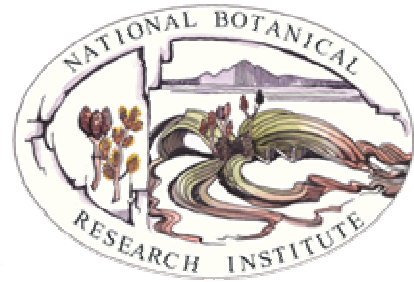


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Since 2004, there has been a Namibian SEPASAL team, based at the National Botanical Research Institute of the Ministry of Agriculture which has been updating the information on Namibian species from Namibian and southern African literature and unpublished sources.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

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New query

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 *Display help*In names list include: synonyms vernacular names and display: All names per page*Your query found 2 taxa***Setaria sphacelata (Schumach.)M.B.Moss [1362]**

Family: POACEAE

Synonyms

None recorded

Vernacular names

(Mozambique)	cununo [5480], quisumbe [5480]
Afrikaans (Namibia)	kanariegras [2259]
Afrikaans (South Africa)	gewone mannagrass [5117], gewone setaria [2259], goue mannagrass [2259] [5117], kanariegras [2259], katstertmannagrass [2259], kruipmannagrass [5117], ou land gras [2259]
Afrikaans (Southern Africa)	buffelsgras [1171], kanariegras [1171]
English (Namibia)	common bristlegrass [5115]
English (South Africa)	common bristle grass [2259] [5117], creeping bristle grass [5117], dogstail [2259], golden bristle grass [5117], golden millet [2259], landsgrass [2259], old land grass [2259]
English (Southern Africa)	South African golden millet grass [1340], Zimbabwe Timothy grass [1171], buffalo grass [1171], dogstail [1171], golden Timothy grass [1171], golden bristle grass [5664], golden millet [1171], golden tumbling grass [1171]
English (Zimbabwe)	Rhodesian Timothy (grass) [2259], golden Timothy [2259], golden Timothy (grass) [2259], twisted Timothy [2259], twisted-leaf bristle grass [2259]
Niassa (Mozambique)	quisumbe [2259]
Rumanyo (Namibia)	likonge [5115], makonge [5115]
Zulu (South Africa)	umFushlo [2259]
Zulu (Southern Africa)	ikununu [1171] [1340], umpuhlo [1171]

Partial distribution

Plant origin	Continent	Region	Botanical country
Native	Africa	East Tropical Africa	Kenya [1362] [2259] [6573], Tanzania [2255] [2259] [6573], Uganda [1362] [2259]
		South Tropical Africa	Angola [2259] [5126], Malawi [3] [2259],

			Mozambique [3] [2259] [5480], Zambia [3] [2259] [5481], Zimbabwe [3] [2259] [5125]
		Southern Africa	Botswana [3] [2259] [5104] [5186], Cape Province [2259] [5104], Caprivi Strip [3] [5115], Lesotho [2259] [5104] [5131], Namibia [2259] [5104] [5115], Natal [2259] [5104], Orange Free State [5104], Swaziland [2259] [5104] [5452], Transvaal [2259] [5104]
		West Tropical Africa	Burkina, Ghana, Guinea, Nigeria, Senegal, Sierre Leone, Togo
		West-Central Tropical Africa	Zaire [2259]
	Asia-Temperate	Arabian Peninsula	North Yemen
Introduced	Africa	Northern Africa	Morocco
		Western Indian Ocean	Madagascar
	Asia-Temperate	Eastern Asia	Taiwan
	Asia-Tropical	Malesia	New Guinea, Philippines [5664]
	Northern America	Southeastern U.S.A.	Florida
	Pacific	Southwestern Pacific	Fiji

ISO countries: Australia [5664] , China [5664] , Israel , India [5664] , Philippines [5664] , United States , Yemen , South Africa [5104] [5117] [5664]

