SAKATA®
PASSION in Seed

Invictus*

F1 Hybrid Cucumber

TB REF : INVICTUS*: 01/04/2024

OUTSTANDING QUALITIES

- **EXCELLENT FRUIT QUALITY**
- **GOOD ADAPTABILITY**
- **GOOD DISEASE PACKAGE**
- **OPEN PLANT FOR EASIER HARVEST**

Invictus* is an early maturing hybrid parthenocarpic Dutch/English type cucumber, with an open plant that allows for easier harvesting. It has an excellent fruit quality with uniform dark green and straight fruit that does not tend to make a neck. **Invictus*** has a very good disease package, offering high resistance to Cucumber vein yellowing virus (CVYV), Corynespora blight and target spot (Cca) and Scab and gummosis (Ccu) as well as intermediate resistance to Cucumber green mottle mosaic virus (CGMMV), Cucurbit yellow stunting disorder virus (CYSDV) and Powdery mildew (Px).

SPECIAL VARIETAL REQUIREMENTS

- Contact area representative for more information

CHARACTERISTIC	INVICTUS*
KIND	F1 hybrid cucumber (*Cucumis sativus* L.)
TYPE	Dutch/English type
FLOWERING TYPE	Parthenocarpic
PRODUCTION TYPE	Greenhouse
MATURITY	Early
SEASON	Spring to Summer
FRUIT SIZE	32 - 35cm
SHAPE	Cylindrical
COLOUR	Dark green
YIELD POTENTIAL	Excellent
VIGOUR	Medium vigour
DISEASE REACTION (SCIENTIFIC)	**High resistance :** *Cucumber vein yellowing virus* (CVYV), *Corynespora cassiicola* (Cca), *Cladosporium cucumerinum* (Ccu) **Intermediate resistance:** *Cucumber green mottle mosaic virus* (CGMMV), *Cucurbit yellow stunting disorder virus* (CYSDV), *Podosphaera xanthii* (Px)
UNIFORMITY	Excellent
MARKETS / END USE	Fresh, pre-pack
POPULATION GUIDE	1.6 – 2.0 plants per m^2
SPECIAL FEATURES	Excellent fruit quality. Does not tend to make a neck

* 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 CUCUMBER PRODUCTION

Crooked fruit
It is common for young cucumber fruit to become crooked. Crooked fruit are not acceptable by the market in general.

Symptoms
- Development on one side of the fruit is inhibited, leading to bending to various degrees

Causes
- Extreme fluctuation in temperature and humidity
- High EC
- Disease
- Overbearing
- Water stress
- Heat stress
- Ca and B deficiency
- Thrips damage on the young fruit
- Poor pollination (not applicable to parthenocarpic fruit)

Control
- Control thrips and disease
- Regulate greenhouse temperature
- Revise fertigation and irrigation programme and apply foliar sprays of Ca and B if required
- Remove some fruit if plants are overloaded

Cracking
Symptoms
- Longitudinal cracks appear between ribs on fruit. Cracks can be almost invisible, to large and unattractive

Causes
- Fluctuation in transpiration rate between day and night caused by low night and high day temperatures

Control
- Maintain favourable temperatures
- Improve transpiration through ventilation

Cold stripes
Symptoms
- Yellow or light green strips between ribs

Causes
- Night temperatures < 13°C
- Warm days and cold nights
- Unstable RH
- Low B levels

Control
- Maintain minimum temperature > 15°C
- Stabilise RH
- Apply Foliar B and Ca sprays weekly

Blossom end rot (BER)
Symptoms
- Resembles a pathological disease at the blossom end, but actually is a physiological disorder due to a Ca deficiency at the blossom-end of a fruit

Causes
- Low Ca levels
- BER is not caused by any single factor but a combination of one or more factors intensifying the effect, including high salinity, high Mg, NH_4, and/or K concentration, inadequate xylem tissue development, accelerated growth rate, unfavourable moisture relationships (high, low, or fluctuating), low soluble soil Ca, high temperature, and high or low transpiration

Control
- Revise the fertigation programme
- Improve ventilation to improve transpiration
- Apply Ca sprays after cloudy weather

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.

Tolerance (T): is the ability of a plant variety to endure ***abiotic stress*** without serious consequences for growth, appearance and yield. Vegetable companies will continue to use tolerance for abiotic stress.

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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