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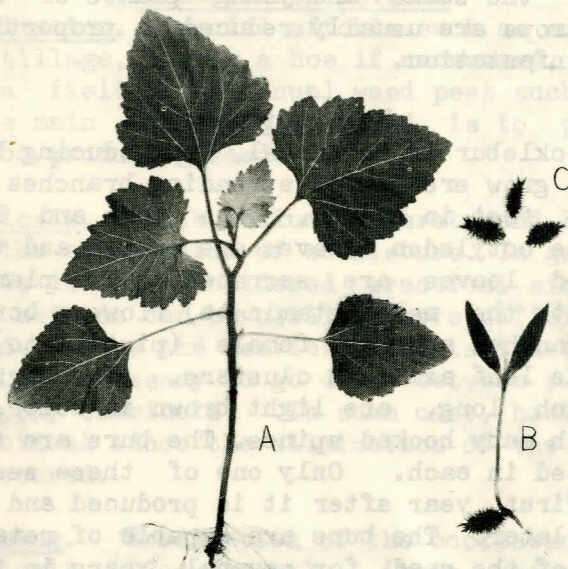
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The Cocklebur A Serious Weed in Nebraska



- A. Plant showing heart shaped, serrated and alternate leaves. The root system is fibrous. B. Seedling with entire cotyledon leaves and first true leaves appearing at the apex. C. Mature burs showing hooked spines.

Cooperative Extension
University of Nebraska
Department of Agriculture

UNIVERSITY OF NEBRASKA-LINCOLN



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Home Economics
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THE COCKLEBUR -- A SERIOUS WEED IN NEBRASKA

Noel S. Hanson

The cocklebur, Xanthium Commune, which is also called clotbur and sheep bur, is a serious weed pest in Nebraska. The heaviest infestations are in the main corn growing areas. The cocklebur is not considered a noxious weed because seed is rarely found in crop seed. It is serious, however, from the standpoint of its destructive matting of the pelts of sheep and its toxic effect on livestock. Hogs and sheep are frequently poisoned by the seeds and young plants of cocklebur. Yields of crops are usually reduced in proportion to the amount of infestation.

Description

The cocklebur is an annual, reproducing by seeds. The plants grow erect with spreading branches and range from 1 to 4 feet in height. The stems and leaves are rough. The cotyledon leaves are entire and the true, heart-shaped leaves are serrated. The plant is monoecious with the male (staminate) flowers borne on the ends of branches and the female (pistillate) flowers borne in the leaf axils in clusters. The burs are from $3/4$ to 1 inch long, are light brown in color, and are covered with many hooked spines. The burs are two-parted with one seed in each. Only one of these seeds germinates the first year after it is produced and the other germinates later. The burs are capable of retaining the viability of the seed for several years in the soil.

Adaptation

The cocklebur may be found growing on a wide range of soil conditions. It grows commonly in waste places, along road ditches, irrigation canals, and lowlands that are subject to flooding. It thrives especially well in fields where cultivated crops are grown and it is the most serious in the corn growing regions of Nebraska. Many cocklebur plants are missed by the cultivator shovels while others emerge and grow after the crop is laid by and produce heavy crops of seed that infest and re-infest the soil.

Dissemination

The seeds of the cocklebur are disseminated by anything movable to which the burs can become attached, and by flood waters from heavy rains. The spiny burs break loose and cling to livestock, wild animals, humans, and to machinery moving through the infested patches of mature plants. The twin-seeded burs thus become strewn over wide areas from the point of origination. In general, very few burs are ever found in the various crop seeds and these can easily be removed. The seeds are never found separated from the burs.

Eradication Methods

Cultivation. Special efforts such as summer fallow or extra tillage, using a hoe if necessary, will soon clean up a field of an annual weed pest such as cocklebur. The main principle involved is to prevent the plants from producing seed.

Chemicals. Both sodium chlorate and 2,4-D can be used for the elimination of cockleburs. In general, however, this is not considered practical since cheaper cultural methods can be utilized more efficiently. In corn fields, where the heaviest infestations are located, it would be necessary to go down between two rows at a time to apply chemicals. In such case, hoeing would be more practical since the elimination of the plant would be more assured.

Cropping. Eradication of the cocklebur in corn is very difficult. Consequently, it is recommended that crops other than corn be grown on infested soil. Since more than one year is necessary for the seed in each year's bur crop to germinate, it is also recommended that the infested area be planted to crops other than corn for at least two years. If corn is grown on infested land, the cocklebur plants should be hoed or pulled before they set seed. Duckfoot shovels on the cultivator will cut off more of the cocklebur plants than will spear-point shovels.

Following is an outline of several different plans of cropping that are effective in the control and eradication of cockleburs:

Progress of Eradication

Plan No.	1st year	2nd year	3rd year
1	Oats or barley and sweetclover. Mow field 4 in. high after harvest and before cocklebur set seed.	Harvest sweetclover seed. Subtill, double disc, one-way or plow after harvest before cocklebur set seed.	Plant field to corn. Hoe or pull individual cocklebur plants.
2	Oats or barley. Subtill, double-disc, one-way, plow, or mow after harvest and before cocklebur set seed. Sow winter wheat or rye in the fall.	Harvest winter wheat or rye and subtill, double disc, one-way, plow, or mow after harvest and before cocklebur set seed.	Plant field to corn. Hoe or pull individual cocklebur plants.
3	Oats or barley. Subtill or plow immediately after harvest. Seed alfalfa or bromegrass alone or in to Sept. 15.	Alfalfa or bromegrass for hay.	Alfalfa or bromegrass for hay or seed. Bromegrass for pasture.
4	Seed bromegrass and alfalfa in spring. Clip weeds before cocklebur set seed.	Bromegrass and alfalfa. Mow for hay.	Bromegrass and alfalfa. Mow for hay, cut for seed, or pasture.
5	Seed alfalfa in spring. Clip weeds before cocklebur set seed.	Alfalfa for hay.	Alfalfa for hay.

Other cultural methods by which the cocklebur plants can be eliminated before they set seed, for two or more years, would perhaps also be practical.