



# Western Horse Nettle

*Solanum dimidiatum*

The leaves, **petioles** and branched stems of western horse nettle carry sharp spines. Most specimens of this perennial are less than 2 feet tall, but some grow to 3 feet tall.

The oval, five- to seven-lobed leaves can be up to 6 inches long. Flowers are bluish-purple to violet (rarely white) and grow in **terminal** clusters. They give rise to spherical fruits that are 0.75 to 1.5 inches in diameter and yellow at maturity.

## Distribution and habitat

These plants are widely distributed on loamy prairies of Texas except in the far west, Panhandle and extreme eastern parts of the state. Regions: 2, 3, 4, 5, 6, 7, 8.

## Toxic agent

Western horse nettle contains varying amounts of **glycoalkaloids** and **calystegines** in all parts of the plant. The highest concentrations are in the ripe fruits.

Low-level intake of calystegines over several months is probably responsible for "Crazy Cow Syndrome," a nervous condition occurring in two limited geographical areas: Real County with parts of surrounding counties, and the larger area roughly bounded by Glasscock, Menard and Taylor counties.

When cattle, sheep, goats or horses consume larger amounts, the **glycoalkaloids** produce signs of classical nightshade poisoning.

## Livestock signs

Clinical signs of cattle with the "Crazy Cow Syndrome" include:

- Loss of equilibrium after rapid movement
- Extension of head and front legs
- Rapid eye movement
- Spontaneous but temporary recovery after rest

These signs are the result of loss of Purkinje cells of the brain. Affected animals do not return to normal. The poisoning itself is not fatal, but animals die as a result of accidents, particularly by drowning when water is nearby.

Clinical signs of classical nightshade poisoning include:

- **Anorexia**
- Depression
- Excessive salivation
- Diarrhea or constipation
- Trembling
- Weakness
- Colic

## Integrated management strategies

Because this plant often grows in fields, take care to prevent baling

fruiting plants into hay. When the plant is in round bales, cattle should not be forced to clean up the leavings, where most of the seeds will accumulate.

Do not allow the same animals to continuously graze pastures containing many western horse nettle plants, especially in the fall and winter. Rotating cattle every 30 days from this type pasture to one containing few western horse nettles has helped prevent "Crazy Cow Syndrome."

Chemical control strategies include 0.6 to 0.9 pound **a.i./acre** of Grazon P+ D® as a broadcast treatment or a 1 percent solution as an individual plant treatment when plants begin to flower in the spring.

