



Update on National Eradication Program Activities

M. J. Gilsdorf
USDA/APHIS/VS





USDA TB Update

January 2006

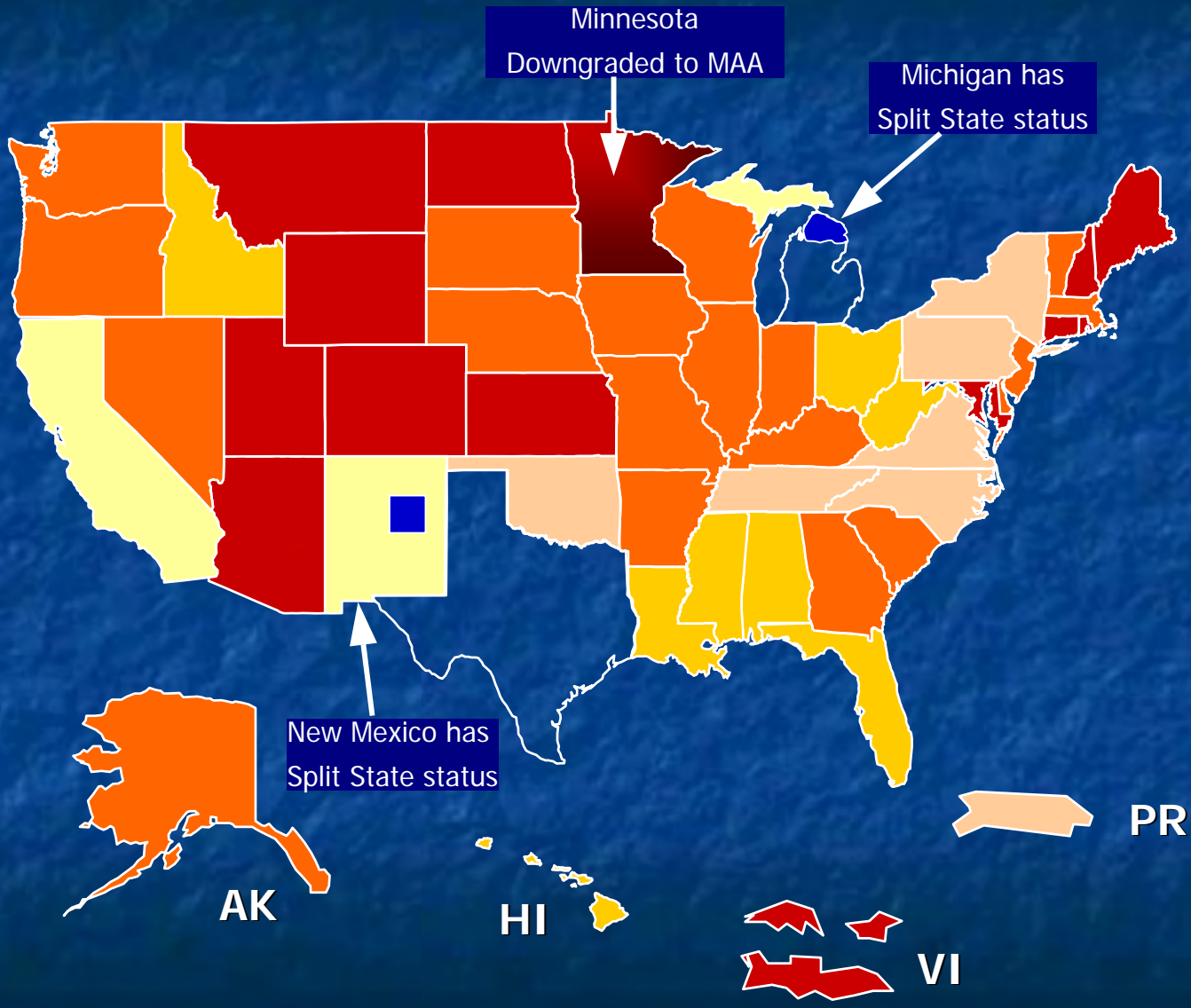
Mick Dutcher DVM

M. J. Gilsdorf DVM



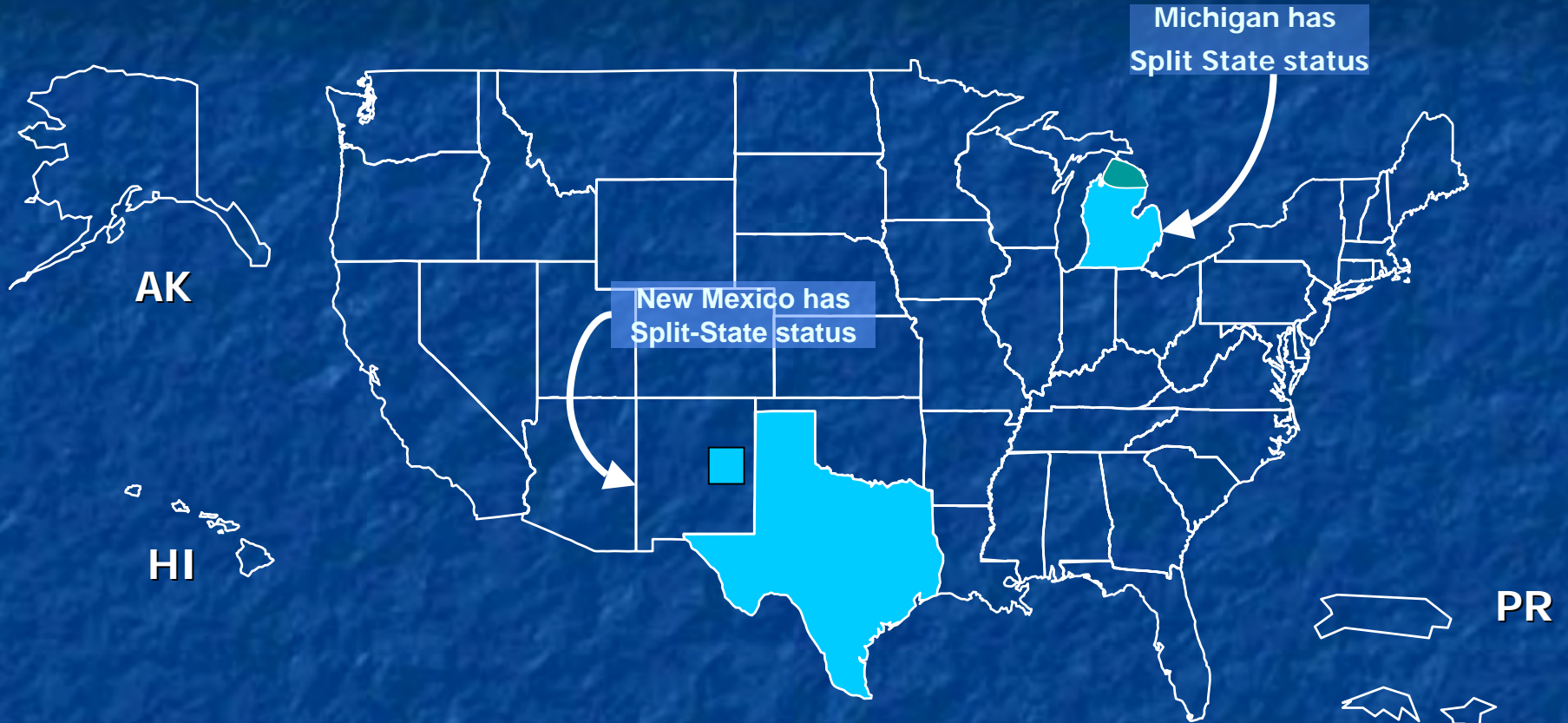
Tuberculosis Freedom in the US


- Over 25 years (14 with USVI)
- Over 15 years (19)
- Over 10 years (8)
- Over 5 years (6 with PR)
- 1 year or less (3)
- Split State Status








Bovine Tuberculosis State Status for Cattle and Bison



 Accredited-free States and Territories (49)

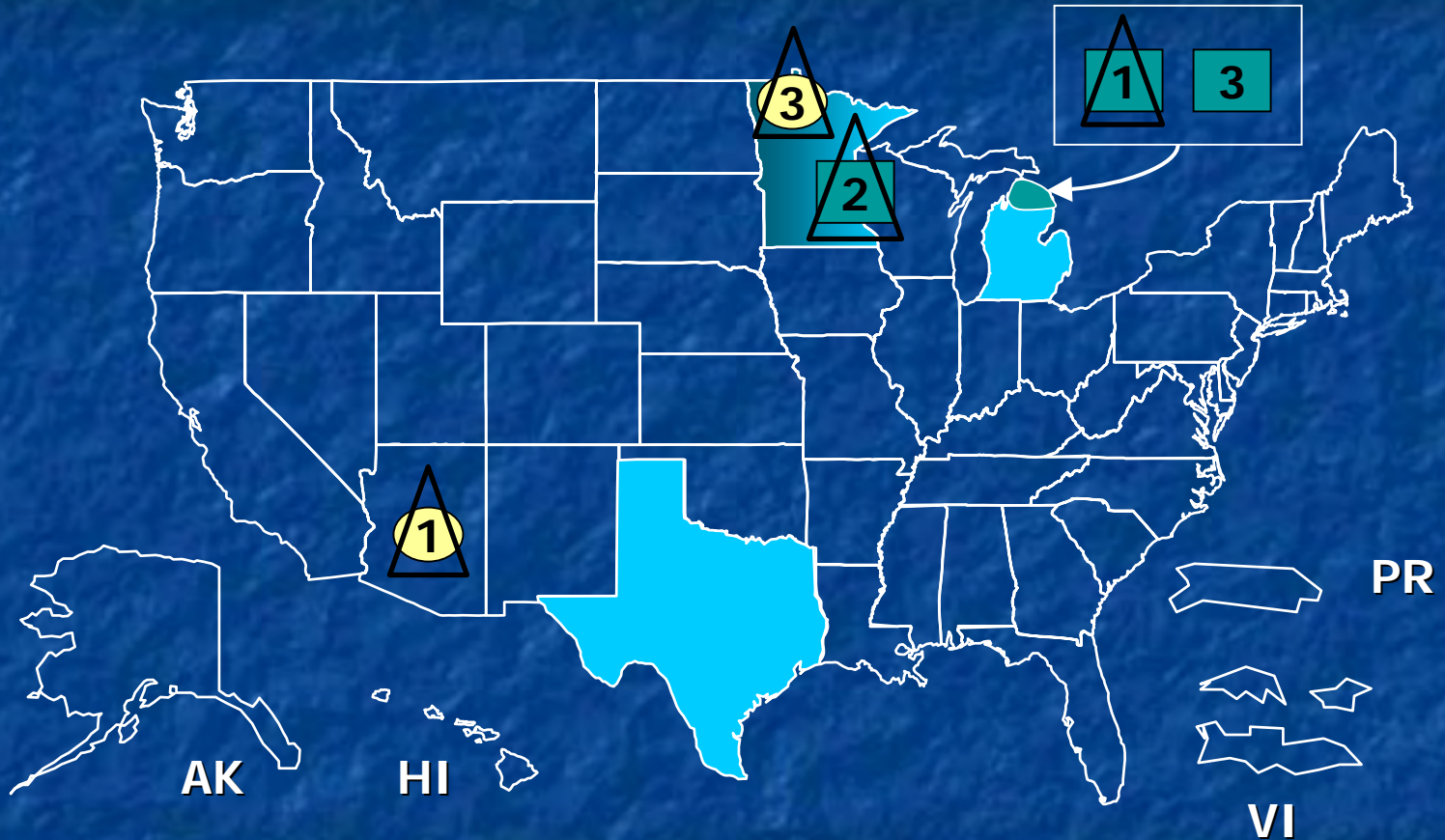
 Split Status State AF/MAA (1)

 Modified Accredited Advanced (MAA) States (1)

 Split Status State MAA/MA (1)



Affected and Exposed Cattle Herds 2005 & 2006



● FY 05 (4)

■ FY 06 (6)

▲ Depopulated (7)



Update: Arizona

- 1 large dairy detected through slaughter surveillance in 2005
- Depopulation completed early in 2006
- Epidemiology is ongoing, source of infection has not been identified yet



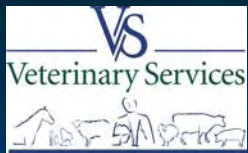
Update: Michigan - 1

- Upper Peninsula granted TB Free status in 2005; State now has 3 zones
- 1100 herds in MA zone tested annually
- Annual tests for 800 randomly-selected herds in the MAA and Free zones



Update: Michigan - 2

- Wild deer prevalence decreasing (0.5% in 2001 to 0.2% in 2004)
- No herds detected in FY 2005
- However, 4 beef herds detected in the Modified Accredited Zone in FY 2006 (2 herds have been depopulated)



Update: Minnesota - 1

- 3 positive herds detected in FY05
 - Last known MN case was 1971
- 2 positive herds detected in FY06
- All herds have been depopulated
- All herds were beef herds; 4 from Roseau County and 1 from Beltrami County
- All affected herds were epidemiologically linked



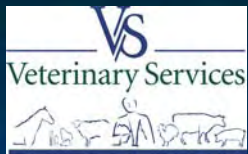
Update: Minnesota - 2

- Epidemiologic Investigation
 - All traces from the index herd reported out; trace testing is underway
 - Epidemiologic investigations and trace reporting of subsequent herds in progress
- MN conducted surveillance in wild deer this fall around affected herds and found 2 affected deer.



