crop growth.



Seed Treatment of sesame

Irrigation and water management

Sesame is suitable to well drained soils. Sesame is susceptible to water logging (Wang *et al.*, 2016). Excess irrigation is not advisable to farmers. It requires very light irrigation. Irrigation to sesame crop should be given with low slow movement of water flow. The high force of water flow should not be directly exposed to sesame plants as the would be affected. Irrigation should be given at sowing, flowering and capsule development stage. Irrigation at preharvest stage to sesame is highly undesirable. Dry period during last 15-20 days of crop (preharvest) is desirable. Rainfall or irrigation during preharvest stage results in poor yields and poor quality of the produce.



Sesame Crop Affected Due to Heavy Irrigation

Harvesting

The sesame crop should be harvested when the crop turns lemon yellow colour. When the capsule at $\frac{3}{4}$ th part of the plant is opened, the colour of the seed changes, representing the



crop is ready to harvest. The crop is harvested and heaped. After 4-5 days, the sesame is sun dried and threshed. Irrigation or rains at harvesting stage of sesame severely attacks the seed yield.

Conclusions

Sesame is photosensitive and thermosensitive crop. Environment plays a major role in sesame seed yields. The major tips discussed on temperature, fertilizer application, irrigation plays a major role in sesame yields. Hence, the farmers should adopt these techniques for achieving higher yields in sesame.

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