# THE NATIONAL STATUS OF BRUCELLOSIS[1]

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The stepped up brucellosis eradication program now under way through cooperation between the states and the federal government is expected to eliminate about 400,000 reactors in dairy herds by next July 1, 1955. This will nearly double the number of reactors eliminated in recent years. This is history in the making. The extra $30,000,000 which Congress provided in 1954 and 1955 is almost double that which was available previously. It will enable the farmers to get $25.00 indemnity for a grade animal instead of $9.00, and $50.00 for a purebred instead of $18.00. The major milk markets are tightening up their sanitation requirements — probably the chief reason why twice as many reactors were sent to slaughter in 1953 than was expected. The slogan today is "Wipe Out Brucellosis" because it has been demonstrated that elimination is possible. As early as July 1, 1942, North Carolina was declared a certified brucellosis free area, and New Hampshire and Maine have since qualified, and it is reported that all dairy cows in Oregon have been tested.

## REVIEW OF PROGRESS

A brief review of some major facts relative to the brucellosis scourge may not be amiss. Brucellosis was formerly known as contagious abortion and it is well to remember this because it was the abortions that brought about the campaign to control the disease. The cattle owners asked for help. Testing was requested and supplied by New Jersey as early as February, 1927. Nationally speaking, very little in an organizational way was done before July, 1934, when Congress provided funds for a cattle reduction program tied up with that year's severe drouth and big feed shortage. Since there were too many cattle the question was asked "Why not eliminate a lot of the diseased ones?" This gave the blood testing program great impetus. At that time about 10 percent of the country's cattle were infected. This figure has now been cut to about 3.5 per cent. Eradication methods have been greatly improved over the years and we now have good sound procedures that can be used with assurance. The standard blood test is the basic factor in brucellosis eradication. It is the only means available for telling whether or not an animal is affected with the disease. With reference to the great boons, calfhood vaccination and the ring test, I quote Dr. J. R. Porteus, Federal Inspector from New Jersey:

"The strong aid that we now have in eradicating brucellosis is calfhood vaccination. It is not a substitute for the blood test and it is not a guarantee that the animal vaccinated cannot become infected. In fact if there were no brucellosis there would be no need to vaccinate. It produces a lot of resistance to infection. The ring test is for testing on the herd basis. When herds are found negative in 2 or 3 successive milk ring tests they could be considered brucellosis free in the majority of cases, thus making it unnecessary to run more expensive blood tests in many instances. While used differently in various states, it is a screening process which saves time and expense. It is a partial but not a complete substitute for the blood test which must continue to be used on all herds where infection is present or where each animal is to be tested."

In conjunction with the ring test the Federal Department of Agriculture recommends minimum standards for a certified herd. Such a herd should pass three milk ring tests with not less than 90 days between each and this should be followed by a clean blood test. For a certified area, all the cattle must pass two milk tests at least 6 months apart, together with a blood test of any herds not included in the milk test. The number of reactors must not be more than 1 per cent of the cattle and the number of herds infected must not exceed 5 per cent.

Thus the measure of our progress is partially the number of blood tests made each year, partially the number of the milk ring tests that are run, and partially the number of calf vaccinations made. The actual measure is the number of brucellosis free herds and areas that we have, and this standard is attained by testing all of the herds in a given area and getting rid of all infected stock.

## FIGURES REFLECTING PROGRESS

In the United States during the fiscal year ending June 30, 1954, there were 9,002,109 blood tests run and the indicated rate of infection was 2.6 per cent as compared with 7,750,000 tests and an infection rate of 3.4 per cent for the preceding year — an increase of 16 per cent in blood tests and a drop of

Enos J. Perry was graduated from Penn State in 1916 and from Columbia University in 1928. He served as county agricultural agent in his native Pennsylvania for several years before taking the position of dairy specialist at West Virginia University in 1920. Since July 1, 1923, he has been in charge of the dairy extension program at Rutgers University where special attention has been given to herd improvement by means of cooperative artificial breeding associations and dairy herd improvement associations. Another major project has been the educational program in behalf of herd health.