Proposed movement requirements from a TB Free state

- (d) Interstate movements. Cattle or bison that are not known to be infected with tuberculosis and that originate in an accredited-free State or zone may be moved interstate without restriction; except that dairy cattle may be moved interstate only if:
 - (1) **They are officially identified with RFID devices prior to leaving their premises of birth; (Those animals that have already left the premises of birth at the time this regulation goes into effect must be officially identified with RFID devices prior to movement from any premises.)**



Proposed movement requirements from a TB

Free state

- (2) They are not known to be infected with or exposed to tuberculosis; and
- (3) They comply with one of the following conditions:
 - (i) The dairy cattle are moved directly to slaughter at an approved slaughtering establishment or through an approved market and then direct to slaughter.



Proposed movement requirements from a TB

Free state

- (ii) The dairy cattle are sexually intact and are accompanied by a certificate of veterinary inspection that states that the herd of origin is currently accredited.
- (iii) **The dairy cattle are sexually intact, are 6 months of age or older and are accompanied by a certificate stating that they were negative to an official tuberculosis test conducted within 60 days prior to the date of movement.**

Cattle Fever Tick Eradication Program Updates



Dr Jo-Ann Bentz Blanco
Michael J Gilsdorf, DVM
USDA, APHIS, VS

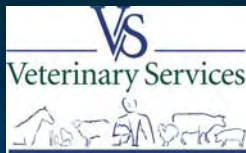


Background

- In 1906, the program was initiated to eradicate the cattle fever tick and the southern cattle tick that transmit babesiosis
- By 1943, these ticks had been eradicated from the U.S. except for a narrow buffer zone—a quarantined area along the Rio Grande from Brownsville to Del Rio, Texas, about 500 miles long and $\frac{1}{4}$ mile to 10 miles wide
- This buffer zone was placed under Federal and State quarantine since re-infestations have continued to occur in the area

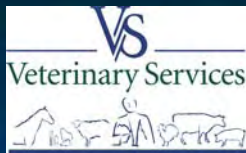
Quarantined Area





Need for the Program

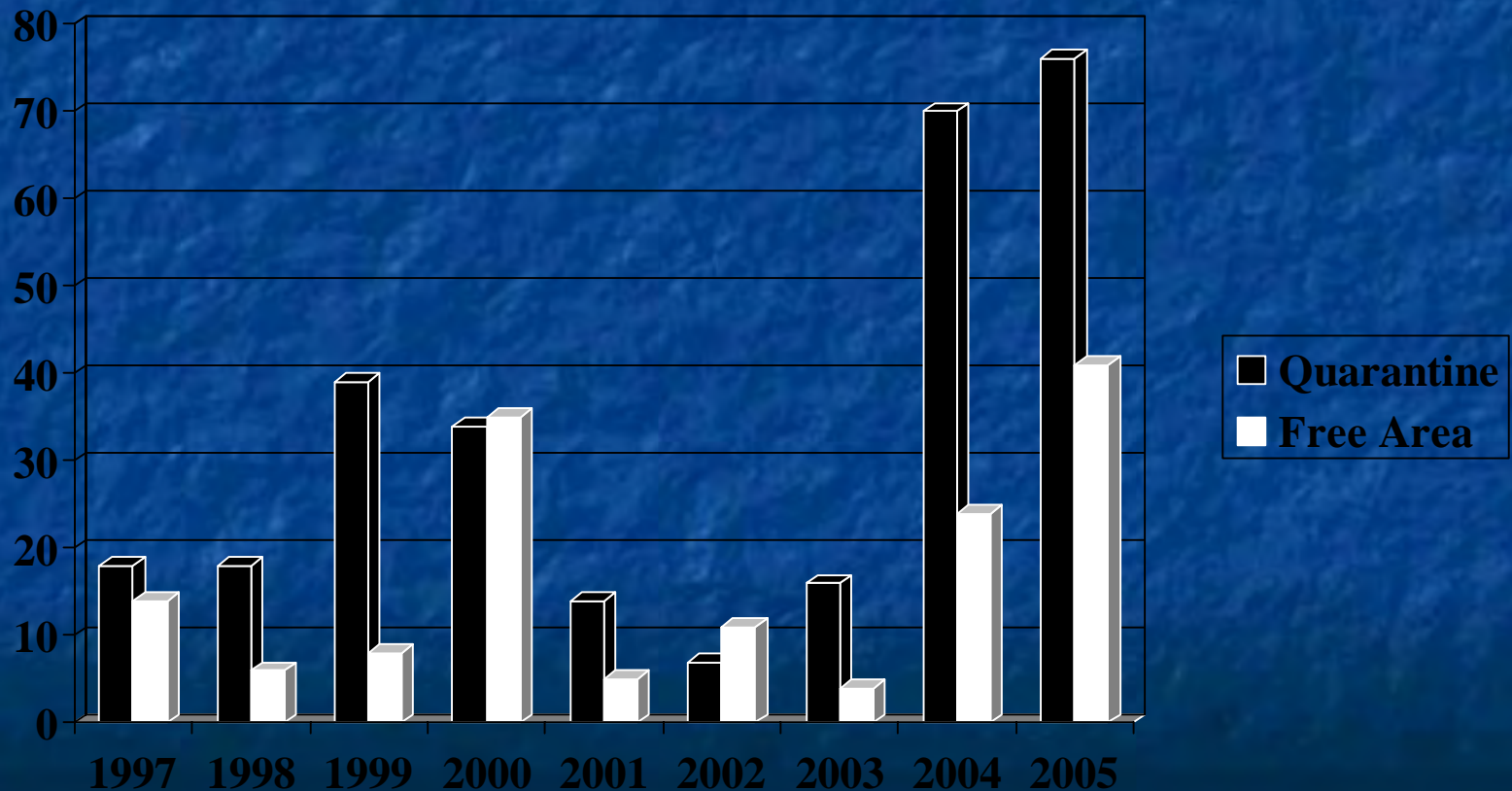
- If re-introduced, ticks and babesiosis would have severe adverse economic effects on the beef and dairy industries in the southeast U.S., from southwest Texas to Virginia, as well as in southern California
- Savings to the U.S. livestock industry due to the eradication of these tick vectors were estimated to be one-half to one billion dollars annually
- An active surveillance and control program prevents the spread of *Boophilus* ticks into free areas of Texas or other U.S. areas



Program Challenges

- Initially, the main responsibility was to patrol the international border within the quarantined area and intercept any stray or smuggled animals that may have entered from Mexico
- Since 1967, tick outbreaks in areas north of the quarantined area have occurred with increasing frequency
- Since 1980, the number of tick inspectors has decreased from 160 to 61 permanent and 5 temporary inspectors, 7 work area supervisors, and 2 assistant directors
- Thus, workload of inspectors has significantly increased, diverting resources away from river patrolling

