# A SUCCESSFUL CUCUMBER AND BUTTERNUT SQUASH GUIDE

## LAND PREPARATION

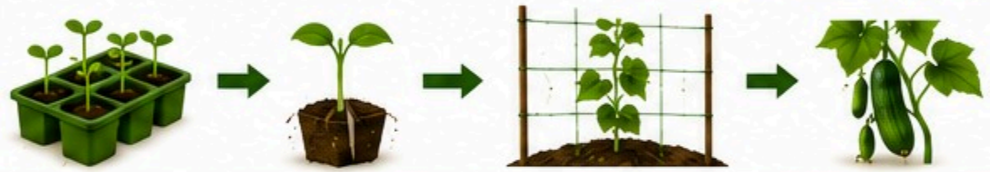
Normal beds can be made for these crops, 3–4 ft. wide with 1 to 1.5 ft. drains. This allows for easy access to carry out operations. Limestone should be incorporated into the top 4 in. or spread over the whole cultivation at a rate of 2,500 lbs. per acre on clay or Pegasse soils or 500 lbs. per acre on sandy soils. For small areas, apply 1 oz. per sq. ft. on clay or Pegasse soils and ½ oz. per sq. ft. on sandy soils.



## PLANTING AND SPACING

Traditionally, cucumber and squash were planted by seed, but recently many farmers are using seedlings. These seedlings are produced in cells because root damage is not tolerated by the plant, so plucking seedlings from a seed bed is not an option. If a 3 ft. or 4 ft. wide bed is used, one row can be planted in the middle of the bed, spaced about 3 ft. apart. For maximum production, a trellis or net is used to allow the plant to climb above the soil. This has two major advantages: it keeps the fruit and leaves off the ground, reducing the risk of soil-borne diseases, and it makes operations such as fertilizing, weed control, and harvesting much less labor-intensive.





## IRRIGATION

For any commercial-size plot, sprinkler irrigation from Caribbean Chemicals will dramatically reduce costs.



## FERTILIZING

Since virtually all soils in Guyana are deficient in calcium, and limestone takes a month or more to act depending on the weather, it is important to apply Agrical at a rate of 1 oz. (30 ml) per gallon, applying 100 ml of the mixture to each plant. For large areas, apply at a rate of 5 gallons per acre. The first dose at 1 week can be Elixir 7-21-21 at 10 (50 lb) bags per acre. Fersan 15-15-15 or 12-12-17-2 at rate of 5 (100 lb) bags per acre may also be used, although the nutrients, especially phosphorus, take longer to dissolve in soil water and become available to the crop. For small areas, 10 to 20 g per plant of the fertilizer may be applied. A second dose at 3 weeks may be applied using about half the amount, and a small amount of Sulphate of Ammonia can be applied if the leaves are not green enough or large enough. Muriate of Potash may be applied instead of SOA to support flowering and fruiting.



## WEED CONTROL

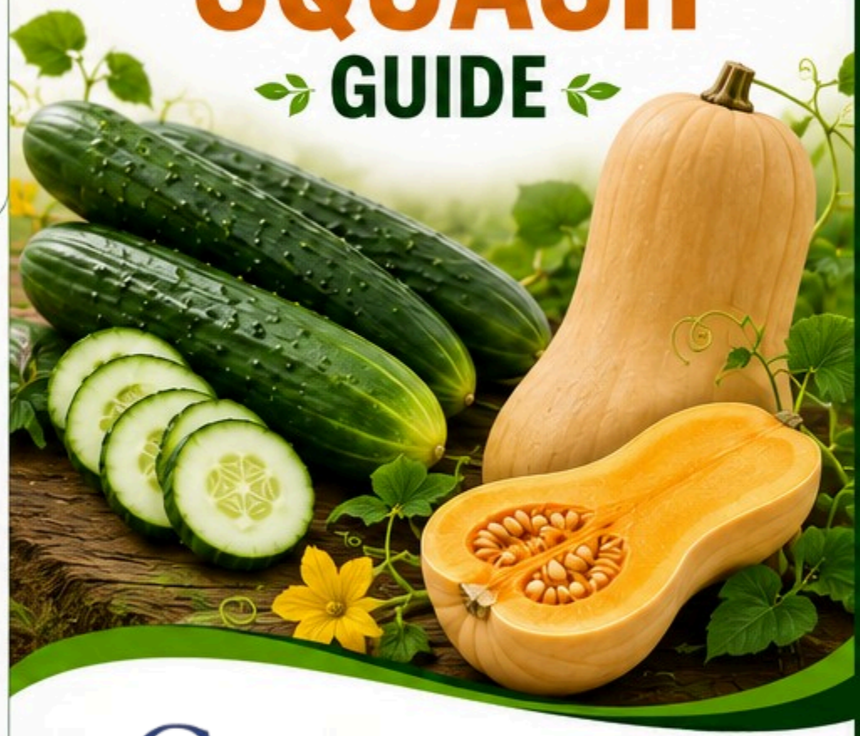
Fusil or Select can control grass weeds but not broadleef weeds or sedges. Carista or Lifeline is non-selective and would kill the crop if it is sprayed over it. It works by eliminating the chlorophyll in the plant, so if enough of the plant is covered by the spray, it would not be able to produce food and therefore dies. However, it will only affect the crop plant if the spray touches it, and it will only affect the chlorophyll on the spot it has touched. It does not cause injury like Paraquat or affect the roots like Glyphosate. If applied with caution, it is an excellent option to reduce cost.



