

# Why are there so many buttercups in my pasture?

Sarah Flack

One cause of too many buttercups that pasture soils are too wet for good quality grasses to grow. However, the most common cause is the grazing management, not the soils.

- Grazing the pastures too often, so that the grasses don't have enough time to grow and outcompete the buttercups
- Grazing the pasture grasses too short and damaging the grasses so they can't compete with the buttercups

**Pasture is a crop, just like a hay field.** Many of the same grass and legume species that thrive in a well-managed hay field where they can outcompete the weeds, will also thrive and outcompete weeds in a well-managed pasture. In the hay field, plants are mowed and baled, then manure or other fertility is added, and then the field is left to regrow for a month or so before second or third cut is taken.

In the pasture, the tractor and mower are replaced with grazing cows who mow and harvest the grasses and legumes. Cows even spread their own manure. But if those cows are left in the paddock for more than a few days in a row, or come back to that pasture again before those plants are fully regrown, then the good plants are grazed too often and probably too short, creating ideal conditions for weeds to outcompete the dairy quality pasture plants. Just like a hay crop, which needs to regrow for about a month, pasture plants also need anywhere from 3 to 6 or more weeks to regrow after each grazing.

An important difference between the mower and the cow is that the mower cuts everything, weeds and all. However, the cow is able to selectively graze what she likes and leave the rest. Buttercups are mildly toxic, so the cow leaves those and eats all the delicious and nutritious grass and clover. So the more times the cow returns to that good quality grass or clover plant and grazes it down too short and too soon, the weaker those plants get. Meanwhile, the buttercups are able to thrive and spread.

Clipping the pasture can help slow the spread of the buttercup. However, unless the good quality grasses and legumes in the pasture are given enough time to fully regrow between each grazing, the buttercups will continue to do better than the plants you want growing in the pasture. So eventually, unless the management is changed, the buttercups may take over and the field may need to be reseeded.

**Make sure the paddock sizes are correct, and that you have enough of them to make good grazing management easier.** Good grazing management is easier to do with paddocks that are sized correctly, so that cows go in, graze them in a day or less, and leave behind 2 to 6 inches of un-grazed residual plant material. Just like the mower should not set too short in the hay field, cows should not be allowed to mow those grasses too short. Leaving taller residual behind allows grasses and legumes to grow back more quickly, out competing the weeds which the cows may not have grazed.

Good grazing systems also should have enough paddocks so that the cows don't have to return to the pasture area until that "crop" of grasses and legumes have had enough time to fully regrow (just like a hay field). To tell if the plants are fully regrown, you can look at how tall

they are AND how many grass leaves are on each grass tiller. There should be at least 2 ½ new leaves on the grass tillers, and it would be much better if there were 3 or more new leaves. Pick some grass tillers in the hay field before mowing and see what those ones look like, then make sure the pasture grasses are getting the same amount of re-growth time.

As pasture growth slows later in summer, the speed of the rotation must also slow down. This is usually done by adding more acreage and paddocks to the rotation. If the number of grazing acres is not increased, plants will not get enough rest, animal dry matter intake will drop resulting in poor animal and pasture performance and even more weeds. Timing first cut of early enough to allow some areas to grow back enough for grazing later in the season is the easiest way to add in more good quality pasture when plant growth slows in the summer.

Whenever possible, try not to graze the pastures in the same order as the herd or flock rotates around the farm. They should instead only be grazed when plants are at the correct stage of growth.

**Test soils regularly and apply the right types and amounts of fertility.** Cows do spread their manure in the pastures, and a correctly sized paddock will have a nice even distribution of manure in it. In addition, by maintaining legumes including red clover, white clover, alfalfa or birds-foot trefoil in the pastures, some nitrogen will be provided to the grasses through nitrogen fixation by the legumes.

However, just legumes and some manure dropped by grazing cattle may not be enough fertility to maintain good soil health and plant growth over time. Pasture soils should be tested, and then retested every few years to make sure that the right types and amounts of manure, lime, wood ash or other fertilizer are spread. Spreading too much, too little, or the wrong amount can also weaken the good quality grasses and legumes so they can't outcompete the weeds.

**Summary.** Good grazing management improves pasture plant species and increases how vigorously they grow without tillage and reseeding, by just using animal impact from grazing. As pastures improve, plant density and diversity increase, and soils are protected from erosion and compaction. Soil health is improved by increased plant root growth and improved nutrient cycling. The quantity of dairy quality forages produced in well managed pastures gets better over time with good grazing management, and those plants will outcompete many of the weeds.

**Grazing guidelines – variable recovery periods and short periods of occupation:**

- **Allow plants enough time to fully regrow and recover after each grazing.** Regrowth periods should not always be the same length of time, and the pre grazing height should also be varied to meet your management goals.
- **Graze livestock in each area for a relatively short time (short period of occupation) to prevent “re-grazing”.** Stocking density should not always be the same, use higher or lower densities as needed to meet your management goals.
- **Test pasture soils regularly.** Apply manure and other inputs according to the needs shown in those test results.