SYMPOSIUM: BIOLOGICAL AGENTS CAUSING INFECTIONS
IN DAIRY CATTLE

Brucellosis Status Report

ABSTRACT
Tremendous progress was made in the eradication of brucellosis for about 15 yr beginning in 1955. However, progress has been little in the last few years. This has been due to inflation and commitment of resources to other programs which had a higher priority at the time. We need additional resources, strengthened program procedures, and a renewed commitment on the part of all people and organizations involved in the eradication effort.

INTRODUCTION
The United States Department of Agriculture is involved in a cooperative brucellosis eradication program with the individual states. Losses due to brucellosis have been reduced to a minimum by the current low incidence of the disease. Total eradication of brucellosis from livestock is extremely important to the livestock industry and to the consumer in this country. Cattle produce almost 30% of the agricultural income annually. Cattle also produce a large portion of our protein supply. We would be hard pressed to find an acceptable substitute or an alternate source for these fine products.

PROGRAM PROGRESS
A Brucellosis Eradication Program has been underway for many years. In fact, it had its beginnings as far back as the mid 30's. As a result of this program, progress toward the goal of total eradication has been considerable. Most of the progress was from the mid 50's until the late 60's and early 70's. During this period, brucellosis in cattle was reduced from 11% to less than 1% of the cattle population. During this same time, losses due to brucellosis were reduced from $100 million annually in 1950 to approximately $12 million each year at the present incidence of infection. If you use your imagination and compare the value of the dollar of 1950 to the value of a dollar today, that reduction is even more impressive.

During the last few years, however, progress has been slow and in some areas there has been no progress at all. This loss of progress has been basically due to assignment of resources to other programs which had greater importance at the time, such as hog cholera, VEE, and VVND eradication. Also, there has been a lack of interest on the part of livestock owners because their losses have been reduced to such a low. This lack of interest is a normal reaction on the part of owners. We also have contributed to their lack of interest due to the design of our current methods of finding and eliminating disease.

PROGRAM PROCEDURES AND PROBLEMS
For a number of years, our basic program consisted of area testing. This involved what we call “down the road” contact with each herd owner requiring that all of his animals be assembled and tested. The herds in which infection was disclosed were placed under quarantine and retested until all evidence of infection had been removed. As areas attained certified status, we moved into a surveillance type program which involves collecting blood samples from animals that are sold for slaughter. These samples usually are collected in slaughtering establishments. The owner is not involved in the process, and neither is he aware that his animal is being sampled unless it is a reactor. If this occurs, the owner is contacted, his herd quarantined and tested. Consequently, the only cattle owners involved in the program are those who have a problem.

In some states this surveillance program has been increased to include collecting a blood sample from all classes of animals in marketing channels. This usually is done in the livestock market. This has increased our ability to screen...
the cattle population. Also, the producer is aware that cattle are being tested if he is at the market.

We have lost the day-to-day support of large numbers of livestock owners because they are, in fact, not involved in any way in the brucellosis eradication program. During the same period, the number of calves being vaccinated has decreased considerably. Here again we have lost another point of contact with the owner of the negative herd.

Of course, the surveillance program which involves the dairy producer is still the Brucellosis Ring Test. In the Brucellosis Ring Test (BRT) Program, the owner is basically unaware of what is going on unless he has a suspicious test result; in which case he is contacted and his herd quarantined and tested.

All of these procedures involve only the people who must do something that they would rather not do. In many cases, the infection is not eliminated from the herd promptly, and the owner gets discouraged. Comments about brucellosis eradication usually are not helpful to the eradication effort because most of the discussion comes from people who have been hindered in their operation or who have been hurt by brucellosis. They have a tendency to blame this hurt or loss on the program rather than on the disease itself where the blame properly should be placed.

We are aware that the brucellosis eradication program does cause many inconveniences to those who are in the marketing business, the transportation business, or those owners whose herds become infected. This includes less than 1% of the herd owners in any 1 yr. We should be concerned about and direct more attention to the clean herd owner. This group of people have the largest stake in total eradication of brucellosis for only through total eradication can these owners of clean herds be assured that their herds will not become infected.

As we take another look at the inconveniences connected with brucellosis eradication, we find that even if we step up our effort and develop and put into practice program procedures which will speed up final eradication, we do not come up with any new inconveniences not do we come up with any new problems that would bother either the marketing industry, the transportation industry, or the infected herd owner. Any control program would require testing of animals moving from farm to farm for purposes other than immediate slaughter, and it would involve the quarantine and testing of herds infected. It would require the obtaining of health certificates and negative test results for the interstate shipment of cattle. There would still be chronically infected herds that would require assembling and retesting of all animals in the herd.

