

Snow peas is a legume crop. It is a variety of pea eaten whole in its pod while still unripe. Snow peas have the thinner walls of two edible pods variants. This is the major difference between them and closed related garden peas which lacks edible pods. They are sources of vitamin A and C and is eaten as raw, lightly boiled, steamed or as stir fries. As a legume crop, they host beneficial bacterial, rhizobia in their root nodules which fix nitrogen in the soil (mutualistic relationship) and therefore a useful crop to grow inter-cropped with green leafy vegetables that benefit from high nitrogen content in the soil.

### **SNOW PEAS WORLD DISTRIBUTION**

Snow peas are majorly grown in Western Australia, parts of Asia and France. In Africa, the large producers are South Africa, Ethiopia and Zimbabwe while in East Africa Kenya and Uganda are the largest producers. In Kenya, Nyandarua and Transnzoia are largest producers but is well distributed in other parts of Kenya.

### **SNOW PEAS SOIL REQUIREMENTS**

Snow peas requires adequate air circulation to the beneficial nitrogen fixing bacteria that live on the plant root. Constant air supply is ensured by avoiding waterlogged areas and not compressing the soils after planting

Snow peas prefer fertile Sandy loams that drains well, but tolerate most soils except impermeable clay. A P. H level of 6.0-7.5 is preferred. In case of soils with lower P. H, **1kg of HUMIPower** can be mixed with 50kg fertilizer or manure. This raises the soil P. H since low soil P. H has adverse effects on crops such as;

- Toxicity of Aluminum which becomes soluble
- Affects nutrient availability
- Leaching of Mg, K, and Ca since they become soluble
- Lack of nodulation of legumes

### **CLIMATIC REQUIREMENTS**

They thrive well in cool weather in upper and lower highlands at altitude of between 1500-2600 m above the sea level and temperatures of between 12°C – 20°C with well distributed rainfall of 1500mm-2100mm per year and well drained soils rich in organic matter.

## PESTS AND DISEASES

### PESTS

- **Aphids**(*Acyrtosiphon pisum*)

Aphids are very common sap-sucking insects that can cause a lack of plant vigor, distorted growth and often secrete a sticky substance called honeydew which allows the growth of sooty moulds. This Sooty moulds coats the leaves surface blocking stomata which acts as entry for carbon dioxide for photosynthesis hence lack of the crucial process in the plant leading to stunted growth. Aphids also vector many diseases even in other crops.

Aphids are controlled through spraying Kingcode Elite 10ml/20l.

- **Thrips**( *Tabaci spp*)

Thrips are tiny slender insects with fringed wings. They are sucking pests feeding by puncturing epidermal layers of host tissue resulting in silvering of leaves' surface.

Control is by use of insecticide; **Alonze 3ml/20l**.

- **Pea weevil** ( *Bruchus pisorum*)

These are small, black to brownish insects with a white zigzag running across the back.

The pea larvae hatch and burrow into the pods and feed on the developing peas.

They can be controlled by use of insecticide; **Pentagon 10ml/20l**.

- **Cutworms** (*Agrarian segetum*)

Cutworms are more larvae that hide under the litter or soil during the day, coming out at the dark to feed on the plant. The larvae attacks the crop at the stem base by cutting it down hence the name 'cutworm'.

Control is done by drenching with **Pentagon 20ml/20l**.

### DISEASES

- **Damping off and root rot**

It is caused by a number of pathogens such as *pythium* and *rhizoctonia*. It is exacerbated by cool wet soils. Seeds become soft and rolled while seedling fall due to sunken lesion. Older seedlings develop root rot when peas are planted in overly wet soils.

#### **SYMPTOMS;**

- Wilting
- Foliage becomes brown
- Roots become brown
- Stunted growth
- Seedling attacked by damping off

#### **Management.**

In addition to use of certified seeds a drench of **Pyramid 700 WP 100g/20l** is used to control damping off.

