

# Research Snapshots

• A new oral vaccine against bovine respiratory disease, a disease that costs the beef industry \$1 billion annually, has had promising results.

Developed by USDA scientists, the vaccine also increased initial weight gain in the feedlot, and protection occurred 4 days after vaccination as compared to the current 10-14 days with injectable vaccines.

• Beef cow nutrition in the last 60 days prior to calving has long been known to influence calf survival and reproductive efficiency of the cow.

One reason for this is that the incidence of calf scours are reduced when cows are fed properly during this critical period. Often over-looked by producers, weather conditions during late winter for spring-calving cows can be cold, wet, windy, and muddy.

All of these conditions increase

the nutritional requirements of the cow, reports author Dr. Clell Bagley from Utah State University.

Persistent poor conditions, particularly for cattle that are wet, exposed to wind, and subjected to subfreezing temperatures, will increase the incidence of scours in young calves. Producers end up playing "catch-up" with their nutritional program.

Reduce calf scour problems by knowing the requirements for energy and protein for the cows in the herd, adjust these "book" values for the conditions on the farm, and know the concentration of these nutrients in the feed and forage provided to be sure an adequate supply is available.

• Round bale hay feeders vary greatly in feed wastage according to Michigan State University scientists (Buskirk and others). Their work indicates the most effective feeder is the inverted cone with a solid base.

For this feeder, waste was measured at 3.5 percent (our work at Penn State found this to be 2.8 percent.) Conventional ring feeders with a solid band at the bottom had 6.1 percent wastage, and a feeding trailer had 11.4 percent wastage.

The greatest wastage (14.6 percent) was from a cradle-type platform feeder. When calculating the amount of hay you are feeding to cows, do not forget to reduce the intake by the wastage that will occur based on the feeder that is used.

• The first draft of the Nation Non-Fed Beef Quality Audit indicates among cull cows and bulls, 21.6 percent of all carcasses have major to extreme trim loss due to bruising. This results in trim of 5 to 15 pounds per carcass.

These losses are caused by poor management and handling practices. The total value of carcass losses from all causes averaged \$68.82 per head.

• The average cost of gain for fed cattle in Pennsylvania is

about \$.10 per pound of gain higher than their counterparts in the High Plains (\$.53 per pound versus \$.43 per pound) according to a recent presentation by Harold Harpster of Penn State and Jim Hogue of Agri-Basics, Inc.

These authors did not find a difference in feed cost, so the higher cost for Eastern feeders was attributed to lower feed efficiency from producing heavier and fatter carcasses.

This implies the quality-conscious Pennsylvania feeder must receive \$40-\$60 more per carcass in quality or other premiums to be as competitive as the Western feeder.

• Increasing feed intake by five percent and feed efficiency by 10 percent has the same effect on net returns for cattle feeders as a Choice/Select spread of \$10/CWT of carcass according to T.M. Peters (1996).

Feeders may not have control over the price spread on quality grades, but they have complete control over bunk management, sourcing feeder cattle, the use of additives and implants, and feeding conditions that influence feed intake and efficiency.

John Comerford  
Penn State Extension

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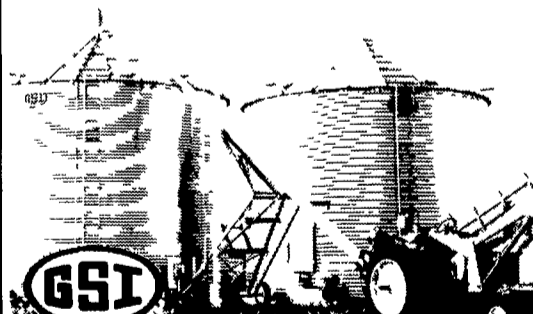
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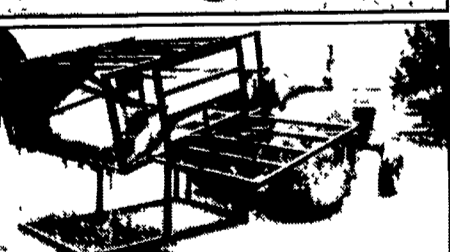
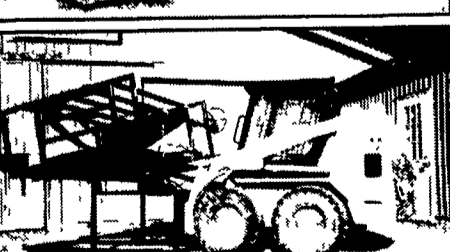
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