

The Interior Design of My Lambing Barn

—Ulf Kintzel

In several previous articles, I addressed different parts of my setup in the lambing barn and the way I feed hay. I wrote about the panels, the jugs, the head gates for lamb adoption, and the hay feeders. In this article I will attempt to paint a comprehensive picture of my setup. Most of all, I will incorporate all the changes that occurred over the past one and a half decades.

Panels for pens, jugs, head gates, and chutes as well as hay feeders can be purchased prefabricated. All these items have one characteristic in common: they are all very expensive. In fact, if you have only a small flock of a few dozen to a couple hundred sheep, these items may be prohibitively expensive. My article will address reasonably priced alternatives. The skill needed to “manufacture” them can be limited. The tools needed are basic.

Lumber. My first choice is eastern hemlock. I opt for rough-cut. The universal board size I use is three inches wide and one inch thick. Rough-cut eastern hemlock has the advantages of bending substantially when under pressure rather than breaking. Furthermore, it is light and relatively cheap. The downside of it is that it splits easily when you put in screws along the ends, and the risk of getting a splinter when handling hemlock is fairly high. White pine can be used as an alternative, but it breaks

easier. The upside is that it does not split the same way as hemlock. For my very first panels that I made here in the US I used red oak. While they lasted almost two decades, they were in my view too heavy.

Tools. The tools I use for building panels are a circular or a table saw, a drill, 1 5/8-inch-long wood screws (ideally self-tapping or self-starting screws), a measuring tape, a woodworker’s pencil, a woodworker’s triangle, and a couple of sawhorses. I keep it simple because I don’t use the tools often and thus didn’t feel it justified more expensive tools. Besides, I am making panels for the barn and not kitchen cabinets.

Panels. When deciding on the height of the panels, you will encounter two opposing criteria. On one hand, you will need to be able to get over these panels as easily as possible since you will need to get over them often during lambing season. So you want them to be as low as possible. On the other hand, the sheep should not be able to jump over the panels. So, you need them to be as high as necessary. How high exactly? That depends on your breed of sheep and on their temperament. If you have a long-legged and rather lively breed of sheep like Suffolk, your panels will need to be at the higher end. If you have a shorter-legged breed like Texel sheep or very calm sheep like I have with my White Dorpers, your panels can be lower. I chose a height of 40 inches

Photos by Author

This is how it looks before lambing starts.



for the panels that make up the exterior fencing when I set up pens in the barn. My subdividing panels are the same when I have a need for it throughout the year, i.e. when I have groups of lambs overnight in the barn that will be sold to various customers in the coming few days. However, during lambing season when the sheep are least likely to attempt to jump and when I need to get over dividers more often, I use dividing panels that are only 36 inches high. The reason for this is simple. I can step over it without the need to climb or step on the lowest board to get over the panel. The panels for my individual jugs where the ewes spend the first day or two to bond after their lambs are born are of the same height—36 inches—for the same reason. I pointed this out to my wife when we were in the barn during lambing season, but she then walked up to a panel and indicated that the panel nearly reached up to her waist and stepping over it without climbing was not an option for her. While it is not my fault that she decided to stop growing in height so soon, it occurred to me that the 36 inches is something you may want to tweak if you are a person who is shorter. I purposefully made a couple of panels that are only 30 inches high. I have not had any problems with any of my pregnant sheep or ewes with newborn lambs wanting to jump over them.

My 40-inch-high “exterior” panels are between 8 and 12 feet long. The difference in length is because of what tree was available when I had boards cut by my local saw miller and friend Mahlon. Shorter boards are a waste of time. Longer boards are more difficult to transport. Ideal are boards just over ten feet long. You will see why when I address the jugs. Back to my higher panels: They consist of three verticals (legs) and six horizontals. In the past, I used to build them with five horizontals, but after the occasional newborn lamb made it through between two boards, I added a sixth board. I start with the first board two to three inches high off the ground and then space out the lower boards a bit closer together than the upper ones. However, I make sure that the spacing between the bottom board and the one above is wide enough that my winter boot fits through that I can step on the lowest board when I climb over. This may sound like a silly little detail, but you will remember it when you climb over in the winter, especially if you didn’t heed my advice. Two diagonal boards are added to give the panel

stability. Diagonals are the best way to add sturdiness, but they are more time consuming to cut. Alternatively, a fourth, and depending on the length of the panel, even a fifth, vertical (leg) can be added with all of the verticals evenly spaced out. That too will stabilize the panel. My interior divider panels, which are used to make ever-changing group pens of various sizes during lambing season, are the aforementioned 36 inches high and have five horizontal boards. Otherwise they are built the same with three legs and two diagonal boards.



