



*Leaving residual is essential for your success.
Resist the urge to graze “clean.”*

Making Grass-fed Successful

—Ulf Kintzel

I have been selling breeding stock to farmers who want to raise grass-fed sheep for well over a decade now. Many of the people who purchased White Dorper sheep from me stay in touch and have the occasional question, usually when something doesn't work, or when they encounter a problem they struggle to identify or solve. In these phone calls and e-mails over the years I detected common threads and recurring mistakes. I want to address some of these five or six recurring themes comprehensively in this article.

In my view, raising sheep and lambs on pasture without any grain-feeding at any time requires rotational grazing. Rotational grazing means different things to different people, and some of the understanding is plain wrong. When new customers come and pick up the White Dorper sheep they purchased from me, my standard question is if they practice rotational grazing.

The number of people saying “yes” but then saying they do it about once a week or every two to three weeks is quite high. The reactions range from surprise to disbelief when I tell them that leaving the sheep in a grazing cell for more than a week no longer qualifies as rotational grazing. Just because they switch pastures during the grazing season does not make it rotational grazing. Let's discuss what it means and what it takes to rotationally graze.

I consider it a fact that managing a grass-fed operation requires us to daily utilize the most underused human organ. Which organ is that? The brain. As a young man I worked for years at sheep farms with heavy grain feeding. It is easier than grass-fed. It requires less thinking. It requires less knowledge. Many problems can be masked by feeding lots of grain. As provocative as my statement may sound, it is by no means an attempt to diss grain-fed sheep or the people who do it. There



Offering shade on hot days is both important for animal comfort as well as production.

Photos by Author

are circumstances where grain feeding makes sense and there are operations that are very profitable in doing it. What I am saying is this: If you don't want to be involved in intensive management when raising sheep, if you are content with looking briefly at your sheep perhaps once a day or even less, please don't entertain raising sheep on pasture alone. You will fail. Turning sheep loose in a pasture and then letting them fend for themselves is the most common denominator when people call me who are unhappy with the sheep they purchased from me, who have heavy losses, or who ended up reselling the sheep. It is my contention that grass-fed cannot succeed without intensive management, which requires almost constant thought. What is your option if you don't want to heavily manage but still want to raise sheep? Do grain-fed. However, if you still want to do grass-fed and want to do it successfully, here are some cornerstones that cannot be ignored.

One major reason for losses and failure in a grass-fed sheep operation is the barber pole worm. I have written several articles about this internal parasite, which can be found on my website under "Articles." The larvae of this worm are taken in when grazing. The worm develops in the fourth and true stomach, then penetrates the wall of the stomach and sucks blood. That loss of blood leads to anemia and can lead to death. Some of the affected animals develop some swelling under the lower jaw, called a bottle jaw, but not all do. Pale or white eyelid color instead of being pink or red is a clear sign that the barber pole is at work. Sheep and especially lambs that could die if untreated will not die quickly. They will show signs for days before they do. Treatment with

either Levamisole (Prohibit or LevaMed) or Cydectin will be needed. Ivermectin and any white dewormer (Valbazen, Safeguard, Synanthic) should not be used due to widespread resistance against these dewormers.

How do you detect these signs, which are often subtle to the inexperienced eye? This is where management plays a role. Grass-fed requires pasture shifts. A daily pasture shift is desirable. A pasture shift every two to three days is still acceptable. Having a pasture shift every five days is stretching the limits. And a pasture shift after a week and beyond no longer qualifies as rotational grazing. What does the barber pole have to do with the frequency of pasture shifts? Affected animals become listless, they are often at the end of the flock when entering a new grazing cell, and they often don't eat or don't eat much or as vigorously when they enter fresh pasture. Not eating when everybody else does after entering a new grazing cell is one of the most reliable signs of a problem. In addition, the daily pasture shift allows you to detect all kinds of other ailments like a limping sheep or a ewe with mastitis because they too are often at the end of the flock when entering and are less likely to want to eat. Your daily pasture shift allows you to catch these problems on time.

