



Information Sheet

2006

13. VARIETIES

13.8 Variety N21

INTRODUCTION

N21 was released into the industry for its eldana resistance. While recommended for planting on poorer soils where stress and higher levels of eldana are likely, N21 also performs well on a range of soil types (NGS Ordinary, Dwyka tillite, granites). N21 performs better on soils where clay content is above 12%. High yields can be obtained on good, deep soils. Recommended for planting early in Spring, allowing for a plant crop of 14-15 months. When planting in Autumn, this variety can be harvested at 16-20 months, although lodging and harvesting may be a problem at this age. Good yields have been obtained with this variety on the South Coast.

Origin: SASRI, South Africa

Year of release: 1989

Variety Code: 71E0280

Parentage: CB38/22 x N52/214

CANE QUALITY & YIELD

Tons RV: Relative to other varieties N21 yields its best under stressed conditions and when eldana levels are high (Average is 1.1 t RV/ha > NCo376 on Dwyka, 0.4 t RV/ha > NCo376 on NGS Ordinary). This advantage increases with increasing stress and age. Average RV yields can be similar to N12 when harvested older than 15 months but are better than N12 when harvested annually. Best yields obtained when harvested mid-late season, can be immature in the early season.

Cane yield: High (similar to NCo376)

RV content: Moderate (Average = 107% NCo376, 105% N16)

Fibre content: Very high (118% NCo376, 112% N12, 115% N16)

Purity: Moderate

Fibre:sucrose ratio: High

Non-sucrose:sucrose ratio: Low

AGRONOMIC CHARACTERISTICS

Germination (speed and reliability): Rapid and reliable

Stalk population (at harvest): Medium: 110 000/ha

Stalk mass (at harvest): Medium

Stalk height (at harvest): Very tall

Stalk elongation: Rapid

Canopy formation: Very slow canopy formation. Erect canopy

Flowering: Sparse

Lodging: Severe, when harvested older than 12 months

Ratooning ability (speed and reliability): Rapid and reliable if harvested in spring or summer (can be variable when harvested in winter)

REACTION TO DISEASES & PESTS

Smut: Resistant

Mosaic: Resistant

RSD: Susceptible

Rust: Resistant

Leaf scald: Highly resistant

Red rot: Intermediate

Nematodes: Highly susceptible

Eldana: Resistant



Rainfed

REACTION TO WATER STRESS**Growth during severe water stress:** Good**Recovery after water stress:** Good**Ratooning after drought:** Good**Poorly drained soils:** Moderately tolerant**NUTRITION****Nitrogen use efficiency:** Moderate to high**RIPENER RECOMMENDATIONS****Fusilade Forte:** Ground rigs (250 ml/ha), Aerial (275 ml/ha): Yes**Ethephon (1.5 l/ha):** Yes**Gallant Super:** No data**Tandem (Ethephon + Fusilade Forte):** Yes**HARVESTING****Best months:** Aug-Dec**BEST FEATURES**

N21 is resistant to diseases and eldana. It germinates and grows rapidly. N21 is a useful variety for shallow soils and drought stress conditions. It has a tendency to be self trashing. High N use efficiency indicates that a lower rate of N fertiliser can be applied. N21 outperforms other varieties on shallow soils and hilltops. Good yields have been observed on deep, red coastal sands and moderately deep granite soils. N21 is the best variety for shales. It is fairly frost tolerant. N21 has a high tolerance to Aluminium toxicity.

LIMITING FEATURES

N21 tends to lodge severely and is hard to cut. It has a high fibre content. Cutters have difficulty in harvesting N21. Growers can get poorer payloads with this variety. N21 becomes increasingly difficult to cut as it ages beyond 16 months. Avoid harvesting on light textured and Dwyka tillite soils from May to July as N21 ratoons poorly at this time of the year, particularly under dry conditions. It has an open canopy due to erect leaves which may lead to a weed problem. It is recommended that N21 be planted at a closer row spacing (1 m). Ratooning can be variable. Variable stalk populations have been recorded on shallow, black, blocky clays of Milkwood and Bonheim soil forms. Poor yield performance under irrigated conditions. N21 is highly susceptible to nematodes

*Identification Guide***HABIT AND GENERAL APPEARANCE**

A tall, low population variety with an erect, dark green canopy that has a spiky appearance.

LEAF

Blade: narrow, erect and dark green with small chlorotic blotches sometimes on the midrib. At the base of the leaf, where it joins the sheath, there is usually a chlorotic yellowish area, mainly on the midrib and particularly in older leaves.

Sheath: green, with purplish-red blotches sometimes on the younger sheaths; long soft hairs present. Trash clings tightly.

Collar: narrow, yellowish.

Auricle: fairly short, broad and rounded at tip.

STALK**Internode**

Light yellowish-green with a lot of white wax overlay. Medium in thickness, slightly staggered. The stalk is hard.

Wax band: indistinct in young internodes, but can be fairly distinct in older internodes.

Bud furrow: slight.

Node

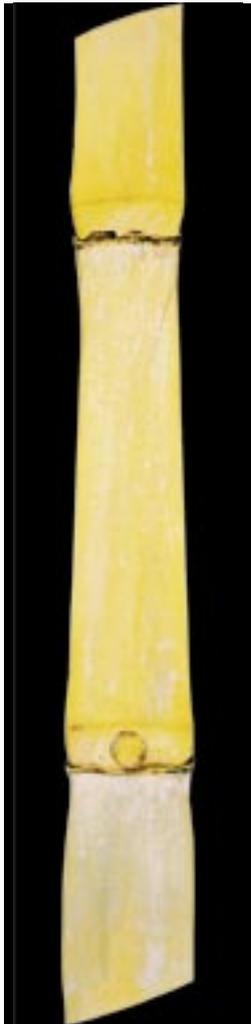
Growth ring: yellowish-green, protruding slightly.

Root band: medium in width, yellowish, similar to the internode. Root primordia similar in colour to growth ring.

Sheath scar: fairly neat.

Bud: small to medium, more or less circular.

Flange: very narrow.



All variety information sheets are available at <http://www.sugar.org.za/sasri/variety/index.htm>

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