

UPDATE ON BRUCELLOSIS

by

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The past year has been one of changes in the brucellosis eradication program. There have been several research efforts of interest to dairymen.

Program Status - Nationwide

Year (Fiscal)	All Cattle Tested	Reactor Rates	
		Marketed Cattle	New Infected Herds
1979	1.11	0.5	14108
1978	1.16	0.54	14657
1977	1.14	0.53	14331
1976	1.29	0.66	16910

The milk ring test (BRT) was positive in 0.26% of the dairy herds and 348 infected herds were located by this surveillance method. There were approximately 6600 herds under quarantine at the end of 1979. There was an increase in calves vaccinated by 1.1 million to a total of 5.2 million. The number of human cases of brucellosis reported to the Communicable Disease Center was approximately 175, the lowest since records were kept. However, in 1980 the number so far is over twice that of last year.

The national budget for brucellosis eradication was approximately \$78 million.

Program Status - Florida

At the end of March 1980, there were 717 quarantined herds (3.7%). There has been a decrease in reactors in dairy herds:

Year	No. Tests	Reactors	%
1979	428,815	4079	0.95
1978	385,581	5743	1.49
1977	584,383	8090	1.38
1976	667,039	8353	1.25

There were 44,157 dairy cows and 35,394 beef cows adult vaccinated in 1979. To date, there are 122 dairy and 124 beef herds adult vaccinated. Of these, 22 dairy (18%) and 17 (14%) beef herds have been released from quarantine.

In a recently published report on dairy herds vaccinated in Florida and Puerto Rico, there was an 87% reduction in reactors removed on the third post-vaccination test when compared with pre-vaccination losses. Among culture positive cows following vaccination, 13.7% were shedding strain 19. This represented approximately 0.45% of the vaccinated cattle (reduced dose). If permitted to remain in the herds, approximately 80% of 98 Strain 19 positive cows appeared to recover from the infection.

Changes in Uniform Methods and Rules - February 1980

1. Permits 'V' brand or AV tattoo and eartag
2. Licensing of dealers and required records
3. Retest of previous quarantined herds 6 months after release
4. Requires herds adjacent to infected herds to be tested
5. Provides for release of quarantine and movement of adult vaccinated cows under certain criteria
6. Allows non-infected herds to be adult vaccinated but requires them to be quarantined. Two negative tests are necessary.
7. Terminates present county and state classifications and moves to A, B, and C status on January 1, 1982. Movements of cattle are affected.
8. Permits 2 classifications within a state.

Some Proposed Changes in Florida

1. Requires all herds (except dairy) to test annually
2. Removes the card test as final test in field or laboratory except where requested by herd owner; adds complement fixation to official tests
3. Requires 'S' brand for all untested cattle in markets

Research Activities

1. Diagnostic Tests
 - a. Indirect Hemolytic Test
 - b. Radial Immunodiffusion Test
 - c. Enzyme Labelled Antibody Test
 - d. Automation of complement fixation test
2. Vaccine
 - a. Reduced dose - recent studies showed that there was no difference in protection between 5 groups of cattle when the vaccine was used at the standard dose and diluted beyond 5000 times.
 - b. New vaccine - an extract of strain 45/20
3. Dermal antigens
4. Wildlife - prevalence and pathogenesis