



**Penn State Cooperative Extension
Capitol Region Dairy Team**

**PROPER ELECTRIC
FENCE INSTALLATION:
PUT THE ZAP
WHERE YOU WANT IT**

**Dan F. McFarland
Capitol Region Extension
Agricultural Engineer, York**

As the weather warms and the grass turns green, the "click, click" and perhaps the "snap, snap" of the electric fence charger can be heard.

Electric fences can be an effective method of keeping cattle where you want them, but you certainly don't want to unintentionally charge waterers, feeders, stalls, and milk pipelines. Proper installation of electric fence chargers (energizers) is essential to insure they work effectively and prevent unintentional shocks.

An electric fence system controls cattle by delivering an uncomfortable current through the animal's body at a short duration so that it will not cause injury. When an animal touches the charged fence wire, it completes a circuit from the "hot" terminal of the energizer, or fence charger, through their body to the earth, and back to the "ground" terminal on the energizer.

Special care should be taken to prevent small children from touching a charged fence. All individuals should avoid fence contact with the head and neck. Modern fence energizers are typically of the "low impedance" type that delivers a very high current for a short amount of time. They work even when some grass or other vegetation touches the fence. However, if an adequate number of ground rods are not used, the current delivered to the animals can be reduced significantly. Be sure to choose a fence energizer that is labeled by a testing laboratory.

Proper grounding of the energizer is one of the most important, and overlooked, elements to insure the electric fence works properly. If the energizer does not adequately control livestock, check for adequate grounding before selecting a more powerful unit. Improving the grounding may be the least cost, most effective method of improving the operation of an electric fence system.

Grounding will vary depending on soil type and moisture. For "average" soil, a 5-Joule, low-im-



Dan F. McFarland

pedance charger should be grounded with three 8-foot ground rods spaced 10 feet apart. Doubling the Joule output of the energizer doubles the grounding needed.

The fence energizer should be placed in a location where the distance between the energizer grounding and electrical system grounding can be maximized. The best place of the energizer is outdoors away from animal buildings and grounded equipment. When installed indoors, the high voltage produced by the energizer must be taken outside using high-voltage lead cable with 20,000-volt insulation. Electrical wire used for building wiring typically has 600-volt insulation and must never be used for this purpose.

Unintentional shocks from an improperly installed electric fence system can show up at waterers, milk pipelines, feeders, stalls, and other metal equipment. Improper grounding of the fence energizer is the most common cause. The energizer must have its own grounding electrode located a minimum of 50 feet from other grounds or other metal objects in the earth. Energizers must never be grounded to electrical system grounds, utility grounds, metal water pipes, or metal objects in a building. Such improper grounding puts the metal objects and animal in the electric fence return path.

Even if you don't suspect that your electric fence system is a problem, it is a good idea to check the installation and connects regularly to insure safe and effective operation. If you would like more information, give me a call at (717) 840-7408.



FOAL MANAGEMENT

**Jessica R. Dacey
Senior, Animal Science;
Dr. Fredrick Hofsaess
Professor of Animal Science**
So, you have a foal!

The foaling process was successful and now it is the next day. The veterinarian should be coming to do a routine checkup and take blood for the Immunoglobulin G (IgG) test.

If the mare was not vaccinated or if you are unsure, the foal should also receive the tetanus antitoxin. The foal should also be vaccinated with tetanus toxoid, influenza, rhinopneumonitis, and encephalomyelitis as well as dewormed regularly during the first year.

Consult your veterinarian for a complete vaccination program so you are sure to get all the necessary vaccines, their boosters and any others recommended for your area.

It is also important to monitor the foal for normal behavior. The foal should be bright, active and feisty. It should be nursing regularly and interacting with the mare and other horses with which it is turned out.

If the mare's udder begins to bag up, or there is a lot of dried milk on the foal's head, it could be a sign of illness. Other signs of illness include lethargy, droopy ears/expression and standing alone.

Keep an eye on the mare as well. If she appears worried, she may have good reason. Diarrhea is a common problem in foals. Around 4-14 days, the foal is

likely to develop diarrhea known as scours, or foal heat diarrhea.

This is because the microflora are being established in the gut. The foal will continue normal behavior during this period though.

