

LECTURE 14

LINSEED

Linum usitatissimum L.

- **Origin** – South western Asia
 - ✓ In India, it is grown in M.P., U.P., Maharashtra, Bihar, Rajasthan, Karnataka and West Bengal
 - ✓ Grown for fibre and oil extraction
- **Climate**
 - Needs cooler climate
 - Temperature - 25 to 30° C during germination
 - 15 to 20° C during seed formation, but fibre requires still lower temperature
 - As a rainfed crop, grown in areas receiving 450-750mm of rainfall
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 - Higher temp at this stage induces early flowering
 - Pearl millet does not resist drought but cut short its life cycle and comes flowering early under adverse conditions
 - Rainfall during flowering & grain formation- poor grain setting
 - Rain at grain maturity - ergot disease due to high humidity & low temp.
 - Hence optimum time of sowing is very vital for this crop
- **Soil**
 - Deep cotton soil of central India, alluvial loam soil of North India, soil must be well drained
- **Improved varieties**
 - Neelam , K2, Himilini, Jawahar 17,18, Mukta, Chambal
- **Field preparation**
 - Fine and smooth seed bed free from clods
 - Free of termites and ants
- **Sowing**
 - Mid September to Mid October – rainfed crop
 - Mid October - Mid November
 - In U.P. Linseed is sown in standing rice crop as relay crop during September – October. This system of sowing is also called as paira or Utera cropping

- **Seed rate**
 - 20-30 kg/ha for line sowing, 35-40 kg/ha for broad casting
 - Spacing – 20 to 30 cm of row spacing
- **Nutrient management**
 - Irrigated – 30 to 40kg of N & P
 - Rainfed – 20 to 30 kg/ha of N & P
 - Relay cropping – 10 to 15 kg/ha of N
- **Weed management**
 - Weed free condition upto 25 DAS
 - 2 hand weedings at 21 DAS and after 35 to 40 DAS
- **Retting**
 - It is a process of fibre extraction
 - Kinds of retting
 - Hot water, cold water, snow, dew retting
 - Temp decides duration of retting and quality
 - Standing warm water is more suitable than running cold water
 - Double retting is in practice in cold countries
 - Retting period is 4-6 days
 - After retting cleaned in running water, dried and ready for scutching
 - To separate the valuable fibers of (flax, for example) from the woody parts by beating
 - Rainfed areas in India water availability is problem hence they are not opting to fibre flax
- **Water management**
 - Light irrigations at 35 DAS and 65 DAS
- **Harvesting**
 - At red ripe stage for fibre crop
 - For grain and fibre at physiological maturity
 - Storage moisture – 10 to 12%
 - Oil content in seed – 36 to 42%
- **Grain yield**
 - Irrigated 1.0 to 1.2 t/ha

Multiple choice questions

- 70% of the production of Linseed in India is in _____
a. **M.P. & U.P** b. Tamil Nadu c. Karnataka
- Soil type suitable for Linseed cultivation is _____
a. **Clay loam soils** b. Loam soils c. Heavy soils
- The centre of origin of linseed is _____
a. S. Africa b. America **c. Mediterranean**
- The inflorescence in linseed is _____
a. Raceme b. Ear **c. Cymose**
- Optimum temperature towards seed formation of linseed ranges between____
a. **15-20⁰c** b. **20-22⁰c** c. **25-30⁰c**
- Optimum temperatures for proper germination of linseed is _____
a. 20-22⁰c **b. 25-30⁰c** c. 15⁰c
- The recommended seed rate for line sowing of linseed is_____kg/ha
a. 20 **b. 10** c. 40
- The recommended seed rate for sowing of linseed by broadcasting is_____kg/ha
a. 30-40 **b. 20-30** c. 40-50
- Linseed is commonly known as _____ in western countries
a. Fiber **b. Flax** c. Coir
- Linseed oil contains _____ % linolenic acid
a. **50-60** b. 20-30 c. 40-50
- The linseed fruit is known as _____
a. Caryopsis b. Head **c. Capsule**
- The linseed crop besides oil is grown for centuries for extraction of _____
a. **Fiber** b. Dye c. Resins
- Linseed seed normally contains protein and oil percent _____ respectively
a. 40 & 20 **b. 20 & 40** c. 40 & 30