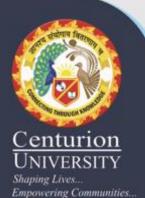




SESAME



SESAME

- Scientific name:- (<u>Sesamum indicum</u>)
- Chromosome no:- (2n=26)
- It is an ancient oil seed crop of tropics and warm sub-tropics. It is also called as gingelly.
- Origin: India, and Ethopia (Africa)
- **Distribution:** India, Pakistan, Africa, China, Mexico, Iran, Iraq etc.
- Progenitors: <u>Sesamum</u> angustifolium
- <u>S</u>. <u>radiatum</u>
- <u>S</u>. <u>alatum</u>



Wild species utilised in breeding programme

- 1. S.alatum(2n = 26)
- Resistant to phyllody *S.alatum* x *S.indicum* alatum is having dormancy.
- 2. S.malabaricum (2n = 26) Occurs in Travancore of Kerala. It freely crosses with cultivated gingelly. Oil content is low 32% It is utilised to induce male sterility in cultivated sesame.
- 3. *S.laciniatum* 2n = 32

Tolerant to phyllody, drought and jassid resistant. Fertile auto allopoly ploid produced by crossing *S.indicum* x S.*laciniatum*

- Sterile, Double.
- 4. *S.prostratum* occurs in S.India (2n = 26) Tolerant to drought.



Breeding objectives

1. Breeding high yielding varieties tolerant to drought. Eg:- Thillarani (KAU)

2. Breeding white seeded varieties

Finest quality of oil is obtained from white seeded lines. Eg :- G.Til 4

3. Development of mono stemmed varieties.

By this more population per unit area and yield can be increased. Monostemmed varieties are low yielders.

4. Development of multicapsule / axil and multicarpellary varieties.

5. Rice fallow varieties :

Shorter in duration.eg:- TMV 3, TMV 4, TMV 6, VRI 1

6. Non- shattering varieties

African lines.(Done in Kasetsart university of sesame breeding project)

7. Resistant to disease

Powdery mildew (TIL 10)

Phyllody - transfer from wild species.(TMV 4)



Breeding Methods :

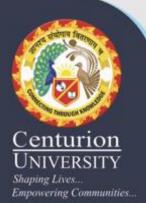
- 1. Introduction : African lines.
- 2. Pure line selection.
- TMV6 Andhra local.
- 3. Hybridization and selection.
- a) Inter varietial
- b) Inter specific : Male sterile lines evolved by crossing with *S.malabaricum*.
- 4. Population improvement
- 5. Poly ploidy breeding
- 6. Heterosis breeding

Epipetalous nature makes emasculation and crossing easier

Use of CMS lines is also being attempted.

7. Embryo rescue technique.

Varieties Gouri, Madhavi, Rajeshwari, Swetha



THANK YOU