



# Information Sheet

2006

## 13. VARIETIES

### 13.3 Variety N12

#### INTRODUCTION

**C**urrently N12 is the most widely grown variety in the rainfed regions of the SA sugarcane industry. It is a reliable and hardy variety and performs well through the very dry years. To achieve the greatest economic return from this variety it should be planted on average to less favourable areas of the farm: Grey recent sands, Dwyka tillite and NGS Ordinary soils and harvested on a long cutting cycle (16-22 months). N12 must not be harvested at 12 months. The minimum harvest ages (months) for the different regions are: North Coast (14), South Coast (15), Coastal hinterland (16), and Midlands (17). N12 has above average P and K requirements.

**Origin:** SASRI, South Africa

**Year of release:** 1979

**Variety code:** 67G0023

**Parentage:** NCo376 x Co331

#### CANE QUALITY & YIELD

**Tons RV:** Age at harvest is an important factor. Best yields are obtained when harvesting older than 16 months. 0.7 t RV/ha >NCo376 on Grey Recent Sands, 0.5 t RV/ha >NCo376 on NGS Ordinary

**Cane yield:** 94%NCo376 at 12 months, 108%NCo376 when older than 12 months

**RV content:** Moderate (105%NCo376). Sucrose content averages 102%NCo376 when harvested at or younger than 16 months. Harvested older than 17 months N12 averages 106%NCo376

**Fibre content:** Moderate to high (106%NCo376)

**Purity:** Moderate

**Fibre:sucrose ratio:** Moderate

**Non-sucrose:sucrose ratio:** Low

#### AGRONOMIC CHARACTERISTICS

**Germination (speed and reliability):** Slow and moderately reliable (can be poor after hot water treatment and in unfavourable conditions)

**Stalk population (at harvest):** High: 145 000/ha

**Stalk mass (at harvest):** Low

**Stalk height (at harvest):** Short

**Stalk elongation:** Slow for 12 months and then rapid

**Canopy formation:** Slow to canopy in plant cane, moderately rapid in ratoons. Erect stalks.

**Flowering:** Moderate

**Lodging:** Erect

**Ratooning ability (speed and reliability):** Moderate speed but very reliable

#### REACTION TO DISEASES & PESTS

**Smut:** Intermediate

**Mosaic:** Intermediate

**RSD:** Intermediate-susceptible

**Rust:** Resistant

**Leaf scald:** Resistant

**Red rot:** Resistant

**Nematodes:** Intermediate

**Eldana:** Intermediate-resistant.

#### REACTION TO WATER STRESS

**Growth during severe water stress:** Moderate to good

**Recovery after water stress:** Good



Rainfed

**Ratooning after drought:** Good - leaf blades roll inwards in response to moisture stress.

**Poorly drained soils:** Tolerant

**Salinity tolerance:** Tolerant

#### NUTRITION

**Nitrogen use efficiency:** High

#### RIPENER RECOMMENDATIONS

**Fusilade Forte: Ground rigs (250 ml/ha), Aerial (275 ml/ha):** Yes

**Ethephon (1.5 l/ha):** Yes

**Gallant Super:** 165 ml/ha

**Tandem (Ethephon + Fusilade Forte):** Marginally better than Fusilade Forte alone

#### HARVESTING

**Best months:** May-Oct

#### BEST FEATURES

*N12 is a very reliable, low risk cane with good disease resistance. On the coast N12 is good on poorer soils, as well as waterlogged and weak sands (Grey recent sands and NGS Ordinary). N12 is the most tolerant variety in soils where nematodes are a problem. Higher yields are obtained in the early season (May-July). Under acid soil conditions N12 requires lower amounts of lime. Acid chlorosis and brown spot are sometimes evident in this variety. N12 has a high N use efficiency which indicates that a lower rate of N fertiliser can be applied. It is fairly frost tolerant. N12 has a high tolerance to Aluminium toxicity. Fibre:sucrose ratio is generally low. Best yields obtained when aged and carried over.*

#### LIMITING FEATURES

*N12 germinates slowly and early growth is generally slow. It is not suited to 12 month old harvesting. N12 does not perform well on soils with high organic matter content or on alluvium soils. The longer cutting cycles may be affected by flowering in heavier flowering years. Late flower emergence will prevent carryover. N12 is not recommended for humic soils in the Midlands as the yields are variable on these soils (lower than N16).*

## Identification Guide

#### HABIT AND GENERAL APPEARANCE

Early growth is prostrate, becoming erect later. Good resistance to lodging and canopy is erect. Leaves are quick to respond to conditions of moisture stress, by an inward rolling of the leaf blade.

#### LEAF

**Blade:** narrow, erect leaves with a slight chlorotic blotch. The canopy is usually paler in colour than that of NCo376.

**Sheath:** hairs on the back of the leaf sheath usually absent; sometimes a few present. Has a distinct purplish tinge visible through the overlying wax coating.

**Collar:** medium width, with distinct green colour. A prominent fringe of hairs is associated with the collar region.

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

#### STALK

##### Internode

Medium thickness and relatively hard. Yellow-green in colour. On exposure green flushes develop. Cylindrical in shape and staggered. Generally no cracks, although corky markings (patches) may be present.

**Wax band:** narrow, constricted and usually distinct.

**Bud furrow:** absent.

##### Node

**Growth ring:** green in young nodes, becoming yellow in older nodes.

**Root band:** medium width, creamy white in colour. Root primordia generally present in two to three rows.

**Sheath scar:** a ragged scar which may protrude and sag slightly below the bud.

**Bud:** usually oval, occasionally circular, arising above the sheath scar. The young, immature buds are a characteristic pink or red-pink colour.

**Flange:** narrow to medium width, arising at or below the centre of the bud.



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

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