Cocklebur

Xanthium spp.

Texas has six species of cocklebur. They are coarse, rough, annual weeds with alternate, toothed or lobed leaves.

Separate male and female flowers grow on the same plant, although both are inconspicuous. Male flowers occur in dense clusters on the ends of the stems; female flowers occur in leaf axils.

Many spines cover the conspicuous cocklebur fruits, which have two compartments, each with a seed.

Distribution and habitat

Cockleburs are found throughout most of the United States. In dry areas they are most common around water holes, playas, arroyos and disturbed areas. Regions: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10.

Toxic agent

Cocklebur poisons all classes of livestock. The toxic substance in the seeds is carboxyatractyloside, a glycoside causing hypoglycemia and massive liver damage.

Although livestock generally do not eat the seeds, problems can occur when cattle are fed whole cottonseed or hay contaminated with cocklebur. The toxic agent remains present in the seedling through the cotyledon stage. The toxin concentration drops rapidly when the first true leaves appear.

A toxic dose of seedlings is about 0.75 to 1.5 percent of the animal's weight. Seedlings are toxic even when dead and dry.

Livestock signs

Signs generally occur 12 to 48 hours after cocklebur seedlings are eaten. They include:

- General weakness
- Depression
- Unsteady gait
- Rapid, labored breathing with a weak, rapid pulse
- Subnormal body temperature with nausea and regurgitation

Once the animal is down, it convulses, makes running motions with its legs or shows a marked curvature of the neck. Death usually occurs a few hours to 3 days after the first signs appear.

Integrated management strategies

Keep poisoned animals warm and give them large amounts of fatty substances. Cream, milk and mineral oil can be given by mouth, administered through a stomach tube to avoid producing inhalation pneumonia. Heart and respiratory stimulants are also recommended.

Poisoning usually occurs when many seedlings germinate after a rain or as water recedes in low-lying areas. Hazard is greatly increased when seedlings are commingled with desireable foliage. Do not feed supplements or hay on ground where seeds or seedlings are present.

Control cockleburs by aerial or ground broadcast application of 2,4-D at 1.0 pound a.i./acre before plants flower. Or, mix a 1 percent solution of 2,4-D for individual plant treatments.

Cocklebur germinates after summer rains, so chemical application may be required more than once a year. Follow any chemical treatment with proper range and livestock management programs.

Any means of mechanical control that prevents the plant from producing seeds helps reduce the population of this annual plant. Concentrations of small seedlings can be burned with a hand-held propane burner.