



Information Sheet

3. VARIETIES

Variety N39

Parents: CP67-411 x 75L1157. Year of release: 2002.

Permitted Pest, Disease and Variety Control Areas: Felixton, Entumeni, Amatikulu, North Coast, Midlands North, Midlands South, Sezela, Umzimkulu.

Recommended for planting under moderate to low potential conditions along the coast and hinterland on a 12 to 18 month cutting cycle. Also recommended for 18 month harvesting and frost pockets (12 month harvesting) in the midlands.

BEST FEATURES

N39 is an excellent variety for coastal and hinterland production on sandy soils. Best RV yields are achieved when harvested between 14 and 18 months of age. It is resistant to eldana and can therefore be carried over with less eldana damage compared to other varieties. It exhibits very quick germination and canopy closure. It is one of the best varieties for frost pockets in the midlands.

LIMITING FEATURES

N39 is susceptible to smut and should be planted cautiously in high risk areas. Brown rust is common on this variety, particularly in the plant crop. Although better than N12 in the midlands, N39 is generally outperformed by other newer midlands varieties like N48 or N50. N39 is usually outperformed by N41 when harvested at 12 months along the coast. Pithing can be a problem when N39 is aged.

YIELD AND QUALITY*

	Age at harvest		
	12-15	15-18	18-24
Tons RV	Moderate to high 112% of N12 112% of N27 98% of N41	Moderate 109% of N12 91% of N31 95% of N48	Moderate to low 107% of N12 85% of N31 76% of N48
Cane yield	Moderate to high 116% of N12 114% of N27 100% of N41	Moderate to low 101% of N12 82% of N31 88% of N48	Moderate to low 100% of N12 78% of N31 77% of N48
RV %	High 107% of N12 100% of N27 98% of N41	High 108% of N12 109% of N31 107% of N48	Moderate to high 106% of N12 107% of N31 97% of N48
Fibre content	Moderate 92% of N12 99% of N27 101% of N41	Moderate 99% of N12 101% of N31 108% of N48	Moderate 99% of N12 100% of N31 105% of N48

Better RV yields have been achieved with N39 when harvested younger than 18 months of age, especially on sandy soils along the coast and hinterland. RV yields on shallow soils have not been good. Good RV yields are achieved in frost pockets in the midlands region. N39 is generally outperformed by other midlands varieties when harvested on a 24 month cycle.

*Based on average performance relative to control varieties under the same conditions. Performance may vary under different conditions and levels of management.

**Harvest age is related to region, where 12-15 months represents coastal, 15-18 represents hinterland, and 18-24 represents midlands conditions, in general.

MILLING CHARACTERISTICS

Colour (lower values better)	52% lower colour than NCo376
Processability (higher percolation is better)	7% lower percolation than NCo376

SOIL SUITABILITY

Soil Group*	Performance
Grey crest to midslope	Good
Grey lower slopes	Good
Humics	Moderate (relative to other varieties)
Red	Moderate (relative to other varieties)
Black structured	Moderate (relative to other varieties)

*For soil forms that fall within these groups consult SASRI's Soils Bulletin or your local Extension Specialist.

AGRONOMIC CHARACTERISTICS

Germination	Very rapid and reliable
Stalk Population	Moderate to high (124 000 stalks/ha)
Stalk Height	Moderate
Canopy speed	Rapid
Flowering	Rare
Lodging	Moderate
Ratoon regrowth	Rapid and reliable
Reaction to water stress	Good (especially on sandy soils)
Reaction to waterlogging	Moderate to poor

N39 is one of the quickest germinating varieties in plant and ratoon crops. Under favourable growing conditions, quick growth of N39 often leads to pithing when aged. There have been reports of early ratoon yield decline under certain conditions with N39.

REACTION TO DISEASES AND PESTS*	
Smut	Susceptible (Poorer than N12 and N48)
Mosaic	Intermediate (Similar to N41, poorer than N48)
Brown rust	Intermediate (Poorer than N12 and N48)
Tawny rust	Intermediate
Eldana	Resistant (Better than N27, similar to N41)
Nematodes	Intermediate (Better than N27, similar to N41)
Moderate to severe brown rust has been observed on N39, particularly in the plant crop. Thrips numbers on N39 have generally been intermediate to low.	

* Reactions vary depending on pest and disease pressure and were accurate at the time of publishing

REACTION TO CHEMICAL RIPENING	
Fusilade Forte (250 – 275 ml/ha)*	Yes
Ethephon (1.5 L/ha)	No
Tandem (Ethephon + Fusilade Forte)	No

*The higher rates should be used when the chemical is applied by aircraft.

IDENTIFICATION GUIDE

Habit and General Appearance

A tall variety that has an erect growth habit. The stalks are medium to thin. The canopy is fairly light green and has erect leaves, medium in width, usually with bent leaf tips.

Leaf

Blade: Erect, medium in width with bent leaf tips. Fairly light green in colour, often with chlorotic blotches on both the midrib and blade.

Sheath: Light green, normally with no hairs present. The trash can be peeled off fairly easily.

Collar: Medium width, green-yellow; often also has slight purple colour.

Auricle: No auricle present.

Stalk

Internode

Medium length and fairly thin. There are often corky markings present. Light yellow-green in colour, becoming green-yellow on exposure. The stalks can have a slight stagger or zigzag.

Wax band: Narrow to medium; fairly distinct.

Bud furrow: None.

Node

Growth ring: Medium width; yellow-green.

Root band: Medium width; green-yellow in colour.

Sheath scar: Neat.

Bud: Round/ovate; arises at the sheath scar.

Flange: narrow to medium width; usually just reaches the growth ring.



Updated by Sanesh Ramburan (Senior Agronomist: Varieties) December 2014