

Tropical Forages

Urochloa subquadriflora

Scientific name



Urochloa subquadriflora (Trin.) R.D. Webster

Synonyms

Basionym: *Panicum subquadriflorum* Trin.; *Brachiaria subquadriflora* (Trin.) Hitchc.; *Brachiaria miliiformis* (C. Presl) Chase; *Panicum miliiformis* J. Presl

Family/tribe

Family: *Poaceae* (alt. *Gramineae*) subfamily: *Panicoideae* tribe: *Paniceae* subtribe: *Melinidineae*.

Morphological description

Stoloniferous, mat-forming annual or short-lived perennial. Culms slender, straggling, rooting at lower nodes, 20–60 cm tall, nodes pubescent. Leaf sheaths loose, glabrous or with tubercle-based hairs or ciliate margins; leaf blades lanceolate or linear-lanceolate, 4–15 (–20) × 0.4–1 cm, glabrous or pubescent, base subrounded, margins thicker and scabrous, apex acute or acuminate. Inflorescence axis 3–10 cm; racemes 3–6, 2–4 (–6) cm, divergent to reflexed; rachis flat, 0.7–1 mm wide, narrowly winged, nearly glabrous; spikelets single, in 2 rows; pedicels glabrous. Spikelets elliptic to narrowly obovate, (3–) 3.5–4 mm, glabrous, acute; lower glume broadly ovate, 1/3–1/2 spikelet length, 5–7-veined; upper glume separated from lower glume by a short internode, 5–7-veined; upper lemma finely rugose, apex subacute.



Stoloniferous, mat-forming annual or short-lived perennial. CIAT, Colombia (CIAT 16740)



Decumbent culm with nodal roots (stolon)



Mature plant



Inflorescence a panicle with 3–6 racemes



Seeds



Herbarium specimen

Similar species

U. subquadriflora (Trin.) R.D. Webster: spikelets 3.2–4.3 mm long; second lemma 2.6–2.8 mm long.

U. distachya (L.) T.Q. Nguyen: spikelets 2.4–3.0 mm long; second lemma 1.9–2.3 mm long.

Based on Veldkamp (1996).

U. subquadriflora (Trin.) R.D. Webster: spikelets well-separated, 3–4 mm long; palea well-developed; lower glume 1/3–1/2 spikelet length.

U. piligera (F. Muell. ex Benth.) R.D. Webster (glabrous form): spikelets close-packed, 4–5 mm long; palea not significant; lower glume about 1/2 spikelet length.

Based on: <http://ausgrass2.myspecies.info/content/urochloa-piligera>

Common names

Asia: □□□□□ si sheng bi xing cao (China); niku-kibi (Japan)

English: Cori grass, armgrass millet, green summer grass, tropical signal grass

Pacific: thobuti (Fiji); mauspentotnafu (Rotuma); mohuku'apopoa (Tonga)

Other: nofh-lov-si (unknown)

Distribution

Native:

Asia: Cambodia, China (Fujian, Guangdong, Guangxi, Guizhou, Hunan, Jiangxi, Yunnan), India (Assam, Bihar, Uttar Pradesh, West Bengal), Indonesia, Japan (Ryukyu Islands), Laos, Malaysia, Myanmar, Nepal, Philippines, Sri Lanka, Taiwan, Thailand, Vietnam

Australasia/Papuasias: Australia (New South Wales, Queensland, South Australia, Western Australia, Northern Territory), Papua New Guinea

Naturalized:

Northern America: Mexico, USA (s.e.)

Uses/applications

Forage

Permanent pasture.

Environment

Ground cover, mainly in coconut plantations.

Ecology

Soil requirements

Grows well on sandy soils of medium to high fertility. In Australia, *U. subquadripara* is commonly found in well-structured, well-drained, red rainforest soils.

Moisture

High-rainfall (>1,750 mm/yr) recommended; particularly suited to monsoon environments. Well adapted to flooding conditions. Considered to be only moderately drought tolerant.

Temperature

Warm season grass.

Light

Good tolerance of shade.

Reproductive development

No information available.

Defoliation

Considered to withstand heavy grazing once well established.

Fire

No information available.

Agronomy

Guidelines for establishment and management of sown forages.

Establishment

Easily established from stolon cuttings buried 10–15 cm deep; minimum 1 plant/m².

Fertilizer

Considered to respond well to complete fertilizer mixtures and particularly to N.

Compatibility (with other species)

Once established, Cori grass competes well with weeds.

Companion species

Grasses: not normally sown with other grasses.

Legumes: *Arachis pintoii*, *Centrosema molle*, *Grona heterophylla*, *Neustanthus phaseoloides*.

Pests and diseases

No information available.

Ability to spread

Spreads by stolons.

Weed potential

Low because of insignificant seed production.

Feeding value

Nutritive value

6.25–12.5% CP in 4–8 wk-old regrowth.

Palatability/acceptability

Highly palatable.

Toxicity

No information available.

Production potential

Dry matter

Annual DM yields of 4–17 t/ha have been reported, depending on N fertilization. Because of competition for nutrients and water, excessive grass productivity is considered detrimental for coconut production.

Animal production

At stocking rates of 1.5–2.0 steers/ha up to 400 kg animal LWG/ha can be expected without affecting coconut yields.

Genetics/breeding

$2n = 54$ and 72 .

Seed production

Reported to be very low.

Herbicide effects

Cori grass can be controlled with Diuron, Trifluralin and imazapyr.

Strengths

- Shade tolerance.
- Palatability.
- Tolerance of flooding.

Limitations

- Low to moderate productivity.
- Low seed production.

Internet links

[https://uses.plantnet-project.org/en/Brachiaria_subquadripara_\(PROSEA\)](https://uses.plantnet-project.org/en/Brachiaria_subquadripara_(PROSEA))

<http://tropical.theferns.info/viewtropical.php?id=Brachiaria+subquadripara>

Selected references

Reynolds, S.G. (1995) Pasture-Cattle-Coconut Systems. Food and Agriculture Organization of the United Nations (FAO), Bangkok, Thailand. fao.org/3/af298e/af298E00.htm

Schultze-Kraft, R. (1992) *Brachiaria subquadripara* (Trin.) Hitchc. In: Mannerje, L.'t and Jones, R.M. (eds) Plant Resources of South-East Asia No. 4. Forages. Pudoc Scientific Publishers, Wageningen, the Netherlands. p. 67–68. edepot.wur.nl/327785

Skerman, P.J. and Riveros, F. (1990) Tropical grasses. Food and Agriculture Organization of the United Nations (FAO), Rome, Italy. p. 260–262. books.google.com/books?id=tCydcW6MK60C

Stanley, T.D. and Ross, E.M. (1989) Flora of South-eastern Queensland. Volume III. Queensland Department of Primary Industries, Brisbane. p. 218

Veldkamp, J.F. (1996) *Brachiaria*, *Urochloa* (Gramineae-Panicaceae) in Malesia. Blumea 41:413–437. repository.naturalis.nl/document/565314

Cultivars

None released.

In the combined germplasm collections of CIAT, ILRI and the Australian Pastures Genebank, the species seems to be represented by only three accessions.

Promising accessions

CIAT 16740 Promising in simple nursery evaluation in Colombia.

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