



Centurion
UNIVERSITY

Session121: Senji (Indian Clover) Seed Production



Introduction

Botanical name: *Melilotus alba Desrousseaux*
Melilotus officinalis L. Lamarck

Senji or Indian sweet clover is important forage legume crop having annual or biennial growth habit

Its yellow and white variety is used for fodder purpose

It contains 60% of digestion nutrients and 16.57% crude protein

Pods of yellow sweet clover are one or two seeded and seeds are smooth, ovoid-elliptical, 1.5-3 mm long, and 1.5mm broad, yellow or greenish yellow, sometimes with purple spots



Land requirements and field inspection

Land Requirements:

- Land used for seed production should be free from volunteer plant
- The soil of the field should be preferably loamy to sandy loam with neutral to alkaline reaction and rich in lime, phosphorous and potash
- Land should be well drainage because crop is not tolerating to water logging condition

Isolation distance:

Contaminants	Minimum distance(Meter)	
	Foundation seed	Certified seed
Field from other variety	50	25
Fields of the same variety not conforming to varietal purity requirements for certification	50	25

Field Inspection

- A minimum of two inspections shall be made from the time the crop approaches flowering until it is ready for harvesting

Brief cultural practices

Land preparation:

- One to two harrowing is sufficient bring the seed field to the desired tilt

Time of sowing:

- The best time for seed sowing is mid November

Sources of seed:

- Obtained nucleus/breeder/foundation seeds from a **source approved by a certification agency**

Methods of sowing:

- ✓ The seed is covered with husk
- ✓ Therefore, it is essential to beat the seeds with sticks or scarify them to breakup the outer skin
- ✓ This as well as soaking seeds overnight before sowing facilitates quicker germination

Continued

Brief cultural practices

- The seed crop should invariably be sown in row 45-50cm apart
- The depth of seedling should not be more than 1.5cm
- The field should be irrigated immediately after sowing

Seed rate: 35kg/ha

Varieties:

- Senji Safed-76, FOS-1, YSL-106, HFWS-55, PC-5 etc.

Fertilizer:

- Application of 20-25kg urea and 125kg super phosphate per ha has been found to give satisfactory seed yield

Brief cultural practices

Irrigation:

- The winter rains of 100-125mm in two to three showers generally suffice to meet its water requirements
- One irrigation however, may be given after five to six weeks, if the winter rains fail or severe cold prevails

Interculture:

- ✓ For obtaining good quality seed it is necessary to keep the field free from weeds
- ✓ One to two hand weedings done to achieve weed free field

Roguing:

- ✓ Roguing for removal of off-types should be done at pre-flowering and flowering to fruit stage
- ✓ The off-types could be distinguished on the basis of difference in plant height, pigmentation on stem and leaf, flower colour and pod characteristics

Brief cultural practices

Harvesting:

- The seed crop can be harvested when two third of the pods have turned brown
- The crop after harvesting should be left in the field for three to four days

Threshing:

- ✓ The threshing should be done when the seeds are well dried
- ✓ After threshing and cleaning, the seed should be further dried to 8-10% moisture content before storage

Seed yield:

- Average seed yield is **8-10qtl/ha**



Seed Standard

Factor	Standards for each class	
	Foundation	Certified
Pure seed (minimum)	98.0%	98.0%
Inert matter (maximum)	2.0%	2.0%
Other crop seeds (maximum)	10/kg	20/kg
Total weed seeds (maximum) 10/kg 20/kg	10/kg	20/kg
*Objectionable weed seeds (maximum)	5/kg	10/kg
Germination including hard seeds (minimum)	80%	80%
Moisture (maximum)	10.0%	10.0%
For vapour-proof containers (maximum)	7.0%	7.0%

Specific requirements:

Maximum permitted off-types for foundation and certified at the final inspection should be 0.20% and 1.0% respectively



Centurion
UNIVERSITY

*Thank
you*

