



# Sweetclover

*Melilotus* spp.

There are three species of sweetclover in Texas. They are biennial or annual with erect, branching stalks 1 to 8 feet high. The alternate leaves have three egg-shaped leaflets with toothed margins on the tip.

Small white or yellow flowers are presented in upright terminal spikes. Crushed plants have a characteristic sickly sweet, sharp odor.

## Distribution and habitat

Sweetclovers are grown throughout the mid- and southwestern United States as high-yielding, high-quality cultivated forage crops. Most areas in the eastern two-thirds of Texas can grow sweetclover without irrigation. Wild plants typically grow in areas that receive extra moisture such as draws, roadsides, and stock tanks. Regions: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10.

## Toxic agent

Sweetclover contains coumarin, which may be converted to the toxin dicoumarol by bacteria or fungi in damaged plants, moldy hay and spoiled silage. The popularity of round-baled hay has almost eliminated the use of sweetclover, as a moldy thatch covers most bales.

Dicoumarol disrupts normal blood clotting processes, causing internal and external hemorrhaging. Hay containing 0.002 to 0.003 percent dicoumarol may poison cattle. Feeding trials with sheep have shown them to be about twice as tolerant.

## Livestock signs

Clinical signs of poisoning vary depending upon the dicoumarol concentrations and the length of exposure. Signs can appear suddenly or after several months and include:

- Stiffness and lameness
- Soft swelling under the skin
- Nosebleeds
- Anemia
- Convulsions
- Sudden death

In several instances when cows have eaten sweetclover hay, the cows and/or their newborn calves have bled to death soon after parturition.

## Integrated management strategies

Forage containing sweetclover should be baled only in small square bales after it is well-cured, and should not be fed if it is the least bit moldy. Chemical testing for dicoumarol in hay or silage is

impractical because of difficulty in sampling.

Treat poisoned animals with vitamin K and eliminate sweetclover from their diet.

