

*Transportation:*

Although some varieties are fairly hardy, care should be exercised to see that bruising does not occur in transit to market.

Handle carefully throughout and have a wholesome unblemished fruit for sale.

TABLE 1

QUANTITIES AND DILUTION RATES OF PESTICIDES  
FOR CONTROL OF PUMPKIN DISEASES AND PESTS.

PEST OR DISEASE	CONTROL	AMOUNT 100 gallons Water	AMOUNT ONE gallon water
Plant-lice or Aphids	Malathion 50% E.C*	1 1/2-2 pts.	1 tablespoon
Caterpillars	Sevin		
Vine Borers }	Dipterex	2lbs	2 tablespoons
Beetles		2lbs	2 tablespoons
Army Worms			
Cutworms and Crickets	D.D.T.40% W.P.	4 lbs	2 tablespoons
Damping -Off	Captan 50% W.P.	2 1/2 lbs.	1 3/4 tablespoon
Downey } Mildew	Perenox Cupravit Zineb Dithane	2 lbs. 3 lbs. 2 lbs 2 lbs	3/4 tablespoon 1 tablespoon 1 1/2 tablespoon 2 tablespoon
Powdery } Mildew	Katathane 25% W.P.	3/4 lb.	1 teaspoon 1 teaspoon

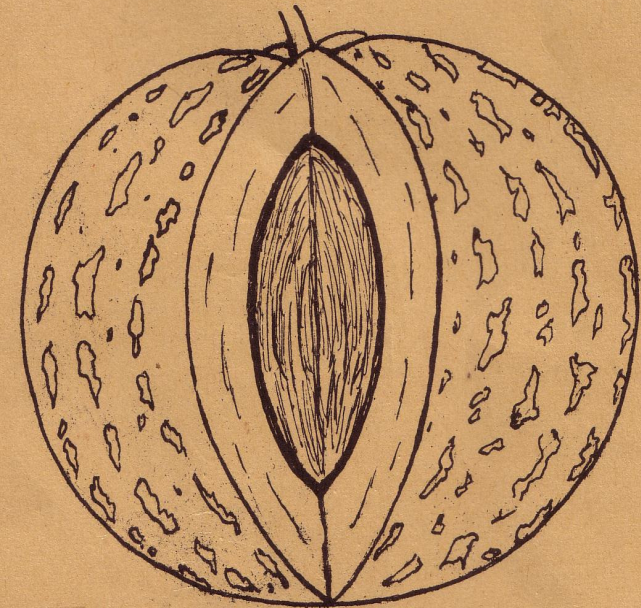
\*E.C.- Emulsifiable Concentrate.

W.P.-Wettable Powder.

# PUMPKINS

## A PROMISING EXPORT CROP

### Notes on its Cultivation



1 07-07-06

The pumpkin is a warm temperature crop which originated in North America.

Conditions in St. Vincent are ideal for its cultivation. Rainfall should be between 25 to 80 inches per year.

When properly cultivated, pumpkins may give yields of over 10 tons per acre. The St. Vincent Marketing Board now provides an assured market for this crop at a reasonable price.

#### *Soil Types:*

Almost all the soils in St. Vincent are suitable for growing pumpkins.

Soil should be moderately well drained as in sandy loam soils. It should contain much organic matter and not be too acid.

#### *Land Preparation:*

The pumpkin sends out roots at every leaf stalk and these roots feed heavily in the top 6-8 inches of soil. This upper layer should therefore be thoroughly prepared. Land preparation may be by (a) Hand or (b) Machines.

#### *Hand Cultivation:*

*Forking:* The entire area should be forked and left 2-4 weeks to break down, especially on heavier soils. Lighter soils can be planted earlier.

*Digging Holes:* Holes 1 ft. x 1 ft. should be dug after the land is lined out 8ft. X 12 ft.

These holes should be filled with well rotted manure and then soil added to form a mound or hill 6 inches high.

