Shaggy-soldier (Hairy Galinsoga)

(*Galinsoga quadriradiata* Cav.)

Row Crop

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Fig. 1. Pubescence on shaggy-soldier.

Fig. 2. Approximate size of a shaggy-soldier plant.

Introduction

Problems Created

Shaggy-soldier is an invader of agricultural and other disturbed areas; it is highly competitive and can spread quickly to dominate such open areas. It is not known to cause economic damage outside of crop systems. In Europe, hairy galinsoga is recognized as a significant problem for many growers, including commercial greenhouses, and its presence may reduce yields by as much as half in row crops.

Regulations

Shaggy-soldier is listed as an invasive species in the Hawaiian Islands. Although it is absent from state invasive plant lists, it is included in several regional weed guides, including *Weeds of Kentucky and Adjacent States*, *Weeds of the Northeast*, *Weeds of Nebraska and the Great Plains*, and *Weeds of the US and Canada* (see PLANTS database for citation information on these guides). It is not listed as a federal or state noxious weed.

Description

Vegetative Growth

Shaggy-soldier may be confused with *G. parviflora* (small-flower galinsoga), but the latter is paler green, has noticeably shorter hairs throughout, and has involucral bracts (bracts around flower head) with a broader and rounded apex. Shaggy-soldier produces an erect stem, 4'' to 32'' tall, that is highly branched and covered by coarse hairs. The typically dark green leaves are arranged oppositely on the stem and grow up to 2.5'' long and 1.5'' wide. They are simple (not divided) and usually ovate to acute or acuminate in outline (broadest at the base and tapering toward the tip). The leaf margin is coarsely toothed, and both surfaces of the leaf are coarsely hairy.

Flowering

Flower heads are less than 0.4'' wide and include 4 or 5 white, 3-toothed ray florets (appear as "petals" around the head) and many yellow disk florets (central portion of the head). The fruit is a plumed achene, 1.5mm long, with a pappus of white hairs. Involucral bracts have a very narrow, acute tip (versus the broader, rounded tip in small-flower galinsoga).

Dispersal

Achenes can be dispersed by wind, animals, or sometimes water. In addition to the hairy pappus, which assists in wind dispersal, achenes are covered with short stiff hairs that may cling to the fur of animals.

Spread by

Dispersal by human activities, such as movement of soil or plants can be very important in the dispersal of this species. In Finland, the most effective means of dispersal is believed to be seedlings inadvertently grown in nurseries or commercial greenhouses.

Habitat

Shaggy-soldier is adapted to warm climates and heavy, nitrogen-rich and clayey soils. In much of its introduced range, it can be found in gardens, greenhouses, agricultural lands, roadsides, railways, and other disturbed areas, essentially in association with any form of human development. In fact, it is widely regarded as a common weed even in its native range in Central and South America. It also has been found in natural riparian habitats in Europe.

Distribution

The native range of hairy galinsoga includes areas of Central and South America, from Mexico to Chile. However, this species now is known to have been introduced widely in North America, Europe, and Africa. The earliest recorded naturalized population in the US was in the 1830s from the Bartram Botanical Gardens in Pennsylvania. In the US, it has been collected and reported most frequently from about OH, WV, and VA into New England, and in the Appalachians of TN and NC.

The PLANTS database indicates records of shaggy-soldier in fewer than ten counties/parishes in AL, AR, and LA. There are no reported collections from Mississippi. Tennessee provides records of this species from about thirty counties, primarily in the middle and eastern thirds of the state.

Control Methods

Shaggy-soldier is best controlled during the early blooming period in order to prevent seed production.

Biological Control

None.

Chemical Control

There are several herbicides which are very effective in controlling shaggy-soldier, but since it mainly occurs as a weed in fields planted with vegetables and intercrops, herbicide use is limited and will be dependent upon the crop planted. Specific herbicide recommendations for use in a variety of vegetable crops are given in the Mississippi Weed Control Guidelines (http://msucares.com/pubs/publications/p1532.html). The “stale seedbed” technique may be used to increase control of shaggy-soldier with herbicides without damage to vegetable crops. Using this method, the field is prepared for planting, but not seeded until shaggy-soldier begins to grow. Weeds are then killed using a contact herbicide with no soil residual. Crop seeding can occur just prior to or following the herbicide application. Post emergence herbicide applications should be made to small actively growing shaggy-soldier plants to minimize potential damage to crops. Shaggy-soldier control in non-crop areas can be achieved by using 2,4-D at 2 to 4 pints per acre.

Mechanical Control

Early tillage to bury seeds may be useful, since shaggy-soldier seeds germinate best in lightly disturbed soil not deeper than 2 to 3 cm.

Physical Control

Summer cover crops of grass including *Sorghum bicolor* or *Sorghum sudanense* will suppress the germination of shaggy-soldier seeds. Black plastic or natural mulch is a good control option in intensive agriculture production or in home horticulture to prevent germination and growth.

References

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