



**STARKE  
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# MARROW & SCALLOP

## PRODUCTION GUIDELINE

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**SEEDS OF SUCCESS**

# MARROW AND SCALLOP

## 1. HISTORY AND BACKGROUND

Marrows and scallops are both members of the cucurbit family and are grown throughout the world. They are sensitive to frost and cold conditions result in slow growth and low production. Where cool conditions prevail artificial heating can be used to produce these crops.

## 2. ADAPTABILITY

### 2.1 CLIMATIC REQUIREMENTS

Ideal soil temperature for germination : 20 - 25 C (minimum 16 C )

Ideal temperature for growth : 18 – 24 C

### 2.2 SOIL REQUIREMENTS

pH 5.8 – 7.0

Best results are obtained with well-drained soils. Low salt level and high organic matter content are preferred.

### 2.3 PRODUCT TYPES

Marrows (or summer Squash) come in many different shapes and colours. The commonest in South Africa is the dark green, cylindrical type of fruit. Lighter shades of green, yellow, striped and mottled fruit are common in other countries. Some markets prefer club-shaped fruit. Scallops are most commonly yellow or green, but other colours are also known.

## CULTIVATION PRACTICES

### 3.1 SOIL PREPERATION

Soil should be thoroughly prepared and deeply loosened before planting. Any residue from previous crops should be well-rotted.

### 3.2 PLANTING PERIODS

All marrows are sensitive to cold temperatures and frost will kill young plants and damage older ones. The crop can be planted anywhere there is no danger of frost during the growing period.

### 3.3 PLANTING

Most marrows are direct-sown, that is the seed is planted directly into the soil. Early in the season, some growers use seedlings in order to establish an early crop. Seedlings must be transplanted before they become root-bound in seed trays.

### 3.4 SPACING

A variety of spatial arrangements may be used, but a final population of around 16,000 plants per hectare is normally targeted. An in-row spacing of 40 cm and between rows of 1.5m is most common.

### 3.5 FERTILIZATION

For accurate and most effective use of fertilizers a soil analysis is needed. Marrows and other squashes respond well to organic fertilization but will most often also need supplementary inorganic applications to obtain best results. After a few years of building up the soil with organics, the inorganic component will become less important.

### **3.5.1 FERTILIZATION GUIDELINE**

N – 110 Kg. 70% pre-plant, remainder applied as top dressing throughout crop cycle.

P – 50Kg. All applied pre-plant.

K – 80 Kg. 30% pre-plant, 30% at 2 weeks, 30% at first flower, 10% at later flowering.

Precise requirements should be determined by means of a soil analysis. Exact programmes will have to be tailored according to this and incidence and severity of diseases which may shorten the crop cycle.

Marrows and scallops show low sensitivity to Mn, Cu, Zn and Fe but are highly sensitive to B and Mo.

### **3.6 IRRIGATION**

Water requirement will vary with soil type, season and growth stage. Avoid over-irrigation and waterlogging. The amount of water needed is generally 25 – 40 mm per week. Drip irrigation is preferred as the leaves remain dry.

### **3.7 OTHER CULTURAL PRACTICES**

- 1) Plastic mulching is often used in winter production. This increases soil temperature and speeds growth. Weed control is also facilitated.
- 2) A 4 year rotation is recommended.
- 3) Weed control is by hand and is particularly important in early growth stages.
- 4) Natural bee populations may be supplemented if low.
- 5) Shelf-life is extended by cold storage.

## **4. HARVESTING AND MARKETING**

A sharp knife is used to cut the fruit from the plants. The fruit stems can later be trimmed in the pack house. Fruit should be washed and thoroughly dried before packing. Most marrow and scallops are packed into punnets of varying sizes. The size of the fruit at picking is largely determined by market requirements. In general, export markets require smaller fruit, while local markets will accept larger fruit.

#### **INDEMNITY**

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