Fever Tick Infestations FY 1997-FY 2005



Critical Threats

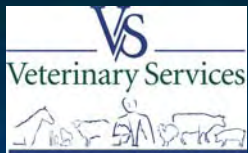
- Acaricide resistance:
Acaricide-resistant ticks from Mexico would render the U.S. acaricide-dipping program ineffective and limit the options available for the eradication of outbreaks
- Identification of the whitetail deer and other ungulate wildlife as tick hosts





Addressing Challenges

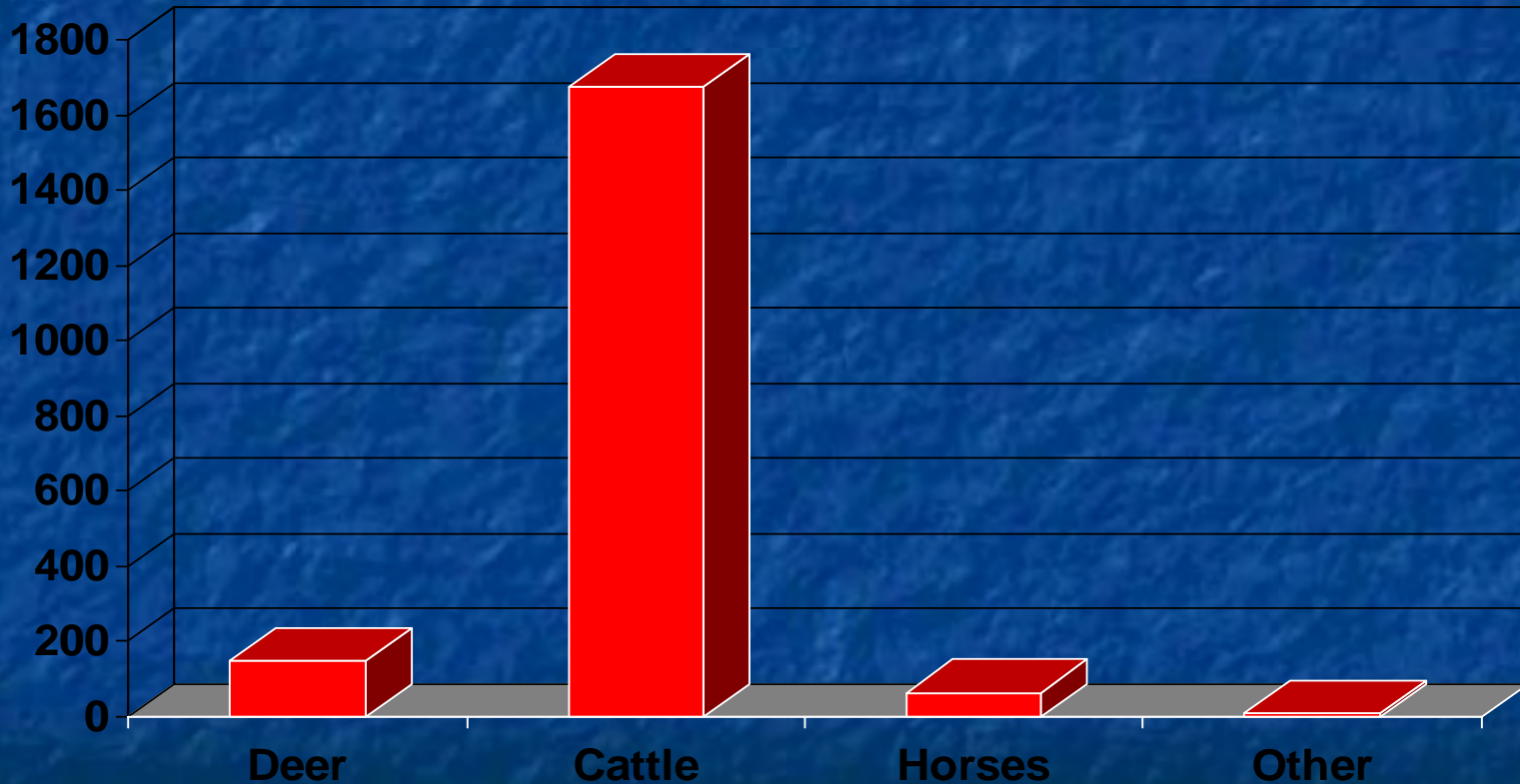
- To address the challenges, the Tick Force Working Group has developed a national strategic plan for the cattle fever tick eradication program for FY 2006-2011
- The strategic plan contains the mission statement, program vision, and five program goals
- The program goals identify objectives and action items to accomplish each goal, along with estimates of the additional cost to accomplish the program's mission



Are White-tailed Deer and Other Wild Ungulates Compromising the APHIS-VS Cattle Fever Tick Eradication Program?



Fever Tick Identifications to NVSL 1976-2004







Systemic Control - Field Trials with Ivermectin Medicated Whole Kernel Corn

- ***Kerr Wildlife Management Area, TX*** – Four year study achieved greater than 91% control of free-living adult and nymphal lone star ticks
- ***Apache Ranch, TX*** – In 1992, treated a herd of 30 wild elk, and eradicated cattle fever ticks on this 6,500 acre ranch for the first time since 1956
- ***Catarina Ranch, TX*** – In 1997, treated wild white-tailed deer on 22,000 of the 40,000 acre ranch, and eradicated cattle fever ticks for the first time ever on record (dating back to before 1936)

The '4-Poster Deer Treatment Bait Station





Field Trials of '4-Poster' Deer Treatment Bait Station Technology

- ***Kerr Wildlife Management Area, TX*** – Four year study achieved greater than 91% control of free-living adult and nymphal lone star ticks (used 2% amitraz)
- ***USDA Northeast Area-wide Tick Control Project*** – Five year study with sites in MD, NJ, NY, CT, and RI achieved 63 to 81% control of free-living nymphal blacklegged ticks and 89 to >99% control of free-living nymphal lone star ticks (used 2% amitraz)
- ***Goddard Space Flight Center, MD*** – Three year project achieved >98% control of free-living nymphal blacklegged ticks (used 10% permethrin)

