

Cenchrus incertus

IDENTITY

Name: *Cenchrus incertus* M.A. Curtis

Synonyms: *Cenchrus pauciflorus* Bentham, *C. tribuloides* Linnaeus

Taxonomic position: *Poaceae*

Common name: spiny burgrass, field sandbur (English); ценхрус якорцевый, ценхрус малоцветковый (Russian).

Bayer code: CCHIN

Note. Several *Cenchrus* spp. have spread around the world as weeds, and their nomenclature is somewhat confused. The phytosanitary literature from the former USSR refers to *C. pauciflorus*, generally regarded as a synonym of *C. incertus*. However, it is also equated with *C. longispinus* (longspine sandbur), another common and damaging North American species which has not yet established in Europe (although it has been found there), and which presents a similar risk. This data sheet concentrates on *C. incertus*, but much of it applies also to *C. longispinus*

GEOGRAPHICAL DISTRIBUTION

Europe: France, Italy, Moldova, Portugal (Azores), Russia (small outbreaks in Krasnodar territory), Spain, Ukraine.

Asia: India.

North America: Mexico, USA (native).

Central and South America: Argentina, Bolivia, Brazil, Chile, Colombia, Cuba, Honduras, Paraguay, Peru, Uruguay.

Oceania: Australia.

ON WHICH CROPS

All crops may be infested by *C. incertus*, especially arable crops. The weed also causes problems in orchards, vineyards, often occurs on the riversides and lakesides, on roadsides and all uncultivated land.

BIOLOGY

C. incertus is an annual weed. It reproduces mainly by seeds, but also from fragments of shoots. One plant may develop up to 45 tillers and produce up to 3.000 seeds. The spiny spikelets stick to wool and are transported by animals. Seedlings appear in April-May. The weed prefers well aerated sandy soils.

DETECTION AND IDENTIFICATION

C. incertus is 20-40 cm tall, but may reach 120 cm on arable land. The stem is flat and right??, creeping or erect, strongly tufted??. The roots are filamentous and shallow. The easiest way to identify seedlings of *C. incertus* is to pull them out of the soil, together with their roots and the remains of the spiny spikelet which contained the seed, which is very characteristic. The inflorescence is a spike of 8-20 spikelets. The mature spikelets are 8-9 mm long and 5-6 mm wide, yellowish-green, tough, covered with multiple rigid spines. They are shed together with their short stalks. Each spikelet usually contains 2 seeds (sometimes 1 or 3). The fruit is 2.1-3.5 mm long, 1.8-2.3 mm large and 1.0-1.4 mm thick.

MEANS OF MOVEMENT AND DISPERSAL

C. incertus seeds are carried inside spikelets with harvested seeds of many herbaceous crops, particularly cereals, and also with hay, straw, wool, cloth, skin and other soft materials. Locally, spikelets can be carried from infested fields by livestock.

PATHWAYS

Contaminated seed lots (especially cereals and grasses), fodder (especially hay and straw), soft packing materials, textile, soil and growing media, soil attached to plants.

DAMAGE

C. incertus is an annual weed, which strongly competes with crops for water and nutrients. It can seriously reduce yields of cereals and other field crops, and heavily contaminate the harvested crop and soil with spiny spikelets. These spikelets damage livestock (causing tumours and ulcers of the mouthparts) and reduce the quality of animal wool.

PHYTOSANITARY RISK

C. incertus is an invasive weed which continues to spread in areas where it has been introduced. Its control is difficult. It could present a risk for the warmer parts of the EPPO region.

PHYTOSANITARY MEASURES

The movement of agricultural seeds, grain, forage, fodder and other materials infested with spikelets of *C. incertus* into pest-free areas should be restricted. Eradicative treatments with herbicides are possible.

BIBLIOGRAPHY

- Savotikov YuF, Smetnik AI (1995) *Guide on pests, plant diseases and weeds of quarantine significance for the Russian Federation*. Arnika, Nizhnii Novgorod (in Russian).
- Shutova NN (ed.) (1970) *Guide on quarantine and other dangerous pests, diseases and weeds*. 2nd edition. Kolos, Moscow (in Russian).
- Tutin TG *et al.* (1964-) *Flora Europaea*. Cambridge University Press, Cambridge (GB).
- Vasyutin AS, Smetnik AI, Mordkovich YaB, Zinchenko VN, Yudin BI, Smirnov SA, Moskalenko GP, Shakhramanov IK, Maslyakov VYu (2001) *Plant Quarantine in the Russian Federation*. Kolos, Moscow (in Russian).
- Whitson TD *et al.* (1996) *Weeds of the West*. Western Society of Weed Science, Newark (US).



Fig. 1. *Cenchrus pauciflorus*: 1) general view of the plant; 2) spikelet; 3 and 4) seeds; 5) upper part of a shoot (Shutova, 1970).