



Information Sheet

2006

3. VARIETIES

Variety NCo376

INTRODUCTION

The cross between the parents of this variety was made at the Coimbatore Research Station in India. The seed (fuzz) from the flower was planted under local conditions in KwaZulu-Natal and NCo376 was one of the varieties selected for commercial propagation. Since its release in 1955 this variety has become susceptible to mosaic and smut. NCo376 is not permitted for planting in the Midlands or Northern Irrigated regions due to its susceptibility to these diseases. NCo376 is, however, still a popular variety along the coast.

Origin: Coimbatore, India (seed) & SASRI, South Africa

Year of release: 1955

Variety Code: NCo376

Parentage: Co421 x Co312

CANE QUALITY & YIELD

Tons RV: Good yields are obtained when harvested annually under favourable growing conditions and where disease levels are low. Best yields obtained mid-late season.

Cane yield: Generally high, although often slightly lower than N16.

RV content: Moderately low (96%N12, 97%N14, 97%N16, 90%N19)

Fibre content: Moderate (approx 13% fibre) (95%N12, 97%N16, 105%N14, 102%N19)

Purity: Moderate

Fibre:sucrose ratio: Moderate

Non-sucrose:sucrose ratio: Moderate to high

AGRONOMIC CHARACTERISTICS

Germination (speed and reliability): Rapid and reliable

Stalk population (at harvest): High: 133 000/ha

Stalk mass (at harvest): Low

Stalk height (at harvest): Tall

Stalk elongation: Moderately rapid

Canopy formation: Moderately rapid

Flowering: Moderate

Lodging: Slight

Ratooning ability (speed and reliability): Rapid and reliable

REACTION TO DISEASES & PESTS

Smut: Susceptible

Mosaic: Highly susceptible

RSD: Susceptible

Brown Rust: Resistant

Tawny Rust: Intermediate

Leaf scald: Resistant

Red rot: Susceptible

Nematodes: Susceptible

Eldana: Susceptible

REACTION TO WATER STRESS

Growth during severe water stress: Poor

Recovery after water stress: Moderate to good

Ratooning after drought: Moderate to good

Poorly drained soils: Moderately tolerant

Salinity tolerance: Tolerant

NUTRITION

Nitrogen use efficiency: Moderate to low



Rainfed

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): Yes - highly recommended

HARVESTING

Best months: Jul-Dec

BEST FEATURES

NCo376 is a reliable variety that produces good yields on moderate to high potential soils and under favourable growing conditions. It has a good ratooning ability. NCo376 tends to recover from water stress as long as the stress is not too severe. It responds well to ripeners.

LIMITING FEATURES

NCo376 has a fairly low sucrose content. Avoid harvesting in the early season; cane is immature at this time of year. It is susceptible to diseases and the eldana borer. Do not carry over on the Coast or in areas where there is water stress and eldana is a problem. Avoid planting NCo376 in areas where smut and mosaic are a problem. It has a moderate to low N use efficiency which indicates that a higher rate of N fertiliser may be required. NCo376 has a low tolerance to Aluminium toxicity.



Identification Guide

HABIT AND GENERAL APPEARANCE

An erect cane with leaves which, although fairly erect, droop near the tips. Leaves are dark green, with a characteristic pale mottling nearly always present on the lower surface, particularly along the midrib. Trash somewhat clasping. Flowers fairly freely.

LEAF

Blade: fairly erect but drooping towards the tip; medium width; dark green except for chlorotic blotching of lower surface of midrib.

Sheath: hairs few to fairly plentiful; sheath somewhat loosely clasping; usually with a very slight purplish tinge on the outside and white or only slightly pinkish at the base on the inside.

Collar: green to light brown.

Auricle: usually present on both sides, with one side well developed. Arising at or slightly below the level of the base of the collar.

STALK**Internode**

Medium in thickness and texture; nearly cylindrical but thinner towards the centre; staggered; yellow, but on exposure develops green patches that are sometimes overlaid with purplish flushes. Wax coating usually plentiful. Corky markings usually present and splitting is commonplace.

Wax band: rather narrow; slightly constricted; often not very distinct because of a general wax coating all over.

Bud furrow: absent.

Node

Growth ring: light green in young nodes, waxy-yellow in older nodes. Flush or swollen.

Root band: medium in width, narrowing slightly opposite bud; swollen, expanding towards base. In young nodes cream coloured, sometimes with green tinges; later becoming waxy yellow. Root primordia in two to three rows; depressed; centres dark without a purplish tinge.

Sheath scar: slightly slanting; does not protrude nor sag below the bud, or does so only very slightly.

Bud: more or less circular; small to medium in size; arising at or slightly above the sheath scar. Usually does not reach the growth ring. Germination central.

Flange: narrow and inconspicuous; arising at or above the centre of the bud. Apex not indented, or only slightly so. Tuft of hairs usually arises from the apex.