Descriptors

Category	Descriptors and states
DESCRIPTION	Prostrate/Procumbent/Semi-erect [5664]; Tussock Forming/Tufted/Caespitose [2259] [5117] [5664]; Aquatic [2182] [2259]; Erect [2259] [5664]; Terrestrial [2259] [5664]; Rhizomatous [2182] [2259] [5664] [6573]; Perennial [2182] [2259] [5104] [5664] [6573]; Plant Height 0.45-3 m [2259] [5104]
CLIMATE	Tropical Summer Rains [2259] [5664]; Subtropical, Hot and Arid [3] [2182] [2259]; Annual Rainfall >= 500 mm [1653]
SOILS	Sometimes Waterlogged (frequency unknown) [2182] [2259] [5115] [5117] [6088]; Boulders/Rocky [2182]; Gravels/Stony [5664] [6573]; Alluvial Soils [2259]; Poorly Drained [2259] [5664]; Sandy [5664]; Clays [2259] [5664]
HABITAT	Woodland [3] [2259]; Montane [2259] [5664]; Shrubland/Bushland/Scrub [5117] [6573]; Grassland/Forb-Land [2182] [2259] [5664] [6573]; Wooded Grassland [3] [2182] [5117]; Hillsides/Slopes [2182] [5664] [6573]; Wooded Shrubland [2182] [5117]; Outcrops/Kopjes/Inselbergs [2182] [2259]; Semi-Desert [5117]; Watercourses [2182] [5664] [6088] [6573]; Anthropogenic Landscapes [5664]; Croplands [2182] [2259]; Floodplains [2182]; Vlei/Dambo/Seasonally Flooded Grassland [3] [2182] [2259] [5115] [5664] [6088]; Plains [5664]; Altitude 0-3300 m a.s.l. [3] [2255] [5104] [6573]
PHYSIOLOGY	C4 [2182]

PRODUCTION AND VALUE	Potential Environmental Uses [5664]
FURTHER DATA SOURCES	Botanical Illustration [1171] [2182] [2259]; Additional References [6127]; Regional Distribution Map [2259] [5123] [5664]; Botanical Photograph [2182] [5664]; Databases [5123]; Habit Illustration/Photograph [5664]; Grid Map [5115] [5117] [5123]
SEPASAL DATASHEET STATUS	All Data Transferred from SEPASAL Paper Files; Nomenclature Checked
CHEMICAL ANALYSES	Poisonous Compounds - aerial parts [5664]; Poisonous Compounds - seeds [1171] [1340] [2795]

Uses

Major use	Use group	Specific uses
FOOD	Seeds	entire seeds, famine food [1340] [2795]; entire seeds, cereals, porridges, famine food [1171]
ANIMAL FOOD	Fertile Plant Parts Aerial Parts	seeds, birds [2259] unspecified aerial parts, hay/straw [2182] [2259] [5117] [5664]; unspecified aerial parts, mammals, fodder [5118]; unspecified aerial parts, grazing [1653] [2182] [2259] [5117] [5664] [6088]; unspecified aerial parts, game mammals, grazing [2259]; unspecified aerial parts, silage [5117] [5664]
MATERIALS	Fibres	inflorescences, brushes/brooms [1340]; unspecified aerial parts, thatch [5118]
MEDICINES	Injuries	humans, wounds [1340]
ENVIRONMENTAL USES	Erosion Control Revegetators Indicators Ornamentals Boundaries/Barriers/Supports	eroded land [5664] watercourses [5664] [6088]; rangelands [6088] rangelands [5664] live plant in situ, gardens [5664] animal barriers, homesteads [5118]

Picture

None recorded

Notes

NOMENCLATURE/TAXONOMY

A polymorphic species, varying greatly in overall size. It is partitioned into a number of segregate taxa, either at species or at varietal level [[3](#)].

Name derivation:

The generic name is derived from the Latin 'seta' which means a bristle, alluding to the bristles subtending the spikelet. 'Sphacelata' is from Greek for gangrene, and by extension meaning dark and withered as though dead. The reason for this name is unknown. 'Torta' is the Latin for twisted, descriptive of the older leaf blades of var. torta [[2259](#)].

See Flora of Tropical East Africa pp. 527 - 530 for full details of varieties and their synonyms [[1362](#)].

Southern Africa:

A polymorphic species, varying greatly in overall size. It is customarily partitioned into a number of segregate taxa, either at species or, as in southern Africa, at varietal level. Four varieties: sericea, sphacelata, splendida and torta occur in southern Africa and are included in this species [[2182](#)].

VERNACULAR NAMES

Afrikaans (South Africa), Kruipmannagras:

Refers to var. torta. Gewone mannagras refers to var. sphacelata and var. sericea [5117] .

English (Namibia), common bristle grass:

Refers to var. sphacelata [5115] .

English (South Africa), (southern Africa), golden bristle grass, common bristle grass, creeping bristle grass:

Golden bristle grass refers to var. sericea and alludes to the golden bristles. Common bristlegrass refers to var. sphacelata and creeping bristle grass to var. torta [5117] [5664] .