When sheep stay in a grazing cell for several days, they tend to not graze evenly. Instead, they will graze the short and tastier spots repeatedly, while less desirable plants will grow too tall and unpalatable. Since about 80 percent of the barber pole's larvae will stay below the first four inches of any given blade of grass, the intake of these parasites is tremendously high. Likewise, leaving residual of at least four inches leads to much reduced



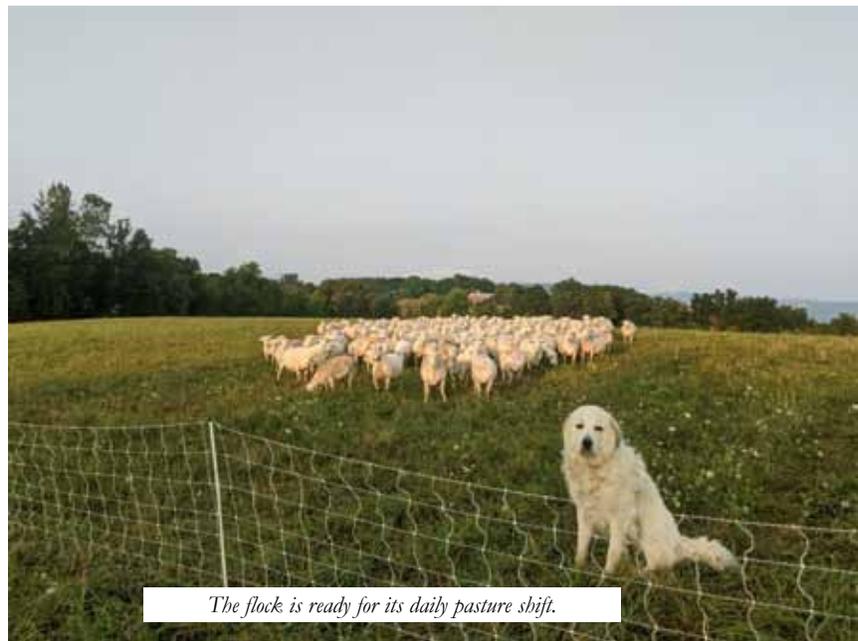
intake of the larvae.

Leaving residual is not only for that important reason. Residual allows the pasture to regrow much quicker. “Why don’t you graze cleaner?” or “My sheep have to graze cleaner!” Questions and statements like these are the norm when someone looks at my pasture. Likewise, in conversations I often hear that farmers let the pasture be chewed down and then move on to the next, the “chewed down” part being the measuring stick when to move on. Grazing “clean” is another big reason for failure when doing grass-fed due to a lack of yield, as well as the higher risk of barber pole worm infestations.

Leaving residual is more important at certain times of the year than at others. Grazing somewhat shorter during springtime when pasture is growing most vigorously is less of a problem. However, in late summer and early fall, when the grass starts putting more reserves for the winter into its roots, it has much more of a negative effect when grazed too short. Those who know me know that I like to tell a story to illustrate the points I try to make. So here is a story to tell: Last year in August before I went on vacation, I had to put up lots and lots of grazing cells with my electric nettings so my farm sitter could take care of my sheep. The problem during this time of year when putting up this much fencing, is that the grass will have grown too high after a week or so and will start touching the lower electric wire of the nettings, draining a lot of electricity away. Usually I bush hog the main paths to avoid the problem, but this time I went a step further. I took my lawn mower and took the grass down a bit further. Three months later I could still see in many places where these paths were. The grass had not grown back the same way the surrounding pasture had grown. The reason is a simple one. Grass that is cut or grazed too short must take reserves out of its roots to regrow, which is hard on the plant. When you leave residual, the plant is using photosynthesis with the remaining green blades. Photosynthesis uses the sunlight. And sunlight is perhaps the one thing in this world that is free. Everything else costs something.

