

# Wizard with Steel

Angus producer recycles his way to a solid cattle-handling facility.

Story & photos by **Boyd Kidwell**

‘O ne of the most important parts of the cattle business is being able to handle your cows. I designed this facility to work cattle by myself without getting hurt,” says John Brewer of Oxford, N.C.

Like many cattle producers, Brewer has held down a full-time job while running his farm. But a busy schedule hasn’t stopped the North Carolina cattleman from large-scale building projects on Mile Away Farm near the Virginia border. A heavy-duty handling facility is a key part of this Angus breeder’s operation.

The beauty of Brewer’s building projects is they don’t require much in the way of out-of-pocket investments. For example, his cattle handling facility (see Fig. 1, page 52) is built almost entirely with recycled materials that Brewer welded into a smooth-working layout.

“If you have a welder and surplus metal, you don’t need to buy much material to build pens and corrals,” says Brewer, who purchased only a headgate and palpation cage to build his handling system.

The corrals are made out of surplus highway guardrails; the solid-sided working chutes are built out of salvaged steel doors turned horizontally, and the gates are made out of recycled boiler pipe and pipe conduit.

## Trash is treasure

When Brewer spotted workers replacing the guardrails on nearby I-85 a few years ago, he asked the crew boss what they were going to do with the old guardrails. Salvaged steel prices were low at the time, and the boss said if Brewer hauled the surplus guardrails away, he could have them at a reasonable price. The cattle producer visited the job site weekly and hauled hundreds of guardrails and steel posts back to his farm.

To build corrals and pens, Brewer welded the guardrails

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► John Brewer’s handling facilities prove you don’t need to break the bank to work cattle safely and efficiently.



► Brewer built a sweep tub out of recycled steel doors and pipe.



► Depending on how the gates are closed, the cattle are directed to the squeeze chute, the scales or the loading area.

on steel posts sunk 3 feet (ft.) in the ground. To lengthen each post, he welded and reinforced two posts together. It required about 50 guardrails to build the holding pens around the working facility. A shed roof made with guardrail beams and reinforced steel posts shelters the working area. Poured concrete with a rough finish provides excellent footing in the high-traffic areas.

To protect the cattle from sharp edges, Brewer lapped the guardrails and then cut and rounded the corner edges. Finally, he smoothed the edges with a grinder.

“I am very careful not to leave any sharp edges on the guardrails or steel doors that could hurt me or the animals. Safety is always my top priority,” Brewer says.

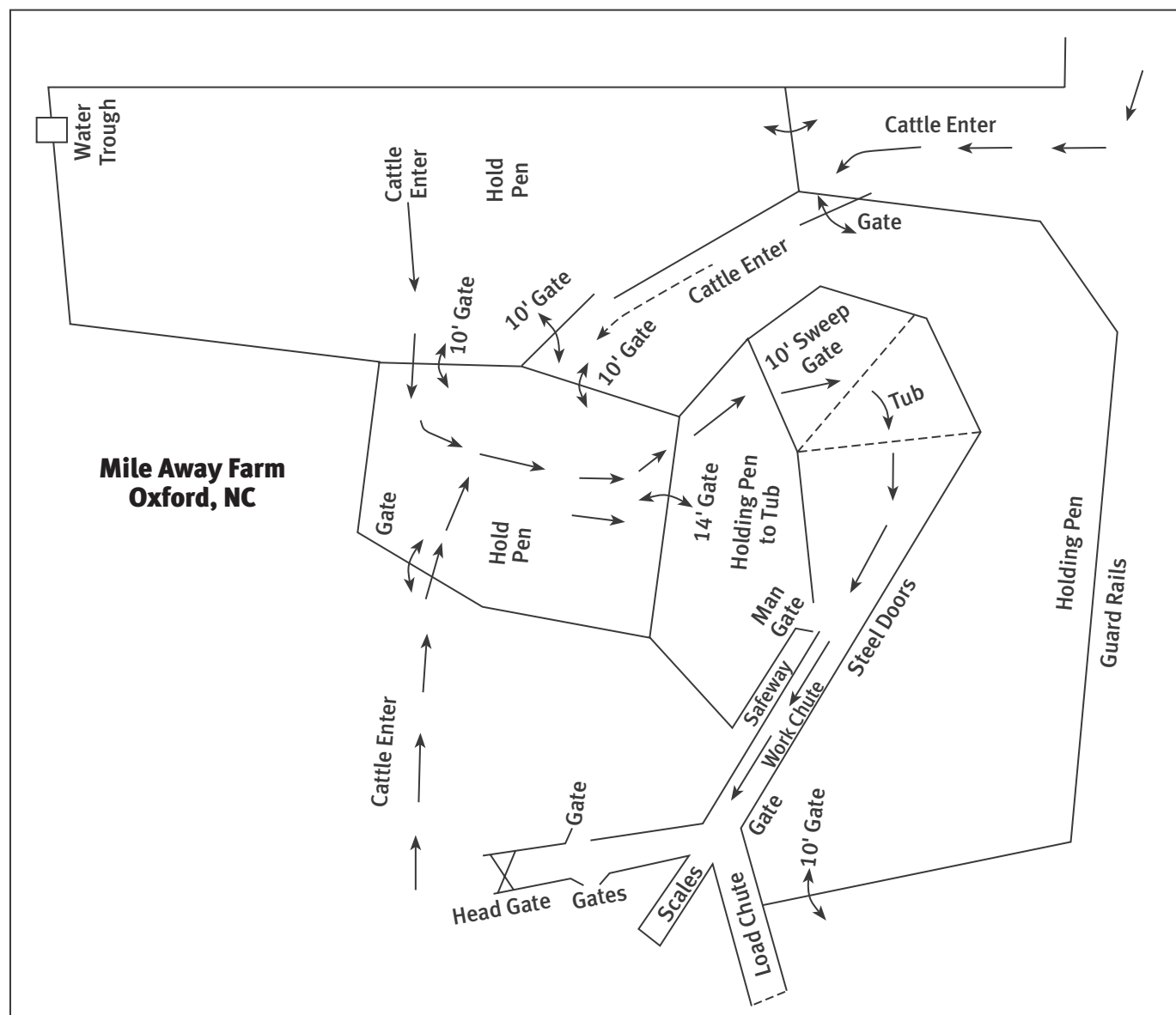
Brewer has increased the flexibility of his handling system by including three ways for cattle to enter the central holding pen. From this central pen, the cattle flow through a 14-ft. gate to a second holding pen. From there the animals go into the sweep tub with a 10-ft. gate. The sweep gate pushes the animals into the alley that leads to the working chute.

