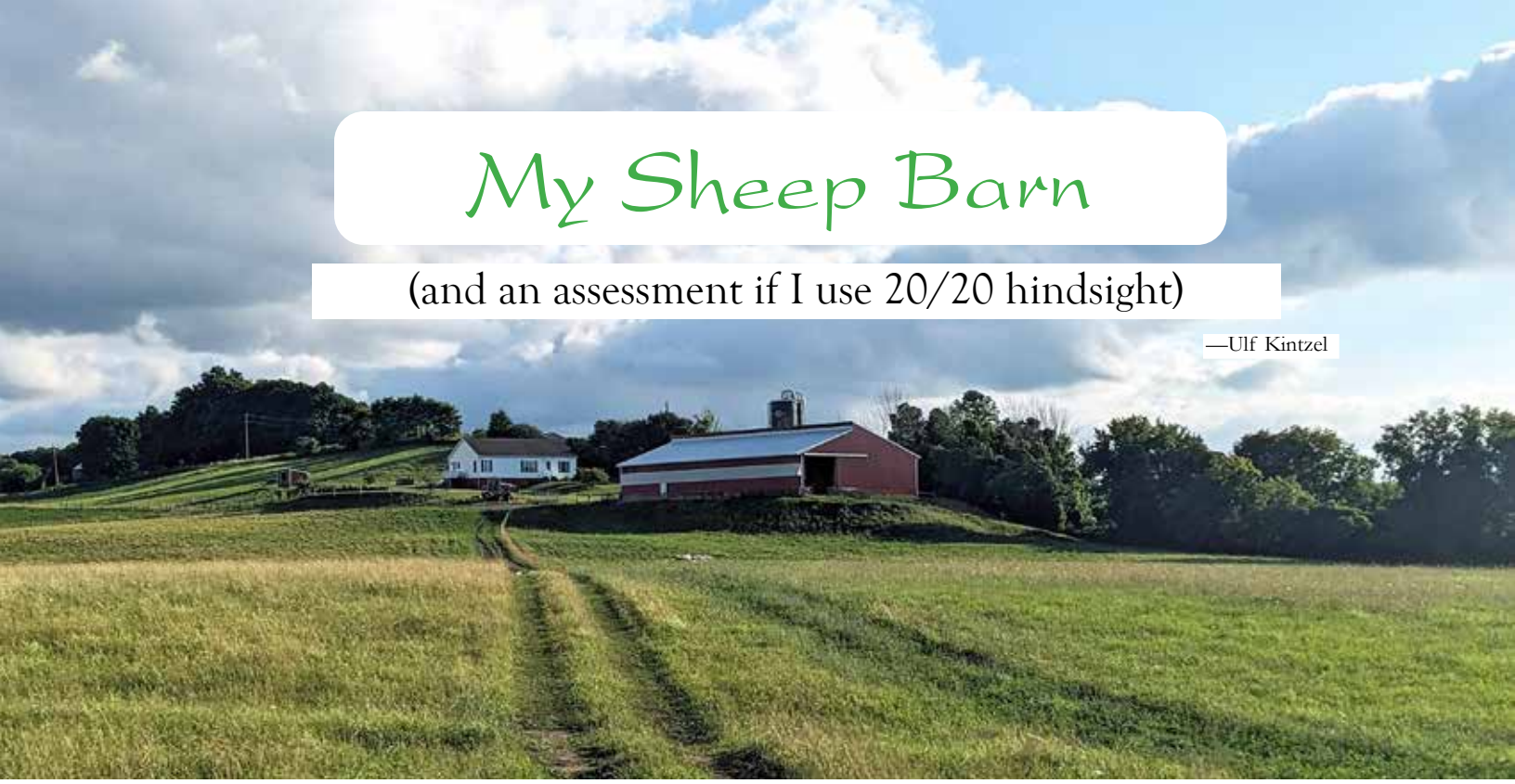

My Sheep Barn

(and an assessment if I use 20/20 hindsight)

—Ulf Kintzel

When I came to the Finger Lakes area in western New York about 17 years ago, I opted for a piece of land with no buildings. Aside from me not being a handyman when it comes to buildings, I also didn't want someone else's headaches and didn't want to be tied down to what already existed. I had my own ideas. When I was shearing sheep for customers in New Jersey, I got to see various kinds of barns. Knowing years in advance that I would eventually move to a new farm, my brain started planning various things, including an "ideal" barn.

A barn would be needed for my farm for several reasons:

1. First and foremost, I wanted a structure for lambing season.
2. I wanted a barn for when the weather was not favorable, either extreme weather in the winter, which required shelter for the adult sheep, or unfavorable weather in the spring that required shelter for the young lambs, even if it were just for a night at a time.
3. Hay storage was part of the planning, wanting to get as many round bales in a certain space as possible.
4. Lastly, I also wanted chicken housing and dog kennels for my herding dogs in that barn and perhaps a place for my truck on a particularly snowy night.