Another main reason why sheep can die is overeating disease. Usually people perceive the death of a sheep to be “all of a sudden,” while in reality they failed to see

the obvious signs. In case of overeating disease, they may be right. The official name is Enterotoxaemia, but another common name is sudden death disease. (In lambs the disease is also called pulpy kidney disease.) The symptoms are subtle and short-lived before the animal dies. Within hours, a seemingly perfectly healthy animal can be dead. There is a vaccine against Enterotoxaemia; the most widely available is Bar-Vac CD/T. (It also provides protection against tetanus, which is what the T at the end stands for.) I heard many times from farmers that grass-fed sheep shouldn’t need that vaccination since overeating disease is a problem that occurs with heavy grain feeding. Until 2006 I agreed with them. Then I lost many ewes during the spring flush because of the disease, which is caused by the toxins of rapidly developing bacteria in the intestines. I have been vaccinating ever



The flock is ready for its daily pasture shift.

since. You give the lambs two shots when they are at least two weeks old the first year, spread out over three to four weeks, and a booster shot every year thereafter of this relatively cheap vaccine. The vaccine does not provide 100% protection, but you will buy peace of mind with it since only an occasional individual will die of it.

Not long ago someone called who wanted to get into raising sheep and didn’t know where to start. He was already cash-strapped, and had been advised that the first step should be fertilizing his newly purchased pasture, which was in decline. I advised against it. Instead, I recommended to rotationally graze, to frost-seed clovers, and to purchase hay for winter feeding and feed it strategically outside during the winter months whenever

the weather allows. Remember, most of the nutrients, at least 80 percent of them, come back out of the sheep on the other end and become fertilizer. Of course, you can feed it in the barn and then spread the manure in the spring in your pasture. However, you will have lost valuable components, especially nitrogen. Urine, when direct deposited, is worth a lot more than it is in the manure because in the barn much of it evaporates as ammonia. Also, liming may make sense early on if the pH level is too low. However, using fertilizer would be at the very end of my list, if it would even make my list. There are so many things where you can spend your money much wiser and to much greater effect when you are just starting. So, know where to spend your limited resources when you start raising grass-fed sheep.

Another recurring question is the one about shelter and shade for sheep. "Do they need shade?" or "Do they need shelter?" When it comes to hot weather, I have a rule of thumb. If it reaches about 80 degrees, I offer shade. I offer it already in the high seventies when the humidity is high, but don't worry as much when the humidity is low. Is it needed? No. But your straw hat is not needed either when you work out in the sun. You will get by and survive without one. However, would you be willing to give it up when it is 90 degrees out there?

The same can be said when the wind is blowing, and it is well below freezing. Sheep ought to have a shed or a windbreak like a hedgerow so they can get out of the wind. The cold in itself or the wind in itself is rarely a problem for adult sheep, but when wind and cold are combined, sheep show great discomfort.

The questions about shelter are posed quite frequently, often paired with the statement that wild animals like deer don't have a roof over their heads either. For two reasons, that is a very flawed argument. In fact, I think it is dumb, but I would not say it out loud or put it in writing.... First, wild animals are perfectly capable of seeking shelter in the woods, in a ravine, or in a corn field, while domestic animals are fenced in and are limited in what they can seek to feel protected. Secondly, wild animals are not in your care and are not your responsibility, but your sheep are. Across the board, I see too many farmers with a complete disregard for the well-being and comfort of their animals. That is why I felt compelled to add this paragraph. I know many of my reader are plain people, so allow me to quote Scripture in German to make my point: "Der Gerechte erbarmt sich seines Viehs; aber das Herz der Gottlosen ist unbarmherzig." (A righteous man regardeth the life of his beast: but the tender mercies of the wicked are cruel.)