This is the row of jugs with feeders in between.

Jugs. My jugs for individual ewes with newborn lambs—used for the first 24 to 48 hours for the lambs and ewe to bond—are five feet by five feet in size. When I purchase boards that are ten feet long, I can cut out two five-foot pieces from each board. As

mentioned before, the height is 36 inches to be able to step over. The biggest change I made in the past few years is a “feeder” in between every two jugs. The feeder panels are of the same height and length as the jug panel and have three narrowly spaced boards at the bottom and two wider spaced boards at the top. The narrower spaces at the bottom keep the lambs confined. The two wider spaces of seven inches each higher up allow the ewe to put her head through and eat the hay in the feeder. Two feeder panels are spaced out by a two-foot-wide panel in front. The backs of the feeder panels are attached to the wall. That means the feeder is a rectangle that is two feet wide and five feet long. These feeders are always kept full with good hay throughout the lambing season. Replenishing the feeders is a daily chore during that time. The idea behind it is that the ewes with newborn lambs have as much hay as they want and can eat as selectively as possible.

Usually I have two rows of ten of these jugs with feeder panels, amounting to twenty jugs total. The sequence, starting on one end, is: Jug, feeder, jug, jug, feeder. Then the sequence starts over. It finishes at the very end with a jug. The picture of jugs should illustrate the setup well.

T-posts. Every panel is held in place with T-posts six feet in length. The floor of my barn is compacted dirt with very few stones. Pounding posts in with a post pounder and removing them again with a post puller is in my view a relatively easy task. A common question I

receive is how I attach the panels to each other or how I attach them to the posts. I use bale string, of course! What is a farm without bale strings? It is chaos! I use one at the upper half and one at the lower half to keep the panels from tilting. It works great and it is cheap. I have therefore found no need to explore or copy any sophisticated system with hinges or rods.

I use a post pounder and a post puller. A post pounder is always a better option compared to a sledgehammer. It is both easier and safer to pound T-posts in with a pounder. Likewise, a T-post puller allows me to relatively easily remove T-posts that are pounded through the manure and a bit into the packed soil underneath. Only frost can make this job harder, in which case I may leave the post in until the frost is out of the ground or use the tractor's front loader and a chain to pull out a post now and then.

Caps on posts. I found out the hard way that instinctively grabbing a post when stepping or climbing over panels can lead to quite painful metal splinters, especially when the top of a post gets beat up by the post pounder. If you don't know it yet, tiny metal splinters are hard to remove. The solution to the problem was inexpensive white caps called Safe-T-Post Caps. They are initially hard to put on, but once they have been mounted, they pretty much retain their shape and are easier to put on the second time. The inconvenience of having to remove them when the post is pounded in is a small price to pay.

Hay feeders. I feed exclusively round bales of first-cutting hay of very good to excellent quality to my sheep during the winter months, including during lambing season. I feed these round bales in my self-made feeders. I have written an extensive article of various designs I tried and what kind of panels I used. That article can also be found on my website under "articles." For the sake of brevity, I will address the design that I am using most of the time. If you want to know all the details about the way I construct and use my hay feeders, please read the article on my website. Of course, you can always buy a round bale feeder. Various companies offer them. There are many different designs. They also all cost a lot of money.

Many of you are likely familiar with a feedlot, cattle,

or livestock panel. Such a panel is 16 feet long and between 48 and 50 inches high. Then there is a little more expensive goat panel with a narrower four by four mesh. It is that goat panel that I am currently using. While heavier and more expensive, it has a longer lifespan than the other livestock panels with a wider mesh. I cut staggered holes in the panel. This will amount to three rows with holes that are eight by eight inches. I use a disc grinder to cut the holes. Afterwards, I smooth the sharp cutting edges with the grinder. I then connect both ends with three three-inch snap ring hooks. Voila, the feeder is done! The cost is approximately \$80.

