

## Red Maple Leaf Toxicity

Nathan Voris, DVM

As another hot, busy summer draws to a close we enter into one of my favorite seasons-FALL. There are several reasons for my affinity for the season: mild weather, college football, and the spectacular display of fall colors offered by the many species of trees here in the Midwest. One of the most visually appealing species unfortunately is also one of potential concern to horse owners-the Red Maple.

Rest assured that not all maple trees are toxic, and not all red leafed maples are Red Maple Trees. The red maple is identified by its uniquely shaped three-pointed leaf. The exact toxic component is not known. Green leaves growing on the tree are not toxic; however, if dry, wilted leaves are eaten by a horse, the toxin causes red blood cells to break down (hemolysis).



It takes only one to three pounds of dry, wilted leaves for a 1000 pound horse to suffer the toxic effects of the red maple leaf. Clinical signs include weakness, depression, blood-tinged urine, and yellow or brown gums. Horses typically show clinical signs within 48 hours of eating the leaves. Severely affected horses die within five days. The only treatment for red maple leaf toxicity is supportive care; including intravenous fluids, blood transfusions, and oxygen therapy. Because red maple leaf toxicity compromises the horse's ability to carry oxygen in its blood, affected horses should be kept quiet in a stall while being treated. A secondary complication of red maple leaf toxicity is acute kidney failure due to the by-products of red blood cell breakdown (methemoglobin).

Now before you cut down all of the red maple trees within a mile of your pasture, read on, there are preventative measures. Horses only actively seek tree leaves when there is nothing else to eat or they are bored. Always make sure there is adequate forage (hay or grass) in all pastures, especially those with red maples nearby. Pay close attention to your trees immediately after storms to locate fallen branches, as wilted leaves on the severed limbs are particularly toxic. If your red maple trees need pruning, it's advisable to wait until all the leaves have fallen before cutting unwanted branches.

If you do have a tree you suspect is a red maple, you can take some leaves to your veterinarian or local nursery and landscape expert for identification. If you have a red maple tree near your horses, simply pay close attention to fallen limbs and the quality of forage available in the pasture. If you are one that will lose sleep knowing there is a red maple, have it removed and replace it with a more horse-friendly species. Whatever you decide to do with your tree, enjoy the mild weather, college football and fall colors-even those of the Red Maple.