



Milking parlor mounts on a 16-wheel trailer that's 65 ft. long, 12 ft. wide and 12 ft. high. Cattle are milked in a "cage" that hydraulically raises 4 1/2 ft. for easy access by workers.

Portable Milking Parlor Leaves Cows On Pasture

In an attempt to produce milk more economically, Mark McAfee has put together a portable 20-cow milking parlor that he moves from pasture to pasture. His 350-cow herd is on a rotational grazing program.

McAfee, Kerman, California, is the managing partner of Organic Pastures Dairy Co., LLC, an organic Grade A dairy that sells milk through Organic Valley Cooperative.

McAfee designed the parlor himself, and hired contractors to put together the trailer it's built on and the building itself. Design was important. It needed to be portable enough that he could move it with a tractor and self-contained so he could milk with automatic milkers and meet all the standards for Grade A milk.

The moveable parlor sits on a specially built Eaton axle with 16 wheels. It's 65 ft. long, 12 ft. wide and 12 ft. high. Cattle are milked in a "cage," which is basically a herringbone layout on a platform. When the cows enter, the platform is at ground level. Once the stalls are filled, hydraulic cylinders raise it up 4 1/2 ft., so for workers at ground level, it's like being in a pit.

McAfee worked closely on the design with Schleuter, the company that supplied milking equipment for the portable parlor. It has rubber floors and several 1-in. thick rubber 4 by 4-ft. mats laid out on the ground in front of the doors so the cattle don't create a muddy area walking in and out.

"We have everything you'd have in a conventional parlor, including milk-sensing automatic take-offs," he tells. "Our cows are

always on pasture, where they'd prefer to be. We don't use barns and they never set foot on concrete."

To provide electricity for the portable parlor, McAfee installed a generator powered by a John Deere 140 hp turbocharged diesel engine. The electrical system is 480 volts, although they step it down for some uses. The parlor's hydraulic system is powered by a 40 hp. electric hydraulic pump. It also has an electric water heater, although some of the heat is reclaimed from the engine's exhaust.

In his rotational grazing system, McAfee moves his herd about once a week. He pulls the 57,000-lb. parlor from pasture to pasture with a Case-IH 7220 150 hp front wheel assist tractor. Once he has it in place, it's leveled by hydraulic cylinders at the corners.

Because it is a Grade A system, milk must be stored in a central location. At the parlor, milk is quickly cooled and then pumped into a portable insulated 1,300-gal. tank designed just for this purpose. It's mounted on a special trailer with a hitch on both ends, so they don't have to back it up or turn it around. After milking is over, the tank is pulled to a centralized 6,000-gal. bulk storage silo, where it's picked up by the milk transport truck.

McAfee says the parlor cost a little more than most milking parlors of similar size. With his system, though, he has hardly any other building and facility costs. With the cattle always on pasture, he needs no manure holding or handling equipment. There are no lots, no pens, no freestalls, no need for

bedding, and not much need for feed storage, either. He does have a portable bunk from which he feeds a grain and protein supplement, but cattle get most of their forage needs from pasture.

McAfee's rotational grazing system has resulted in very good cow health and an almost unbelievable average standard plate cell count of 1,100. (For the record, pasteurized milk is allowed a plate count of 3,000).

"We hardly ever have to treat a cow for anything. And our cull rate for all reasons is just 12 percent," he says. "Cattle would never be this healthy in barns or concentrated in lots."

With such a low bacteria count, McAfee is well below the level allowed for raw milk sales. He says there's an established and growing market for organic raw milk, and he'll begin packaging some of his milk for raw milk customers later this year.

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"Our portable milking parlor has everything you'd have in a conventional parlor, including milk-sensing automatic take-offs," says inventor Mark McAfee.



Brian Haubrich uses his home-built 26-ft. draper header on an IH 1420 combine.



To build the unit, he merged a used Co-op 66 swather and the center part out of an old International Harvester 914 header.

Home-Built 26-Ft. Draper Head

Brian Haubrich, Glenbain, Sask., made a 26-ft. draper header out of a used Co-op 626 swather and the center part out of an old International Harvester 914 header.

He uses it on his International Harvester 1420 combine to harvest durum, peas, lentils, and mustard crops.

"I paid \$3,500 for the swather, \$200 for the 914 header, and spent about \$500 for bearings, sprockets and welding rods. Now I've got myself a header that compares with commercial ones that sell for about \$25,000," says Haubrich.

He cut the 12-ft. 914 header down to 6 ft., keeping the center part of the auger and a 48-in. length of canvas, as well as the header mounting brackets. He cut out the center part of the swather's auger and then welded in the

914 header auger. The auger and swather reel are both belt-driven off the combine feederhouse via a homemade system of belts and pulleys. He used steel tubing to reinforce the header mounting brackets.

"I made it four years ago and really like it," says Haubrich. "The one problem is that the 48-in. length of center canvas isn't quite long enough. Some of the crop coming off one canvas tends to go under the opposite one, rather than onto the feeder chain. If I could do it over again I'd find a way to get two canvases in the center and make the whole center area wider."

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