

# CITATION

## F1 Hybrid Watermelon

### Experimental

#### OUTSTANDING QUALITIES

- ◆ TRIPLOID SUGAR BABY
- ◆ EXCELLENT INTERNAL QUALITY
- ◆ VERY STRONG GROWER
- ◆ AVERAGE FRUIT WEIGHT 4 – 6 KG
- ◆ HIGH YIELD POTENTIAL FOR A TRIPLOID



**Citation** is a medium maturing triploid seedless watermelon. Fruit are uniform, globe-shaped and weigh 4 - 6 kg. The attractive green rind is strong, durable and ship very well. Fruit have an attractive deep red flesh colour. **Citation's** flesh is firm, crisp and juicy with high sugar content. Plant populations of up to 6 000 plants per ha can be planted. **Citation** has excellent transport qualities and is ideal for the local and export markets.

#### SPECIAL VARIETAL REQUIREMENTS

- **Citation** can be planted in warm and cool season production areas. However, **Citation** is known for its high fruit setting capability during cool seasons
- **Citation** should be inter-planted with 20 % to 25 % of a diploid variety like Daytona, to ensure good pollination and fruit set. Daytona differs significantly in appearance which is vital to prevent mixing of diploid fruit

CHARACTERISTIC*	CITATION
KIND	F1 hybrid watermelon ( <i>Citrullus lanatus</i> (Thunb.) Matsum. et Nakai)
TYPE	Triploid Sugar Baby
MATURITY	Early (80 – 90 days after sowing during warm season)
GROWTH HABIT	Trailing
PLANT VIGOUR	Strong
SEASON	Summer
FRUIT SIZE	Weight: 4 - 6 kg
FRUIT SHAPE	Globe
INTERNAL FLESH COLOUR	Deep red
FRUIT DIMENSION	Approximately 25 x 25 cm
RIND QUALITIES	Dark green
BRIX	High
FLAVOUR	Excellent: sweet with good flavour
UNIFORMITY	Excellent
LEAF COVER	Good
DISEASE REACTION (SCIENTIFIC)	-
AVERAGE SEED COUNT	20 seeds per gram
MARKET/END USE	Fresh market, fresh processing and export
POPULATION GUIDE	4 000 - 6 000 final stand per ha
SPECIAL FEATURES	The small seedless fruit are ideal for supermarkets and other niche markets

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

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**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.

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## GENERAL TIPS FOR WATERMELON PRODUCTION

### Pollination

Fruit set and development in watermelon is stimulated by growth regulators released during pollination, seed set and fruit development. Flowers of seedless varieties (triploid) are highly sterile and do not produce enough viable pollen to release the growth regulators required to induce fruit development. Fertile diploid plants are therefore inter-planted with seedless plants to provide viable pollen. Polliniser varieties are available. However, diploid varieties with fruit easily distinguishable from the triploid fruit can be used successfully.

### Planting

We suggest 5 000 – 5 500 seedless plants per hectare. An additional 20 – 25% of the pollinator needs to be inter-planted to provide viable pollen. To ensure enough bee visits to each female flower of the seedless variety we suggest the following planting spacing methods:

**P – S – S – S – P – S – S – S – P**

(A seedless plant every meter, with every 4<sup>th</sup> plant a pollinator)

Do not plant one complete row of seedless plants in every 4<sup>th</sup> row as bees tend to forage from one plant to the next in a row.

Planting density affects fruit size, the higher the density, the smaller the fruit.

Plants of seedless varieties initially develop slower than diploid plants. Pollinators can therefore be planted one week after the seedless variety. This delay normally ensures that the two varieties reach the flowering stage at the same time.

### Seedling production

The price of seed of seedless varieties is higher than diploid hybrids and seedless varieties require special conditions for seed germination, emergence and early plant development. It is therefore common practice to use seedlings instead of direct sowing.

Time required is approximately 27 – 30 days in summer and 45 – 50 days in winter.

Germination is optimal at a constant temperature of 24 – 25°C and RH of 80 – 90% (not higher). These conditions can best be maintained in a dark growth chamber. Remove the trays from the chamber when radicles are approximately 1.5cm. Check for germination after 48 hours. If radicles are not visible, leave for another 24 h and repeat every 24 h. Trays are not irrigated during this period.

For seedling emergence and development, the temperature must be kept > 16°C and the night temperature must be 5 – 6°C lower than the day temperature.

Sow seed in trays with large holes (90) and use a medium with good drainage and aeration properties, especially in winter. A good medium may consist of peat, vermiculite and perlite with added 'slow release' fertiliser to ensure sufficient nutrition for 50 days. The medium must be moist, but not wet.

To ensure uniform emergence and development, seed should all be sown at the same depth (1 – 1.5 cm).

It is critically important to maintain a constant moisture level during all stages of seedling production. A good method to use is to weigh seedling trays after sowing and to monitor the weight during germination (the first 10 – 12 days). Only irrigate when the trays show a loss in weight and only enough to replace the moisture (weight) loss. If medium is too wet, the roots will not 'search' for water and will grow in the upper part of the compartment.

### Irrigation

Maintaining optimal soil moisture levels is critical for seedless watermelon production as moisture stress can increase the incidence of Blossom-end rot, and result in poorly shaped, bottle neck fruit. Over irrigation on the other hand, may increase the incidence of hollow heart. Seedless varieties are generally more susceptible to hollow heart than diploid ones. We suggest the use of tensiometers for irrigation scheduling. Good irrigation scheduling will ensure optimal soil moisture and aeration levels, efficient nutrition and water use.

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

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