



DEPARTMENT OF AGRICULTURE
Regional Field Office No. 02
Tuguegarao City, Cagayan



SWEET PEA

PRODUCTION GUIDE



Sweet Pea

Production Guide

This Publication is a project of the **Department of Agriculture, Regional Field Office No. 02, High Value Crops Development Program**. It contains the most recently available and locally adaptable technical information on **Sweet Pea Production** in Region 02.

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Introduction

Sweet pea (*Pisum sativum L.*) is the most expensive vegetable legume in the Philippines. Other types such as condon peas are grown for their green peas, while field peas are grown for their dried seeds. The snow pea is the most common grown in the country. This group also includes the snap pea, a group of edible podded peas that are differentiated from snow pea because of their round pods. Snap pea produces thick full bodied, edible pods, and sweet, full sized peas. The pods snap when bent like fresh green like fresh green beans. Snow pea has generally flat pods.

Uses and nutritional value

Sweet pea is usually grown for its green peas and pods, which are used as vegetable. It is also grown for its mature peas, which are cooked as ingredient of soups, broths, and finger foods. Its seeds contain trypsin and chymotrypsin, which can be used as contraceptive, ecboolic, fungistatic and spermicide. The dried and powdered seeds has been used as poultice on the skin for the treatment of skin complaints including acne.

Per 100 (g) edible portion, fresh sweet pea pod contains:

Properties	Amount
Water (g)	82.4
Energy (kcal)	67.0
Protein (g)	3.0
Fat (g)	0.4
Carbohydrates (g)	12.8
Dietary fiber (g)	2.1
Ash (g)	1.4
Calcium (g)	92.0

Phosphorus (g)	48.0
Iron (mg)	1.2
Vit A (mg)	52.0
Thiamine (mg)	0.16
Riboflavin (mg)	0.09
Niacin (mg)	1
Ascorbic acid (mg)	67.0

Source: The Philippine Food Composition Table, 1997 FN-RI-DOST

Varieties

Below are varieties which are commercially available in agricultural stores.

Pole Type: Chinese Dark Green, Kalantao, Chinese 60, Sugar Snap, Melting Sugar, Trinidad, CGP 14, CGP 19, Sweet Pea DK30, Green Smile, Mini White

Bush Type: Dwarf Grey

Soil and Climate Requirement

Sweet pea grows well in humus rich soil or volcanic soil. It thrives best in areas at least 1,000 m above sea level. Sweet pea flavours cool climate with a temperature range of 10° to 18°C. In lower elevations, the plants are less vigorous and are more prone to diseases including powdery mildew. Moreover, the pods are more fibrous. A well-distributed rainfall is also important in growing this crop.

Land Preparation

Plow and harrow twice to make the soil more friable and weed free or hoeing by the use of garden hoe prior to preparation of furrows or plots at 0.75 to 1.0 meter wide for double row planting.

Planting

Sweet pea is propagated from seeds. The recommended seeding rate is 40-60 kgs per hectare. Pre-soak the seeds for 12 hours in water prior to planting to improve seed germination.

Drill the seeds in shallow furrows at 5-20 seeds per linear meter. If hill planting, place 2-3 seeds at a distance of 20-30 cm between hills. The spacing between rows in double row plots is 20cm.

Weeding, Hilling up and Irrigation

Early cultivation is done as soon as rows of young plants become visible to achieve early control of weed and to provide optimum soil conditions for vigorous growth.

Under dry environment, light over-head irrigation at least twice a week is provided over the plots. Irrigation by gravity is resorted to under extensive cultivation of the crop and when the furrow method of planting is adopted. Light flowing at about 2.5 cm every week between the furrows provide sufficient moisture for satisfactory growth.

Trellising

Provides trellises to prevent the plants from lodging. A local grass called “rono” with a long but sturdy stem is commonly used. This is used in a crisscross fashion in between the adjacent rows at 40-50 pcs per 10 linear meter. Synthetic straw is also used to support the growing vines.

Fertilizer application

The general recommendation is to apply manure at 3-5 t/ha during land preparation while the required complete fertilizer is applied at band at equal depth with the hill of seeds in between the rows during planting time at around 3 bags/ha and as needed.