I wanted to avoid a structure with supporting posts in the middle of the barn. The whole structure needed to be free of any obstacles when maneuvering in the barn like taking manure out or bringing hay in.

In addition, I wanted a floor that allowed me to push manure together, but I did not want a concrete floor. I wanted compacted soil, relatively free of stones, to be able to pound in my T-posts to set up my lambing jugs and pens with my self-made panels.

Furthermore, I wanted a barn that was light, a barn that was as inexpensive as possible, and yes, a barn that was good-looking.

Lastly, I wanted a well-ventilated barn, meaning I wanted no chance of getting any accumulation of moist or humid air. Moist air is a major problem for sheep. It contains bacteria. It influences a sheep's ability to breathe and stay healthy. Dry air is a sheep's friend.

What I was not looking for was a barn that kept the animals warm. Warmth is not necessary for a sheep barn in an area like mine. Protection from the elements like rain, wind, ice, and snow is important for sheep, not protection from the cold itself.

When the barn was going to be built, I knew that I was not going to be at the building site and would still be living in New Jersey. Therefore, I opted for a local company that had a record for building pole barns. I contracted to have a pole barn built that was 99 feet long, 60 feet wide, and 14 feet high. The sides are covered with corrugated metal siding. The roof was originally made of aluminum. Aluminum was chosen by the company because they believed that a steel roof would corrode because of the ammonium evaporating from the manure. They based their estimation on dairy barns. However, that is usually not

Photos by Author

an issue in sheep barns that house sheep only at certain times of the year. The aluminum roof was installed incorrectly and leaked from day one. It eventually was replaced with a steel roof at no cost to me. No corrosion took place as expected.

Ventilation is accomplished via two-foot overhangs on both sides and approximately two-foot overshot ridge on top of the roof. I have included a picture of the overshot ridge with the knee wall, as I am not one hundred percent sure it is a two-foot ridge, and I wasn't willing to climb up and step onto the roof to measure it for the sake of this article.

Size: Aside from the size I chose, I also wanted the barn to be proportional and not an eyesore. A long and narrow barn, looking like a chicken barn, would be my understanding of an eyesore. No offense to chickens, but if the barn looks like a chicken barn you might as well house chickens. A customer of mine, who used to sell barns, told me later that you want to make your barn as wide as you can because you never can change the width later, but you can always add length. However, my neighbor told me afterwards that adding width to the barn adds significantly to the price because a 60-foot barn needs far stronger trusses than a building just 40 feet wide. He found that out when he had the two sizes priced out for a machine shed. In fact, my barn's trusses needed a heavy crane to lift them on top. How much did I add to the price when I chose the width of 60 feet? I don't know. As an aside, one of my children is able to use a computer program to "create" barns in the right proportions when I give him different sizes. So, if I ever have another barn built, I will be able to play a bit with different sizes and still have the barn look to my liking and not like a, you know, chicken barn.

Ausmistin: The floor consists of compacted soil.

Doors: The doors on each end are 14 feet high and 15 feet and six inches wide sliding doors, one piece, not two-part-doors. They are heavy. That comes into play when there is wind, hitting the doors directly. It then takes some planning to open and close them in a very swift action. The size was chosen at that time because I thought trucks delivering hay would enter the barn. The engineer from the company building the barn told me that anything that is legal on the road would be able to enter the barn with doors that size. I went for it. However, in 17 years I have never had a need for doors that big.

In addition, I have a regular door in front to walk through when I enter the barn. I have the same kind of door along the side where I have my chute, placed towards the end of the chute. It opens towards the chute. I use that door to sort animals into the barn as needed when I run the flock through the chute. The door was incorporated for that purpose alone.

Floors: Concrete floors are expensive and often, as in my case, unnecessary. Besides, all my panels are secured and fastened by T-posts. That meant I wanted and needed a dirt floor. Yet, I wanted a floor compact enough that I can clean the floor after the manure has been taken out by scraping along the floor with my tractor bucket without digging into the floor. The solution was to use on-site screened soil for the floor, compacted after every six inches. It turned out to be exactly the floor I wanted.

Lights: When the barn was built in 2006, construction was at an all-time high and everything was overpriced. So was copper. The original estimate for lights in the barn was $6,000. That was outrageously high. The estimate made me gasp. I opted for a stripped-down version of four rows of six lightbulbs per row, a lightbulb above each small door and a couple of outlets. That still amounted to $3,000! First, I put regular lightbulbs and later more energy efficient bulbs into these sockets. At that time, the lighting system I had chosen seemed to have been the wrong decision. The lightbulbs, hanging 14 feet high in the rafters, did not offer the bright light I needed to be productive during lambing season, making it difficult to take my notes about each ewe that had lambed. In addition, the energy efficient lightbulbs, not designed to be turned on and off repeatedly and thus breaking one by one, had to be replaced often. A few years ago, I started researching new lighting systems and then tried a new generation of lightbulbs, this time 27-watt LED bulbs with 4000 lumens. They are not affected by repeated turning on and off. The output of these new lightbulbs is amazing. It turns the barn as bright as day at night and then some. It was a relatively inexpensive solu-

The barn was primarily built for my lambing season.

