

NATIVA

F1 Hybrid Carrot

Experimental

OUTSTANDING QUALITIES

- ◆ SUMMER TO EARLY AUTUMN SOWING
- ◆ VERY EARLY MATURING
- ◆ EXCELLENT YIELD POTENTIAL
- ◆ VERY UNIFORM ROOTS
- ◆ HIGH RESISTANCE TO NEMATODES

Nativa is a F1 hybrid Chantenay carrot for warm season production. **Nativa** is very early maturing. The high quality roots are very uniform and smooth with a dark orange internal and external colour. The roots are cylindrical with slightly tapered tips. **Nativa** is not prone to green shoulders, if Nitrogen fertilization is managed. **Nativa** has intermediate resistance to Powdery mildew (Eh) and Alternaria (Ad) and high resistance to Nematode (Mj). **Nativa** is ideal for bunching, bagging and processing.



SPECIAL VARIETAL REQUIREMENTS

- Suitable for summer to early autumn sowing, but we suggest trialing in specific areas to determine adaptability
- Due to the earliness and the vigour of **Nativa** – the nitrogen requirements are lower (30%) and the applications of fertilizer are less frequent than for standard varieties
- Due to the earliness of **Nativa** – take note of the harvest time
- Contact area representative for a sowing guide

CHARACTERISTIC*	NATIVA
KIND	F1 hybrid carrot (<i>Daucus carota</i> L.)
TYPE	Chantenay
MATURITY	Very early (warm: 85 – 95 days from sowing)
SOWING SEASON	Summer to early autumn (trial in specific areas to determine adaptability)
DIMENSIONS	20 - 25 x 2.0 - 3.0 cm
COLOUR	Dark orange
FLAVOUR	Sweet
CARROT SHAPE AND TIP	Cylindrical with slightly tapered tips
CORE (COLOUR AND DIMENSION)	Very good
SKIN SMOOTHNESS	Very good
TOP HABIT	Very strong with erect foliage
TOP HEIGHT	30 – 35 cm
TOP COLOUR	Dark green
STEM ATTACHMENT	Strong
DISEASE REACTION (SCIENTIFIC)	High resistance: <i>Meloidogyne javanica</i> (Mj) Intermediate resistance: <i>Alternaria dauci</i> (Ad) and <i>Erysiphe heraclei</i> (Eh)
FIELD HOLDING	Good
BOLTING REACTION	Fair
YIELD POTENTIAL	Excellent
SUGGESTED POPULATION	1.8 – 2.2 million seeds per ha
USE	Pre-pack, bunching, fresh market, bulk and processing
SPECIAL FEATURES	Very early maturing with a high resistance to Nematodes with an excellent yield potential and excellent quality

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

Disclaimer: This information is based on our observations and/or information from other sources. As crop performance depends on the interaction between the genetic potential of the seed, its physiological characteristics, and the environment, including management, we give no warranty express or implied, for the performance of crops relative to the information given nor do we accept any liability for any loss, direct or consequential, that may arise from whatsoever cause. Please read the Sakata Seed Southern Africa (Pty) Ltd Conditions of Sale before ordering seed.

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.

GENERAL TIPS FOR CARROT PRODUCTION

Soil preparation

Being a root crop, soil conditions and preparation are essential to the success of the crop. Although sandier soils are preferred, carrots are commonly produced on heavier soils. Soil preparation must include deep ripping of the soil to remove any potential sub surface compaction layers that may inhibit root growth and lengthening of the roots.

Soil should be worked into a fine, smooth tilth to produce a fine seed bed. Carrots are usually planted in beds and seldom directly into the soil on flat ground. Beds should be made to a depth of at least 15 cm, but for heavier soils, depths of up to 20 cm should be preferred, particularly in higher rainfall areas. Straight beds across the field also make for easier management of the crop as well as the actual sowing of the seed.

Irrigation

Irrigation management can have a very profound affect on the development of carrot roots. Typical management practices should be used to impact the growth and size of the carrots.

Over-irrigation can lead to short, stumpy carrots. This can also occur in poorly drained or heavier soils as well as during high rainfall periods. To assist under these conditions, lighter soils should be used along with deeper beds around 20 - 30 cm.

During earlier growth and development, growers often reduce the amount of water being given to the crop to help establish a longer carrot. As water is withdrawn from the field, the carrot root lengthens "in search of water". Withdrawal of water should not bring the plants to wilting, so caution should be taken with monitoring the crop. For sandier soils, irrigation would need to be applied sooner than with higher clay soils.

For the last 3 to 4 weeks of production, ensure regular supply of water and do not allow the crop to stress. This will help keep the roots turgid and develop quickly as well as bulk up for weight.

Large amounts of water applied to the crop shortly before harvest can increase sensitivity to cracking during the harvesting process. This crack is longitudinal and often occurs when the carrot is hit or knocked along its length. There is some evidence that a shortage of calcium may increase susceptibility to cracking.

Fertilisation

Carrots require specific fertilisation to ensure good production. Firstly, good leaf growth and development are

required to establish the crop followed by the encouragement of sugar production and storage.

Therefore in the earlier stages of growth, the carrot plant responds well to nitrogen stimulating the production of good healthy tops on the plants. Stimulation of sugar production can be boosted after leaf development by increasing phosphates and potassium, but primarily potassium. Calcium is also important to improve strength of the carrot. Magnesium can also be applied in the later stages of growth to help improve colour. Nitrogen should not be removed as it is important that a small continual supply will maintain healthy leaf production.

Over application of nitrogen at any stage will stimulate leaf production and can negatively affect the production of excess sugars for the roots.

Disease reaction definitions:

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.

Immunity (I): Not subject to attack or infection by a specified pest or pathogen.

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