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Since 2004, there has been a Namibian SEPASAL team, based at the National Botanical Research Institute of the Ministry of Agriculture which has been updating the information on Namibian species from Namibian and southern African literature and unpublished sources. By August 2007, over 700 Namibian species had been updated.

Work on updating species information, and adding new species to the database, is ongoing. It may be worth visiting the web site and querying the database to obtain the latest information for this species.

#### Internet SEPASAL

New query Edit guery View query results Display help In names list include: synonyms vernacular names and display: 10 names per page Your query found 1 taxon

# Brachiaria nigropedata (Ficalho & Hiern)Stapf [2182]

**Family: POACEAE** 

# **Synonyms**

Panicum melanotylum Hack. Panicum nigropedatum Ficalho & Hiern Brachiaria melanotyla (Hack.)Henrard

# Vernacular names

Afrikaans (Namibia) swartvoetjie [5115] [5116], wurmpiesgras [2259]

swartvoetjiegras [5117], haasgras [2259], krulgras [2259], soetgras [2259], wurmpiesgras Afrikaans (South

Africa) [2259], wurmsinjaalgras [2259]

Afrikaans (Southern wurmsinjaalgras [2182]

Africa)

**English** black-footed brachiaria [2259]

English (Namibia) black-footed brachiaria [2259] [5116], spotted brachiaria [5115] [5116]

black-footed signal grass [5117], spotted false paspalum [2259], spotted signal grass English (South Africa)

[2259], sweet grass [2259]

English (Southern spotted signal grass [2182]

Africa)

English (Zimbabwe) black-footed brachiaria [2259], spotted false paspalum [2259]

German (Namibia) Schwartzfüsschen [2259] [5115] [5116]

Jul'hoan (Namibia) beye-llxui-doa [5115], glam (-si) [5115], glaqm [5083]

Kxoe (Namibia) beyellxui-doa [5083]

Thimbukushu muranganandho [5115], muranganandhoghoro [5083]

(Namibia)

Tonga (Zimbabwe) chiDyashana [2259]

Unknown (Angola) Txuá [2259]

#### **Distribution**

Plant origin	Continent	Region	<b>Botanical country</b>
Native	Africa	East Tropical Africa	Kenya [1362] [2259], Tanzania [2259]
		South Tropical Africa	Angola [5126], Mozambique [2259] [5104] [5127], Zambia [2259], Zimbabwe [2259] [5125]

Southern Africa

Botswana [2259], Cape Province [2259], Lesotho [5131], Namibia s.l. [2259] [5115] [5116], Natal [5104], Orange Free State [2182] [2259] [5104], Swaziland [2259] [5104],

Transvaal [<u>2259</u>]

**ISO countries:** South Africa [2182] [2259] [5104]

# **Descriptors**

Category	Descriptors and states		
DESCRIPTION	Herb [2255]; Tussock Forming/Tufted/Caespitose [2182] [5116] [5117]; Terrestrial [2255]; Rhizomatous [2182] [2259] [5117]; Perennial [2182] [5115] [5116]; Plant Height 0.3-1.2 m [2182] [5104]		
CLIMATE	Tropical Summer Rains [2182] [2259] [5115]; Subtropical, Hot and Arid [2259] [5115] [5116] [5117]; Annual Rainfall 300-1000 mm [2255]		
SOILS	Well Drained [2182] [5116] [5117]; Boulders/Rocky [2182] [5117]; Gravels/Stony [5117]; Sandy [2182]; Dry [5117]		
HABITAT	Pioneer Species [2259]; Shrubland/Bushland/Scrub [1362] [5117]; Grassland/Forb-Land [2259]; Wooded Grassland [2259] [5101]; Hillsides/Slopes [2182] [5117]; Semi-Desert [2182] [5117]; Vlei/Dambo/Seasonally Flooded Grassland [2259]; Altitude 100-1600 m a.s.l. [5104]		
PHYSIOLOGY	C4 [940] [2182]; Drought Tolerant [2255]		
PRODUCTION AND VALUE	Potential Animal Food Uses [2259] [5116] [5117]		
SOURCES OF PLANTING MATERIAL	Other Seed Sources [5181]		
FURTHER DATA SOURCES	Dot Distribution Map [5115] [5116]; Botanical Illustration [2259] [5116]; Regional Distribution Map [2182] [2259] [5117]; Botanical Photograph [5117]		
SEPASAL DATASHEET STATUS	All Data Transferred from SEPASAL Paper Files; Nomenclature Checked		
CHEMICAL ANALYSES	Poisonous Compounds - sap/leaf sap [1340]; Nutritional Analyses - aerial parts [940] [5251]; Polysaccharides - 'roots' [5128]		