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23 per cent in rate of infection. Calf vaccinations rose from 3,688,-149 to 3,999,101 in a year. The cattle represented in the milk ring tests increased from 12,000,000 in the year ending June 30, 1953, to 16,633,034 for the last fiscal year — a rise of 38 per cent.

### FACTORS AFFECTING PROGRESS

Thankful as we are for this progress to date, we are still challenged and obstacles remain to be surmounted — more in some areas than in others. The blood tests conducted in the last fiscal year revealed that the per cent of infected herds ranged all the way from a low of 1.9 for a New England state to 31.5 per cent for one of the north central states. The per cent of reactors ranged from a low of 0.3 per cent for that same northeastern state to a high of 10.3 per cent for a southern state. Progress in brucellosis eradication is greatly affected by the market demands for high quality, healthy cattle and cattle products, and the amount of funds and number of personnel available to carry out control programs.

The New Jersey Department of Health has set the date of April 1, 1958, when all milk sold in the state must come from herds clean of brucellosis. Some milk dealers in the state have antedated this requirement. Certain of their producers by procrastinating cannot now avail themselves of the flexible plan B which permits marking and retention of reactors and the disposal of them at a convenient season after they are milked out, or fail to conceive, etc.

In certain areas the rise in the per cent of cases of undulant fever believed traceable to milk supplies has given boards of health cause for concern. A few years ago, 75 cases were reported toward the end of summer in Sussex County, New Jersey, a county noted both for its dairy herds and vacation areas for tourists from the cities where the only milk sold for years was pasteurized.

### A CONTINUING EDUCATIONAL PROGRAM

The degree to which officials of the U. S. Department of Agriculture, State Departments of Agriculture, State Colleges of Agriculture, farmers organizations, public health authorities, veterinary associations, and other interested parties have joined hands in the crusade against brucellosis has been amazing and most heartening. The goal ahead can be most quickly attained by an accelerated educational program. In the forefront of the campaign, there have been and will continue to be the County Agents and Extension Specialists of each state along with the control officials of the State and the Federal Bureaus of Animal Industry. An example of cooperation in New Jersey between the Agricultural Extension Service and the Bureau of Animal Industry of New Jersey largely typifies what has been going on throughout the country for many years. On March 12th, 1952, Agricultural Agent Richard Lippincott of Trenton, New Jersey sent the following letter to all of the cattle owning farmers of Hamilton Township in Mercer County:

"Dear Sir:

"We are cooperating with the U. S. and New Jersey Departments of Agriculture in their plan to test the cattle of Hamilton Township for Brucellosis — a disease appearing in cattle which can cause severe economic losses. In addition, this disease can be transmitted from cattle to humans where it appears as what is commonly called undulant fever. It should be much to your advantage to know if you have any infected animals in your herd."

"Within a very short time, Dr. Edward Carbrey of Trenton will call at your farm for the purpose of collecting blood samples from your cattle for a brucellosis test. The service will cost you nothing and there are no restrictions attached. The results of the test are for your own information and use. Dr. Carbrey will be happy to answer any questions you might have about this program.

"In the past several years, neighboring counties have instituted this same program with most satisfactory results. We are now able to offer this service to you and trust that you will take full advantage of it."

Agricultural Agent Babbitt of Hunterdon County, New Jersey has used a slightly different method to promote area cleanups by townships. He calls a meeting of the area's dairy leaders who are already in the testing program. Armed with a list of untested herds, a discussion is held and the list of names is finally divided up among those present. Each leader contacts his group explaining the sound reasons for cooperating in order to have clean herds on every farm. New Jersey's one day Dairy Institute held in each of the dairy counties in February has repeatedly afforded some time to explain by discussion, moving pictures and exhibits the facts about the scourge of brucellosis and how it can be controlled.