Rumanyo (Namibia), makonge, likonge:

Refers to var. sericea [5115] .

DISTRIBUTION

Africa:

Var. sphacelata occurs in Tropical and South Africa; var. aurea mainly in East Africa but also from the Ivory Coast to Sudan and south to Zambia; var. torta in Tanzania, Zaire, Zambia, Malawi, Zimbabwe and South Africa; var. sericea in Tropical and South Africa and introduced elsewhere in tropics under cultivar names 'Nandi' and 'Kazungulu'; var. splendida from Sudan through East Africa to South Africa [1362] .

Angola:

Var. sericea occurs in Cuando-Cubango, Huila, Kuanza Norte and Moxico provinces. Var. sphacelata occurs in Cuando-Cubango, Cunene and Moxico provinces [5126] .

Botswana:

Var. sericea occurs in Chobe and Ngamiland districts and var. sphacelata in Ngamiland, South East and Chobe districts [5186] .

Cape Province:

Var. sericea occurs only in the Eastern Cape Province. Var. sphacelata and var. torta occur in the Western and Eastern Cape Provinces [5104] .

Lesotho:

Var. sphacelata occurs in the Lowlands and Senqu Valley zone. Var. torta occurs only in the Lowlands zone [5131] .

Mozambique:

Var. hirsutior occurs in the Maputo province; var. sericea in Maputo and Tete provinces; var. sphacelata in Manica, Maputo, Tete, Nampula and Sofala provinces and var. splendida in Manica, Maputo, Tete and Zambezia provinces [5480] .

Namibia:

Var. splendida occurs only in the Caprivi Region [5115] .

Southern Africa:

Var. splendida occurs only in Namibia and KwaZulu/Natal [5104] .

Var. sericea:

It occurs naturally in tropical Africa, but today is also found in various other countries such as Australia, India, China and the Phillipines, where it was introduced as cultivated pasture [5664] .

Var. sphacelata:

Occurs in East Africa. Var. sericea occurs in Tropical Africa. Var. splendida occurs in scattered localities northwards through east Africa to Sudan. Var. torta occurs in Tropical Africa [2182] .

Var. sphacelata:

Occurs in southern Africa and East Africa [5664] .

Var. torta:

Limited to Central Africa, Tanzania, Zaire (Katanga), Zambia and Zimbabwe [2259] .

RARITY/CONSERVATION

Namibia:

In Namibia assessed as lower risk, least concern [5400] .

DESCRIPTION

Habit:

Var. *torta* is a short, creeping grass or sometimes tufted [5664] .

Height:

0.45-2 m [2259] .

Height:

Var. *sericea* 1-2 m, var. *sphacelata* up to 1 m, var. *splendida* 1.8-3 m, and var. *torta* up to 1 m [5104] .

Inflorescence:

Panicle 30-500 mm long, cylindrical, spikelets mostly pallid to purple with fulvous bristles, the rachis tomentellous; bristles 1.5-2 mm long, 6-15 below each cluster of 1-4 spikelets. Spikelets 1.5-3.5 mm long, elliptic, oblique but scarcely gibbous, or laterally compressed [3] .

Leaves:

Var. *torta*: basal leaf sheaths are predominantly flattened and overlapping [5664] .

Leaves:

Var. *torta*: leaves are mostly concentrated at the base. Dry leaves are curled (like a corkscrew) [5664] .

Lifeform:

Graminoid [5104] .

Roots:

Var. *torta*: rhizomes short. Var. *sphacelata*: rhizomes short and compact [5664] .

Stems:

Culms 0.20-3 m high, the nodes quite glabrous [3] .

Stems:

Var. *sphacelata*: culms have two to four hairless nodes [5664] .

Inflorescences:

A spiciform panicle 330-500 mm long, with the spikelets in clusters of 1-4 subtended by 6-15 pale, yellowish to brownish bristles 1.5-12 mm long; rachis tomentellous. Spikelets elliptic, oblique, obtuse or acute, 1.5-3.5 mm long, with the upper glume usually 1/3-2/3 the spikelet length; upper lemma rugose, occasionally almost smooth [6573] .

Leaves:

Leaf-blades flat or convolute, 100-500 mm long and 2-17mm wide [6573] .

IDENTIFICATION

Differs from *Setaria pallide-fusca* because the latter is an annual [2259] .

