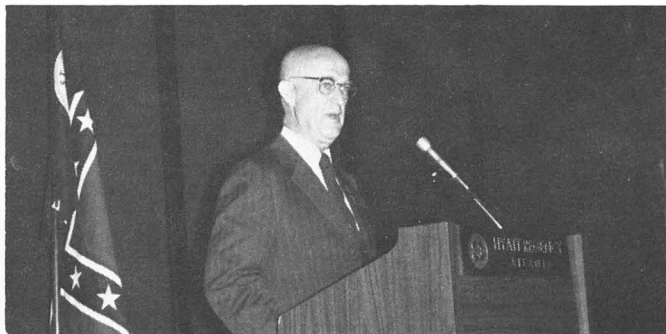


Progress in Infectious Disease Control

M. R. Clarkson, D.V.M.

P.O. Box 155

Peterborough, New Hampshire 03458



Dr. Jarrett, President Tharp, Dr. Allenstein, Commissioner Irvin, members and guests of the American Association of Bovine Practitioners.

It is a pleasure to be with you as you recognize our nation's bicentennial, and a special honor to be given this opportunity to reflect on some of your accomplishments as well as on some of the challenges of today and tomorrow in infectious disease control.

We in New England have been celebrating the bicentennial since the first of this year. As our forefathers were engaged in the struggle for independence fully a year and a half before the Declaration of Independence, so their descendents also forged ahead with full confidence that once again the rest of the country eventually would catch up.

You may recall that Dr. Benjamin Rush, a signer of the Declaration of Independence, was an early advocate of the development of veterinary medical education in this country. He and his colleagues noted the devastations from animal diseases and recognized the futility of raising valuable animals without safeguarding their health. But it was not until many years later that the first of today's colleges of veterinary medicine was established.

Cattle, and most other domestic animals, had come to this new land from the Old World. Many diseases came with them. Others were contracted here.

The most devastating and certainly the most bewildering of the native diseases to attack our cattle was piroplasmiasis, variously known as Spanish staggers, bloody murrain, southern fever, and Texas fever. The depressing weight of this disease on the development of cattle husbandry south of the 37th parallel, and the fearful losses imposed upon local herds following the annual drives of cattle to northern markets, made this disease one of the most important in the history of our country.

It is a tribute to the expertise of our predecessors in the application of the science and art of veterinary

medicine that we no longer have to worry about *Piroplasma bigemina*, the causative agent of this disease, except as an import problem.

Among the diseases introduced from abroad, bovine contagious pleuropneumonia brought substantial losses to livestock owners and a mounting concern among veterinarians. Their combined efforts wiped out the disease in a remarkably short period of time. Among the lasting developments evolving from the concern about this disease were:

1. Setting the stage for successful attacks on other plagues of animals;

2. Formation of the U.S. Bureau of Animal Industry. (Its work now is carried on by the Animal and Plant Health Inspection Service and the Agricultural Research Service.);

3. Organization and strengthening of the offices of state veterinarians; and,

4. Stimulus for developing and strengthening colleges of veterinary medicine.

Since the beginning of this century, foot-and-mouth disease has entered our country six times and been conquered. It has struck our neighbors in Mexico and Canada and has been eradicated. Many other serious cattle plagues have been kept from our shores, including the ever-dangerous rinderpest, east coast fever, Rift Valley fever, and several other viral and protozoan diseases.

The absence of these foreign plagues has permitted our profession to concentrate on the myriad of "home-grown" conditions that adversely affect the health and productivity of cattle. In many ways the problems of dealing with these everyday conditions are more difficult, although the accomplishments are less spectacular than is the case with the great plagues.

But you and your colleagues have made great progress in solving these problems. A quick look at some of the changes that have taken place in the last 50 years is convincing on this point.

Consider mastitis. You couldn't live with the procedures we had for dealing with mastitis in the twenties. The same can be said for problems of infertility, abortion, external and internal parasitisms, post-partum fever, and many others.

But, although we have made remarkable progress, we still have much to do in protecting cattle from all too many of the old familiar diseases including tuberculosis, paratuberculosis, brucellosis, anaplasmosis, bovine respiratory disease complex, hemorrhagic septicemia, vibriosis, trichomoniasis, anthrax, the "weak calf syndrome," and others—some as old as

man's history—others only recently identified.

