

Open Cultivation of French Bean variety Zorin bean

Scientific Name: Phaseolus vulgaris

Family: Leguminosae

French Bean is one of the most popular leguminous vegetable crops widely grown in Mizoram. It is a short duration crop and farmers get more profit in a short period. It is mainly grown in Kharif but it can be grown round the year where irrigation facilities are available except winter in hilly region. It is considered to be a very rich source of protein, vitamin and minerals.

Climate:

The soil and climatic conditions of this region is highly suitable for cultivation of French bean. The optimum temperature range is 15-25°C. It is highly sensitive to frost and water logging.

Soil:

French Bean can be grown on all types of soil but loams and clay loams with pH range of 5.5-6.0 are best for obtaining high yield.

Preparation of soil:

For preparation of field, plough and loosen the soils to 15-25 cm deep for good growth of root.

Seed Treatment:

The plants are susceptible to many diseases and thus seed treatments aids in getting good productivity. Treat the seeds with Trichoderma

4g/kg or Thiram or Carbendazim @ 2g/kg of seed 24 hours before sowing to control fungal diseases.

Spacing and seed rate:

The seeds are sown with the spacing of row to row 60-65 cm and plant to plant 10-12 cm. The seeds should be sown at 2-3 cm depth in soil. The seed rate is about 25kg/ha.

Sowing Time:

It can be grown throughout the year in three seasons Kharif-June/July, Rabi-October/November and Summer-February/March.

Nutrient Management:

The requirement of fertilizers depends upon the condition of the soil. Being leguminous crop, it requirement for fertilizers is relatively lower than other crops. Apply FYM or Compost 25t/ha and NPK @ 60:90-120:50kg/ha. Half dose of N and full dose of Phosphorus and Potash are applied at the time of sowing and remaining half dose of N should be applied after one month of sowing.

Micronutrients are also very important for high productivity of French bean, hence 0.1% of B, Cu, Mo, Zn, Mn and Mg is recommended for improving the quality and pod formation.

Excessive application of N should be avoided as it may lead to vigorous vegetative growth at expense of pod formation.

Weed Control:

Crop should be kept weed free. Weeding should be given 20-25 days and 40-45 days after sowing.

Irrigation:

French Bean is a shallow rooted crop. It is sensitive to both water excess and water stress condition. Deform pods can result from water stress due to low moisture or excessive evaporation loss.

Staking:

French Bean needs stake in order to obtain high yield. Bamboo sticks or any locally available materials should be erected when plants start vining.

Harvesting:

The first crop of the green pods becomes ready for harvest within 2 months from sowing. Pick the pods by hand before they are fully grown. If it is grown for seed, beans should be allowed to mature fully and then harvested.

Yield:

A yield of 100-140 q/ha can be obtained from a good crop

Post Harvest Management:

French beans are highly perishable and rapid cooling after harvesting is important to maintain quality. After harvesting, beans are washed and culled and diseased, inferior pods are destroyed. Optimum storage and transit temperature are 5-7°C. Under these conditions storage life are increases up to 20- 25days.

Plant Protection Measures:

1)Anthracnose: Use of healthy seeds, clean cultivation. Sulfur fungicides like Thiram, DithaneZ-78

and the systemic fungicide like Benlate or Bavistin@ 2 g/l of water should be used.

2) Leaf Spot: Circular to angular spots with gray center and reddish border appear on leaves. They gradually cover the entire leaf surface as more number of spots appears. Spraying with copper fungicide @ 3-4g/l or Thiram@ 2g/l at 12-15 days interval can control the disease.

3) Bean beetle: Both adults and larvae feed on all parts of the plants. Spraying of Malathion 0.1 % checks the menace.

4)Aphid: The tiny insects are gray or black in colour, which suck the cell sap of the tender parts of the plant, mostly the leaves. When the insects are abundant, they attack the developing pods causing reduction in growth and yield



*Prepared By : R.Vanlalduali SMS (Soil Science)
KVK Champhai District, Mizoram*

Department of Biotechnology
Govt. Of India Sponsored

Biotech KISAN Hub,
Mizoram University, Aizawl

Open Cultivation of French Bean Variety *Zorin Bean* (In English Language)



Developed by
**Krishi Vigyan Kendra Govt. of Mizoram
District Champhai, Khawzawl**

Phone No.: 9615591207
Email: duatikawlni@gmail.com

