Buttercup Risk to Cattle and Horses

As many of you have observed, there has been a profusion of yellow buttercup in pastures this spring. Buttercup grows in overgrazed pastures and since cattle and horses general avoid it then it can proliferate. So we asked Dr. Cindy Gaskill, toxicologist at UK Vet Diagnostic Lab (VDL), if producers should be concerned about livestock toxicity. This was part of her answer: First, there are so many different species of Ranunculus (scientific genus of buttercup), so it is hard to generalize. Some are definitely more toxic than other species. Typical, toxicity issues are upset stomach and irritation throughout the GI tract, but depending on the species of buttercup, effects can be severe and even fatal. As with all pasture plants and weeds you can bring a plant sample to you local extension office for identification.

At UKVDL, buttercups are not high on the list of things causing problems in either cattle or horses. As long as the animals have plenty of other forages to eat, they are unlikely to eat much if any of the buttercups, and so are unlikely to have major problems. A problem could occur if the pasture is extremely overgrazed, and the animals have nothing else to eat, then they may be forced to eat too much buttercup and end up with problems from it. And depending on the species of buttercup, effects in that case could be severe and even fatal. From a quick review of UKVDL records over the last 13 years, there have been no cases of livestock brought to the lab that have died from ingesting buttercup and there have been no calls of clinical cases where buttercup ingestion was the most likely cause of the problem. It is important to note that horses may be more susceptible to the GI irritant effects, and it is possible that some colics and diarrheas have been unknowingly been caused by buttercups.

From what has been written about buttercups in hay, it is unlikely that dried buttercups in hay retain the toxic component ranunculin, so it is unlikely to cause problems in hay unless there is a large amount of buttercup. How much is too much is hard to know, and will depend on species of buttercup, etc... ~ Dr. Cynthia Gaskill, UK VDL Toxicologist

Managing Pastures this Summer

Setting a sustainable stocking rate. Setting the proper stocking rate, defined as animals per acre per year, is a primary determinant in grazing system success. A stocking rate set too high will result in the degradation of the entire grassland ecosystem. A stocking rate that is set too low will result in wasted forage and decreased profitability. In addition, stocking rate also impacts the amount of conserved forage that will be needed. A stocking rate set too high will result in less grazing and more hay feeding. Stocking rate depends on many factors such as forage species, soil type, soil fertility level, and grazing management. In general, supplying each cow-calf unit with 2 to 3 acres of grazable pasture is a good place to start. In most cases it is better to start with a lighter stocking rate that can be gradually increased as soil fertility increases and grazing management improves.

Grazing management. Controlled grazing or rotational stocking is a management practice that allows producers to determine how closely pastures are grazed and how long they are rested between grazing events. Leaving residual leaf area and resting pastures between grazing events allows pastures to re-grow quicker and produce up to a third more forage in a given grazing season. Crabgrass, a warm-season annual grass, can provide high quality summer grazing. Remember crabgrass needs some annual soil disturbance to keep coming back.

Forage Timely Tips: June

- Continue hay harvests. Minimize storage losses by storing hay under cover.
- Clip pastures for weeds and seedheads as needed.
- Slow rotation allowing for a longer recovery period.
- Use portable fencing to decrease paddock size and increase paddock number.
- Do NOT grazing below the minimum desired residual height.
- Crabgrass, a warm-season annual grass, can provide high quality summer grazing. Remember crabgrass needs some annual soil disturbance to keep coming back.

Buttercups can be toxic to livestock.
The upcoming June issue of Cow Country News.

Combination! ~ Dr. Chris Teutsch. See the full article in...

Successful pasture management requires an integrated approach that involves the soil, plant, and animal. This means we need to select well adapted forage species and manage them in a manner that creates a healthy and vigorous sod that excludes weeds from our pastures. When we combine this with clipping species like tall fescue and orchardgrass and red and white clover become less productive and weed species that are better adapted to lower fertility fill in the gaps. Fertilizer and lime applications should ALWAYS be based on a recent soil test. If funds are limited, apply lime if needed. Lime not only reduces soil acidity, but also makes nutrients in the soil more available to plants.

Hay and silage remove large quantities of nutrients. In contrast to grazing, making hay or silage removes large quantities of nutrients. These nutrients must be replaced to maintain soil fertility, and stand health and productivity. Each ton of hay that is removed from a field takes with it approximately 15 lb of phosphate and 50 lb potash. In a good year a tall fescue-clover mix may yield 4 tons per acre and remove 60 lb phosphate and 200 lb of potash.

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We're Producing and Feeding Less Hay

The dynamics of the hay industry have changed. Whether it can just be attributed to a natural cycle or a permanent new normal is yet to be determined. One year ago, USDA reported that year-over-year May 1 hay stocks had declined by 36 percent, which amounted to 8.7 million tons. This past December, year-over-year hay stocks also dropped for the second year in a row. Last week, USDA's Crop Production report pegged May 1 dry hay stocks at 14.9 million tons, 3 percent (442,000 tons) below one year ago. That's not the same drop in magnitude as last year, but it's also not a second year in a row. Last week, USDA's Crop Production report pegged May 1 dry hay stocks at 14.9 million tons, 3 percent (442,000 tons) below one year ago.

Some of the largest hay-producing states had year-over-year May 1 stock reductions much greater than the U.S. average. Falling into this group were: Colorado (down 57%), Arkansas (down 51%), Minnesota (down 50%), Oregon (down 47%), Idaho (down 39%), Mississippi (down 39%), Pennsylvania (down 34%), Wisconsin, Michigan, and Ohio were each down 31%. Not all states experienced inventory reductions. Some had large gains after experiencing severe reductions in May 2018 following less than desirable growing conditions the previous year. Included in the states that had large year-over-year inventory boosts were: Montana (up 120%), New Mexico (up 110%), California (up 80%), Nebraska (up 70%), Utah (up 40%), North Dakota (up 39%), Texas (up 34%).

What has made the difference?

2011 and 2012 years were characterized by severe drought, with the 2012 being nearly nationwide. This caused hay inventories to deteriorate and prices to soar toward record levels. Between 2009 and 2014, beef cow numbers declined by about 3 million head. We might point to that as a reason for the reduction in winter hay feeding except that since 2014 the beef cow herd has rebounded to 31.8 million, a number similar to one we had in 2009.

Regardless of the reason, there has been a significant decline in U.S. hay production in the past 20 years. From 2000 to 2010, the average annual dry hay production was 150.2 million tons. Since 2011, hay production has averaged 130.3 million tons per year. Hay prices during this time have remained relatively strong.

It's probably safe to assume that many beef producers are figuring out ways to feed less dry hay to get them through winter. More and more, we're seeing annual forages grazed into December or later. Also, it has been well documented that dairies in the West are feeding less alfalfa hay in their cow rations year-round. A number of producers have converted from dry hay to baleage. This directly impacts hay production and inventory figures but there is no data to document exactly what percentage of production has been recently converted from dry hay to baleage.

Whatever the reasons, USDA data is telling us that we're producing and feeding less dry hay; both trends began in 2011, and whether this situation is cyclic or the new normal remains to be seen. Go to the Hay and Forage Grower website for the full article. ~ Mike Rankin, Hay and Forage Grower, May 2019