

# *Miscanthus sinensis*

## Chinese silver grass

### Introduction

The genus *Miscanthus* contains approximately ten species occurring primarily in southeastern Asia and occasionally Africa. Six species have been reported from China<sup>[121]</sup>.

### Taxonomy

**Order:** Graminales

**Suborder:** Gramineae

**Family:** Gramineae (Poaceae)

**Subfamily:** Panicoideae A. Br.

**Tribe:** Andropogoneae

Dumort.

**Subtribe:** Saccharinae Griseb.

**Genus:** *Miscanthus* Anderss.

**Species:** *Miscanthus sinensis* Anderss.



10 to 30 cm long with 2 to 6 long stalks. The shiny yellowish spikelet is lanceolate, 4.5 to 5 mm long, and no longer than the white or light yellow filaceous hairs at the base of the glume. The lower glume is acuminate, 3 to



### Habitat

*M. sinensis* occurs in mountainous areas, highlands, and wastelands in the plains at elevations below 1800 m<sup>[121]</sup>.

### Distribution

*M. sinensis* has been reported from the provinces of Fujian, Guangdong, Guangxi, Guizhou, Hainan, Hunan, Jiangsu, Jiangxi, Sichuan, Taiwan, Yunnan, and Zhejiang<sup>[19, 30, 53, 105, 121]</sup>.

### Economic Importance

The fibers of *Miscanthus sinensis* are useful for many purposes including papermaking<sup>[121]</sup>.

### Related Species

*Miscanthus jinxianensis* L. Liu is morphologically similar to *M. sinensis*. However, *M. jinxianensis* has fewer inflorescences and larger spikelets measuring about 6-7.5 mm in length<sup>[121]</sup>.

### Natural Enemies of *Miscanthus*

Nineteen fungal species and 18 arthropods are reported from the plants of genus *Miscanthus*. Ten fungi are reportedly hosted by *M. sinensis*.

### Species of *Miscanthus* in China

Scientific Name	Scientific Name
<i>M. flavidus</i> Honda	<i>M. purpurascens</i> Anderss.
<i>M. floridulus</i> (Lab.) Warb. ex Schum. et Laut.	<b><i>M. sinensis</i> Anderss.</b>
<i>M. jinxianensis</i> L. Liu	<i>M. transmorrisonensis</i> Hayata

### Description

*Miscanthus sinensis* is a reed-like clumping perennial grass. The culms, about 1-2 m tall, are glabrous, or pilose below the inflorescences. The glabrous leaf sheath is longer than the internode. Ligule is membranous, obtuse, 1-3 mm long, with tiny cilia at the tip. The leaf is linear, pilose or farinose on the underside, 20-50 cm long and 6-10 mm wide with a coarse margin. The erect panicles can reach 15-40 mm in length, glabrous along the rachis but pubescent in the node and axils. The erect branches are triangular, about

4 veined and rough along the lateral vein, whereas the upper glume is single veined and ciliated along both sides of the involute margin. Noticeably shorter than the lower lemma, which is oblong, membranous, about 4 mm in length and ciliated, the upper lemma is 2-lobed. Between the lobes is a single, bent, brown awn 9 to 10 mm long. The pinkish color of the flowers can be attributed to the -purplish brown anthers that are 2.2 to 2.5 mm long. The pistils have purplish brown pinnate stigmas. The fruit is an oblong, dark purple caryopsis<sup>[121]</sup>.

### Fungi

Phylum	Family	Species	H. R.	Ref.
Ascomycota	Chaetothyriaceae	<i>Chaetothrium javanicum</i> (Zimm.) Boedijn	po	[26]
	Clavicipitaceae	<i>Balansia claviceps</i> Speg.	m	[26]*
	Dothioraceae	<i>Metasphaeria miscanthi</i> Sawada	mo	[26]

Phylum	Family	Species	H. R.	Ref.
	Erysiphaceae	<i>Balansia andropogonis</i> Syd. & E.J. Butler	po	[26]
		<i>Claviceps purpurea</i> (Fr.) Tul.	p	[26]
	Meliolaceae	<i>Meliola andropogonis</i> F. Stevens & A. Roldán	mo	[26]
		<i>Meliola boedijniana</i> Hansf.	o	[73]
		<i>Meliola panici</i> Earle	p	[73]
			po	[26]
		<i>Meliola setariae</i> Hansf. & Deighton	po	[73]
	Phyllachoraceae	<i>Phyllachora graminis</i> var. <i>graminis</i> (Pers.) Fuckelel	p	[26]
		<i>Phyllachora miscanthi</i> Syd. & P. Syd.	o	[26]
Basidiomycota	Pucciniaceae	<i>Puccinia erythropus</i> Dietel	p	[170]
		<i>Puccinia melanocephala</i> Syd. & P. Syd.	p	[170]
		<i>Puccinia miscanthi</i> Miura	p	[170]
		<i>Puccinia miscanthicola</i> F.L. Tai & Cheo	mo	[170]
		<i>Ustilago kusanoi</i> Syd. & P. Syd.	p	[72]
	Ustilaginaceae	<i>Sporisorium miscanthi</i> (W.Y. Yen) L. Guo	mo	[72]
Oomycota	Sclerosporaceae	<i>Peronosclerospora miscanthi</i> (T. Miyake) C.G. Shaw	po	[202]
		<i>Sclerospora mischanthi</i> Miyake	po	[26]

\* Recorded as *Phaeosaccardinula javanica* (Zimm.) Yamam.

## Arthropods

Order	Family	Species	H. R.	Ref
Coleoptera	Eumolpidae	<i>Smaragdina mandzhura</i> (Jacobson)	po	[164]
Homoptera	Hormaphididae	<i>Ceratovacuna lanigera</i> Zehntner	po	[205]
			po	[165]
	Tropiduchidae	<i>Catullia vittata</i> Matsumura	po	[220]
			po	[178]
Lepidoptera	Hesperiidae	<i>Aeromachus inachus</i> Ménériès	m	[178]
		<i>Astictopterus jama chinensis</i> (Leech)	m	[178]
		<i>Borbo cinnara</i> (Wallace)	po	[178]
		<i>Isoteinon lamprospilus</i> Felder & Felder	po	[178]
		<i>Ochlodes venata</i> Bremer & Grey	po	[178]
		<i>Parnara ganga</i> Evansman	po	[178]
		<i>Polytremis pellucida</i> (Murray)	po	[178]
		<i>Polytremis zina</i> (Eversman)	po	[178]
	Satyridae	<i>Lethe insana</i> Kollar	oo	[178]
		<i>Melaritis leda</i> (L.)	po	[178]
		<i>Mycalesis francisca</i> (Stoll)	po	[178]
		<i>Mycalesis sangaica</i> Butler	po	[178]
Thysanoptera	Phlaeothripidae	<i>Ophthalthrips miscanthicola</i> (Haga)	m	[66]
	Thripidae	<i>Stenchaetothrips cymbopogoni</i> Zhang & Tong	po	[66]
		<i>Thrips flavidulus</i> Bagnall	po	[66]