

## "Fostering Pen" For Orphan Lambs

Getting a ewe to accept an orphan lamb isn't always an easy thing to do. But the chances are improved remarkably when using an idea called a "fostering pen".

It's an idea that comes from England and has been tried on a number of farms of agricultural colleges in the United States. Animal scientist, Dr. Lowell Slyter, at South Dakota State University, Brookings, reports outstanding success with it.

The fostering pen Dr. Slyter tested is about 4 by 5 ft. with solid plywood sides and front. The front panel is a stanchion with an 8-in. opening for the ewe's neck and an adjustable 2-in. board to keep her in the stall but with room to stand or lie down. A 12 in. drop board provides access at the rear of the pen.

"The idea is that the ewe can't get away from the orphan lamb, and cannot injure it. The solid front end also prevents her from seeing the lamb, though we

don't know how important this is," says Slyter.

After a new lamb gets some of the ewe's milk, it begins to smell like the foster mother and is usually accepted after three to five days.

The ewes and foster lambs should be turned loose in small groups, Slyter says, so they can be watched to be sure they don't get separated from their "adopted" mothers.

"We lost only one lamb last year while using this method of grafting lambs to new mothers," he says. "It's an economical way to raise lambs and a way to use a milk-producing ewe which has only one lamb or has lost her lambs."

The stall is simple to build. For more details on construction and costs, contact: FARM SHOW Followup, Dr. Lowell Slyter, Animal Science Dept., South Dakota State University, Brookings, So. Dak. 57007 (ph 605 688-5165).



## Air System Stirs Manure Pit Sludge

Iowa hogman Leon Kennebeck doesn't have any more trouble with sludge accumulation in his hog manure pit since he installed a high pressure air system to clean it.

After six years of use, the 8-ft.-deep pit under his finishing house was half full of sludge. "When I cleaned it with an ordinary pump and agitator, it only cleaned the liquid off the top. My pit had only half its capacity," Kennebeck told FARM SHOW.

He had an idea that compressed air might put the sludge into suspension so it could be pumped out, but it would take

more than the usual compressor to do it. So, he located a big industrial model — an 18 hp, gas-powered NAPA unit.

Kennebeck installed a main air line of 1 1/4-in. pipe along the top of the pen dividers. The line stays in place but it is connected at intervals to six 3/4-in. vertical pipes that reach down into the pit. When the compressor is turned on, it creates 40 pounds of pressure at each pipe which stirs and mixes sludge.

Each half of the pit is 100 ft. long so Kennebeck moves the whole setup after one end is cleaned. He can work while the hogs are in the barn, but he cau-

tions that good ventilation is important while cleaning.

"I like it so well that I'm rigging up the farrowing house and two nurseries to use the same system," says Kennebeck. He has a farrowing-to-finishing operation that turns out 2,500 pigs a year.

He says the air compressor unit he bought would probably cost about \$3,500 today, and he feels that 18 hp is the smallest size it should be.

"Be sure you buy a compressor that is 'constant run'. And you don't need any air storage tank. Don't spend money on a

tank which you could better spend on a bigger compressor," he suggests.

Although this may seem like an expensive manure handling facility, Kennebeck is sold on it. "When you lose half your pit capacity because of sludge buildup, you have to clean out more often and it may be at a time when you have no open fields to chisel it into."

For more details, contact: FARM SHOW Followup, Leon Kennebeck, Rt. 1, Carroll, Iowa 51401 (ph. 712 792-9016).

## Home-Made Electric Car

Electric cars have been an on-again-off-again fad. Biggest problem has been that they don't go fast enough, or far enough.

Now comes Tom Walker, Eagan, Minn., who thinks his home-built version — or something patterned after it — just might be the wave of the future.

Called the Day Starter, it's a tiny one-seater that's cramped by any standards. But it will go up to 65 mph and cover a distance of 80 miles without needing a recharge. To recharge, you simply plug it into a standard 110 volt outlet.

Walker's home-built car uses commercially-available batteries. They can be purchased from most retail stores handling batteries," he told FARM SHOW.

The batteries in Walker's car were made by Standard Battery Company, St. Paul, Minn.

They're called the Day-Starter brand, which is where the vehicle itself gets its name.

Walker says he doesn't intend to have his electric car produced commercially, or to sell plans for his particular design. His main purpose in building it, he maintains, was to suggest that if he, as an individual working on a low budget, could build a feasible electric car, "then surely the auto industry can mass produce one at a reasonable price." He says the car costs just one cent per mile to operate, based on electricity at four cents a kilowatt.

Walker's one-seater is 117 in. long, 59 in. wide and 56 in. high. Since it's a 3-wheeler, it's classified by law as a motorcycle. Its low center of gravity allows it to attain speeds up to 65 mph without losing stability.

More than half of the vehicle's



2,220 lbs. is in the 13 batteries, which ride only 8 in. off the ground. The car's Volkswagen transmission has four speeds forward and one in reverse. Windows are plexiglass and the body aluminum. The car's electric motor was obtained from a truck company that had used it in an experimental electric

truck. Heat given off by the batteries is directed inside to keep the driver comfortable in cold weather.

For more details, contact: FARM SHOW Followup, Tom Walker, Standard Battery Company, 2286 Capp Rd., St. Paul, Minn. 55114 (ph. 612 646-2707).