There is need to get behind a bigger than ever program to finish the cleanup job. There is an abundance of effective ammunition on hand. Several examples may be cited. Losses to the livestock farmers due to brucellosis are estimated to exceed $65 million dollars a year; the milk yield of infected cows is reduced about 22 per cent and the calf crop about 40 per cent; one out of every 5 aborting cows will become sterile; in areas of large dairy cow population where much blood testing has been done the incidence of undulant fever is declining; and in the last 5 or 6 years the number of cases in up-state New York dropped from 250 to 45 cases in a year. The following quotation of Dr. A. K. Kuttler of the Animal Disease Eradication Branch, U. S. Department of Agriculture is particularly appropriate, "When we consider that almost 60 per cent of agricultural income is from livestock and that brucellosis could be eliminated from that stock at a cost of the losses sustained by the livestock industry in any one year, we need no further justification for the expenditures being made for this important project."

C. G. Bradt of the Animal Husbandry Department, Cornell University, recently completed a study of public livestock health programs in the country and issued an encouraging report. He found that all state Extension Services were conducting livestock health programs and that, . . . "brucellosis was the featured project upon which greatest emphasis was being placed. Relationships between extension agents and state and federal livestock sanitary officials were cordial. However, progress was not equal in all areas. Lack of funds, shortage of veterinarians, particularly in the range states, and insufficient extension personnel to do all the jobs waiting to be done were the chief retarding factors noted. The dairy states and dairy areas of the range states were observed as making the greatest advances in eradicating brucellosis. Due to a shortage of veterinarians, some states use trained laymen, working under veterin-

arians, to draw blood, vaccinate calves and run the milk ring test."

The Bradt report clearly indicates that great progress is being made under the country-wide eradication program. Supporting facts are the much lowered infection rates in most states, the wide acceptance of calfhood vaccination, the marked impetus given to testing as a result of adoption of special milk ordinances, the demands by certain milk companies, and last but not least, the attestations of dairy farmers that their cleaned up herds are producing heavier, calving more regularly and without any "abortion blowups" that formerly plagued many an untested herd.

Dr. Raymond Kerlin, in charge of brucellosis eradication in New Jersey reported that less than 4 per cent of the state's cattle are reacting on initial test. Regarding calf vaccination he stated, "The closer we stick to 6 months of age for vaccination the better it will be to get a maximum resistance. At Ideal Farms, Augusta, New Jersey, with its 1400 herd, the largest herd of registered Guernseys in America, many calves are vaccinated every month at or very near 6 months of age and there has not been a reactor for several years."

EXTRAORDINARY LEAFLET

As a part of its educational program, the U. S. Department of Agriculture has just issued Leaflet No. 369, entitled "Wipe Out Brucellosis". It should be in the hands of every cattle owner who has not yet seen the light concerning this disease. It very briefly, yet effectively, explains what brucellosis is, what it does, and why a farmer can not afford to tolerate it in his dairy or beef herd. It does not mince words. One of the concluding paragraphs states, "The most vital contribution you can make toward complete eradication is to arouse interest in the problem among your neighbors. No matter how careful you are with your own herd, you are not safe as long as your neighbors continue to bring brucellosis into the community. No laws, regulations, or program plans can ever be effective unless owners themselves are interested in wiping out the disease. Campaigns on a community or regional basis can and will do the job. Your County Agent or State veterinarian will be glad to help. North Carolina, New Hampshire and Maine are now certified brucellosis free. That proves we can wipe out the disease."

In market milk areas time is running out for dairymen whose herds are not yet being blood tested. In the words of Dr. A. K. Kuttler "apparently there is more need to be reminded than to be converted". In no uncertain terms we must remind herd owners who say blood testing is alright but they won't test until they have to, that such an attitude is decidedly short sighted. For the sake of the health of their herds, the health of their families, the health of the town and city consumers, and as an aid in expanding the sale of their milk and beef for consumption and their cattle as foundation breeding stock, brucellosis must be wiped out.

## NOTICE TO MEMBERS OF IAMFS

**Please, notice letter by H. L. Templeton, Chairman, Membership Committee, on page XI, please, fill out questionaire (page XII) promptly and mail as directed.**

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