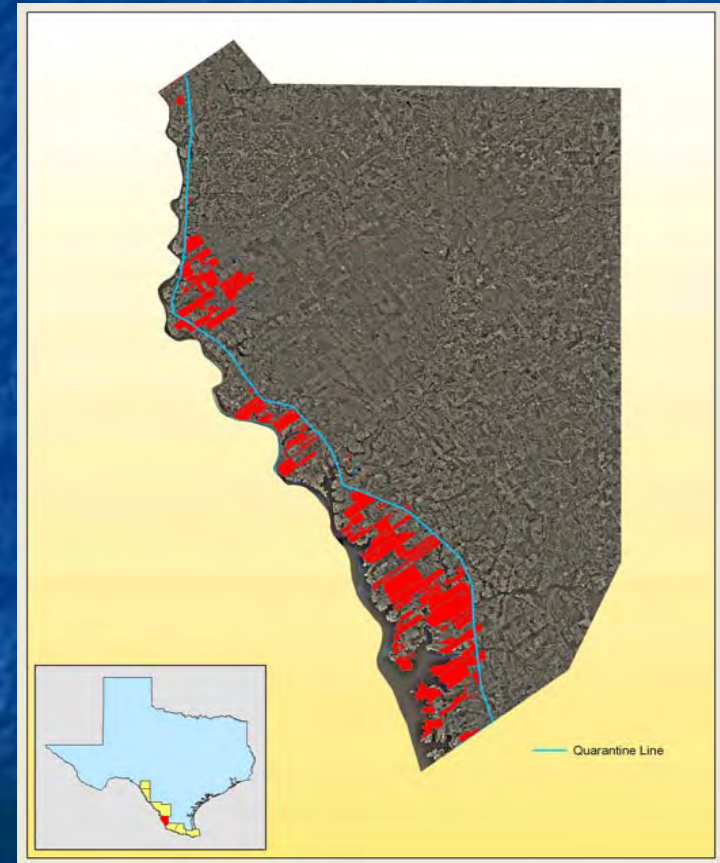
FY 2004 and 2005 Infestations

FY 2004

63 Infestations

FY 2005

62 Infestations





FY 2004 and 2005 Adjacent Quarantines

FY 2004

63 Infestations

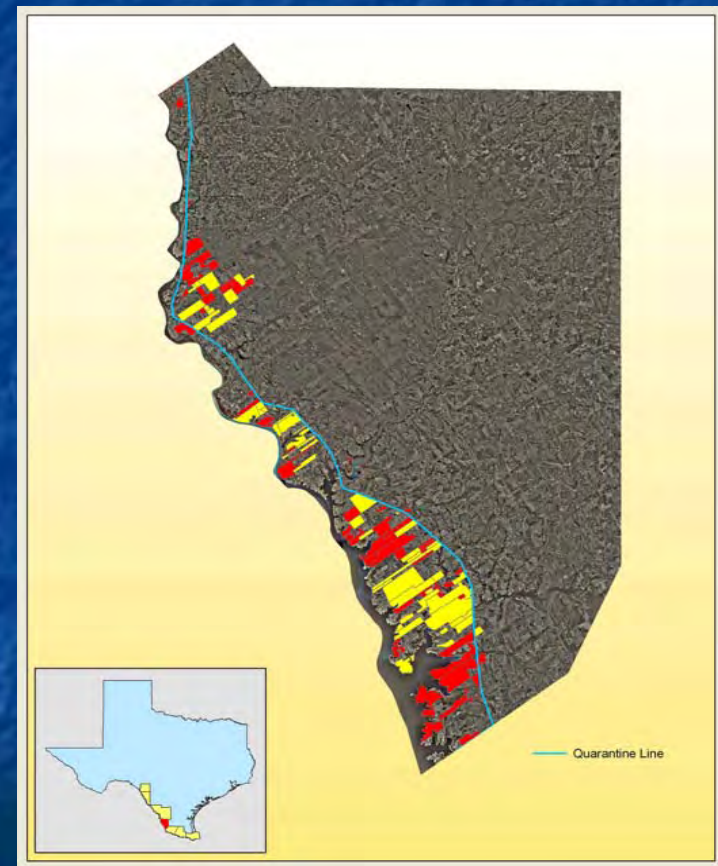
117 Adjacent Quarantines

FY 2005

62 Infestations

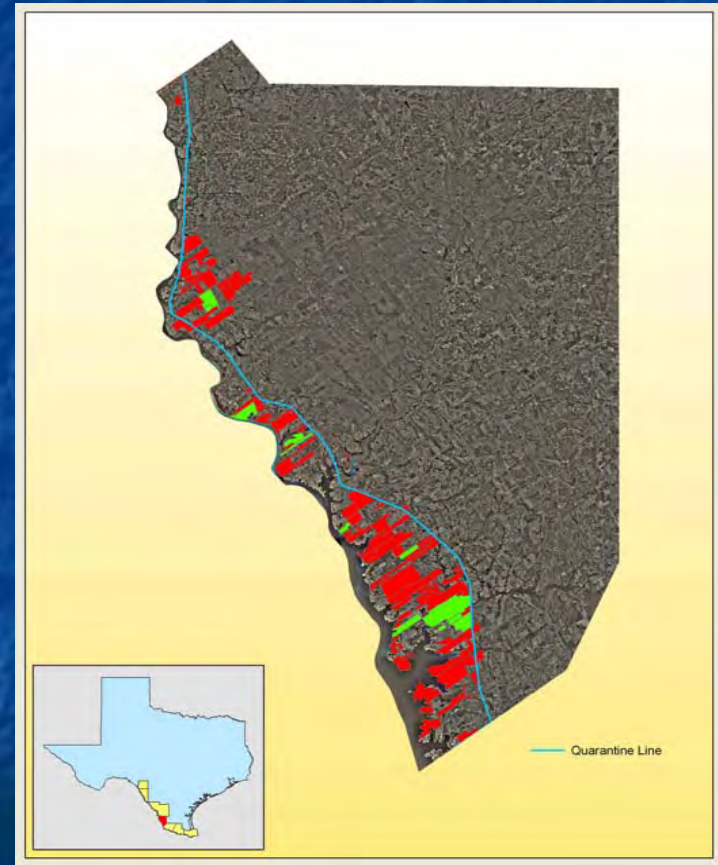
95 Adjacent Quarantines

56 Adjacent Quarantines
became Infested



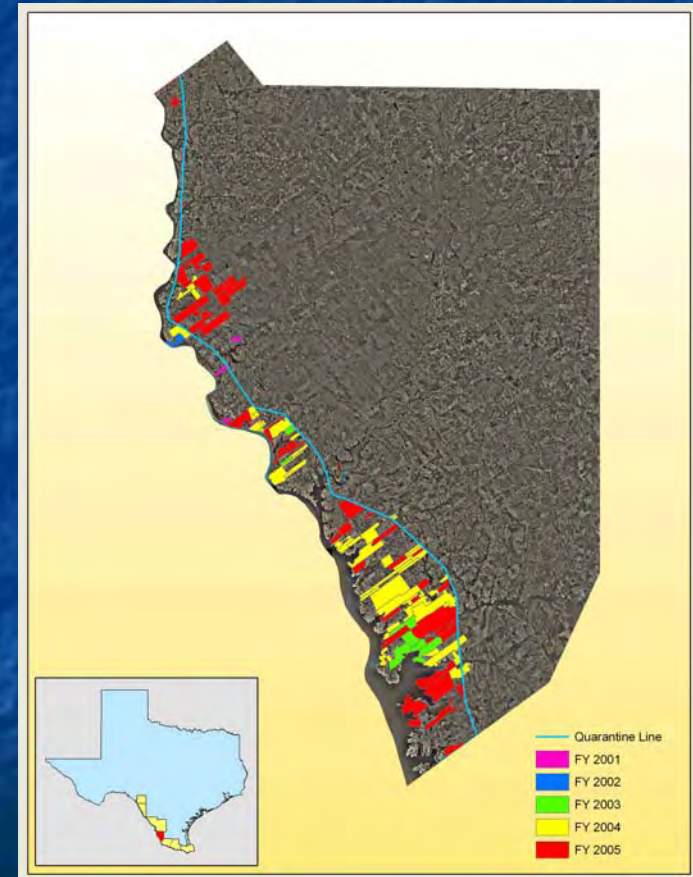
FY 2004 and 2005 Re-Infestations

12 Premises became reinfested during FY 2004 and 2005



Zapata County Infestations

- FY 2001 – 10 infestations
2 Free Area
8 Quarantine Zone
- FY 2002 - 2 infestations
2 Quarantine Zone
- FY 2003 – 8 infestations
8 Quarantine Zone
- FY 2004 – 63 infestations
11 Free Area
52 Quarantine Zone
- FY 2005 – 62 infestations
19 Free Area
43 Quarantine Zone



Exotic Ungulates

(Nilgai, black buck antelope, red deer)





Conclusions:

- There is a growing body of evidence that, as viable hosts, white-tailed deer and other wild ungulates are aiding the spread and maintenance of fever ticks in the quarantine zone and free area of South Texas.
- When properly deployed and maintained, medicated bait and the '4-Poster' technology can significantly reduce or eliminate fever ticks feeding on these hosts.



