



## Livestock Ledger

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### LARGER COWS — LOWER FERTILITY

When it comes to conception, bigger is not necessarily better.

Research has shown that larger cows have lower pregnancy rates than their smaller herd mates, and that trend can be attributed to limited nutrient availability.

Scientists at the University of Arkansas found cows weighing 1,250 pounds required 18 percent more metabolizable energy and 10 percent more protein on a daily basis than their 950-pound herd mates. Without the extra nutrient requirements, the larger cows ignore energy needed for reproduction and instead concentrate on maintenance, growth, and lactation. This leads to a 3.6 percent decline in pregnancy rate in the larger cows for each 100 pounds of fall weight.

Results of the study show that as cow size increases, it may be necessary to use feed supplement, such as hay or range cubes. Any supplement fed should be high in crude protein and metabolizable energy to meet at least the maintenance and lactation requirements of the cows. This will lead to more available energy for reproduction, thus increasing pregnancy rates.

### Hospital Pen Management

The hospital area of your feedyard may be as important to cattle recovery as your diagnosis and treatment program.

A good hospital facility should provide shelter and convenient access to feed and water for your cattle. The pens should be uncrowded and easily accessible from the treatment chute.

Proper sanitation of treatment equipment, pens, water troughs, feedbunks, and hay racks will prevent unnecessary infection and give your cattle a better chance of recovery. By penning according to disease problems and cleaning waterers daily, you reduce the likelihood of creating additional infection.

Cattle in your hospital facility should receive good quality hay free choice from a bunk, as well as an energy- and nutrient-dense feed ration. Provide the feed twice daily in quantities that the calves will clean up shortly before the next feeding.

### Feeding Gilts — Prebreeding

Penn State graduate student Robert E. Mikesell reports on an interesting study at the University of Delaware that investigated the effect of feed intake of gilts during the period from 240 pounds until breeding on reproductive performance during the first two parities.

Forty-three crossbred gilts either remained on the self-feeder or were limit-fed six pounds per day of a corn-soy diet at the end of the finishing phase. All gilts were bred at the second observed heat, then treated and fed equally for the remainder of the study.

Self-fed gilts were fatter when weaned from their first litters and at day 110 of the second gestation period, but there were no differ-

ences in litter size, litter weight, or gilt body size at any time during the first two lactations. These results are in agreement with a Penn State study which showed no difference in ovulatory rate of self-fed vs. limit-fed gilts.

If we assume the self-fed gilts in the Delaware study ate an average of nine pounds of feed per day, were gaining 1.9 pounds per day, and were bred when they weighed 280 pounds, the self-fed gilts would require 63 pounds more feed than the limit-fed gilts during the prebreeding period. At \$.075/pound of feed, limit feeding would save \$4.73/gilt in feed costs with no change in reproductive performance.

Keep in mind that the Delaware trial was conducted with only 43 gilts. It is possible that a trial conducted with more pigs may show differences in reproductive performance. Also, gilts from heavy milking sow lines may be more apt to benefit from additional body condition at weaning.

Under conditions of these studies, there is no economic advantage to self-feeding gilts during the prebreeding period of subsequent reproductive performance.

### Fine Grinding Hog Feed

Since feed costs represent 60-75 percent of overall production costs in a swine operation, anything a producer can do to improve feed utilization can have a significant

impact on cost of production.

Generally speaking, the finer the particles, the more efficiently the feed will be utilized. This is because of the greater surface area that is exposed to digestive enzymes with a finer grind. Finer particle size also improves ease of handling and mixing characteristics.

There are some negative aspects of fine grinding, however. Grinding costs will be higher, particularly as fuel costs rise. There may be more bridging in bulk tanks and feeders, as well as more dust. Finely ground feed may play a role in gastric ulcers, and pigs may not eat extremely fine feed as readily. Therefore, the increased cost and potential problems of fine grinding must be offset by improved feed conversion.

Achieving smaller particle size is not too difficult. With roller mills, the rollers can be set closer together. A roller mill with a differential drive, which drives one roller faster than the other, gives a tearing action on the grain in addition to crushing. Roller corrugations should be checked and regrooved on a regular basis. With a hammer mill, hammers should be tuned or replaced when they become worn. The screen should also be replaced when the edges of the holes become rounded.

Proper grinding and mixing of feed does require some time and management. However, it should pay off in the long run by lowering production costs through improved efficiency.

### Plan For Shepherd's Symposium

The sixth annual Keystone Shepherd's Symposium has been announced for November 22, 23, and 24 at the Ramada Inn, West Middlesex, Pa.

Don Bailey from Roseburg, Oregon will headline an impressive group of speakers on subjects ranging from Bailey's Disease diagnosis and recommended medi-

cations to ram health, wool marketing, alfalfa, scrapie control, carcass lamb evaluation, breeding soundness, dairy sheep, etc.

The Sunday breakfast topic will be "The Stockmen's Grass Farmer," presented by Allen Nation, editor of "Grassland Farming," Jackson, Miss. The event will also include the Lamb-O-Rama Festival, Make It Yourself With Wool Contest, and the Pennsylvania Lamb and Wool Queen Contest. Preregistration deadline is November 4. Contact your local extension office for details and registration forms.

### Silo Safety

Few farming operations provide as many opportunities for acci-

dents as filling the silo.

The greatest risk stems from the operator being exposed to a number of moving machine parts in a relatively crowded work area. Many farmers take unnecessary chances. Under no circumstances can you justify entering a wagon or reaching into the unloading chute while the power is on.

If clogging occurs, disengage the PTO and stop the tractor. When the silo blower plugs up, do not climb into the hopper or use your hands or feet to force forage into the blower blades.

PTO shafts that drive the wagon and blower rotate 9 to 16 times per second. Even at slower speeds, no one can react fast enough to pull away once caught by the revolving shaft. Be careful!

## Pennsylvania Holds First Forest Workshop

HARRISBURG (Dauphin Co.) — The first Pennsylvania Forest Stewardship training workshop was recently held at three different locations to help landowners manage their woodlots.

Sponsored by the state Bureau of Forestry of the Department of Environmental Resources (DER), 235 professionals registered for the workshops which were held in Centre, Luzerne and Butler counties.

Pennsylvania's program is part of a national effort authorized by the 1990 Farm Bill and is administered through the federal forest service and directed by DER's forestry bureau.

The stewardship program is a federal cost-share and technical assistance program designed to help forest landowners manage their woodlots wisely. The national goal is to bring 25 million acres of private forestland under stewardship management during the next five years. Its other goal is to increase public awareness of how

society depends on and benefits from healthy forests.

Those completing the training are qualified to prepare Forest Stewardship Management Plans and assist landowners in becoming forest stewards.

Landowners who become forest stewards are eligible to receive cost-share monies under the stewardship incentive program. This program is different from other forestry cost-share programs because money is available for management practices that do not involve timber management.

The training sessions focused on key forest stewardship concepts such as wildlife management, biological diversity, aesthetics, recreational opportunities and forestland planning.

Tim Nilan, of Forest Management Associates Inc., of New London, has completed the workshop. For more information, call Tim Nilan at (215) 869-8483, or call the state stewardship program at 1-800-235-WISE.

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