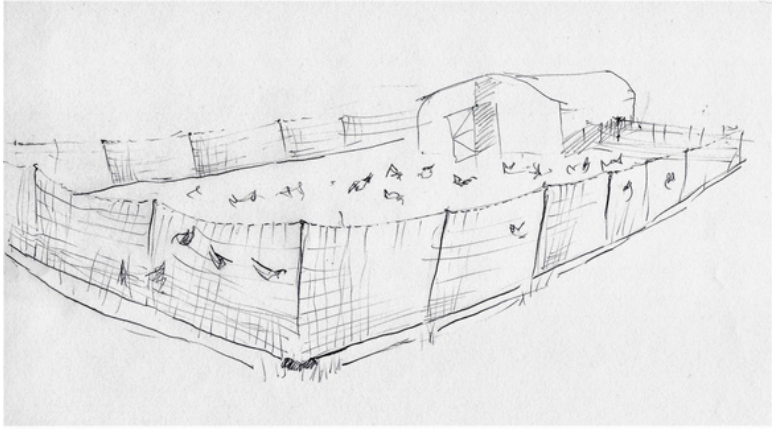

HenPen

A sliding fence system for pastured poultry
Designed by Michael R Gutschenritter, Three Brothers Farm

This project is supported by North Central SARE

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What inspired it all?

In my beginning farmer years, I often felt like I could work 80 hours a week doing hard labor. I did that for several years, building the farm business and adding hours to my week. Eventually, I met my wife and we began having children. When our first daughter was born, my perspective on life completely changed.

Life was no longer about work. It was about family.

I forced myself to change my mindset about the farm. Fortunately, I had just begun to gain a lot of confidence in my creative abilities. I decided to focus my energy on developing efficiencies on the farm so neither family nor farm would suffer. So I started with the most labor-intensive chore on the farm - moving poultry netting.

What were we trying to do?

The goal of this project was to design and build a fencing system to reduce the time spent, and eliminate the physical demands associated with, moving fence on pastured poultry farms.

To achieve this, we designed and built prototype systems on two different farms and began trialing them with laying hens, broilers, and turkeys.

We then made necessary modifications and documented data about physical stress, emotional stress, and time spent moving flocks.

Did it work?

By the end of the project, we determined that the resulting fence system did, in fact, significantly reduce the time and labor elements of moving poultry to fresh pasture.

The data we collected was based on simple daily surveys that we filled out each day. The results, averaged among the three types of poultry moves, follow:

Physical Stress (Scale 1-10)

When we were moving poultry netting by picking it up and setting up a new paddock, we documented our physical stress to be at a **7.35**.

When we built the HenPen and were able to move the fence by sliding it under tractor power, we documented our physical stress to be at a **1.7**

Emotional Stress (Scale 1-10)

When we were moving poultry netting by picking it up and setting up a new paddock, we documented our emotional stress to be at a **8.9**.

When we built the HenPen and were able to move the fence by sliding it under tractor power, we documented our emotional stress to be at a **2.2**

Time Spent Moving Flocks

When we were moving poultry netting by picking it up and setting up a new paddock, we documented our time spent moving flocks to be at **75 minutes per day**.

When we built the HenPen and were able to move the fence by sliding it under tractor power, we documented our emotional stress to be at **17 minutes per day**

Notes about results

To say the least, these results are impressive. But for anyone who makes a living by moving poultry on pasture, these results are life-changing. As the project coordinator, and the primary investigator, I will clarify some results and add a few points of observation that were not an official part of the data collection.

The data for the physical stress is primarily indicative of the fact that we didn't have to pick up the netting posts, carry them forward in the pasture, and reset the posts. The netting included four 164-foot fences, each weighing 26.5 pounds.

The data for the emotional stress is based on multiple factors. Setting up netting can be very frustrating, particularly with grass taller than eight inches. It becomes cumbersome and often ineffective in containing poultry and deterring predators. Emotional stress has been documented to be the primary source of burnout for farmers. Reducing this factor is essential to the sustainability of any farm business.

The data for the time to move a flock was recorded as the time it took for us to enter the pasture, move the flock and their netting, and then leave the pasture.

