



Locoweeds

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Astragalus is the largest genus of flowering plants in Arizona, with over 70 species plus 2 species of *Oxytropis*, a species that closely resembles locoweed in both appearance and poisonous principle. Species identification is often difficult and requires flowers and seed pods for proper identification. While most Arizona species have not been proved to be injurious, it is best to treat all loco's as poisonous to herbivores. This is especially important for cattle and horses, unless positive evidence of their harmlessness is available.

Typical loco symptoms usually don't manifest until after plants have been grazed for weeks, but death may occur within a few days after this period of ingestion. The action of a "locoed" animal includes jerky, uncoordinated moves, lowered head and a vacant stare. Head shaking and shying from common objects are also common. Abortion is a common symptom to loco poisoning in cows. Horses are especially sensitive and can be irreparably damaged after eating locoweed for one week.

Poisonings are of three types. Some species cause typical loco poisoning from the alkaloid swainsonine. Others with nitro-toxins cause either acute or chronic poisoning with respiratory problems and rear-limb weakness. Still other loco species may accumulate selenium and cause hair loss, lameness and reproductive problems. At least 6-10 species that occur in Arizona cause the typical loco poisoning and at least 7 other

species can be dangerously high in selenium. Locos are toxic in all stages of growth. Some are very toxic and cause a quick death (acute), yet others may require long periods of consumption before any ill effects are detected (chronic). Additionally, consumption of loco may go unnoticed in the pregnant female yet cause birth defects. Plants may be annual, biennial or perennial. Depending on the species, loco plants can be highly site specific, occurring only on certain soils or in certain localities. Limey uplands are typical loco habitat, but the species also occur on heavy clay sites. Loco plants tend to be cool season growers, so good winter and spring precipitation years are also good loco years.

Preventing loco poisoning is easier said than done. Knowing which plants can be toxic is the first step in preventing poisonings. With loco this can be difficult, but in order to know the toxicity you must know which loco you have. Also, understand the plant's growth cycle and whether it has favored growth areas. Managers who recognize loco and can spot problem areas, can plan a strategy to minimize losses. Grazing management is one key in preventing animal loss. Pastures in good condition will reduce the chance that the animals will eat a toxic plant. If they have something else to choose from, they will often leave locoweed alone. The most effective strategy is to deny access to locoweed infested sites during critical periods. Early detection is critical and can be key to minimizing losses.