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Johnes Program Update

USDA APHIS Veterinary

Services

*Michael J. Gilsdorf, Director, Ruminant Health
Programs, National Center for Animal Health Programs*

*Michael Carter, National Johnes Coordinator,
VS NCAHP RHP*



Johne's Disease Control Program Update

- FY 2006 – APHIS received ~ \$13,057,000
- APHIS distribution ~ \$6,496,000 to States for:
 - Education
 - Producer incentives
 - Laboratory and data infrastructure
 - National demonstration project- 17 States: \$1,280,000
 - Field studies-methods validation-



Yearly Progress

	2002	2003	2004	2005	2006
Advisory committees	41	42	44	47	48
# States in compliance with VBJDCP at the beginning of year	22	34	36	43	48
# Herds in VBJDCP	3254	4722	6,189	7,876	8078*
Total Status Herds	631	543	993	1,472	1,630*
ELISA Tests	614,210	549,810	673,299	697,264	114,157*
Cultures	100,403	97,057	101,786	105,685	12,344*

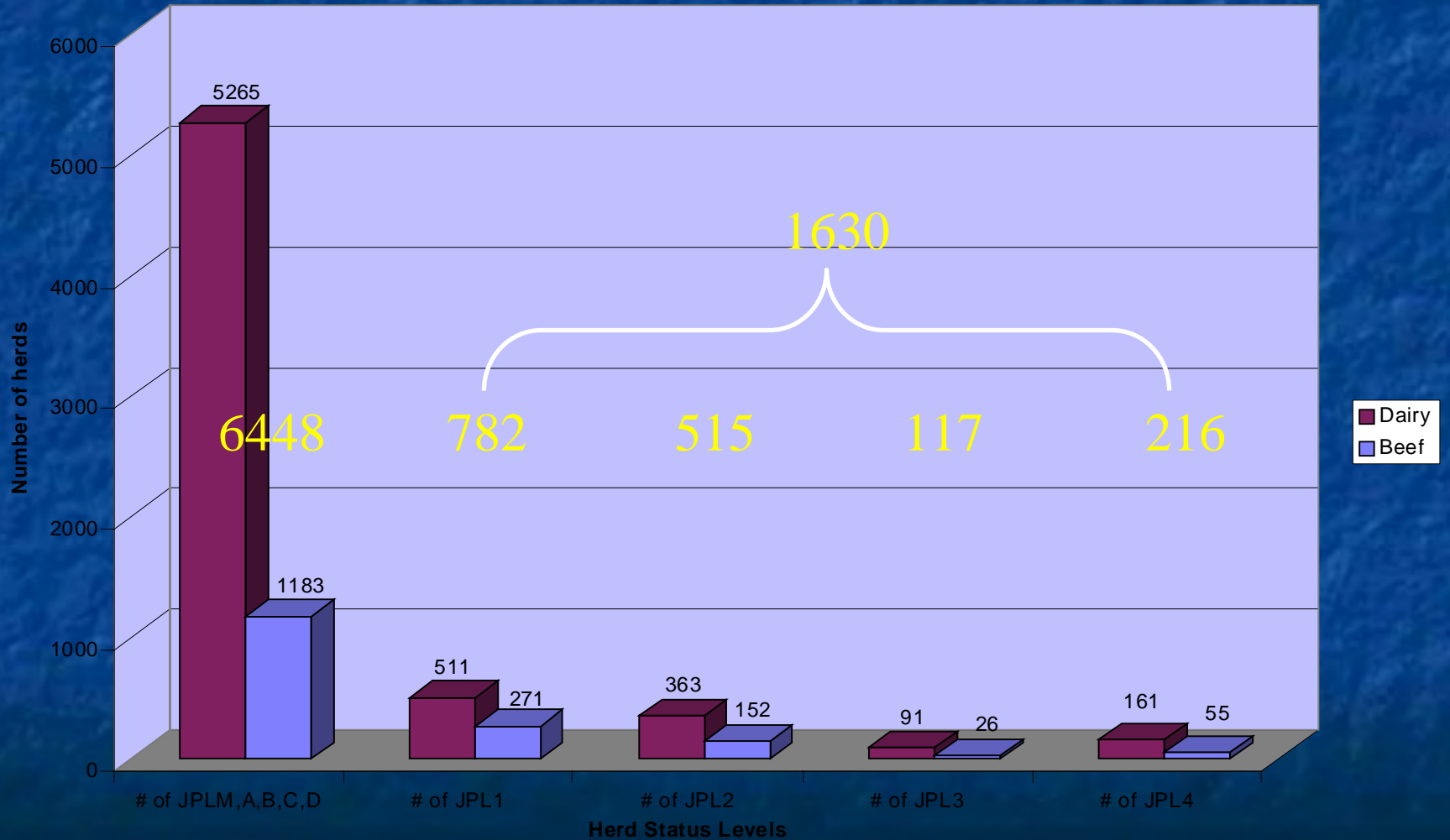
*First quarter reported

VBJDCP=Voluntary Bovine Johne's Disease Control Program



Break Out of Enrolled Herds

All Enrolled Herds
Updated 2/9/05





Approved Laboratories – FY2006

- Serology – 79 laboratories including 8 international
- Fecal Culture (includes all culture methods) - 58 laboratories including 5 international
- PCR Methods - 18 including 5 international