- **Downy mildew**

It is caused by *Peronospora viciae*. The disease survives in soils and on plant debris. It can also be seed borne. The disease develops quickly in cold conditions (5°-15°C) and wet for 4 -5 days. This often happens when seedlings are in early vegetative stages. Rainfall is the major method of spores dispersal and Secondary infection.

#### **SYMPTOMS**

- The underside of leaves are covered with a fluffy mouse grey spore mass.
- Sickly yellowing green appearance
- Deformation of pods covered with yellow and brownish areas.

#### **Downy mildew in snow peas.**

##### **Management.**

In addition to use of certified seeds, a fungicide, **Gearlock turbo 25g/20l** can be sprayed to control the disease.

- **Powdery mildew**

It is caused by *Erysiphe pisi*. Unlike downy mildew, it is prevalent in days of warm weather.

#### **SYMPTOMS INCLUDE**

- Covering of infected Plants with white powdery film.
- Severely affected leaves turns blue-white in color.
- Powdery mildew in snow peas leaves.

In addition to seed treatment and crop rotation, fungicides such as **Chariot 20ml/ 20l** or **Ransom 10g / 20l** is sprayed to the affected crop to eradicate the disease.

#### **NUTRITION**

Nutrition or fertilizer application is determined by soil analysis. However, Up to 10 tons of farm yard manure should be applied. Applications of DAP fertilizer at a rate of 250kg per ha at sowing time and again after one month is recommended for root growth. At flowering stage the plants should be dressed with CAN at a rate of 200kg per ha. All fertilizer applied should be mixed well with soil.

Avoid excess nitrogen which will promote vegetative growth at the expense of growth of pods. Hand weeding is recommended since the crop has shallow roots and care must be taken not to injure the roots. Alternatively, after using DAP in sowing **GATIT RANGE** can be used in subsequent fertilizer spraying.

#### **HARVESTING**

Harvesting of snow peas is determined by horticultural harvesting index rather than maturity index. They are harvested when pods start to fatten, but before peas get too large. For best flavor, cook or freeze peas within a few hours of picking.

#### **MARKETING AND ITS CHALLENGES**

Snow peas farming is a relatively new introduction in Kenya and despite its relatively unsung tales of success in the media-space its high returns combined with a fast growing market make it an irresistible investment venture.

One requires about 10 Kilograms of seeds per acre. Given that each kilo of seeds goes for Kshs 600 then the minimum investment in seeds alone will cost you about Kshs 6, 000.

On top of the cost of buying certified seeds one will need to add an extra Kshs 4, 200 for fertilizer (DAP and CAN), agro-chemicals (Ksh15,000) and sticks/stoppers (Ksh5,000).

An acre piece of land can produce 400Kgs of fresh snow peas per week and harvesting can be done once per week for 13 weeks or more.

Each kilo goes for Ksh150 at the current market price. Now assuming your farm produces 400Kgs per week we multiply that by 13 weeks to get 5200Kgs. That is an equivalent of Kshs 780, 000.

It is possible to recover the initial investment within just 12 weeks (or 3 months) of starting the farm!

How Much You Need To Invest? Kshs100, 300 per acre (minimum)

How Much You Can Harvest: Kshs 780, 000 per acre over 13 weeks

### **Where to Sell?**

Snow peas are not widely eaten here in Kenya and as such you will need to target the export market. One doesn't need to worry about exporting the produce himself either.

All what is needed to do is approach local vegetable exporters among them Homegrown Kenya Ltd, Idu Farm, Wamu Enterprises, Everest Enterprises and Kenya Horticultural Exporters Ltd (K.H.E).

### **Final Word**

One doesn't need to be a "big fish" to succeed in snow peas farming in Kenya. All what is needed is to find a good piece of land, invest in high quality seeds and use approved agro-chemicals.

With ksh100, 000 or thereabout and wondering which business to start with it, don't be fooled to invest in pyramid schemes.

One can invest in snow peas farming today and 24 months down the line can be a notable horticulture exporter – creating jobs.