# Uses

Major use	Use group	Specific uses
ANIMAL FOOD	Aerial Parts	unspecified aerial parts, game mammals, browse [5117]; unspecified aerial parts, grazing [2182] [2259] [5116] [5117]; unspecified aerial parts, cattle, grazing [2255] [5129] [5132] [5133]; game mammals, browse [5117]; fodder [5130]; grazing [2182] [5116] [5117]; unspecified aerial parts, mammals, grazing [5525]
MATERIALS	Fibres	unspecified aerial parts, matting, mats [5088]
	Other Materials/Chemicals	leaves, other material types, adhesives [5088]
SOCIAL USES	'Religious' Uses	leaves, ritual/religion/magic [5088] [5101]; unspecified aerial parts, ritual/religion/magic [5088]

ENVIRONMENTAL Erosion Control other environmental materials, eroded land [5128]

USES

Revegetators copper-rich soils [5134]
Indicators rangelands [5116] [5117]

## **Picture**

None recorded

#### **Notes**

#### **VERNACULAR NAMES**

"Sweet grass" and "soetgras" refers to its palatability [2259].

#### **DISTRIBUTION**

Botswana:

Widespread in the Kalahari sandveld areas [5130].

Namibia:

Uncommon to common [5115].

Southern Africa, south and east tropical Africa [5115].

Southern Africa:

Mainly southern tropical Africa with interrupted northern extensions. [2182] [2259] .

Angola:

Occurs in the Cunene, Huíla, Moxico and Namibe provinces [5126].

Botswana:

Occurs in the Ngamiland, Central, Chobe, Ghanzi and Southern Districts [5186] .

Lesotho:

Occurs in the Mountain and Sengu valley zone [5131].

*Mozambique*:

Occurs in the Maputo and Nampula provinces [5127].

#### DESCRIPTION

#### Leaves:

The leaves are bright or dull green, the blades flat, straight and firm, rough on the margins, usually velvety hairy on the surface. They taper to a very fine point and curl when old  $[\underline{2259}]$ .

Habit:

Perennial, tufted, with an oblique, shortly creeping rhizome. Culms usually glabrous except at the shortly hairy nodes [2259].

## **IDENTIFICATION**

Distinguished from other species by the typical short black pedicel of every spikelet [5117].

## **ANIMAL FOOD - AERIAL PARTS**

Game mammals, browse:

Preferred by sable antelope [5117].

Grazing value very high [5117].

Fodder:

In Botswana the fodder value is rated as desirable [5130].

Palatable pasture (with good forage value) [2182].

South Africa:

A palatable grass with high leaf production, which is well used by grazers [5117].

Valuable, palatable climax grass [5116].

Widely regarded as having good forage value, this grass is palatable [2259].

Unspecified aerial parts, mammals, grazing:

It is a sweet grass much relished by all stock [5525].

#### **MATERIALS - FIBRES**

*Unspecified aerial parts, mats:* 

In Namibia young hunters of the Jul'hoansi who have returned from their first successful hunt are initiated as such by sitting on a mat made of this grass [5088].

#### **MATERIALS - OTHER MATERIALS/CHEMICALS**

Leaves, adhesive, arrows:

In north-eastern Namibia the leaves are sometimes mixed with those of Hermannia tomentosa. The mixture is then added to a black sticky paste smeared on the sinews tying arrows together for example. This black paste forms an important part of hunting equipment [5088].

#### SOCIAL USES - 'RELIGIOUS' USES

Aerial parts, ritual:

In Namibia after successfully targeting an animal with a poisoned arrow, the hunter (of the Jul'hoansi people) lies down to rest on a mattress made of this grass, and waits. This ritual is believed to make the poison in the animal's body more powerful [5088].

Leaves:

Before the hunt begins, the hunter (in north-eastern Namibia) rubs the grass (leaves) on his arms to improve his strength and archery skills [5088] [5101].

Leaves, arrows:

In Namibia the Zu'hoasi people wrapped poison grubs in dry and wet leaves and held them above a fire. The thick smoke that arises is believed to soften the grubs for mixing of arrow-poison [5101].

#### ENVIRONMENTAL USES - EROSION CONTROL

Roots, eroded land:

Roots exude polysaccharides so that root hairs form a rhizophere with soil particles [5128].

#### **ENVIRONMENTAL USES - REVEGETATORS**

Heavy metal tolerance:

Found on copper outcrops [2255] [5134].

# **ENVIRONMENTAL USES - INDICATORS**

Rangelands:

Regarded as an indicator of veld in good condition. One of the first grasses to disappear from the veld as a result in overgrazing [5116] [5117].