Hay storage is another major reason for needing a barn.

tion to my lighting problem. New technology saved me.

"Acrylic Skybelt": The plastic along the sides below a three-foot strip of metal siding is four and a half feet high. I chose it instead of windows to let daylight in. The barn plans, designed by an engineer, call it an acrylic skybelt. For the sake of this article, I looked up what acrylic means to be precise. It says it is Plexiglas. However, it isn't clear, just translucent. You cannot look through. The material is corrugated. Initially, I had concerns about it because I have seen old barns where the originally almost clear plastic turned yellow and darker over time. I was told that the technology had improved and that this would not happen, that the color would remain the way it was on day one and would not darken. Seventeen years later I say the statement was true. The plastic looks as translucent as ever. It lets the same light in the barn as it always did while being far more resilient to damage than any windows would be. I don't recall if I opted for the one strip of metal above it just for looks and to move the plastic a bit further down or if that was suggested by the engineer, who drew up the plans for the barn. I am sure that must have added some to the cost. Had I done the plastic right below the roof line and the metal siding below it instead of siding-plastic-siding, the workmanship required would have been a little less. All I can say is, it looks good the way it is. I would do this strip of plastic anytime again instead of choosing windows.

My chute is an essential tool for my management. This door on the side was added just for the chute.

Ventilation: The overhang on the sides without any soffits, and especially the overshot ridge, provided more air circulation than I needed. During snowstorms, plenty of snow was blowing in from the sides, especially through the overshot ridge. That was particularly true when we had Nor'easters. These storms coincided often with my lambing season in the spring, making the center of the barn unusable for a couple of days. When the aluminum roofing was removed and the new steel roof was installed, I opted for a two-foot-high knee wall, which closed up the overshot ridge by about two thirds and left the rest open. It didn't reduce its ventilation capacity, but it decreased the incoming snow during storms with winds from the east and northeast significantly. Still, I would not opt for an overshot ridge again. I was told that I could add a curtain in addition to the knee wall. I am just very skeptical of curtains and my bias is always confirmed when I see curtains flap in disrepair in the wind at neighboring barns. However, I may still have this curtain installed in the future. I have since explored options for ventilation just in case I have another barn built one day. I learned about ridge vents that come in sections of several feet long. I think that would be a good option. The two-foot eave overhangs are also larger than necessary. Shorter overhangs with soffits are probably the better choice.

Gutters: Aside from ventilation, the two-foot overhangs were also chosen to make it unnecessary to have gutters. That turned out to be mostly true. Yet, one of my key features of the barn is my chute alongside it and a door in the barn towards the end of the chute to sort

sheep into the barn. This feature of the chute is so essential to my farming practices that any change has to take place around the chute rather than changing the chute itself. When it rains and I work at the chute, the animals walking along it are not affected. However, I am. I am standing directly under the water that drips off the roof, making it impossible to write things down when I sort sheep. That is true even in the lightest of rains since this is a large roof, gathering lots of water! Besides the shorter overhangs, I would also opt for gutters. In fact, they are still on the list to be installed at some point, at least on the side of the barn where the chute is.

Mesh along barn walls: The mesh along the barn walls, mounted on the two-by-fours to prevent the sheep from doing damage to the steel walls, is doing its job. The issue at times is that sheep and especially lambs get caught with an ear tag in that mesh and rip it out of the ear. I have long thought about what to do instead. An idea I had was to put several spaced-out rows of horizontal two-by-fours along the sides up to a height of about three feet. The spacing should be close enough that lambs don't get through. While this is just a thought that is not fully thought-out, it is clear that something has to be put up along the barn wall or the sheep will just damage the metal siding from the inside.

Doors: As I get older, opening and closing 15 and a half by 14-foot doors in windy conditions gets more and more difficult. During gusty winds it becomes almost dangerous. As stated, in 17 years I have never needed the doors to be as wide and as high as they are. Doors 12 feet high and 12 feet wide would have done it, too. As I get older, I will come to dread the size of the current doors, especially on windy days.

Color: When I came to the US for the first time I was fascinated by the red color of many barns. We don't have red barns in Germany. I was wondering why that was the chosen color and researched it. The history of rust being mixed into the oil mixtures to protect the barn wood as well as Sears later offering a red paint that was much cheaper than other colors was interesting. So, I too wanted a red barn. Could I do things over, the color would be, well, still red. White barns or green barns? No. And don't get me started on blue! Red it is.

Ulf owns and operates White Clover Sheep Farm and breeds and raises grass-fed White Dorper sheep 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.