

# Livestock Notes

## Profitability Traits in Feedlot Steers

A recent report from the University of Missouri identifies several animal and economic variables that influence profitability for feedlot steers. The trial used data accumulated over five years in a feedlot program.

Animal data included average daily gain, starting weight, frame size, final weight, feed conversion quality grade, internal carcass fat, dressing percentage and total feed intake. Economic data includes initial steer value, feed cost per head, and lot cost per head. Veterinary, marketing, and fixed costs were assumed to be the same for all animals.

Variables that correlated well with profit (total carcass value minus all costs) were not usually associated with the animal. The highest correlations with profits were initial (-.47) and quality grade (.40). Those with lower relationships were feed conversions (-.25) and starting weight (-.23). It is also important to note that frame size was negatively associated with profitability; that is, as frame size increased, profits went down. In fact, this relationship was almost the same as that between average daily gain and profits.

Feedlot programs will often tell you the key to success in feeding cattle is to buy them as cheaply as you can and feed them until they grade Choice. This study certainly confirms that statement.

## Effects of Restricted Nutrition in Mid-Gestation

An Ohio State study shows there will be no difference in reproductive performance after calving of heifers that had a restricted diet during mid-gestation. Crossbred heifers were divided into two groups with one group receiving sufficient feed to gain 1 1/4 lbs. per day from 56 days after breeding through gestation, and the other group restricted to .2 lbs. of gain from day 56 to day 188 gestation. This would be roughly the same as heavy reductions in feed intake during mid-winter for spring-calving heifers.

There was no difference in birth weight, calving ease score, or conception rate between the two groups. This in itself would indicate there would be no problem with this kind of feed restriction in mid-winter, but other factors must be considered. For instance, the restricted group weighed about 270 lbs. less at calving, and they gained about 88 lbs. more to weaning. Also, this weight gain in the heifers was at the expense of calf weaning weight with the calves from restricted group weighing almost 60 lbs. less.

There appear to be a couple of factors at work here. The increasing plane of nutrition of the restricted group after 188 days of gestation would help to explain why there was no difference in reproductive rate between the groups. This result has been shown before with beef cattle. However, with a young heifer that is still growing, that increase in feed appears to be partitioned into growth, rather than into milk production and calf growth. The trade-off of lower winter feed bills may not be justified.

## Manage Control for Sows

Winter will soon be here, and with it the annual mange outbreak in many sow herds around the state. For producers with a treatment program, the outbreak won't be very bad and might not occur at all. For those who don't treat their sows, the situation will probably be a lot worse.

Mange is caused by a mite that burrows under the skin, causing itching and restlessness in the pig. Sows should be treated before entering the farrowing house to eliminate the risk of infecting baby pigs.

What does mange cost in lost performance? Studies have shown that pigs from mange-infested herds weigh about a pound less at weaning and take 5-7 more days to reach market weight. In addition, whole herd feed efficiency can drop as much as 10 percent. The number of born alive can also drop by as much as .6 pigs per litter. Under field conditions this adds up to an annual cost of nearly \$80 per sow.

Let's look at some compounds used to control mange:  
**Permethrin, Ectiban**- No age restriction, 5 day withdrawal, high pressure application required, 2 applications necessary (7-10 days apart), \$18-\$37 for 50 gal. (treats at least 100 pigs).

**Prolate**- Pigs must be over 3 months of age, 1 day withdrawal, high pressure application required, 2 applications necessary (7-10 days apart), \$23 for 50 gal. (treats at least 100 pigs).

**Taktic**- No age restriction, 1 day withdrawal, partially systemic (absorbed through skin into the bloodstream), low pressure application OK, 2 applications necessary (7-10 days apart), \$33 for 50 gallons.

**Ivomec**- No age restriction, 18 days withdrawal, must be injected under the skin, single application enough if no further exposure, also controls internal parasites, \$.80 per 100 lb. (\$32 for 40 pigs).

Mange can be expensive if not controlled in the sow herd. There are several compounds on the market that, when used properly, do a good job of controlling mange. The best control program includes treating the sows before farrowing and treating the pigs sometime after weaning. If you maintain that schedule and the mange problem in your facility is not too bad, treatment of pigs over 100 pounds is usually not necessary.

## Gestation Feeding Level Doesn't Affect Reproduction

Researchers at South Dakota State University fed either 4 or 6 pounds of feeds to Large White x Landrace gilts during gestation. Gilts on the higher feeding level gained more weight during gestation, but lost more weight during lactation. Sows on the lower feeding level consumed 48 pounds more feed during lactation. Feeding level had no effect on number born live, number weaned, litter weight at weaning or days to return to estrus. Based on the conditions of this study, there is no advantage for feeding gilts more than 4 pounds of feed during gestation.

## Meat and Bone Meal Processing Kills PRV

Researchers at Iowa State University recently concluded from the results of six experiments that the normal heating process for meat and bone kills pseudorabies virus (PVR).

**Experiment 1:** Pigs were infected with PVR and killed five days later. The carcasses were then subjected to the normal rendering process. Immediately after the hog carcasses were rendered, researchers processed a group of uninfected cattle carcasses through the same plant. After rendering, samples from both the hog and cattle tissue tested negative to PRV.

**Experiment 2, 3 & 4:** Tissue samples taken during the rendering procedure showed the virus was killed early in the process. The 165°F temperatures apparently inactivated the PRV in as little as 10 minutes.

**Experiment 5:** Researchers contaminated processed meat and bone meal with PRV. Because of the dry nature of the meat and bone meal product, the virus remained viable for only four days.

**Experiment 6:** Twelve lots of the finished meat and bone meal product were monitored over a three month period. None tested positive to PRV.

The normal heating process quickly destroys the pseudorabies virus. Even when clean meat and bone meal is contaminated with live virus, the dry nature of the product inactivates the virus within four days.

# Composting Under Study At Meeting

**YORK (York Co.)** — Yard-waste composting is the subject of two evening meetings being sponsored by Penn State Cooperative Extension of Franklin County on December 12 and 13. The training sessions will start at 7 p.m. and end at 9 p.m. in the County Administration Building, 191 Franklin Farms Lane, Chambersburg. There is no fee to attend.

The first session, on December 12, will be oriented to homeowners, gardeners and those intend-

ing to backyard compost for the first time. The composting process, materials, backyard composting techniques and health considerations will be among the topics discussed. Included in the program will be Clarence Harbaugh of Rouzerville, founder of the Franklin County Organic Garden Club.

Large-scale composting of yardwaste will be the subject of the second session on December 13. This session will be oriented to

municipalities, gardening centers, farmers and those intending to compost large amounts of yard-waste. Yardwaste management options, DER guidelines, site operations, land applications and marketing will be among the topics discussed. Joe Sieber, Franklin County recycling coordinator, will be at this session to discuss DER grants for composting and the County Municipal Waste Management Plan.

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