

MARYLAND COOPERATIVE EXTENSION

UNIVERSITY OF MARYLAND
COLLEGE PARK • EASTERN SHORE

Dr. Amy Burk
301-405-8337
amyburk@umd.edu

Erin Petersen • 301-405-4690 • petersdr@umd.edu

NOVEMBER EXTENSION HAPPENINGS

November 3-6 — Maryland 4-H state teams compete at Eastern National 4-H Horse Roundup, Louisville, KY

November 12 — Maryland 4-H Horse Council meeting, College Park, MD, 10 a.m.

November 19 — University of Maryland Horse Conference, Westminster, MD, 8 a.m.

Ask the Experts

Q I recently heard that clover can be toxic to horses, causing liver damage and a tendency to sunburn. Should I try to eliminate all the clover in my fields?

A There are many plants in this region that can cause harm to horses – *alsike clover* (see drawing below) is one of them. Alsike clover, *Trifolium hybridum*, is known to cause photosensitivity and possibly liver damage, especially in horses. Photosensitization is a serious skin condition characterized by sunburned, crusty skin that dies and sloughs away. It is usually caused by a reaction to something the horse has eaten, but the skin problem does not appear until the animal is exposed to sunlight. The toxin in alsike clover that causes photosensitivity has not been identified, though it is possible that it is caused by a fungus that grows on the plant. Red clover, *Trifolium pretense*, may also be a culprit in photosensitivity in horses, though it is important to note that research is still ongoing for both clovers. The most common types of clover found in Maryland pastures, white and Ladino clover, are NOT thought to cause photosensitivity or liver problems. (They can, however, cause “clover slobbers” – a harmless but unsightly drooling problem in your horse!)

If your horse consumes affected alsike or red clover, skin lesions are the first visible sign of photosensitivity, usually appearing around the eye, muzzle and sometimes under the tail. The skin will be swollen, red, and blistered. The blisters will break, leaving raw areas. Alsike clover poisoning is thought to be a separate syndrome causing liver damage. The amount of clover necessary to cause the problem is unknown, and it appears that it can occur after exposure of several weeks to more than a year. Symptoms include jaundice, neurological problems, disinterest in eating and subsequent weight loss – all clinical signs that can be caused by a multitude of other diseases! Diagnosis and treatment of liver or neurological disorders is best left to your vet and is beyond the scope of my expertise.

Many plants aside from alsike and red clover can cause photosensitivity, so it is important to learn how to identify plants in your pasture in order to determine the culprit. Plants like hound’s tongue, St. John’s Wort, buckwheat, burr trefoil, smartweed,

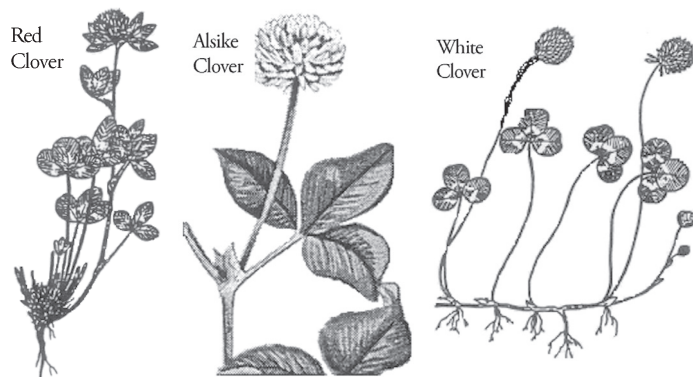
groundsel and perennial rye grass can also cause photosensitivity and possible hepatic (liver) problems. If your horse is starting to show signs of photosensitivity, remove the offending feed source and keep him or her protected from the sun.

I would recommend really *looking* at the clover in your pasture. Alsike is a hybrid of red and white clovers. It is described as a perennial herb with taproots, giving rise to erect stems, 1-2 feet in height. Leaves are alternate (one leaf at each node), trifoliolate (three leaflets make up one leaf), and hairless. The shape of the leaflets is broadly elliptic with toothed margins. Flowers are white to pink and the seeds are produced in a smooth, olive-green pod. It can be differentiated from red clover quite easily, since red clover has very hairy stems and leaflets and is quite large. White clover, on the other hand, will send out stolons (above-ground roots that can “root in” and create a new plant) and is very low growing, with rounded leaves having a distinctive water mark in the center. White clover – or its giant cousin, Ladino clover – are the recommended legumes for horse pastures. However, this type of clover should represent no more than about 10% of the total plant mass in your pastures. You don’t want to eradicate clover altogether, because it has the ability to “fix” nitrogen from the atmosphere, which means that you won’t have to fertilize your pasture as much as if you had a pure grass stand.

Regular scouting of your pastures is extremely important, whether you are looking for weeds, poisonous plants or foreign objects. For established pastures, a good weed control program – including mowing, integrated pest management (IPM), selective herbicide use, and rotating pastures – will help control broadleaf weeds and clover. If you cannot identify a weed, clover or grass, you can bring a sample to your local extension office for identification and herbicide recommendations. If you are planning to plant or renovate a pasture using a pre-mixed seed, check to be sure the mix does not contain alsike clover! If you have questions as to whether a plant is potentially poisonous, please visit the websites listed below.

<http://www.library.uiuc.edu/vex/toxic/toxic.htm>

http://www.vth.colostate.edu/poisonous_plants/



Drawing courtesy of Royal British Columbia Museum “The Pea Family”

Sources:

Photosensitization in the Horse by: Heather Smith Thomas, July 2005 Article # 5863. www.thehorse.com

Shannon Potter, MS
Extension Educator
Talbot County Cooperative Extension
spotter@umd.edu