Troughs. I use plastic 50-gallon troughs that are low, so that even the lambs can reach the water. I prefer plastic (polyethylene) tanks over galvanized steel troughs. They are more durable and don't corrode. Leaks can be relatively easily sealed with silicone. These Rubbermaid troughs are extremely durable and will easily last you more than 20 years. In some smaller temporary pens, I may use smaller, yet higher troughs. That is because less water is required, and a larger tank would be too large as the only animals drinking from it are adults.

De-icer. Lambing in March may on occasion require a de-icer in your water trough. I use a 1500-watt Teflon-coated sinking de-icer for my 50-gallon tanks. Any heating element uses a lot of electricity. Since I am cheap, I don't run the de-icer permanently. Overnight, I allow the troughs to freeze over since the sheep will drink little at night. Besides, the water often doesn't start freezing until the early morning hours. For the same reason (less water need at night) I remove the buckets in the jugs and empty them on my evening or night walk through the barn.

Flat-back buckets. For my jugs I use two-gallon flat-back buckets, which I hang up on the T-posts, using a bit of bale string to do that. Make sure when you hang the buckets that it hangs securely and cannot slide down and thus smash a lamb lying underneath. The reason for hanging them up is

simple: I don't want a lamb to end up in the bucket and drown. Two gallons is plenty capacity. I used to use a larger bucket, which was unnecessarily large. I use a brand called Fortiflex, which I purchase at Tractor Supply Company for \$6.99 each. (Actually, I wait for a sale and then I strike!) I am not trying to promote the brand or



This ewe has just given birth to twins and is bonding with them in the jug.

the company. What I am trying to promote is the way the bucket is made. The plastic is blended with rubber. These buckets are seemingly indestructible, no matter how much you throw them and no matter how much ice you pound out of them on colder days. I have some of these buckets now for about 20 years and they look as good as new. I am sure you can find much cheaper buckets, but I doubt you can find longer-lasting buckets.

Rubber buckets. When I have my sheep outside, I use a high-wall rubber pig feeder to feed free-choice minerals. However, in the barn I use rubber buckets, which, using bale string, I hang over a T-post along the panels. That keeps the bucket a bit off the ground and the lambs from stepping in it and thus keeps the mineral mix clean. However, when the lambs start eating minerals, they will be unable to reach them in that bucket. For that reason, I purchased a small plastic feeder that I can screw to the panels. This way it is off the ground and yet within reach of the lambs.

Lighting. When my barn was built, I had no real concept of what lighting I wanted or needed. The light fixtures that were proposed to me had a price tag of \$3,000. I declined and had four rows of six evenly spaced ceiling receptacles mounted in the rafters of my barn measuring 54 by 99 feet. I used incandescent light bulbs at first. When I transferred from the inefficient 100-watt light bulbs to more energy efficient light bulbs, I struggled to find bulbs with enough light output. That was a bit of a problem since I spend a considerable amount of time in the barn in March, especially when it is dark outside in the early morning and early evening hours. Reading ear tag numbers and documenting the data for my newborn lambs in my notebook became a bit of a strain for my ever-decreasing eyesight. I considered having new light fixtures installed, but being afraid of the cost I thought I'd give it one more try and search for options, knowing that the development of new technology never stands still. I came across 27W LED light bulbs with an output of 4000 lumens. This SANSEI 2-pack was available for less than \$19 per bulb during a sale on Amazon. They are equivalent to 250-watt light bulbs. Have you started wondering why I am occupying



This is my row of six head gates for adoption purposes.

this much space in this article for the sake of a light bulb? It is because the output of these light bulbs literally made my barn as bright as day after dark. Likewise, compared to the installation of new and better light fixtures, this relatively inexpensive update put everyone who watched me turning the light switches on in awe. Trust me, I made a whole bunch of people watch!

Head gates. I use self-made head gates for forced adoption of orphan and triplet lambs. It allows me to almost entirely stay away from bottle feeding and using milk replacer to raise lambs. About ten years ago (winter 2011) I wrote an article for *Farming Magazine* about that subject. This article is very comprehensive and can be found on my website

<https://whitecloversheepfarm.com/prl-articles/FarmingMagazineGraftingLambs.pdf> In today's article I will only address how the panel is built. Of course, these panels for forced adoption can also be purchased. Some companies offer them prefabricated. They are all significantly more expensive than my version.