We are proud to boast that bovine tuberculosis has been *nearly* eliminated as a threat to the health of animals and man in this country. But “nearly” is not enough. As long as there remains one viable organism in a susceptible animal, we live under the threat of increase. Last year, from tests of just over 2% of the national cattle herd, 4,543 reactors and suspects were found in 1,920 lots of cattle.

Paratuberculosis is causing increasing concern. Your committee on infectious disease has noted this. The Purebred Dairy Cattle Association, with the help of Dr. Weldy and others, has raised an alarm. As herds increase in size, with closer confinement of high-producing animals, the insidious effects of this disease become more evident. It is my hope that the modest research efforts now under way can be maintained and increased to find improved procedures for detection and control.

Dr. Moyle's article on paratuberculosis in the April 1, 1975, issue of the *AVMA Journal* and Dr. Larsen's article in the March, 1975, issue of the *AVMA Journal of Veterinary Research* are well worth reading.

Neonatal calf diseases take their toll year after year. We make some progress, as for example in calf diarrhea, toward more positive means of prevention and treatment, but much more research is needed to provide practitioners with an adequate armamentarium of products and procedures to reduce the tragic losses from these afflictions.

Much progress has been made in reducing the losses and the health hazards from bovine brucellosis; but, with over 130,000 reactors in 30,000 herds last year, it is plain that much more needs to be done. The AVMA and the USAHA have added their urging that the procedures be reviewed and the support strengthened for more effective control. Recent modifications of the uniform methods and rules for the eradication of brucellosis should help if there is sustained personal and financial commitment to the program.

Our old enemy, the shipping fever complex, retains its position of influence on the marketing of cattle. Each time we succeed in identifying a fraction of the complex, our hopes for control rise, only to be subdued as other entities of the complex seem to take over. We need a greatly increased research effort, taking full advantage of the knowledge already gained, to give us final victory over this costly complex of diseases.

I know you are concerned with many other infectious diseases in your daily devotion to bovine medicine, and perhaps those I have mentioned are not highest on your list of priorities. Be that as it may, I think we can agree that in most cases we need the help of increased research. As the costs have escalated, we have fallen behind in our overall animal health research program. In an effort to reverse this trend, the AVMA, the American Association of Veterinary Medical Colleges, and the state

agricultural experiment stations have joined in support of an Animal Health Research Act, with bills now pending in both houses of the Congress.

Dr. Tharp commented: H.R. 5602 was introduced by Congressman Melcher of Montana and most of the other members of the House Committee on Agriculture. S.1651 was introduced by Senator Talmadge of this great state of Georgia, chairman of the Senate Committee on Agriculture and Forestry, with the support of most of the other members of his committee.

The proposed legislation, if passed, would provide sustained funding for research to each of the colleges of veterinary medicine and to each of the departments of veterinary science or pathology of the experiment stations in states where there is no college of veterinary medicine. There would be special funding for research of national or regional importance, and provisions for needed facilities. The bills contain certain requirements for matching funds from non-federal sources.

Although this legislation has strong support within the Congress, from the colleges, and from professional and industry associations, hearings have been delayed while efforts are being made to find an approach that will meet the President's concerns about federal spending, while retaining the important aspects of the bills. We hope this can be accomplished and that the legislation will pass next year.

Meanwhile, the myriad of today's problems must be met with today's knowledge and resources. The seminars, practice tips, and scientific sessions at this meeting are vital aids to the increase and dissemination of knowledge. Just as the living organisms of infectious diseases are never static, our learning about these organisms, the diseases they cause, and the methods of dealing with them can never be static. Learning is nothing if it is not a dynamic process, deriving its substance from research, personal observations, and the experiences of others.

In the development and use of knowledge in veterinary medicine, we have received a great heritage from the leaders and thinkers of our profession; but, we must remember that heritage is not earned. The Presbyterian Church (South) puts it this way:

“Heritage comes to us as a gift from others who have gone before. It is given in trust that we shall nurture it, and burnish it, and, in our turn, pass it on to new generations—brighter and more proud than when it came to us. If this trust is broken, we shall have belied the faith of those who lent their nobility to us.”

So may it be in veterinary medicine, and especially in the practice of bovine medicine. Let us go forward with gratitude for the past, pride in the present, and confidence in the future.

Thank you very much for the privilege of being with you at this conference.