While Brewer was cleaning out warehouse space for a large company, he was given several surplus solid steel doors. He turned the doors horizontal and welded them to make solid sides for his alleys and chutes. To make the joints between doors smooth, he tacked strips of thin metal over the spaces. Brewer also built a “safeway” lane along the crowding alley so a person can keep the cattle moving without being in with the animals.

The alley leads to a three-way hub. Depending on how the gates at the hub are set, the cattle can be directed into the loading chute, the scale or the headgate. Because of concern for his safety and for the animals, Brewer purchased a palpation cage and a manual headgate to properly restrain cattle. After using the manual headgate for several years, Brewer rates it completely adequate. He went to artificial insemination (AI) school several years ago and performs his own herd AI work.

“One reason I want a facility where I can handle cattle by myself is because it’s quiet to do AI work when I’m alone,” he notes.

**Fig. 1: John Brewer’s cattle handling facility**



## Still tweaking

Through the years, Brewer has tweaked his facility a few times. For example, he's added "man" gates that allow him to get in or out of chutes quickly. Out of guardrails, the Angus breeder has built holding corrals that keep 100 head waiting with quick access to the handling facility. Between the holding pens he installed a self-waterer protected by surplus metal computer cable racks welded to recycled steel posts.

A travel lane runs from the rotational grazing pastures to the working facility so that Brewer can move animals by himself from any grazing paddock and bring them to the headgate, the scale and the loading chute.

Salvaged guardrails and steel doors aren't the only surplus materials that come in handy for building cattle handling facilities. Brewer also uses sections of metal computer cable racks that he bought as surplus from a local factory.

Depending on availability, sections of surplus grain bins can be used to build chutes. Many western cattle producers have used oilfield pipe and sucker rod to build sturdy corrals and holding pens.

The innovative Brewer continues to find valuable uses for recycled steel. He's built a first-class machinery shed from leftover guardrails. By welding steel computer cable racks, he's made ornate metal gates that spiff up the entrances to pastures.

"Steel was up in price for a while, but it's come down recently. With the government's economic stimulus going into effect, you may be able to find more guardrails and other materials available due to increased road projects," Brewer adds.



▶ A manual headgate works fine at Mile Away Farm.



▶ After building the cattle facility, Brewer used guardrails to make a shed.

## Safety first

Whether you have one cow or 1,000 head, you need a well-designed handling facility. Here are the basics of a good system, according to Clemson University Extension beef specialist Larry Olson:

- ▶ **Pens.** You should have at least four pens — one for capturing animals from pastures, one for holding animals after treatment, and two sorting pens. The capture pen should be built so that two fences narrow into a wing for crowding cattle. Depending on the size of an operation, additional pens come in handy for sorting and holding cattle for treatment and loading.
- ▶ **Sweep tub.** A curved sweep tub saves wear and tear on people and cattle because you don't need to enter the pen to move cattle into the working chute that leads to a headgate.
- ▶ **Crowding alley.** This alley leads from the sweep tub to the squeeze chute. The crowding alley should be at least 30 inches (in.) wide to allow for pregnant cows and herd bulls to pass through, Olson says.
- ▶ **Squeeze chute/headgate/palpation cage.** The squeeze chute and headgate are the center of activity, and this is where 99% of all injuries to people and animals occur. You shouldn't scrimp on this important equipment, but you don't need to spend a fortune. Depending on the number of animals you handle, manual headgates can be quite effective in a reasonable price range. A palpation cage provides access to the rear of animals for pregnancy-checking, AI work and breeding soundness exams.
- ▶ **Non-slip footing.** Producers say it's worthwhile to pour concrete under the high-traffic sections of the handling facility. When pouring concrete, finish the surface with a broom that leaves a rough surface to provide non-slip footing. This is particularly important at the end of the headgate where animals shoot out of the gate after treatment.
- ▶ **Roof shelter.** If you work cattle often, you'll find a roof over the facility is worth the cost. Protection from rain and hot sun makes tough jobs easier for you and the animals.
- ▶ **Electricity.** If possible, you'll want electricity for lights and running water for cleaning equipment.

You can see Olson's plan for a handling facility built out of guardrails at: [www.clemson.edu/edisto/beef/corral/Plan.PDF](http://www.clemson.edu/edisto/beef/corral/Plan.PDF)

Oklahoma State and the University of Kentucky provide excellent information on cattle handling facilities at: <http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-1998/F-1219web.pdf> and [www.ca.uky.edu/agc/pubs/aen/aen82/aen82.pdf](http://www.ca.uky.edu/agc/pubs/aen/aen82/aen82.pdf).



▶ Recycled computer cable racks can be turned into excellent gates.