The way the head gate works is that a ewe is confined with her head in a headlock. She is unable to turn around and smell the lamb that she is supposed to adopt, yet she can get up and lie down as she pleases. Both water and feed are in front of her. Behind the head gate is a jug where the body of the ewe and the lamb(s) are.

I start building such headlocks by using a sheet of plywood and cutting it exactly in half. I usually use a three-quarter-inch thick piece of plywood instead of a half-inch piece. I then cut a long and narrow piece out of the middle where the head will go through. I smooth the edges with sandpaper to keep the neck of the ewe from getting irritated. This rectangular hole is seven inches wide. It starts at one foot off the ground and is three feet high. In essence, the upper end of the opening should be



Another use for the headgate: This ewe rejected one of her lambs because it got lost in the flock when she gave birth to the second.

high enough for the ewe to fully stand up. The lower end should be low enough that the ewe can lie down comfortably.

One hole is then drilled below and one above the rectangular opening in a manner that a board can be hinged with bolts and wing nuts to the hole at the bottom and to the top. That board will hold the head in place. When the board is closed, the opening for the neck narrows down to four inches. That works for my White Dorper sheep. If you have a breed of sheep with a similarly sized head, it will work for your sheep too. For breeds with larger heads like Texel sheep you will need a wider opening, for breeds with narrower heads you will need a narrower opening. In order to put the head through the opening, the top bolt with a wing nut is removed and the board is moved to the side. I close that opening once the head of the ewe is put thorough, holding the ewe in place with my knees while I am doing this. Those familiar with headlocks for cattle or cows should be able to picture the general idea.

These head gates have to be very well secured when they are put up or a ewe that initially fights this restraint will pull it down. Also, I always have another head gate on the opposite side. This makes the feeding easier because the ewes in the head gates keep pushing the hay toward each other when they eat.

Using my head gates has never not worked. Why do I phrase the statement so awkwardly? Because there have been some strange and unusual cases that were not a straight line to adoption. However, in the end, no lamb was ever rejected after using these head gates.

Creep feeders are commonplace for grain-feeding lambs. That can be done with hay during winter or early spring lambing as well. The idea behind a creep feeder is that the lambs can access a food source of superior quality, and the ewes cannot. The creep panels consist mostly of vertical boards. Any horizontal boards are only there to make the frame of the panel and to stabilize it. In total, my creep feeder panels have three horizontal boards: one at the bottom, one on top, and a third across the upper half to stabilize it. The height can be whatever you choose. The spacing in between the vertical boards is the crucial part. I chose seven inches. However,



The lambs get through the panel; the ewes do not.

this may be too wide if you have smaller ewes or ewes with a narrower frame like Katahdin sheep or it can be wider if you have larger sheep like Suffolk. Your smallest or narrowest ewe will determine how narrow you will have to keep the spacing.

I have only two creep feeder panels since I always set the creep feeder up in a corner and thus against two existing panels. Inside the protected area I set a hay feeder of smaller size,

particularly made for this purpose. In it I feed loose hay, often of superior quality. I keep fluffing it up daily and replenish it frequently, feeding the leftover coarser hay to the ewes. You want to make the eating as easy as possible for the lambs.

I am at the age when one starts trying to reduce workload and starts wanting to have it a little easier than in the past when I was younger and my body was able to handle all the physical abuse. My woven wire perimeter fence, my livestock trailer, and my camera system for lambing season (yes, you heard it right, I now have a camera system in the barn) are testament to it. However, I pick and choose where to invest. I usually do it for items that buy me the most benefit and likewise benefit me for many years to come. At the same time, I am not trying to eliminate physical work. I enjoy physical work, even (and sometimes particularly) repetitively simple physical work like pounding in posts. It allows me to not think for a while and instead dream about vacation in warm Utah while it is cold outside. Besides, physical labor keeps my hands from ever being idle. Having that said, there are more efficient and less time-consuming ways to set up a lambing barn. Chances are, they all cost substantially more money. So feel free to copy as many or as little of my management. If your imagination and ingenuity lead you to better solutions, go for it. My way of doing things is meant to be food for thought. It is not meant to be a blueprint. 🐑

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.