



Silverleaf Nightshade

Solanum elaeagnifolium

Silverleaf nightshade is an upright, usually prickly perennial in the potato family. It normally grows 1 to 3 feet tall.

This plant reproduces by seed and creeping rootstalks. Its characteristic silver color arises from the tiny, densely matted, starlike hairs covering the entire plant. The leaves have wavy margins and are lance shaped to narrowly oblong.

The showy violet or bluish (sometimes white) flowers are followed by round yellow fruits up to 0.5 inch in diameter from May to October.

Distribution and habitat

Silverleaf nightshade is a serious weed of prairies, open woods and disturbed soils in southwestern United States and Mexico. It is occasionally found even farther north than Missouri. Regions: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10.

Toxic agent

This plant has reportedly poisoned horses, sheep, goats, cattle and humans. However, sheep and goats are more resistant than cattle, and in controlled experiments, goats were not poisoned at all.

Its toxic agent is solanine. The leaves and fruit are toxic at all

stages of maturity, the highest concentration is in ripe fruits. In some instances, an animal can be poisoned by eating 0.1 to 0.3 percent of its weight in silverleaf nightshade.

Livestock signs

The glycoalkaloid can cause two types of effects. Nervous effects include:

- Incoordination
- Excessive salivation
- Loud, labored breathing
- Trembling
- Progressive weakness or paralysis
- Nasal discharge

Effects of gastrointestinal irritation include:

- Nausea
- Abdominal pain
- Vomiting
- Diarrhea, sometimes with blood

Postmortem examinations in some cases have revealed yellowish discoloration of the body fat.

Plant material may be identified in rumen content of dead animals. In cases of fruit poisoning, many small, tomatolike seeds may be found between the folds of the omasum and in the abomasum.

Integrated management strategies

Veterinarians have had some success administering pilocarpine or physostigmine after the animals were removed from infested pastures. Move affected animals as little as possible and give them good-quality hay and water.

Because silverleaf nightshade is relatively unpalatable, problems usually occur after serious overgrazing or if nightshade is baled up with hay. Do not feed livestock from the ground where many ripe nightshade fruits are available.

If infestations become severe, apply Grazon P+D® at 0.6 to 0.9 pound a.i./acre as an aerial or ground broadcast treatment in the spring when plants begin to flower. For individual plant treatments, mix Grazon P+D® as a 1 percent solution in water.

Mechanical control practices that disturb the soil surface may make the plant infestations more severe.



Fruit ↗

Whole plant ↘

↙ Flower

