

**WRITTEN FINDINGS OF THE  
WASHINGTON STATE NOXIOUS WEED CONTROL BOARD**

Scientific Name:        *Xanthium spinosum* L.

Common Name:        cocklebur, spiny

Family:                Asteraceae

Legal Status:        Class C

Description and Variation:    An erect, much branched annual; up to three feet high. Reproduces by seed; spines present, about one inch long and found in leaf axils and at stem nodes. Leaves are mostly three-lobed, the center lobe much longer than the other two, being up to three inches long, shiny dark green and hairy on the upper surface and downy beneath. The flowers are small, inconspicuous, creamy green. Male flowers are found at the top of the stems, and female flowers are formed lower on the stems. Fruit is more or less an egg-shaped burr, up to one-half inch long, armed with numerous hooked spines, some with one or two straight terminal spines. There are two seeds per burr, flattened, three-eighths inch long and brown in color.

Economic Importance:

Detrimental:        The burrs can become tangled in the hide of cattle and horses and in the wool of sheep. Removal of burrs from wool adds to the cost of the final woolen product. The weed can provide some competition for summer crops and is a nuisance to pickers in hand-harvested crops. The seeds and cotyledonary seedlings are poisonous. Ingestion of seeds equal to 0.3% of the animals weight, or ingestion of seedlings equal to 1.5% of the animal's weight are toxic. Poisoning has occurred in all classes of domestic livestock, and is always associated with cotyledonary seedling ingestion. The symptoms are anorexia, depression, nausea, prostration. Death may occur in a few hours to three days after symptoms are first noted.

Beneficial:        Compounds from the plant may have pharmaceutical value as diuretics.

Habitat:            Spiny cocklebur is adapted to a variety of climates, hence its wide distribution. It is found in a wide variety of soil types of cultivated fields, wastelands, farm yards, flood plains and along waterways.

Geographic Distribution:    Spiny cocklebur is native to Chile. It is now widespread in the warm and temperate regions of the world, occurring commonly in Europe, Asia, North and South Africa, North and South America and Australia.

History:            Spiny cocklebur was introduced into the United States from South America. It was probably brought in as burrs attached to livestock. It has since spread along the east and west coasts and the Gulf coast.

Growth and Development: Morphology - the numerous hooked spines of the fruit enable it to adhere to animals and be transported long distances. Perennation - Overwintering occurs in the seed stage. Phenology - Seeds germinate after late spring and summer rains, or irrigation, and young plants grow quickly. Plants flower in summer and bear fruit until killed by fall frosts.

Reproduction: By seeds only. Seed Production and Dispersal - Seeds are well adapted for dispersal by livestock or people because of the hooked spines on the fruit. Viability of Seeds and Germination - Of the two seeds in each burr, one germinates the first spring or summer and the other does not germinate until the second or third year. Some seeds may remain viable for up to eight years. Population Dynamics - Spiny cocklebur can spread rapidly to infest new areas because of its ability to be spread by livestock. The plant may persist in an area for quite some time due to the long-lived seeds in the soil.

Response to Herbicide:

Response to Cultural Methods: On arable land, cultivation is effective against the seedlings. This should be repeated periodically for at least three years. Mowing or slashing are effective if done prior to burr formation.

Response to Mechanical Methods:

Biocontrol Potentials:

References:

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