which consists of the mycellium and spores of the fungus.

- The number and weight of the pods are reduced.

Management:

- Avoid late planting.
- After harvest collect the plants and burn them.
- Spray Sulfex @ 3 kg/ha in 1000 litre water. The first spray is done after appearance of the disease, the second spray should be done 14 days after the first spray.
- Dusting Sulfex @ 25 kg/ha is also recommended.

Rust – The disease is caused by the fungus Uromyces fabae

Symptoms:

- The stem of the plant becomes malformed and the affected plant dies.
- All the green parts of the plant are affected.
- The earliest symptoms are the yellow spots having aecia in round or elongated clusters.
- The uredo pustules develop which are powdery and light brown in appearance.

Management:

- After harvest collect the plants and burn them.
- Follow suitable crop rotation with non leguminous crops.

Harvesting: At maturity, all the leaves turn yellow and fall down leaving behind stalks with pods. Care should be taken while threshing is done i.e, not to over beat or over trample which may damage the seed coat and reduce quality. Moisture content of 13 to 14 % in seed is ideal for threshing purpose.

Yield: By adopting zero tillage practices, 8-12 quintal / ha of field pea pods can be obtained.

Courtesy :
ICAR Research Complex for NEH Region,
Sikkim centre, Tadong, Gangtok.

ZERO TILLAGE IN FIELD PEA CULTIVATION

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Zero tillage (ZT) is an integral feature of conservation agriculture. Zero tillage is an extreme form of minimum tillage and it is also known as no till farming or as direct drilling.

- It is a way of growing crops from year to year without disturbing the soil through tillage
- It is an agricultural technique which increases the organic matter retention and cycling of nutrients and increases the amount of water that infiltrates in to the soil.
- It reduces or eliminates soil erosion in many agricultural regions.
- Helps to increase the amount and variety of life in or on the soil including disease causing organisms and disease suppressing organisms.
- The most powerful benefit of zero tillage is improvement in soil biological fertility making soil more resilient.

Field preparation: After harvesting of paddy, weeds are removed with the help of a sickle.

Recommended varieties: Aman, Adarsh, Prakash, VL 42, HUDP – 15, Vikash, IPFD 6-3.

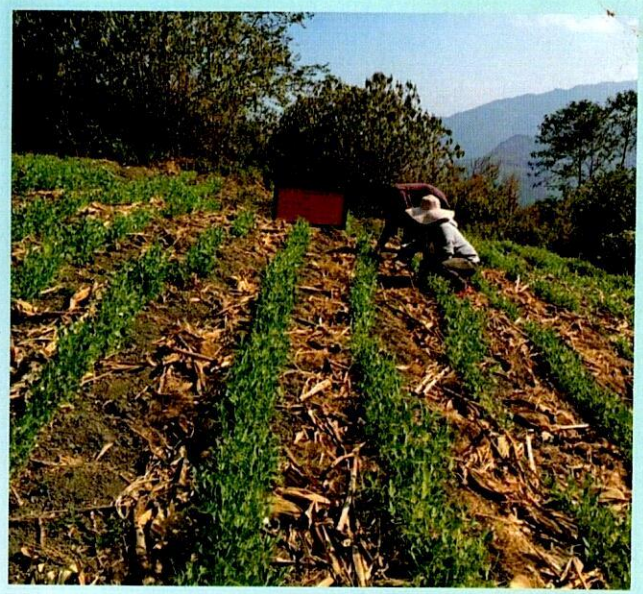
Seed rate and spacing: 80 to 100 kg/ha. Seed treatment with Rhizobium inoculation @ 200g/kg seed should be practiced before sowing of the seeds. The spacing of Row and plant should be 30×10 cm.

Sowing: In Zero Tillage, a small opening is made on the soil surface for placing the seeds. A prototype zero till drill machine can be used for sowing the seeds.

Nutrient management: As field pea is a leguminous crop it requires only nitrogen as a starter dose. Apply vermicompost or neem cake @ 1 tonne/ha in the furrows opened for placing of the seeds.

Weed management: The critical period of crop weed competition is 15-40 days after sowing which reduces crop yield if not managed in time. Hence, 2 hand weedings at 15 and 35 days after sowing should be carried in the field.

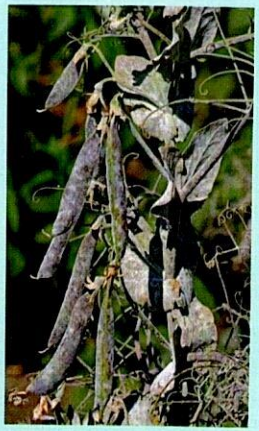
Mulching: Soil moisture determines the germination and establishment of field pea seedlings. Mulching with paddy straw helps maintain optimum soil moisture, aids in seed establishment and promotes good crop growth.



Important Disease Management:

Powdery mildew – It is a fungal disease caused by Erysiphe polygoni, a serious disease of field pea.

Symptoms:



- The first symptom appear on the leaves, and then on other green parts of the plant.
- They are characterized by white powdery, patchy growth on both the surface of the leaf, tendrils, pods and stem.
- In advanced stage, entire plant surface may be covered with white powder