#### *Mechanical Cultivation:*

Plough to a depth of 12 feet apart should be made with a furrow-cutter. If manure was not broadcast, then 2 lbs of open manure should be worked into the soil at intervals of 8 feet along the ridges.

#### *Control:*

- Look for aphids and spray them with malathion
- Destroy weeds growing near the field, as the disease is carried by many weeds.

(A summary of How to Control Diseases and Pests is given in Table 1).

#### *Note:*

Most of the insecticides and fungicides commonly used, can be mixed, so that the spraying jobs can be done in one operation.

The amounts of water given are for the knapsack sprayer. When a motor-blower is used the quantity of water should be reduced to a quarter of the amount given.

A spreader such as 'Agral 90' or 'Teepol' and a sticker such as TENAC should always be added to the mixture.

#### *Harvesting:*

##### *Signs of Maturity:*

Reaping is done by hand as the crop matures. The following are signs by which one may decide on whether the fruit is mature or not:

1. The leaf immediately above the fruit dries up.
2. The tendril of the fruit dries up.
3. The stem turns yellowish near the fruit.
4. The fruit sounds hollow when tapped.

#### *Reaping:*

Stems should be cut with a sharp knife or scateur.

#### *Grading:*

Standard Grade:- consisting of pumpkins that are:

- Mature and clean
- Free from damage caused by disease, scars, insects and other damage caused by mechanical or other means.

#### *Storing:*

Pumpkins can be stored for a fairly long time if put in a cool, dry and airy place. Care should be taken not to damage the skin as this allows bacteria and fungi to attack the fruit causing decay.

b) 'Sevin' or 'Dipterex' at the rate of 2 lbs to 100 gallons per acre (using knapsack spray pump).

Caterpillars may cause serious damage by defoliating the vines.

Diseases and Their Control:

*Damping-off:*

This is a fungal disease which causes young seedlings to wilt and die.

*Control:*

Treat seeds with 'Captan' or 'Ceresan', 1 teaspoonful to 1 qt. seeds.

*Downy Mildew:*

This is a fungus which attacks the leaf in the form of small yellowish spots which enlarge slightly and become dry and brown in the centre.

It spreads rapidly in heavy rains.

*Control:*

Being a fungal disease, it should be controlled by preventative spraying with:

- (a) 'Perenox' or 'Cupravit' at the rate of 3 lbs per 100 gallons water or
- (b) 'Zineb' or 'Dithane' at the rate of 2 lbs to 100 gallons water.

*Powdery Mildew*

This is also a fungal disease with small whitish powdery patches on older leaves. These increase until the entire leaf is fully covered.

*Control:*

Spray with 'Karathane' at the rate of 3/4 lb to 100 gallons water. Perenox, Zineb, Cupravit, etc, can also be used.

*Mosaic:*

This is a damaging disease which is spread mainly by aphids. Leaves which are affected turn yellowish green and may have dark green blister-like patches on them. The virus which causes mosaic on pumpkins also attacks cucumber, watermelon, pepper, celery and Spinach. There is no cure for the disease at present, and control is based on prevention.

*Selection and Preparation of Seeds.*

Important points to follow in seed selection:

1. Take seeds from healthy bearing vines only
2. Take seeds from mature pumpkins only
3. Take seeds from recommended size pumpkins-5 to 15 lbs depending on the strain, small or big.
4. Take seed only from vines bearing a majority of round or oval shaped pumpkins. (The Marketing Board does not buy 'bottle neck' pumpkins because of the high rate of breakage during shipment.)

If you remember and follow these important points, you will increase your chances of getting good yields and fair profits.

*Preparation:*

Immediately after being taken out, seeds should be thoroughly washed to remove all the mucilage and so prevent fungi and bacteria attacking them. The seeds should be air-dried for 2-3 days in the shade. Seeds should be dusted or treated with 'CAPTAIN' at a rate of 1 teaspoon to 1 quart seeds, stored in air-tight containers, e.g. tightly corked bottles, until needs for planting.

