



# Western Bitterweed

*Hymenoxys odorata*

Bitterweed is an erect, annual, composite plant growing from 3 inches to 2 feet tall. Stems are purplish near the base. Leaves are **alternate** and usually woolly underneath.

Bright yellow flowers bloom from April through June and occasionally in the fall. This plant has a bitter taste and a distinct odor.

## Distribution and habitat

Bitterweed is common in arid areas of the southern Great Plains from southwestern Kansas and central Texas to southern California and into Mexico. It is most common where soil disturbance or overgrazing has occurred. Populations can be quite variable between years. Regions: 3, 4, 5, 6, 7, 8, 9, 10.

## Toxic agent

Bitterweed is toxic to sheep and is generally **unpalatable**. However, starved sheep that begin eating the plant may develop a liking for it.

Cases of poisoning in cattle, horses or goats are rare. The toxic agent is a **sesquiterpene lactone** (hymenoxon). This material appears to accumulate, with a lethal dose consisting of 1.3 percent of an animal's weight in green plant material, whether ingested at one time or over several months. The minimum lethal

dose varies considerably among individual animals, regardless of their nutritional history.

From a management perspective, it is probably best to consider bitterweed toxic at all growth stages. The plant becomes much more toxic in drought, when a **lethal dose** is 0.5 percent of the animal's body weight.

## Livestock signs

Signs of **acute** bitterweed poisoning include:

- Loss of appetite
- Rumin stasis
- Depression
- Indications of abdominal pain (arched back stance)
- Bloating

Green salivary and nasal discharge is a typical sign on the range. Weight loss is the most common sign of **chronic** bitterweed poisoning. Clinical signs are usually not immediate; they may appear a month or more after the plant is first eaten.

## Integrated management strategies

There is no medical treatment for bitterweed poisoning. However, recent evidence indicates that activated charcoal may alleviate signs.

Move poisoned animals to bitterweed-free pastures or feed them alfalfa or a suitable diet in a feedlot for 10 days before returning them to rangeland.

To prevent bitterweed losses, use a proper supplemental feeding program and high numbers of sheep in infested pastures for short periods. Removal of the sheep from pastures when bitterweed signs start requires close observation.

Large, dense populations of the plant may be treated with herbicide by aerial application. Treat localized populations of bitterweed with targeted ground applications.

Refer to Extension publication B-1466, *Chemical Weed and*

*Brush Control Suggestions for Rangeland*, for specific herbicides and rates.



Flower ↗  
Seedling →  
↓ Whole plant