PROGRAM SUPPORT

Support from the total livestock industry including producers and producer organizations is necessary successfully to complete the brucellosis eradication program. We also must make changes in our approach to eradication. We have to increase drastically our capability for screening the beef cattle population over what we are doing at the present time.

As you probably know, the beef cattle industry constantly is changing in herd ownership and herd size. This means that large numbers of breeding type cattle change ownership on a continuing basis. Many cattle that are sold by one owner as cull animals because they are no longer needed by him are purchased by another owner who is increasing his herd size. Currently, our procedures are not getting all of this class of animals tested. Also, it is difficult to trace accurately an animal that moves through one or more dealers prior to going to slaughter. We have increased the number of blood samples collected at slaughter, but we are not getting back to enough herds of origins of the reactors which are disclosed.

PROGRAM CHANGES

In a few states, we have increased surveillance by testing all eligible animals at the first point of concentration regardless of the reason they are sold. The first time a cow leaves a farm and moves through a concentration point, a blood sample is collected. On that day in that market, it is likely that the correct information concerning the herd of origin is available. However, if that animal moves on to slaughter, there is a possibility that the backtag could get lost, or if it had been sold by someone other than the original owner, it would be impossible to trace. Also, this increases the number of animals tested in the surveillance program, and it does get the owner involved in the program.
the same day he sells the animals.

We also have to increase our investigation surrounding each newly disclosed infected herd. Many times the herd has been infected for several months or even years at the time it is found. During this period, animals have been bought and sold. It is essential that we get information concerning movements into and out of each newly disclosed infected herd and do the necessary testing as a result of this investigation. We also must investigate the possibility of exposure to adjacent herds or other herds in the community. If we continue to disclose infected herds in a community, or even over a larger area, we must consider the need for down-the-road testing in that particular area (it may include the entire county).

Another proposed change or at least a change that is needed and one we hope to make in the near future is to change the criteria for modified certified areas and for certified free status. These criteria have not been changed for a number of years. Under the present standards, a county or area can remain modified certified indefinitely without further reduction in the incidence of brucellosis. This means that it can continue to have 1% or less of the cattle known to be infected with brucellosis and remain a modified certified area as long as no more than 5% of the herds are involved. We believe that the time has come to change the criteria to require that a state or county make progress toward eradication in order to maintain modified certified status. We presently are working on guidelines for presentation to the Brucellosis Committee of the US Animal Health Association, recommending such changes.

Also, the criteria for a certified free area or state allow infected herds to be in that area or state anytime other than the date on which it is certified free or is recertified as free. We feel that the standards should be changed to cover situations where infection is reintroduced into free areas. Certified free status would be suspended until an adequate investigation is made to determine whether infection had spread to other herds. If there is no evidence of spread, the status would be restored. In cases where infection, in fact, had spread, free status would be removed but could be regained by again meeting free status requirements.

You may ask what is required in the way of financial resources and people to carry out an effective program. Almost 2 yr ago when it became apparent that progress was not being made at the rate desired, the Secretary of Agriculture called a meeting of livestock leaders throughout the country to discuss the problem and determine the wishes and desires of the industry. It was clear to those present that any alternative to total eradication would be a serious mistake. Following this meeting, five regional meetings were held in the early part of 1974. The same feeling was exhibited at these meetings, that we must move forward to eradicate this disease. Plans were developed for a goal of total eradication by the end of 1983.

Along with these goals, we developed a plan of action which included financial needs. This was presented by the Secretary of Agriculture to Congress in a request for a $9 million annual increase in the appropriation for brucellosis eradication. In fiscal year 1975, we received a $5 million increase. The Agricultural Appropriation Bill which is being considered at the present time includes an additional increase of $4 million. During the first three-quarters of fiscal year 1975, beef cattle surveillance has been increased 21%. Farm testing has increased 16%. The number of reactors removed from infected herds increased by 26% over the same period last year.

We have been visiting with state regulatory officials and industry leaders to determine just where the greatest problems exist and what steps we should take to correct these problems. We made an in-depth review of the brucellosis programs and the brucellosis situation in 10 of the more heavily infected states which are located in the southeast and south central parts of the country. We are working with the officials in these states to develop plans to make the necessary changes so that eradication will be possible. We know that it is going to take a tremendous effort on the part of everyone who has a responsibility in this program, and the responsibility certainly is distributed among several organizations as well as the livestock owners themselves. This includes USDA, the various states, the industry organizations, all marketing agencies, and many others, including the consumer. But I sincerely believe that the time is right to move forward and make whatever effort is necessary to complete this work. It can be done if we all work together.