

Elytrigia repens

Quackgrass

Introduction

The genus *Elytrigia* contains approximately 40 species that are widespread throughout the cold temperate regions of the northern and southern hemispheres. Six species occur or are cultivated in China as a pasture grass. *Elytrigia* is often used to hybridize with wheat [53].



Elytrigia repens. (Photo USDA-PD.)

Species of *Elytrigia* in China

Scientific Name	Scientific Name
<i>E. elongata</i> (Host) Nevski	<i>E. repens</i> (Linn.) Nevski
<i>E. intermedia</i> (Host) Nevski	<i>E. smithii</i> (Rydb.) Nevski
<i>E. juncea</i> (L.) Nevski	<i>E. trichophora</i> (Link) Nevski

Taxonomy

Family: Poaceae (Gramineae)
Genus: *Elytrigia* Desv.

Description

E. repens is a perennial, rhizomatous grass. Stems are erect, decumbent, reaching heights of 40 – 80 cm, with three to five nodes. The leaf sheath is glabrous except for the hairy base. The ligule is short, 0.5 mm long, with slender and membranous auricle. Leaves are flat, 10-20 cm long and 5-10 mm wide, coarse or pubescent on the upper surface, but glabrous on the lower surface. The inflorescence is an erect spike, 10-18 cm long and 8-15 mm wide. Internodes are typically 10-15 mm long, reaching 30 mm near the base. Each spikelet consists of five to seven florets, and measures 10-18 mm long and 6-10 mm wide. Glumes are lance-shaped, 10-15 mm long, five- to seven-veined, glabrous, and sometimes coarse between the veins. Longer than the palea, which is about 5 mm long with 2 ridges and has short hard hairs, lemma is oblong-lanceolate, and five- to seven-veined, with yellow anthers and awn 2 mm long [53].

Habitat

E. repens occurs in plains, oases or valley meadows, as well as hill sides, wastelands, roadsides, and field margins at elevations below 2,500 m [21][53][163]. It is also cultivated in some areas as pasture grass[45].

Distribution

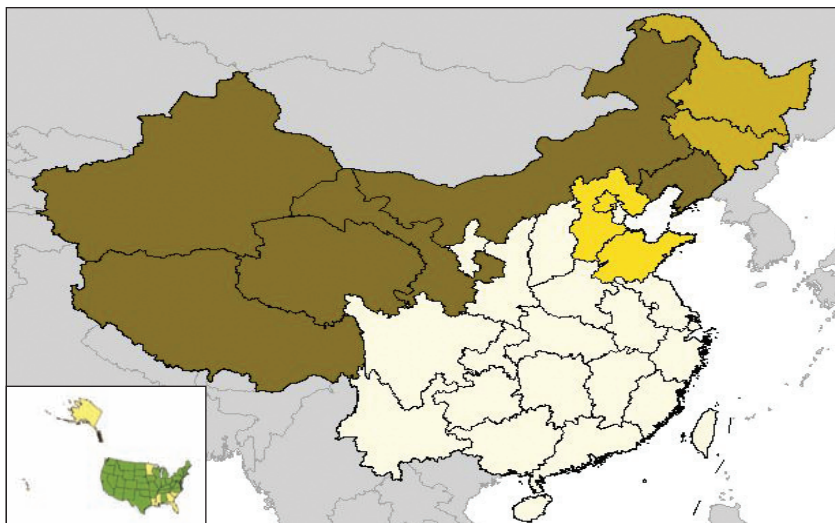
Elytrigia repens occurs in Gansu, Qinghai, Tibet[7][53], Xinjiang and some northeastern provinces, including Liaoning and Inner Mongolia[45][93][121].

Economic Importance

Because of its high protein and starch content, *Elytrigia repens* is regarded as one of the most valuable forage plants. Quackgrass is favored by horses, sheep, and especially cattle because of its low fiber content and sweet taste prior to heading. It is also planted for soil and water conservation and to strengthen dykes. However, it becomes a problem weed when it invades crop fields[33]. *E. repens*, of itself, is not seriously damaging; however, it is host to ergot and rust fungi that are poisonous to livestock[59][96].

Related Species

Elytrigia repens subsp. *longeristata* N. R. Cui is recorded in the *Flora*



Xinjiangensis. It is distinguished by its dark green spike inflorescence and 4- 8 mm long awns^[21].

Natural Enemies of *Elytrigia*

At least four fungi have been reported to infect *Elytrigia repens* as well as other members of genus *Elytrigia* and other genera. No record of insects.

Fungi

Phylum	Family	Species	H. R.	Ref.
Ascomycota	Clavicipitaceae	<i>Claviceps purpurea</i> (Fr.) Tul.	p	23
Basidiomycota	Pucciniaceae	<i>Puccinia graminis</i> Pers.	p	23
		<i>Puccinia rangiferina</i> S. Ito	p	23
		<i>Puccinia recondita</i> f.sp. <i>agropyrina</i> D.M. Hend.	p	23