SAKATA®
PASSION in Seed

Barbara

F1 Hybrid Butternut Squash

TB REF: BARBARA: 01/04/2024

OUTSTANDING QUALITIES

- **UNIQUE BABY VEGETABLE PRODUCT**
- **VERY HEALTHY, PRODUCTIVE PLANTS**
- **OUTSTANDING QUALITY AND FLAVOUR**

Barbara is an exciting tropical butternut variety. Plants are widely adapted and yield potential is high. The fruit set is excellent and covers a long bearing period. It has been observed that the plants' strong vigour tends to make it less susceptible to diseases. Due to **Barbara's** attractive rind colour and its ability to firm up at a very early stage, immature fruit can be used as a baby vegetable. The first fruits are harvestable as baby squashes at around 45 days after transplant. **Barbara** may be used for mature fruit production due to its exceptional quality and can be harvested around 85 - 95 days from transplant. Mature fruit weighs around 1 – 1.5 kg. The rind colour of the immature (baby) fruit is dark green with lighter green stripes and when mature have a medium-dark green colour with tan coloured thinner stripes running from the stem base through to the blossom end.

SPECIAL VARIETAL REQUIREMENTS

- Make sure that mature fruit is ripe before picking. Light green stripes must have discoloured into a normal tan colour before picking

CHARACTERISTIC*	BARBARA
KIND	F1 hybrid squash (*Cucurbita moschata* (Duchesne) Duchesne *ex* Poiret)
TYPE	Tropical butternut squash
MATURITY	85 - 95 days to harvest as mature fruit and 45 days to maturity if harvesting for baby
SEASON	Widely adapted for production after danger of frost has passed
PLANT TYPE	Full vine
FRUIT SHAPE	Cylindrical, with a bulbous blossom end
RIND COLOUR	Dark green thick and thin tan coloured stripes running vertically to the blossom end
YIELD POTENTIAL	30 - 35 t/ha (mature fruit)
BABY SIZE	2.5 x 8 cm
MATURE HARVEST MASS	1 – 1.5 kg
SHELF LIFE (MATURE FRUIT)	Good
UNIFORMITY	Excellent
POPULATION GUIDE	Baby: Final stand of 15 000 plants per ha Mature: Final stand of 15 000 plants per ha
DISEASE REACTION (SCIENTIFIC)	-
MARKETS / END USE	Pre-pack as baby vegetable and fresh market

* Characteristics given are affected by production methods such as soil type, nutrition, planting population, planting date and climatic conditions. Please read disclaimer.

Resistance: is the ability of a plant variety to restrict the growth and development of a specified pest or pathogen and/or the damage they cause when compared to susceptible plant varieties under similar environmental conditions and pest or pathogen pressure. Resistant varieties may exhibit some disease symptoms or damage under heavy pest or pathogen pressure (HR = High resistance, IR = Intermediate resistance).
* Experimental: This variety does not appear on the current South African Variety list, but has been submitted for registration.
Recent version: Kindly contact Sakata or Area Representative for the most recent version of this Technical Bulletin.

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GENERAL TIPS FOR BUTTERNUT PRODUCTION

Spacing, planting depth and planting of seed
The ideal plant population for butternuts is between 12 000 - 18 000 plants per hectare. With a general seed count of 10 seeds per gram (10 000 seeds per kg), approximately 1 kg of seeds is needed for 1 ha at a plant population of 10 000 plants per ha. A general recommendation for butternuts is 1.0 - 1.5 m between rows and 0.5 m within the rows. This may be adapted to some extent to climatic conditions and/or available implements.

Plant spacing guide for the distance between plants in the row:

Between row spacing	Plant population		
	12 000	15 000	18 000
1.0 m	83 cm	66 cm	55 cm
1.6 m	52 cm	42 cm	34 cm

Butternut seed should be planted 30 - 40 mm deep. Under ideal conditions, the field should be thoroughly irrigated before planting. The seed should make good contact with the seedbed and be covered with soil that is not so wet that it forms an impervious layer on drying. No irrigation should be applied before emergence as this may cause crust formation. Should it rain before emergence and a crust be formed, the soil should be kept damp with light overhead irrigation for the seedlings to be able to emerge.

During hot weather, it is advisable to protect the soil surface from drying out by means of mulch such as wood chips, bark or straw. After emergence, the mulch should be removed to prevent the development of spindly plants.

The seed should not be planted too shallow, as the top layer of the soil will dry out quickly, resulting in poor field germination. It should also not be planted too deep as the seedlings are more prone to disease due to the extended pre-emergence period.

Irrigation
Calculating how much water to apply at each irrigation, requires an estimate of the crop's rooting depth and the water-holding capacity of the soil. Light irrigation is needed more frequently at early seedling stages because the plant has only a small soil water reservoir. Later in the season, less frequent but deeper irrigations are used to replenish a larger rooted volume. Information on water-holding capacity is important so to avoid adding more water at any one time than the soil can hold. Maintain soil moisture above 60% of the soil water holding capacity.

Light-textured soils hold less water than heavy clay soils; thus a grower with a sandy soil will irrigate more frequently and apply less water at each irrigation-application.

Irrigation requirements for pumpkins and squashes are influenced by many factors. As a general guide, observe the following for a sandy loam soil type.

Days from planting	Root depth	Total amount of water required
0 - 30	15 cm	27.4 mm
31 - 70	30 cm	35.8 mm
71 - 110	45 cm	54.9 mm
110 - maturity	>61 cm	73.2 mm

It is important to keep the temperature and wind factor in mind as high temperatures and wind lead to an increase in evapotranspiration.

Disease resistance definition
Resistance: is the ability of a plant variety to restrict the growth and development of a specified pest or pathogen and/or the damage they cause when compared to susceptible plant varieties under similar environmental conditions and pest or pathogen pressure. Resistant varieties may exhibit some disease symptoms or damage under heavy pest or pathogen pressure. Two levels of resistance are defined:

High/standard resistance (HR): plant varieties that highly restrict the growth and development of the specified pest or pathogen under normal pest or pathogen pressure when compared to susceptible varieties. These plant varieties may, however, exhibit some symptoms or damage under heavy pest or pathogen pressure.

Moderate/intermediate resistance (IR): plant varieties that restrict the growth and development of the specified pest or pathogen, but may exhibit a greater range of symptoms or damage compared to resistant varieties.
Moderately/ intermediately resistant plant varieties will still show less severe symptoms or damage than susceptible plant varieties when grown under similar environmental conditions and/or pest or pathogen pressure.

Susceptibility definition:
Susceptibility (S) is the inability of a plant variety to restrict the growth and development of a specified pest or pathogen.

Resistance: is the ability of a plant variety to restrict the growth and development of a specified pest or pathogen and/or the damage they cause when compared to susceptible plant varieties under similar environmental conditions and pest or pathogen pressure. Resistant varieties may exhibit some disease symptoms or damage under heavy pest or pathogen pressure (HR = High resistance, IR = Intermediate resistance).
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