

## Feeding Clover to Horses

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Clover is a desirable feed source for most horses whether used in pasture or in hay since it provides useful energy and acceptable protein and fiber. Occasionally, problems may arise with clover, just as they can with most desirable feed sources. Clover may be “too rich” at times for horses. The early rapid growth phase of some clovers, like other forages, may contain high amounts of soluble sugars. These soluble sugars and other carbohydrates are sometimes associated with colics and founder in horses fed only pasture in the early spring. The soluble sugar content of the plant decreases as it matures. Two mold growth problems are occasionally associated with common pasture clovers (red, white and alsike) with weather above 80°F and humidity above 60%. The most well characterized problem is “slobbers.” Horses can literally fill several 5 gallon buckets of saliva in one day. This condition, caused by slaframine, is produced when red clover is infested with a mold that is generally a rust color seen on the upperside of the leaf. This mold normally “runs its course” in 2 to 4 weeks, depending on weather conditions. The second problem, Black Blotch Disease, is not as well characterized, but has been reported in Minnesota, Washington and areas of Canada. The mold literally causes black blotches to occur on the underside of the clover leaves, usually closer to the ground where the humidity is higher. Horses ingesting clover with Black Blotch have been known to develop excessive “sunburn,” which is really a thickening and reddening of the white areas of skin due to liver damage. Black haired horses also get the liver damage but the “sunburn” is not visible. A third mold condition affects a different clover – both white and yellow sweetclover. These clovers are not common in pasture mixes, but are more frequent along roadways. The problem arises not from clover in pastures, but if sweetclover is harvested for hay and gets moldy as the hay is baled. Crimping the sweetclover at cutting reduces, but may not entirely eliminate, this problem. An unknown mold converts the naturally occurring cumarol in the sweetclover to dicumerol – a blood thinning drug. Horses may bleed if moldy sweetclover hay is a substantial amount of their diet over a number of days. Dicumerol clears quickly, so taking the horse off the hay is the best choice. Injections of vitamin K or blood transfusions may be necessary in extreme bleeding situations. However, even with these potential problems, clover is still considered a desirable forage for horses.