The varieties of *Setaria sphacelata* are closely related to each other. Var. *sphacelata* is a smaller grass that grows in open grassland and *splendida* is a larger grass (up to 3 m tall), which is sometimes cultivated but seldom occurs in veld. Var. *sericea* is a larger grass (up to 2 m tall) than *sphacelata* and *torta*, with broader leaves (up to 15 mm wide), and var. *torta* is a smaller, creeping grass with the dry leaves often twisted [5664] .

Var. *splendida* is the most robust variety in the complex [2182] .

Var. *sphacelata* has small, narrow-leaved plants. Var. *aurea* has small, narrow-leaved plants but base fibrous. Var. *torta* is as the latter but with pallid or purple bristles. Var. *sericea* has moderate to large, wide-leaved plants. Var. *splendida* is very like *sericea*, very large plants [1362] .

FOOD - SEEDS

Entire seeds, cereals, porridges, famine food:

In Nongoma (KwaZulu/Natal, South Africa) in times of severe famine seasons the seeds are dried, beaten off the stalks and the grain cooked for about five minutes in rapidly boiling water. The water is then strained off and the product ground on a stone. After adding about an equal quantity of thick milk (maas) it is ready for eating [1171] .

Entire seeds, famine food:

When used as a famine food by the Zulu in KwaZulu/Natal, the grains are reported to be boiled before grinding, apparently to get rid of some toxic substances [2795] .

ANIMAL FOOD - FERTILE PLANT PARTS

Seeds, birds:

The grain is eaten by canaries. The Yellow-eye Canary, *Serinus m. mozambicus* was seen eating the grain at Umtali Heights (Zimbabwe) [2259] .

ANIMAL FOOD - AERIAL PARTS

Unspecified aerial parts, game mammals, grazing:

Grazed by zebra [2259] .

Unspecified aerial parts, grazing:

A palatable and productive grazing grass [2259] .

Unspecified aerial parts, grazing:

Provides early or late grazing (occurs around vleis and streambanks), but is easily damaged by trampling [6088] .

Unspecified aerial parts, grazing:

Var. sericea is a good pasture grass with a high palatability and leaf production. The grass is not suitable for standing hay in winter, as it becomes hard and tough [5117] [5664] .

Unspecified aerial parts, hay/straw, silage:

Particularly suitable for hay making and is often used for silage [5117] [5664] .

Unspecified aerial parts, mammals, fodder:

Used as livestock fodder in the Mbukushu village in the Kavango/Caprivi region [5118] .

MATERIALS - FIBRES

Brooms, inflorescences:

In Uganda the inflorescences are used for making brooms [1340] .

Thatch, unspecified aerial parts:

Used as thatching in the Mbukushu village in the Kavango/Caprivi region [5118] .

MEDICINES - INJURIES

Humans, wounds:

In Uganda it is used in the treatment of open wounds (Wilson et al 1955) [1340] .

ENVIRONMENTAL USES - REVEGETATORS

Rangelands:

Common on streambanks where it plays an important role as soil binders [6088] .

Watercourses:

An excellent grass to protect disturbed soil from soil erosion [5664] .

ENVIRONMENTAL USES - INDICATORS

Rangelands:

In southern Africa it is classified as a decreaser i.e. grasses that are abundant in good veld, but that decrease in number when the veld is overgrazed or undergrazed [5664] .

ENVIRONMENTAL USES - BOUNDARIES/BARRIERS/SUPPORTS

Homesteads, animal barriers:

It is used as kraal fences in the Mbukushu village in the Kavango/Caprivi region [5118] .

TOXICITY/POISONOUS COMPOUNDS

Although golden bristle grass (var. sericea) contains oxalic acid, poisoning is seldom a problem. Dairy cows and horses are most susceptible to poisoning, especially in the case of young grass [5664] .

When used as a famine food in KwaZulu/Natal, the grains are reported to be boiled before grinding, apparently to get rid of some toxic substances [1171] [1340] [2795] .

CONSTRAINTS - MISCELLANEOUS

Although golden bristle grass (var. sericea) contains oxalic acid, poisoning is seldom a problem. Dairy cows and

horses are most susceptible to poisoning, especially in the case of young grass [5664] .
Cultivars 'Kazangula' and 'Nandi' become hard and tough, and therefore cannot be used for standing hay in the winter [3018] [5664] [6088] .

RAINFALL

Above 750 mm in the tropical regions. South African varieties, 500 - 700 mm [1653] .

South Africa:

Selected cultivars from the var. sericea such as 'Kazungula' are planted in high rainfall regions [5117] .

ALTITUDE

0-3300 m [2255] [6573] .