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Brucellosis Program Update

*Michael J. Gilsdorf, Director, Ruminant Health Programs,
National Center for Animal Health Programs*

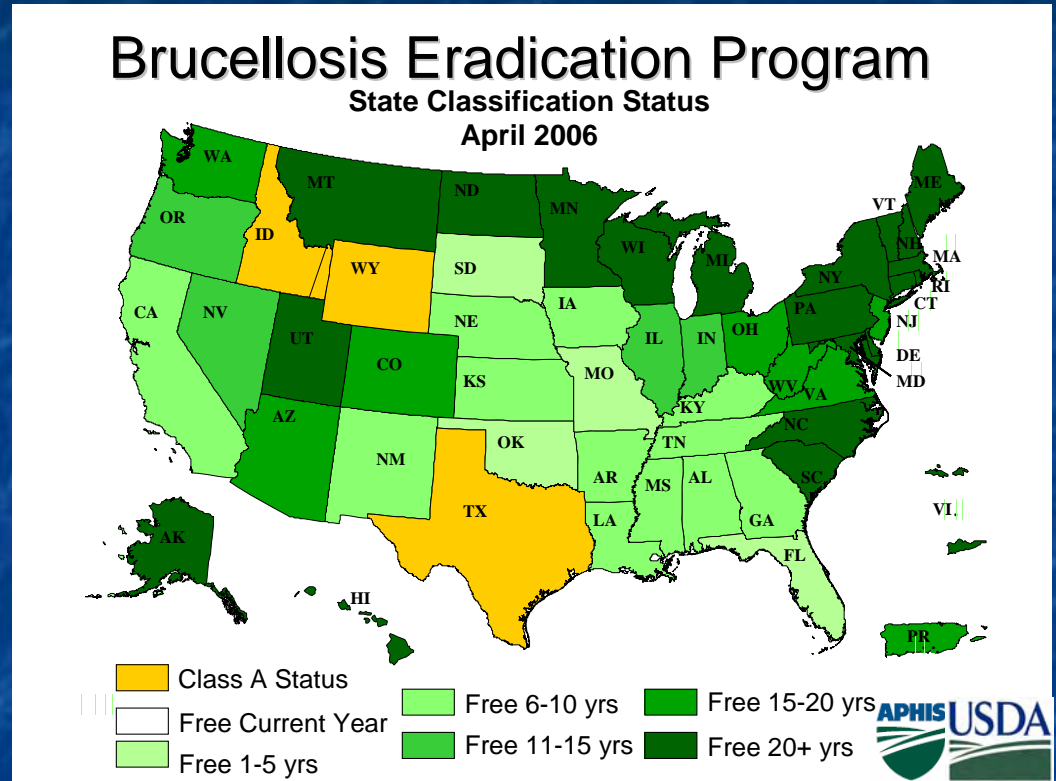
*Debbi A. Donch, National Brucellosis Epidemiologist,
VS NCAHP RHP*



State-Federal Cooperative Brucellosis Eradication Program

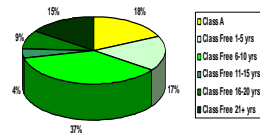
Current Status

- 47 States, Puerto Rico, and the Virgin Islands are Brucellosis Class Free.
- 3 States – Texas, Idaho, and Wyoming are Brucellosis Class A.

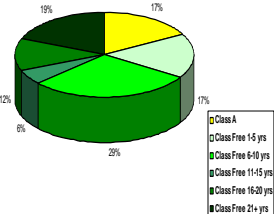


State-Federal Cooperative Brucellosis Eradication Program

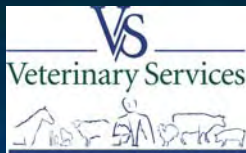
Distribution of U.S. Cattle by Brucellosis State Status



Distribution of U.S. Cattle Herds by Brucellosis State Status



- 17.97% of the U.S. cattle population resides in the three Class A states = 16.82% of the U.S. cattle herds.
- 15.25% of the U. S. cattle population resides in the 20 states that have been Class Free for 20+ years = 18.72% of the U.S. cattle herds.



State-Federal Brucellosis Eradication and Surveillance Program

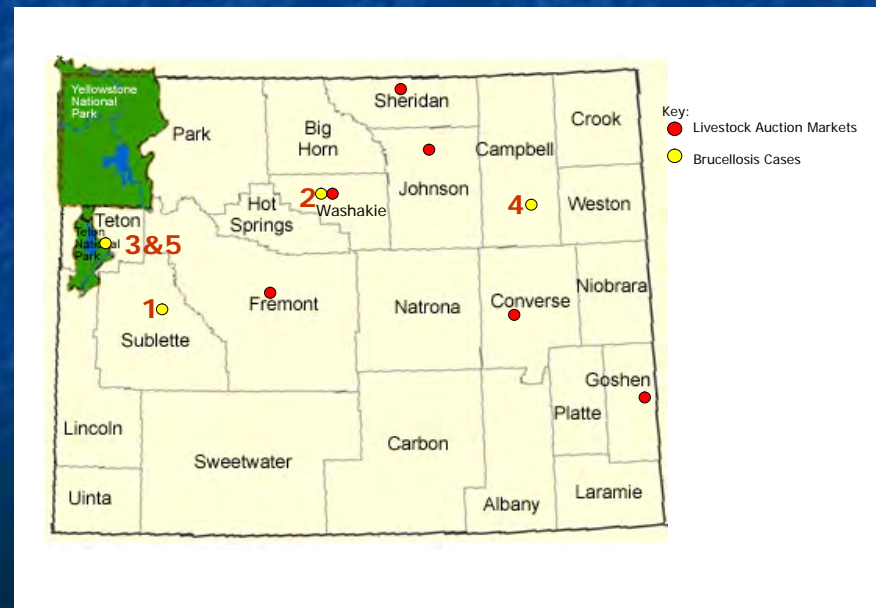


Texas

- Class A since August 1994.
- Last affected herd disclosed in August 2005 – is under quarantine and test = **X**.
- January 2005 affected herd depop'd = **X**. Cultured *B. abortus* and *B. suis*.

Wyoming

- Re-classified from Class Free to Class A in February 2004.
- Last affected herd depopulated in December 2004.
- State program review conducted in July 2005.
- Preparing response to review recommendations.
- Producer concerns regarding herd quarantines if affected wildlife exposure.