## **NUTRITIONAL VALUE**

*Aerial parts*:

Sept 1976 IVDMD 35.7%, CP 3.2%, P 0.04%, Ca 0.39%, moisture 18.5%. Nov. 1976 IVDMD 40.2%, CP 4.4%, P 0.03%, Ca 0.41%, moisture 21.2%. Feb. 1977 IVDMD 44.2%, CP 12.3%, P 0.13%, Ca 0.38%, moisture 66.4%. April 1977 IVDMD 36.3%, P 6.3%, Ca 0.40%, moisture 53.8%. June 1977 IVDMD 37.4%, CP 4.0%, P 0.05%, Ca 0.36%, moisture 25.7%. Feb. 1978 IVDMD 41.1%, CP 7.0%, P 0.12%, Ca 0.27%, moisture 64.7%. July 1978 IVDMD 31.9%, CP 2.9%, P 0.03%, Ca 0.50%, Nov. 1978 IVDMD 45.6%, CP 2.7%, P 0.02%, Ca 0.46%, moisture

11.6%. Feb.1979 IVDMD 53.8%, CP 10.4%, P 0.13%, Ca 0.31%, moisture 66.0%. May 1979 IVDMD 50.7%, CP 4.6%, P 0.06%, Ca 0.39% [940] .

Good forage value [2182].

Leaves, entire plant, crude protein, Ca, P, OM, DM, crude fibre, ADF, NDF, ADL, fat, in vitro digestibility, metabolizable energy, gross energy:

In Namibia 13 samples that included the leaves, the whole plant as well as samples taken which imitated sheep, were analysed. The following results are a summary of the tests presented as ranges (minimum to maximum). Crude protein 2.82-7.50%, P 0.01-0.09%, Ca 0.13-2.09%, OM 85.97-93.42%, DM 91.56-99.48%, crude fibre 27.00-35.27%, ADF 34.36-51.20%, NDF 58.63-72.90%, fat 0.75-1.64%, in vitro digestibility. 35.10-48.50%, metabolizable energy 4.40-6.20 MJ/kg, gross energy 16.08 MJ/kg [5251].

### TOXICITY/POISONOUS COMPOUNDS

Sap:

In Southern Zimbabwe the juice of B. nigropedata is said to produce serious poisoning when taken internally and to burn the skin when applied to it  $[\underline{1340}]$ .

#### CHEMICAL ANALYSES - MISCELLANEOUS

Roots, carbohydrates, polysaccharides:

Roots exude polysaccharides so that root hairs form a rhizophere with soil particles [5128].

#### **CONSTRAINTS - MISCELLANEOUS**

Sap:

In Southern Zimbabwe the juice of B. nigropedata is said to produce serious poisoning when taken internally and to burn the skin when applied to it  $[\underline{1340}]$ .

#### RAINFALL

Kenya:

700-1000 mm [2255].

Southern Africa:

Grows in higher rainfall tropical areas [2259].

#### **TEMPERATURE**

Seasonal variation:

Maximum 20-25°C and minimum 0-10°C [2255].

## TOPOGRAPHY/SITES

Zimbabwe:

Common around disturbed vleis [2259].

### **SOILS**

*Texture*:

On rocky slopes or among rocks, usually on sandy or well-drained soils [2182].

*Texture*:

Poor red sand [2255].

#### **VEGETATION**

Grows in a variety of habitats, ranging from open grassland to woodland savanna, especially in the higher rainfall tropical areas [2259].

Namibia:

Abundant in the open Tree Savanna of the Kaukauveld (Tsumkwe area) [5101].

Namibia:

It forms thick stands in natural climax veld in association with Anthephora pubescens and Schmidtia pappophoroides [5116].

Southern Africa:

Common (usually scattered but sometimes forming dense stands) [2182].

Southern Africa:

Kalahari desert [2255].

Southern Africa:

Savanna and Nama-Karoo [2182] [5117].

Zimbabwe:

Common around disturbed vleis in Rhodesia but also found in undisturbed veld [2259].

Botswana:

Widespread in the Kalahari sandveld areas [5130].

Namibia:

A valuable palatable climax grass [5116].

#### **ENVIRONMENTAL FACTORS - MISCELLANEOUS**

Can remain green throughout drought [2255].

Namibia:

Under injudicious management practices this species is one of the first grasses to disappear as a result of selective grazing [5116].

South Africa:

One of the first grasses to disappear from the veld as a result of overgrazing (decreaser) [5117].

#### FLOWERING/FRUITING/SEED SET

Flowering, Southern Africa:

November to April [2182] [5117].

# **YIELDS**

South Africa:

A palatable grass with high leaf production, which is well used by grazers [5117].

## SEED/GENE BANK SOURCES

National Plant Genetic Resources Centre, National Botanical Research Institute, Private Bag 13184, Windhoek, NAMIBIA.

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Updated for Namibia by E.Irish; checked by A. Jarvis; SEPASAL Namibia, National Botanical Research Institute, February 2005.

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