## SPRAY APPLICATION

The program recommended is designed to maximize your profit and reduce cost. Many products are applied early in the life of the crop because the crop is most volnerable at this stage, and any damage then would affect the productivity of the entire crop. In addition, the plants are small, so the quantity of product needed is also small. It is far better to invest a small amount early in the crop, as addressing problems later is more expensive and yield will be greatly reduced even then. With today's technology, you can apply an insecticide, a fungicide, a foliar fertilizer to feed the plant better, and a biostimulant to improve root development, flowering, growth patterns, or resistance to various stresses. **Coback** and **Cuprofix** must be used with caution as they can cause phytotoxicity under certain conditions.



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## PLANT

Drench **Shield** 15 ml/gal (protect from root fungus like bottom rot) + **Frip** 5 ml/gal (protect from cutworms and sucking insects) + **Bio 20** 15 ml/gal (promote root depth and development) + **Vyd-8** 10 ml/gal (protect from nematodes, mainly on sandy soils) + **Breakthru** 1 ml/gal (helps the drench penetrate the soil effectively). Spray **Tengard/Fastak/Karatax** 5 ml/gal (blanket spray for cutting insects).

## WEEK 1

Drench **Bountiful Harvest** 30 ml/gal (stimulate growth and disease resistance) + **Agrical** 30 ml/gal (liberate calcium and reduce soil acidity) + **Ryzo** 15 g/gal (protect from root fungus) + **Breakthru** 1 ml/gal (helps the drench penetrate the soil effectively). Spray **Advance** 10 ml/gal (kill insect eggs and immature stages) + **Coback** or **Cuprofix** 20 g/gal (protect from fungus and bacteria affecting shoot) + **Bio 20** 15 ml/gal (promote root depth and development) + **Breakthru** 1 ml/gal (helps the spray to spread over and enter the leaf)

## WEEK 2

Drench **Agrical** 30 ml/gal (liberate calcium and reduce soil acidity) + **Shield** 15 ml/gal (protect from root fungus like bottom rot) + **Frip** 5 ml/gal (protect from cutworms and sucking insects) + **Breakthru** 1 ml/gal (helps the drench penetrate the soil effectively). Spray **Advance** 10 ml/gal (kill insect eggs and immature stages) + **Caprid** 5 ml/gal (kill sucking, biting insects, eggs) + **Bellis** 15 g/gal (disease protection and stimulate production) + **Acrobat or Pilot** 10 g/gal (disease protection especially phytophthora) + **Breakthru** 1 ml/gal (helps the spray to spread over and enter the leaf)

## WEEK 3

Drench **Evergreen** 10 ml/gal (biostimulant) + **Saeta** 30 g/gal (calcium and protect against phytophthora) + **Breakthru** 1 ml/gal (helps the drench penetrate the soil effectively). Spray **Secure** 5 ml/gal (systemic insecticide against most insect pests) + **Coback or Cuprofix** 20 g/gal (protect from fungus and bacteria affecting shoot) + **Bio 20** 15 m/gall (promote root depth and development) + **Phortify** 10 ml/gal (promote root growth) + **Breakthru** 1 ml/gal (helps the spray to spread over and enter the leaf)

## WEEK 4

Spray **Caprid** 5 ml/gal (kill sucking, biting insects, eggs) + **Acrobat or Pilot** 10 g/gal (disease protection, especially phytophthora) + **Bellis** 15 g/gal (disease protection and stimulate production) + **Cytokin** 5 m/gall (flower initiation) + **Breakthru** 1 ml/gal (helps the spray to spread over and enter the leaf).

## WEEK 5

Spray **Advance** 10 ml/ga; (kill insect eggs and immature stages) + **Secure** 5 ml/gal (control Diamondback Moth and other pests) + **Quad 14** 10 ml/gal (provide NPK and Ca, stimulate immunity to disease) + **Carbendazim** 5 ml/gal (disease protection) + **Breakthru** 1 ml/gal (helps the spray to spread over and enter the leaf).

## WEEK 6

Spray **Caprid** 5 ml/gal (kill sucking, biting insects, eggs) + **Coback or Cuprofix** 20 g/gal (protect from fungus and bacterial disease) + **Quad 14** 10 ml/gal (provide NPK and Ca, stimulate immunity to disease) + **Cytokin** 5 ml/gal (flower initiation) + **Breakthru** 1 ml/gal (helps the spray to spread over and enter the leaf).





**After week 6 continue to alternate weeks 5 and 6 until the end of the crop.**