State-Federal Brucellosis Eradication and Surveillance Program

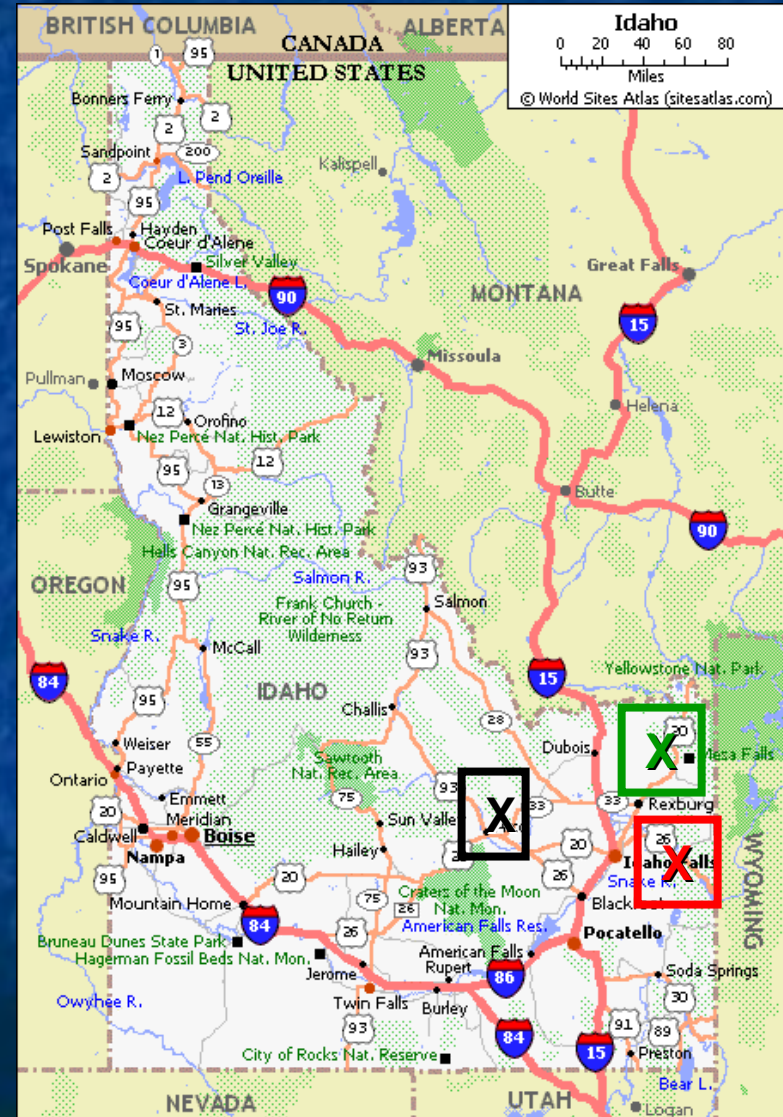
Idaho

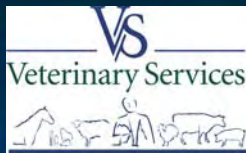
- Re-classified from Class Free to Class A in February 2005 after disclosure of two affected herds in November 2004:

X = Index herd – depopulated with indemnity; most likely source of infection = infected elk in the area.

X = 2nd herd (trace-out herd) - depopulated with indemnity.

- No additional affected herds disclosed to date. Formulating plan to regain Class Free status.
- 2002 affected cattle herd = **X** commingling with infected elk herd in the area.
- Recent finding: RB51 titered vaccinate: USDA/APHIS/Vs purchasing this cow for further study.





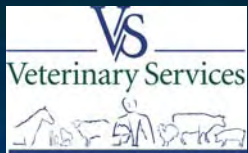
Regulatory Activities

- Amendments to 9CFR Part 78:
 - ✓ Change cattle to “cattle and bison.”
 - ✓ Add wildlife mitigation plan requirement.
 - ✓ Add research in Class Free state – state status.
 - ✓ Add cervid program requirements.
- Standard culture protocol: Implement a standard protocol for the collection, submission, processing and handling of suspected *Brucella* spp. diagnostic specimens and cultures – being reviewed by Labs.



Regulatory Activities

- Wildlife Policy:
 - ✓ VS' animal health policy in relation to wildlife.



Wildlife Policy

- The fundamental goal of VS is to prevent, control, or eliminate infectious agents/diseases/vectors in animal agriculture and wildlife, as appropriate.
- All VS activities related to wildlife will be conducted in collaboration with Federal, Tribal, and State wildlife agencies.



Wildlife Policy

- In cases where VS policy supports eradication of an infectious agent/disease/vector, VS will seek collaborative measures, through (1) movement and testing requirements; (2) herd plans; and (3) emergency response plans, to keep wildlife and livestock apart and to eradicate the disease from all potential reservoirs when eradication is deemed technically feasible.



Wildlife Policy

- Regardless of the current official disease status of a State or zone, the program will require States or zones to include effective efforts to survey, prevent, control, and eliminate the causative agent/vector from wildlife to lower the risk to livestock.



Specific Issue Projects

- Brucellosis Program Surveillance Plan – NSU tasked to formulate effective and efficient future surveillance plan.
- Brucellosis Laboratories – Workgroup formed to assess and study ways to restructure the nation's Brucellosis laboratory system for greater efficiency.
- Vaccine Use White Paper – *"Vaccine Use Following Brucellosis and Pseudorabies Eradication"*
- Recognition of the northern part of Sonora, Mexico as equivalent to Class A status.



GYA – Montana Update

- Implemented hunting season – 50 head
- No bison management operations by MT during hunting season
- YNP captured bison on North side
- APHIS hauled 849 to slaughter &
- 87 bison calves to the quarantine feasibility study facility



GYA – Montana Update

- MT Dept. of Livestock
 - Captured 59 bison to date after the hunt
 - 50 – Slaughtered
 - 9 – Released



GYA – Montana Update

- Gov. Kempthorne nominated to be Secretary, Dept. of the Interior
- MT Dept. of Livestock
 - Lethal Removals – 7 head
 - Hazing ops – 43
 - YNP bison population still > 3000 head



GYA – MOU Update

- The latest draft is being reviewed by the signatory agencies



Bison quarantine feasibility study

- 100 bison calves placed in facility
- 3 bison calves have seroconverted and have been removed
- Vaccination – none thus far this year



GYA – Wyoming Update

- WY has applied for Class Free classification
- Elk capture & test pilot study initiated
- Approx. 36% seropositive
- 54 – Slaughtered
- Dealer registration law passed WY legislature



GYA – Idaho Update

- Two brucellosis affected cattle herds identified in 2005
- Probable source of infection -- elk
- Idaho lost its Class Free classification