South tropical Africa:

0-2000 m [3] .

Southern Africa:

Var. sericea occurs at 15-1800 m, var. sphacelata at 10-1900 m, var. splendida at 700-1000 m and var. torta at 5-2300 m [5104] .

TOPOGRAPHY/SITES

Southern Africa:

Generally in uncultivated lands, road reserves, roadsides and other disturbed areas with wet soils [5117] [5664] .

Southern Africa:

Var. splendida: Swampy areas or floodplains, often in water [2182] .

Southern Africa:

Var. torta occurs on rocky outcrops and hillsides [2182] .

Kenya:

Grows on stony hillsides to riversides [6573] .

SOILS

South Africa:

Adapted to grow in soils which may occasionally be covered by water [6088] .

Southern Africa:

Var. sphacelata usually occurs on well drained soil [2182] .

Kenya:

Grows on a variety of soils [6573] .

VEGETATION

South Africa:

Var. sericea occurs in grassland and savanna, var. sphacelata in savanna, grassland and fynbos and var. torta in fynbos, grassland, savanna, Nama-Karoo and Succulent Karoo. Var. torta occurs in open bushveld and grassland [5117] .

Southern Africa:

A sub-climax to climax grass [5664] .

Southern Africa:

Var. splendida is rare in the wild, but often cultivated [2182] .

Southern Africa:

Var. torta occurs in open woods and grassland [2182] .

Kenya:

Variable from grassland to bushland [6573] .

ENVIRONMENTAL FACTORS - MISCELLANEOUS

Adapted to grow in soils which may occasionally be covered by water. Important in providing early or late grazing,

but is easily damaged by trampling [6088] .

Can't survive long dry seasons and is one of the first grasses to produce after rains [1653] .

Var. sericea is not drought-resistant and is unable to withstand continuous grazing [5117] .

FLOWERING/FRUITING/SEED SET

Flowering, South Africa:

Var. sphacelata flowers from October to June [2182] [5117] .

Flowering, Southern Africa:

Var. splendida from January to June [2182] .

Flowering, southern Africa:

October to June [2259] .

Flowering, southern Africa:

October to May [5664] .

Flowering, southern Africa:

Var. sericea flowers from October to May [5117] [5664] .

Flowering, southern Africa:

Var. torta from September to March [2182] [5117] [5664] .

Flowering, southern Africa:

Var. sphacelata from September to June [5664] .

CYTOLOGY

A polyploid complex, wide range of variation but the varieties integrate completely [3] .

For the genus $x = 9, 10$ (high polyploidy) [5150] .

HYBRIDISATION

Crossings occur within the *Setaria sphacelata* complex [5664] .

PHOTOSYNTHESIS

C4-NADP-ME pathway. K-MS-NADP anatomy [2182] .

CULTIVATION

South Africa:

Selected varieties such as 'Kazangula' are planted in high rainfall regions, particularly on wet clay soils [5117] .

Southern Africa:

Var. sericea: cultivars such as 'Kazangula' and 'Nandi' produce palatable pasture, easy to establish from seed, deliver a high leaf yield and react well to fertilisation. Var. sphacelata is sometimes planted for pasture and hay [5664] .

Var. splendida often cultivated [2182] .

PROPAGATION FROM SEED

For cultivation usually grown from rooted material or seed [2259] .

Cultivars 'Kazangula' and 'Nandi' of var. sericea are easy to establish from seed [5664] .

PROPAGATION - VEGETATIVE

For cultivation usually grown from rooted material or seed [2259] .

'CROP' MANAGEMENT

Graze or cut during rainy season [1653] .

Cultivars 'Kazangula' and 'Nandi' of var. sericea react well to fertilisation [5664] .

SUMMARY EVALUATION/POTENTIAL

Var. sphacelata has the potential to be planted in grass gardens [5664] .

ACKNOWLEDGEMENTS AND DATASHEET PROGRESS

Data added from an Illustrated Manual of Kenya Grasses 1987, by Maryam Imbuni, KENRIK, National Museums of Kenya, April 2007 .

Updated for southern Africa by E. Irish; checked by A. Jarvis, January 2006. Entire species edited by C. Mannheimer, July 2007; SEPASAL Namibia, National Botanical Research Institute .

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SEPASAL's development has been funded by The Clothworkers' Foundation and its Internet development is funded by The Charles Wolfson Charitable Trust. Nutritional information on African wild foods is funded by Nestlé Charitable Trust.

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