If the foal shows any signs of illness or becomes dehydrated (pinch the skin on the neck, it should snap back to place immediately if hydrated) at this time or any other, the veterinarian needs to be called immediately.

Turnout is important at this time. Turn the mare and foal out by themselves every day (preferably in the afternoon when it's warm) until the foal looks like it wants to lie down.

After about 8-10 days, the mare and foal can be turned out with others for the entire day. Frequent handling of the foal is also a good idea. It will make the foal easier to handle and halter/lead break when you decide it is necessary.

There are many books available with suggestions on how to go about it, but it is best to do what you feel is appropriate for your needs and farm.

At about three weeks of age, the foal can be introduced to grain. A feed bucket should be placed in a location that is convenient for the foal to access but not the mare.

There are now special buckets on the market and other ideas out there to make this easier. There is also specially formulated feed for foals of this age.

It is best to consult your local feed and supply store for your needs and situation.

**Wool Pool
Set**

DANVILLE (Montour Co.) — A regional wool pool will take place at Mausdale Farm Supply, Rt. 642 north of Danville, June 17 at 3 p.m.

Wool must be bagged prior to arrival at the collection site. People delivering wool should be prompt, as the wool truck will only be in Mausdale for a short period of time.

Call (570) 437-3657 regarding a date and time for wool-bagging prior to the pick-up time.

It is also very important that the mare be on a complete, well-balanced diet. She needs all her nutritional needs to be met so she can produce adequate amounts of milk.

Milk production is extremely taxing on the mare and can cause weight loss if she is not meeting her nutritional needs.

A farrier should also be called to trim feet on a regular basis, approximately every four weeks. If you notice any confirmation faults in your foal you can also discuss corrective trimming with your farrier. Depending on the foal's future use, surgery may also be considered.

The last thing to consider is when to wean. Foals can be weaned anywhere from two to six months. It is best to wean more than one foal at a time to help reduce stress.

There are many different opinions on when and how to wean. You must consider what options you have available to you and which is most practical. It is similar to raising a child learn from others and formulate your own way that is best for you and your foal.

Most of all have fun and good luck! They aren't young for long!

**Cornell's Small Farms Grants Program
Fosters Farmer-To-Farmer Education**

ITHACA, N.Y. — Extension education is sometimes seen as the one-way the transfer of knowledge from the University out to the public. In the case of agriculture new production technologies, management practices, and ways of understanding the world are generated by agricultural scientists, and then "delivered" to farmers through local extension programs.

But increasingly, another ap-

proach to extension education is taking hold. It is based on the recognition that farmers themselves have tremendously valuable information and experience to offer other farmers. In this approach, the role of extension educator is not so much to "deliver" knowledge, but to "facilitate" the sharing of knowledge among farmers. University-based knowledge is still important in this approach, but extension educators find ways to offer it alongside farmer expertise to get the best of both worlds.

The Cornell Cooperative Extension Grants Program for Innovative Small Farms Education has been an important catalyst for this kind of "bottom-up", farmer-to-farmer education. The program was initiated by Cornell's Small Farms Program in 2000, and has so far funded 53 projects for a total of \$131,610. It is supported by Cornell's College of Agriculture and Life Sciences through federal Smith Lever funds, and provides grants of up

to \$5,000 to CCE educators with creative program ideas that specifically target local small farms. The grants program is overseen by Cornell's Small Farms Task Group, which includes farmers, non-governmental organizations, extension educators and faculty. A committee of farmers reviews all proposals and makes final recommendations for funding.

Farmer-to-farmer learning is a key feature of many projects funded by the Small Farms grants program. Through the CCE Grants Program for Innovative Small Farms Education, growing numbers of small-scale farmers are discovering that Cornell Cooperative Extension is a great resource for them.

For more information about the CCE Grants Program for Innovative Small Farm Education, including complete project reports, visit the Cornell Small Farms Program Website, www.smallfarms.cornell.edu. Click on "Cornell Small Farms Efforts," then click on "Grants Program."

We Love Our
Dairy Farmers
The Cream Of The Crop

One of our favorite times of year is just around the corner: June Dairy Month!

And what a treat we have for Lancaster Farming readers in our June Dairy Issue scheduled June 7. Included will be family farm features, breed and association news and highlights, and other great reading for our dairy families.