So when you walk outside and you are dressed properly and still feeling discomfort, consider that your sheep might too. If you offer shelter or shade, you will do the right thing and your sheep will repay you because they will be far more productive. If I can't convince you that caring for your sheep is the right, or even righteous, thing to do, perhaps I can convince you because it is an economical issue as well.

My standard question when somebody inquires about breeding stock, especially when they purchase a ram lamb for their ewes, is if they have hoof rot in their flock. In case they have it, I decline to sell them one. Since I never had it in my flock, my animals don't have any antibodies against it. That means when they are introduced to a flock with it, they will get it really bad and will be miserable and unproductive.

So, no matter where you buy your sheep, let a standard question be if they have hoof rot in their flock. If they say yes, you want to find a different place to buy your sheep. Sheep farmers who don't have hoof rot in their flock will gladly volunteer the information that they don't have it. I assume that there are some current or former dairy farmers reading this article, who are familiar with hoof rot in cows. Since it is different in cows, I found that it was often difficult to convince a former dairy farmer that this disease is a big deal. It can affect sheep to a degree that they can hardly walk or don't want to walk at all. At times, all four hooves can be affected. It is highly contagious and will spread like wildfire in your flock. Once you have it, it is extremely difficult to get rid of it. Sheep affected will lose a great deal of productivity. They will make less milk for their lambs and they will gain less weight. A breeding ram will service fewer ewes. So don't call me and ask how to get rid of it. Don't buy it in the first place!

Another frequent question I receive is about where to buy sheep suitable for grass-farming. In some cases, people had chosen convenience and purchased sheep that were close by, only to find out that large-framed sheep with generations of heavy grain feeding are not suitable for raising on pasture. The lambs just didn't gain enough, let alone that they could be finished on grass. Others had their eyes set on a particular breed first and then looked for a farm that had them. Instead, I recommend looking for a place where grass-fed is already practiced, a place that has sheep with deep bodies and thus with a lot of room for forage. The question of the breed is secondary.

Lastly, as an overall way of looking at grass-fed, I want to address the amount of forage a sheep should eat each day when no grain is being fed. Forage is not

nearly as nutrient-dense as grain is. This is what makes it so challenging to feed no grain. The questions about intake in every season like “How much grazing should I offer?” and “How much hay should I feed?” get the same answer every time: As much as they want. Don’t ever limit intake. Have feed available free choice at all times. I prefer it when my flock comes slowly and perhaps even reluctantly when I do pasture shift. When I set up new hay bales, I don’t want to have a stampede because they are hungry. Ideally, they should not even be finished with the old ones when they receive new hay. And I never make my flock eat “clean”, not on pasture and not when feeding hay. High intake of quality forage is what allows grass-fed to rival grain-fed sheep.

In summary, here are the points I have made in this article in a comprehensive form:

- Rotational grazing is a must for a grass-fed sheep enterprise. The pasture rotation should not be more than three days. A daily shift is preferable.
- Rotational grazing requires a lot of management. Thinking, observing, and planning will be key to success.
- The barber pole worm and overeating disease are in my view the most common reasons why

sheep die. Both can be kept in check with good management.

- Leave about four inches of residual in any grazing cell. Do not attempt to graze “clean.”
- Provide shelter during unfavorable weather and shade when it is hot. It is the right thing to do and your sheep will thank you with better production.
- Avoid buying sheep that have hoof rot.
- Seek sheep suitable for being raised on forage over sheep that are conveniently located and over a certain breed.
- Let your sheep eat as much each day as possible.



Ulf owns and operates White Clover Sheep Farm and breeds and raises grass-fed White Dorper sheep and Kiko goats without any grain feeding and offers breeding stock suitable for grazing. He is a native of Germany and lives in the US since 1995. He farms in the Finger Lakes area in upstate New York. His website address is www.whitecloversheepfarm.com. He can be reached by e-mail at ulf@whitecloversheepfarm.com or by phone during “calling hour” indicated on the answering machine at 585-554-3313.

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