

## Horse News and Views



Clovers (*Trifolium* species) are well accepted by horses. Clovers have a calcium to phosphorus ratio (Ca:P) of 5:1. They supply their own nitrogen needs because they have the ability to fix nitrogen from the air. Clovers are especially useful to improve or supplement pasture since they can be frost seeded. However, there are some downsides to feeding the various clovers.

- Red clover has small hairs along its stem and leaves and, therefore, can be dusty when cured.
- Red clover has a thick stem that is difficult to dry and, therefore, can become moldy.
- The clovers can contain isoflavone glycosides and coumestans, which have estrogenic effects. These phytoestrogens can increase the number of services per conception of mares.
- Slobbers is occasionally seen when horses consume red and white clover infected with the fungus *Rhizoctonia leguminicola* (Black patch). The fungus produces the mycotoxin slaframine or slobber factor. Clinical signs include excess salivation, lacrimation and colic.
- Cyanogenesis or cyanide production occasionally occurs, particularly in a dry fall. It is controlled by a dominant gene. Some clover cultivars can liberate cyanide.
- Red urine is seen occasionally when some horses consume white clover. It is due to breakdown products of tryptophan which oxidize and turn the urine red, most obvious when the horses are on snow.
- Acute photosensitization, also known as trifoliosis or dew poisoning, is seen as a primary photosensitization.
- Chronic photosensitization is due to periportal hepatitis (fibrosis), especially seen with alsike clover.

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