Sesamum in Odisha and Its Disease Pest Management

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About Sesamum
Total annual Oilseed area is about 7.71 lakh hectares (11.36% to the total food grain area of Odisha). Out of that, annual Sesame area is about 260.62 thousand ha. (33.81% of the total oilseed area of Odisha) and tops the list in acreage in the State. The crop is cultivated in all the 30 districts of the State. It is grown in Kharif rained (June & August sowing), Pre-Rabi residual moisture (September & October) & summer irrigated (Jan-March). The area under Kharif is about 196.80 thousand ha., mostly in plateau region; and in Rabi/summer, the area is about 63.82 thousand ha. mostly in coastal delta track. Major districts under Sesame are: Angul, Malkangiri, Sundargarh, Sambalpur, Dhenkanal and Bolangir.

Production
The annual oilseed production to the total food grain is 7.2%. The Sesamum production is 15.74% to the total oilseed production of the State and 2nd highest in order. The high productivity season is summer irrigated and the season is limited to coastal region of the State.

Productivity
The lead productivity districts are Bhadrak, Gajapati, Balasore, Kalahandi, and Jagatsinghpur. The productivity is reduced mainly due to major fungal diseases like wilt caused by Macrophomina sp. and Fusarium sp., leaf spot disease caused by Alternaria sp. and Cercospora sp. as well as Phyllody and insect attack by capsule borer and hawk moth. Besides major disease and pest attack productivity also reduced due to regular vagaries of monsoon every year. Followings are some of the major plant protection measures which will reduce the disease and pest load and pushes the yield about 20% more than the average yield.

1. Deep summer ploughing.
2. Destruction of highly infected crop residue.
3. Use Varieties like Prachi, Nirmala and Kalika which are resistance to thrips and wilt.
4. Use Varieties like Nirmala, Uma and Prachi which are resistance to Phyllody.
5. Early sown Kharif crop escapes capsule damage by capsule borer to a great extent than late sown crop in Odisha climate.
6. Provide good drainage facilities.
7. Do crop rotation or change the field after every two to three years.
8. Irrigate the crop every two weeks interval to avoid stress condition during Summer season.
9. Seed treatment with Imidaclopid (7.5/kg) and foliar spray of profenophos 50 EC 2 ml/l was most effective in reducing phyllody as well as capsule borer incidence.

10. The highly infected phyllody plants should be uprooted and burn it.

11. Antigastra (Capsule borer) infestation can be minimized on intercropping with (sesame + green gram 3:3, sesame + black gram 3:3). The production of sesame + cluster bean in intercropping is most remunerative.

12. Soil application of neem cake @ 250 kg/ha + Seed Treatment with (Thiram 0.2%) + Carbendazim 0.1%) + spray of mancozeb 0.25% + Profenofos 50 EC @ 2ml/lit. of water at 30 and 45 Days after sowing recorded least incidence of Alternaria and Cercospora leaf spot and capsule borer attack.

13. Spraying of quintal 0.1% (Carbendazim + Iprodione) or Iprodione (rovral) 0.2% two times (30 and 45 Days) was effective against Alternaria and Cercospora.

PHOTOGRAPH SHOWING PEST AND DISEASE INCIDENCE IN SESAMUM CROP

A. Wilting due to Macromomphomina phaseolina

B. Phyllody of Sesamum by Hopper

C. Hawk damage in Sesamum

D. Capsule borer in Sesamum

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