LOOKING AHEAD AT BEEF CATTLE HEALTH

by John B. Herrick

Universally beef constitutes the biggest part of the livestock industry. In the United States 80 per cent of our capital investment in livestock is tied up in the cattle enterprise. However, with this tremendous program there are problems, problems of health and parasites that reduce the efficiency of the enterprise and in some cases present public health hazards.

Parasites and diseases take an annual toll of more than $2,000,000,000 (billion). The magnitude of this figure is underscored by such losses from individual diseases as mastitis, $250,000,000; leptospirosis, $100,000,000; footrot, $2,000,000; brucellosis, $20,000,000; anaplasmosis, $90,000,000; and cattle grub, $100,000,000. Losses from internal parasites alone amount to over $400,000,000 annually. The magnitude of these losses is incomprehensible and to the average producer probably meaningless.

Losses such as represented by the death of two or three calves out of every 10 before weaning; 70-85 per cent calf crops and 40 per cent of all cows with mastitis are more realistic to the livestock producer. Infertility studies show that every repeat service costs a dairyman $1 per day, and it is well known that a barren beef cow will cost from $20 to $50 per year. An 80 per cent calf crop is meaningful to a beef producer, particularly if he knows that an 85 per cent calf crop may be the break-even point.

Despite these figures the United States has made a sizeable contribution toward production of quality meat and milk in the form of sound disease control programs. Fortunately the philosophy of disease control in the United States is eradication of disease instead of mere control. Eradication of tick fever, pleural pneumonia, foot and mouth disease and now brucellosis is evidence of the contribution that the cattle industry of the United States has made towards plentiful meat and milk. Other countries envy this position and many are trying to mimic it. To realize its significance one has only to consider the condition that would have prevailed in the beef industry had we not eradicated foot and mouth disease.

The brucellosis eradication program is ample indication of the value of such programs. A program that is only 10 years old has reduced the annual losses in the United States from $100,000,000 to $20,000,000. With the program continuing we will eventually eradicate the disease. More than 25 states are officially "modified certified," and six states are fully "certified" as being free of brucellosis. This achievement is worthy of note to the meat consumer public. Such achievements are made only by the cooperation of the producers.

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Diseases that are looming as candidates for similar action are anaplasmosis, leptospirosis and vibriosis. Grub control is the chief candidate for similar effort in the parasite field. In the last decade diseases such as infectious bovine rhinotracheitis, virus diarrhea, and mucosal disease have presented problems to breeders and feeders. These diseases fall into the mucosal disease complex classification and loom as threats to the cattle industry. They will bear further research and observation. Concerted effort should be made by the cattle industry to keep constant programming of disease control on a national basis. However, cooperation by each individual producer is necessary for complete implementation of such programs.

Projected Programs

Continuation of the brucellosis eradication program is imperative. The current complacency in tuberculosis eradication indicates a need for further intensive effort and research. Plans for control programs in anaplasmosis are now under way. The National Association of Artificial Breeders has a sire health program in effect, and studies are under way for regulations on all semen-producing units. During the last decade recognition of the part the bull plays in a calf crop has generated a broad program on fertility evaluation of bulls. This phase of cattle production has assisted in establishment of sound economic calf crops. Coupled with this is the program for determination of which animals are pregnant following breeding. These two programs should be employed in every herd for sound cattle production.

Self Help Programs

It is my opinion that more than 85 per cent of the diseases of cattle can be controlled by the integrated applied techniques in breeding, feeding, management and disease control. Our greatest losses in beef production are from everyday neglect. The majority of our losses are hidden from the unobservant eye. The loss in weight, feed utilization and daily gain caused by lice, ticks, grubs, internal parasites and diseases is incomprehensible. Losses caused by breeding problems fall in the same category. As a result, a great share of the inefficiency in beef production comes from mismanagement of the herd. This involves mismanagement of factors that only the cattlemen himself can control. A great share of these losses and problems can be prevented by the application of practices and principles already known.

Livestock Health Programming

It has been estimated that farm losses from disease and parasites average from $1,500 to $2,000 a year. It has also been estimated that there exists sufficient knowledge, technicians and other factors so that 85 per cent of this loss can be prevented. Essentially these losses can be prevented only by the integrated application of breeding, feeding, management and disease control on a programmed basis. Disease control
and fertility management aimed at "rescue of the perishing" is not the correct approach; yet it is used by too many cattle producers.

Disease can be prevented by taking a good overall look at the livestock enterprise. Then the disease incidence and the factors that contribute to these losses should be determined. Veterinary service and counsel are important at this point in mapping out a prearranged program aimed at eliminating the losses from diseases and parasites.

**Program for a Cow-Calf Project**

It is known that approximately 10 per cent of all heifers and cows may present breeding problems and that 15 to 20 per cent of all bulls may affect fertility levels because of their low fertility. Therefore these factors must be kept in mind when attempting to obtain a 90 per cent calf crop (which should be the minimum) and a sound disease control program.

1. Brucellosis and tuberculosis control are mandatory. Calfood vaccination of all replacements plus periodic checking for incidence of the disease in a herd is imperative. Periodic tuberculosis testing must be continued.

2. Immunization for blackleg, leptospirosis and other diseases peculiar to a given area should be conducted at a time chosen to give maximum protection to the herd.

3. Internal and external parasite control programs must be continuing affairs.

4. In all herds the fertility of bulls should be evaluated before service. Pregnancy should be checked 60 days after the breeding season. Virgin bulls, artificial insemination or herd bulls that have been thoroughly tested and found free of disease should be used for breeding.

5. Management provisions should assure calf liveability and normal growth. In many cases management factors that lessen the mortality rate in calves must be substituted for "nature's way."

**Control of Diseases in Feed Lot**

The disease mortality and morbidity of feed-lot cattle is, in a sense, directly related to management programs that prevail on the farms or ranches where the cattle are produced. However, many of the disease problems in feed lots are different from those in the cow-calf production programs.

The following are suggestions for preventing disease loss in the feed lot.
1. To prevent many of the diseases; secure healthy animals and transport them from production sites to feeding sites with minimum stress.

2. Observe cattle upon entering the yard for early recognition and treatment of disease. This is imperative to minimize losses.

3. Immunize cattle against leptospirosis, mucosal disease complex and other diseases only when the cattle are in a good health. Have them immunized instead of merely vaccinated.

4. Control internal and external parasites according to a programmed scheduled procedure.

5. Provide facilities to keep the cattle comfortable. This also includes proper restraint for handling the cattle.

Summary

1. We should continue disease control programs involving effort at the national level aimed at eradication as well as control.

2. Regulations involving movement of cattle between states should be uniform.

3. Disease prevention programs should be integrated with breeding, feeding and management.

4. Reliable veterinary service and counsel are available for all cattle producers in the United States. These resources should be used to reduce the losses from disease and parasites.