



Information Sheet

3. VARIETIES

Variety N19

INTRODUCTION

N19 is commonly grown in the northern irrigated region. It also yields well in the rainfed region along the coast on higher potential soils (good alluvium, dolerite, Vryheid sediments) harvested annually. N19 yields well under irrigation on a range of soils (alluvium, dolerite, Vryheid sediments) and requires good irrigation management. N19 is also suited to the North Coast and Zululand regions. Do not plant on the South Coast, in the Midlands or in Mistbelt areas as it is susceptible to mosaic. For the same reason (mosaic) do not plant N19 in the late season in Mpumalanga.

Origin: SASRI, South Africa

Year of release: 1986 (North) / 1989 (South)

Variety Code: 75F2753

Parentage: NCo376 x CB40/35

CANE QUALITY & YIELD

Tons RV: Average is similar to N14, but it is superior to NCo376 and N14 when harvested early to mid-season. Poorer than N14 on sandy soils. Under favourable rainfed conditions will produce very high sucrose yields when cut annually (111%N12). Average RV yields are 1.5 t RV/ha >NCo376 on Lower/Middle Ecce, 1 t RV/ha >NCo376 on alluvium, 0.8 t RV/ha >NCo376 on dolerite.

Cane yield: Low-moderate (lower than NCo376, N12, N16 and N14)

RV content: High (average is 113%NCo376, 110%N12, 109%N16, 108%N14)

Fibre content: Moderate (100%NCo376, 95%N12, 99%N16, 103%N14)

Purity: High

Fibre:sucrose ratio: Low

Non-sucrose:sucrose ratio: Low

AGRONOMIC CHARACTERISTICS

Germination (speed and reliability): Rapid and reliable

Stalk population (at harvest): Medium: 112 000/ha

Stalk mass (at harvest): High

Stalk height (at harvest): Average

Stalk elongation: Rapid

Canopy formation: Rapid

Flowering: Sparse

Lodging: Severe and prone to early lodging

Ratooning ability (speed and reliability): Rapid and moderately reliable

REACTION TO DISEASES & PESTS

Smut: Resistant

Mosaic: Susceptible

RSD: Susceptible

Brown Rust: Resistant

Tawny Rust: Resistant

Leaf scald: Highly resistant

Red rot: Susceptible

Nematodes: Highly susceptible

Eldana: Intermediate-susceptible

REACTION TO WATER STRESS

Growth during severe water stress: Poor

Recovery after water stress: Poor

Ratooning after drought: Moderate

Poorly drained soils: Intolerant

Salinity tolerance: 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: 150-165 ml/ha

Tandem (Ethephon + Fusilade Forte): Yes - highly recommended

HARVESTING

Best months: Apr-Aug, best early in the season

BEST FEATURES

N19 has a high sucrose content. It is resistant to smut. N19 is best suited to early season, annual harvesting. It has a high tolerance to Aluminium toxicity. High N use efficiency indicates that a lower rate of N fertiliser can be applied to this variety. Good yields will be produced in soils of moderate depth (clay content >20%). It is recommended for irrigated areas as well as for rainfed areas. N19 is only recommended for annual harvesting. Under rainfed conditions N19 yields best at lower altitudes and in the coastal areas of North Coast and Zululand. N19 has good milling characteristics and has a very low pith:fibre ratio, resulting in good extraction at the mill.

LIMITING FEATURES

N19 is susceptible to mosaic. Do not carry over on the Coast or in areas where there is water stress and eldana is a problem. N19 tends to lodge and ratooning ability is generally poor because it has a shallow rooting system. Crooked sticks can lead to poor stack/load weights. Generally poorer payloads are achieved with this variety. Yield performance is poor under waterlogged and water stressed conditions, especially on sandy soils. N19 is very sensitive to heavy traffic, especially when wet. Avoid planting in areas that are prone to water stress. Avoid planting and harvesting in Spring and Summer in Onderberg area, where mosaic has become a problem. Plant only in Autumn and keep this variety on an early to mid-season cutting cycle (up to end of Aug).



Identification Guide

HABIT AND GENERAL APPEARANCE

A very quick growing variety, with an open growth habit and a medium stalk population.

LEAF

Blade: medium to broad in width; slightly drooping. A well defined chlorotic blotch is present, and chlorosis may be present on the lamina as well as the midrib.

Sheath: the abaxial surface is usually very hairy, with the hairs being rather short and spiny.

Collar: medium width; indistinct green-brown in colour.

Auricle: usually present, being well developed, broad and lance-shaped.

STALK**Internode**

Yellow-green in colour. Trash clings loosely. When exposed a purple colour develops, so the stalk appears to be purple.

Wax band: much wax is present on the internode, so the band may be indistinct.

Bud furrow: absent.

Node

Growth ring: yellow to yellow-brown. Sometimes slightly raised to form a small ridge. Distinct wave over bud.

Root band: narrow and slightly swollen; root primordia distinct with purple centres.

Sheath scar: protruding and sagging below the bud.

Bud: arises slightly above the sheath scar and is typically circular or oval in shape.

Flange: medium width; arises well above the centre of the bud.