In summary:-

1. Wash seeds free of mucilage
2. Air dry well in the shade
3. Store well in air-tight containers. Add 1 teaspoon of 'Captain' per quart of seed. Cork securely.

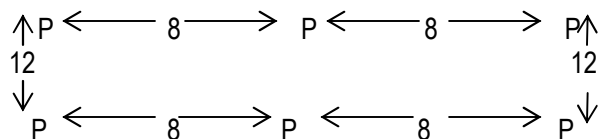
*Seed Rate:*

1 1/2 lbs seeds is sufficient for planting 1 acre.

*Time of Planting:*

In St. Vincent planting is usually done between February and May, to mature from July onwards, but with favorable weather conditions and under irrigation planting should be possible all through the year. Pumpkins take from 3 1/2 to 6 months to mature.

### Spacing:



Make a shallow sink on top of each mound then space five (5) seeds evenly in the sink. On heavy soils cover seeds 1 inch deep, and on light soils cover with 2 inches of soil and press lightly. When plants are about 7 inches tall, thin out the weaker ones, leaving 2 plants to each mound.

### Cultivation Practices:

**Weeding:** Pumpkins should be kept free from weeds during the first two months to allow the vines to spread quickly. Weeding after bearing has started should be very carefully done as brushing against the vines may cause the young fruits to fall off. 'Gramoxone' as a weed killer can be used for the first weeding or two, before the vines close in too much. A knapsack spray pump, with a protective shield should be used to reduce drift and possible damage to plants. Be careful on windy days.

### Fertilizing:

The amounts and types of fertilizer to be given to pumpkins will depend on the type of soil on which they are grown.

The 12:4:30 NPK mixture may be used at 4-8 cwts. Per acre i.e. 1-2 lbs per hole. In more phosphate deficient soils the 11:11:33 mixture may be used instead.

Where the land can be thoroughly prepared before hand up to 10-15 tons of pen manure may be broadcast over the soil and then worked in. Where pen manure is lacking 3/4 of the fertilizer should be broadcast over the land and worked in, the remaining quarter being applied at 6-8 weeks.

Failing the above about 1/2 lb of fertilizer should be added to the planting hole 7-10 days prior to planting and thoroughly mixed with the soil. A further 1/2 lb per hole should be given at about 4 weeks after planting and the remaining 1lb at 2 months after planting.

See your District Agricultural Officer if in doubt.

### Pests and Their Control:

Before planting pumpkins, adequate preparation must be made to deal with attacks of insects. If this is not done, much time and money can be wasted.

*The common pests and their control are:-*

#### *Plant-lice or Aphids*

These are small, yellowish, greenish, or blackish insects found on the undersides of the leaves. They suck the leaves causing them to curl, lose colour, and then die. These insects also transmit virus diseases, like Mosaic, to the plant.

#### *Control:*

Spray with Sevin or Malathion 50% emulsifiable concentrate at the rate of 2 pints to 100 gallons of water or 1 tablespoon to 1 gallon water.

Spraying should never be done when the leaves are wet.

*Remember-* Insects live on the underside of the leaves, so the spray must be applied to the underside of the leaves in order to kill the insects sheltering under them.

#### *Cut Worms and Crickets:*

These destroy young seedlings.

#### *Control:*

Dust the surface of the soil before germination with 10% D.D.T. at the rate of 30 lbs. per acre.

Spray the soil with 5 lbs 40% D.D.T. wettable powder in 100 gallons of water per acre.

D.D.T. *should never be used after the plants germinate*, as all cucurbits are highly susceptible to chlorinated hydrocarbon sprays, e.g. D.D.T., BHC, toxaphene, etc.

#### *Caterpillars, Vine-borers, beetles*

These do damage to the plant mainly by feeding on the leaves.

#### *Control:*

Spray with (a) 'Malathion' as is done for plant lice or aphids, or (