The observations that were not an official part of the grant project were just as noticeably important as those that were a part of the data collection.

We discovered that our quality of life improved significantly, our pasture's forage quality improved, and we were able to grow our businesses with minimal investment.

The ripple effect of reducing our emotional stress was amazing to observe. We began enjoying our farm and family-time more, we were able to start taking vacations, and we had another child without worrying about having enough time to work and raise a family.

The forage quality of our pasture seemed to increase, too. Because it became so easy to move the flocks, we moved them at least once a day. This allowed for longer recovery time before our ruminant animals returned to that paddock. There was a noticeable reduction in weeds and an increase in forage diversity. All of this led to our ability to expand from 1800 hens to 2800 hens without added infrastructure.

So how did we do it?

Over the next few pages, I'll give a brief synopsis of how I designed and built the fence system, which is now called the HenPen. For full detailed instructions and material lists to build the HenPen on your farm, go to www.3brothersfarmwi.com/manuals

First Things First

I planned this fence design around the use of the Prairie Schooner chicken coop. I did this because it's a widely used coop, is extremely heavy duty, and I already had four of them on my farm. However, this design can easily be modified to accommodate any large skid-style coop, such as the Mobile Range Coop, Hen Gear coop, or Pasture Tek coop. There are also many DIY coops out there that could use this design.

I simply wanted to develop a design that would be adaptable to any coop so that farmers could use the system without having to buy a new coop.

I began by building a simple wooden mount out of a 2x6 piece of lumber, attached to the hip board and base board, roughly 10 feet back from the front corner of the coop.

I then added additional layers of 2x6 material at the base, cut a hole large enough to fit a landscape timber, and installed the 8-foot timber, going perpendicular to the coop.

The next step was to slide a 4-inch UV-resistant HDPE pipe over the landscape timber. After I secured the pipe with screws, I added an 18-inch chunk of timber to the open end of the pipe, secured it, and added a rubber 90-degree elbow with the open end pointing toward the rear of the coop.

At that point, I continued to lay out seven pipes straight back and connected each of them with a 12-inch chunk of landscape timber. When all seven were connected, I added another corner. The rear of the fence base consisted of four pipes, then I repeated the first side to complete the system all the way over to the other side of the coop where it would attach to the other mount.

To finish the base of the frame, I set up some simple bracing made out of top rail from chain link fence. At the back of the coop, I bolted the top rail to the base board of the coop and the pipe union, which was ten feet out from the coop.

Then I made a 14-foot piece of top rail and bolted it to each union ten feet from the back corners. This helped maintain the shape of the frame when the coop moved.

Now it was time to attach the poultry netting. First, I took all the posts out of the fence, and cut the tips of the spikes down to 3.5 inches.

At this point, I laid out the netting (without the posts) along the frame. At each union, I drilled holes for the spikes to go into. At those holes, I weaved a post back into the netting and tapped the spikes into the holes. I continued this the whole way around the frame, using two fences to complete it.

At this point, the fence was up and standing. Of course, I attached the end posts to the mounts and added guy lines to the corner posts to ensure tautness.

I also went around the fence and determined where a chicken might be able to sneak out. At those points, I tacked the bottom wire down with a fence staple.

The final step was to connect a rope from the front corners of the coops to the front corners of the fence frame. I used strong rope and a heavy duty eye screw. This kept the whole frame from collapsing when the tractor pulled the coop.

It's important to keep in mind that this adds a bit of drag to the coop, which requires more power to pull. I bought a heavy 75 hp tractor dedicated to moving coops. With a lightweight 30 hp tractor, I was ripping up the pasture trying to move these coops.

A final note

This was a fun project to work on and it has changed our lives dramatically. The most important lesson I learned from this project is that the solutions to all my problems are within me. When I embraced that notion, I started understanding that anything is possible. I now look at the problems on our farm as opportunities to dig deeper into my creativity.

I am grateful to NCR-SARE for funding this project and for pushing many farmers to bolster their respective industries.

For detailed building instructions and for additional farm innovations, please visit www.3brothersfarmwi.com/manuals

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