

Groundnut (*Rabi/Summer*) *(Arachis hypogaea)*

Variety: JL-24

Soil Type:

Well drained, light textured, loose, friable, sandy loam soil with medium organic matter content is suitable. The desirable pH range is 5.5 to 7.5.

Land Preparation:

The soil should be prepared thoroughly to get a fine tilth which helps in obtaining good germination.

To get rid of water logging, broad bed and furrow system should be adopted. In this system, raised bed of 15 cm height and 1.2 m width should be prepared.

Time of Sowing:

Rabi groundnut:

Mid-September to Mid-October (if sowing time is delayed, crop duration will be increased)

Summer groundnut: Mid January to February.

Seed Selection and Treatment:

Bold and well filled pods should be selected and shelled just before sowing since the viability in the stored kernels deteriorates fast. The small shriveled, damaged and broken kernels should be treated before sowing with carboxin @ 2 g/kg kernels.

Seed rate:

For bunch type 120 kg/ha

Method of Sowing:

Seed should be sown in line at 5-6 cm depth of soil.

Spacing:

Row to row: 30 cm **Plant to plant:** 10 cm

Manures and Fertilizers: Compost of FYM @ 10 t/ha should be applied. The following amounts of fertilizer should be applied basal.

Nutrient	Requirement (kg/ha)	Form	Fertilizer requirement	
			kg/ha	kg/bigha
N	20	Urea	44	6
P ₂ O ₅	40	SSP	250	33
K ₂ O	30	MOP	50	7

Interculture:

Weeds should be controlled manually 30-35 days (flower initiation stage) after sowing.

Water Management:

Groundnut crop requires on an average 400-500 mm of water. The critical stages are flowering, pegging and pod development. If the crop does not receive rain during the critical stages, life saving irrigation is to be given.

Plant Protection:**A). Disease:**

The most common diseases occurring on groundnut are: *Cercospora* (Tikka) leaf spots, rust, collar rot, dry root rot, stem rot and bud necrosis. These diseases can be effectively controlled by adopting the following control measures:

- **Tikka and rust:** Hexaconazole 5EC @ 0.2% should be given as soon as the initial symptoms are detected followed by a second spray after 15-20 days.
- **Collar rot, stem rot and dry root rot:** The seeds should be treated with carboxin @ 2g/kg of kernels.
- **Bud necrosis:** Since this is caused by a virus, no control measure is available. To minimize infestation, thrips (the vector transmitting the disease) should be controlled. Cultural methods like early planting, closer spacing and intercropping with tall crop which act as a barrier for the migration of vector, will reduce the disease.

B). Insect Pests:

Insect pests which cause economic losses are jassids, thrips, leaf miner, aphids etc. These insect pests can be controlled by application of lambda-cyhalothrin 5EC @ 10g a.i./ha or 150-250 ml/ha.

Harvesting:

The prominent symptoms of maturity are yellowing of foliage and dropping of old leaves. The pod is mature when it becomes hard and there is dark tannin discolouration inside the shell. The seed becomes unwrinkled and the testa develops colour. A common method used to predict optimum time for harvesting is to dig plants when 75% of the pods are fully mature. Generally, *rabi* groundnut (bunch varieties) matures at 125-130 days, while summer groundnut (bunch varieties) matures at the age of 115-120 days.

Drying and Storage:

Rabi/summer groundnut loses viability if dried in the open sun. The pods could safely be preserved for the next year as follows:

1. If the crop is irrigated, delay harvest (at least one week) after giving the last irrigation to lower the pod moisture level.
2. After uprooting the plants tie them up with pods intact into small bundles and keep the bundles in a small layer with pods upward under shade.

3. When the bundles are dried, the pods may be detached from the plants and spread in a thin layer under shade for further lowering the pod moisture level to 7-8%.
4. The drying of the pod can be judged from the following tests.
 - (a) The pods should give a rattling sound when shaken.
 - (b) When a kernel is pressed between thumb and index finger, it should easily split into 2 cotyledons.
 - (c) When the surface of the kernel is rubbed hard a portion of the testa should come off.
5. The dried pods may be stored in airtight containers so as to prevent entry of moisture inside the pods during the monsoon period.