Pest and Disease Management

Pest

Leaf Miner – (*Lyromyza atricornis* Meigen). This is the most destructive and persistent pests of sweet peas in the Baguio area. The larvae are small and they bury through leaves. Under severe infestation, the leaves appear whitish and papery and in some cases the pest causes the death of the plant.

Control – Encourage natural enemies like spiders, lacewings and sryphid flies. If needed, spray with Cyromazine following the recommended rate. Intercrop with leek, lettuce, pechay and other shallow rooted and short-season crop. Maintain low weed population along the alleys

Cutworm – (*Prodenia liture Fabr*). Often a nuisance during the dry months, this pest attacks the young plants by nibbling or cutting off the stem near the ground level. They usually attack at night, hence, its control is best achieved by drenching the soil where the larvae seek refuge during the day. Aldrin or Heptachlor has been proven very effective against the pests when applied late in the afternoon.

Pod borer – (*Helicoverpa spp.*) Handpicked the larvae and pupae during the early stages of infestation. Spray with hot pepper extract. If needed, spray with Cypermethrin, Fenvalerate, Deltamethrin, or other appropriate chemicals following the recommended rates.

Pea aphid – Spray hot extract (100 g macerated hot pepper) 16 liters water, malathion, deltamethrin or other recommended chemicals following the recommended rates.

Diseases

Powdery mildew – (*Erysiphe polygoni*). Use resistant or tolerant varieties such as CPG 14. Apply protectant fungicides such as Mancozeb or compost tea.

Ascochyta leaf spot – Practice field sanitation and crop rotation.

Harvesting

Harvest the crop at 60-65 days after planting. For best quality, sweet pea should be harvested before physiological maturity or before the peas deform the hull. Sweet pea should be harvested when the pods are of maximum size, but before any visible seed development. Frequent harvesting is necessary. Sugar snap bean should be harvested after they have developed seeds.

Harvest by priming twice a week. Harvesting can be extended up to 10 times for the entire growing period depending on crop management. Keep the produce under shade and pack in plastic crates.

Seed Production

Select plants that are vigorous and free from damage of pests and diseases. Harvest dry pods and extract the seeds. Dry pods can be harvested 120 days from sowing. Sun-dry to around 10% moisture content. To determine if the moisture content is acceptable, put some seeds inside a plastic bag and place under the sun. If condensation occurs after around 30 minutes, continue sun-drying the seeds. Pack the dry seeds in moisture-proof containers and store in cool, dry place. If properly stored, seeds can remain viable up to 2 years.

Cost and Return Analysis per Hectare

Labor (250/man day)

Items	Amount
Clearing (20 MD)	P 5,000
Bed preparation (20 MD)	P 5,000
Manure application (15 MD)	P 3,750
Planting (10 MD)	P 2,500
Trellising (10 MD)	P 2,500
Vine training (30 MD)	P 7,500
Side dressing/Hilling-up (10 MD)	P 2,500
Spraying (10 MD)	P 2,500
Weeding/Hilling-up (30 MD)	P 7,500
Irrigation (10 MD)	P 2,500
Harvesting (40 MD)	P 10,000
Hauling, sorting, packing (10 MD)	P 2,500
Subtotal	P53, 750

Materials

Item	Unit	Amount
Seeds	40 kg	P24, 000
Manure	60 bags	P15, 000
Fertilizer		
• 14-14-14	3 bags	P3,000
• 0-0-60	1 bag	P2,000
• Foliar	4 boxes	P800
Insecticides	1 Liter	P500
Fungicides	2 boxes	P4,000
Fuel and Oil		P5,000

Trellis Materials	20,000 pcs	P20,000
Pail, gloves, bolo, shovel, plastic drum		P3,000
Packaging materials		P2,000
Sub-total		P 76,300
Grand total		P 130,050

Regular Season - - - - - 6,000 kgs @P50/kg = P300,000

Off Season - - - - - 3,500 kgs @P100/kg = P350,000

Net Income:

Regular Season - - - - - 300,000 kgs – P 130,050 = P 169,950

Off Season - - - - - 350,000 kgs – P 130,050 = P 219,950

Reference:

- *Sweet Pea Production Guide, Information Bulletin No. 275/2008*
- *Federation of India Chamber of Commerce and Industry (FICCI)*
- *India: Agribusiness Information Center, 2007*
- *Cultural Directions of Agricultural Crops, 1986*

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