Comments on Bovine Tuberculosis
December 2008

This document summarizes comments, ideas, and suggestions that were submitted in writing to USDA officials during or around the time that public listening sessions were being held on the future of the national bovine tuberculosis (TB) program. However, these comments, ideas, and suggestions were not submitted in connection with a particular listening session.

Description of Respondents

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Education and Outreach

APHIS Summary/Interpretation of Comments and Suggestions:
Education for producers on biosecurity practices is needed.

Comments:

- Our education partners must do a better job of teaching appropriate biosecurity practices to producers. (State Official)

Funding

APHIS Summary/Interpretation of Comments and Suggestions:
Options that include the producers/industry for funding an indemnity program should be considered.

Suggestions:

- Consider creating a producer/industry funded program to cover indemnity costs. Funds might come from market check-off, scale fees, feed surcharges, etc. (State Official)

Imports and Mexican Cattle

APHIS Summary/Interpretation of Comments and Suggestions:
Livestock imported from countries not free from bovine TB need to be tested, utilizing stricter regimes than are currently used to test U.S.-bred cattle. Imported animals should be tracked through the system over their lifetime or restricted to quarantined feedlots for direct movement to slaughter houses.

Comments:

- USDA has, at best, a perception issue and maybe a real concern to address with the cattle industry in regard to the continued importation of cattle infected with TB from Mexico. Many are concerned that it is this continued importation of Mexican cattle that is the cause of the TB recurrence within the U.S. cattle herd. In some cases, due to poor biosecurity and management breakdowns within herds that import these cattle, they may be right. The argument that carries the most weight with me is that these cattle are being tested with the same technology used in this country in areas and herds with higher infection rates than are found here in the U.S. Clearly, the lesson should be learned that when challenged, the testing regimes currently available fail miserably. The question then becomes why do we continue to import live animals that surely are not the same health status as U.S. cattle with respect to TB? (Producer)
- The vast majority of bovine TB cases are Mexican strain TB. (State Official)

Suggestions:

- Feeder cattle imported from Mexico must be permanently identified and restricted to quarantined feedlots for direct movement to slaughter only. (State Official)
- Progress towards eradication might benefit from a mandatory negative pre-movement test for all cattle 60 days old and older, not going to approved feedlots over a 2-5 year time period coupled with restrictions of Mexican feeder cattle. (State Official)
- The U.S. needs to require that cattle imported from countries not free from bovine TB are tested prior to entry in the U.S. and ensure that facilities where these cattle are raised in the U.S. are adequately monitored, and consideration should be given to annual testing of those facilities. Livestock originally imported into the U.S. must be traceable throughout their lifetime. To avoid potential spread to U.S. breeding stock, requirements should be drafted whereby imported cattle from countries not free from TB are properly segregated from U.S. breeding stock. Appropriate enforcement measures need to be part of such requirements. (Producer)

Indemnity/Depopulation

APHIS Summary/Interpretation of Comments and Suggestions:
Funding for indemnification is inadequate; USDA needs to consider the value of breeding stock and herd size when considering whether to depopulate a herd. USDA needs to consider alternatives to whole-herd depopulation as the only disease control/risk management method for bovine TB.

Comments:

- Changes in herd sizes and the value of breeding stock in the U.S. make the current practice of whole-herd depopulation, with indemnification untenable, as the USDA TB program managers have learned and relearned recently in California, Minnesota, Michigan, New Mexico, and Indiana. In my opinion indemnification is untenable due to inadequate funding to support the program as it is currently designed. (Producer)
- Dairy cattle prices are significantly higher than beef cattle, and herds tend to be larger which results in higher indemnity costs even though fewer dairy herds are infected. (State Official)
- We would encourage USDA to consider whether or not it is necessary to depopulate an infected herd. Depopulation is costly and may not be achieving the desired results. (Producer)
- I can imagine a rubric being developed based on herd size, commercial value of the animals, specific management and testing history of the herd, environmental factors, type of housing, etc., that would give USDA and State officials enough latitude to work with herd owners with affected animals to meet the goal of disease eradication within the herd and eliminate disease transmission risk to other herds. (Producer)

Suggestions:

- Although eradication is the ultimate goal, research should be conducted on the need of whole-herd depopulation in order to resume business and become TB free. This should take into account the prevalence of infection in the herd, livestock movements in and out of the farm, and livestock purpose (meat, milk, genetics, etc.). (Producer)
- While in many cases, whole-herd depopulation is likely the best method to deal with a TB infected herd, USDA needs to have more than one disease control/risk management option when working with this disease and the diverse herd types found within the U.S. (Producer)

Public Health

APHIS Summary/Interpretation of Comments and Suggestions:
USDA needs to consider the impact on public health of reduced efforts to eradicate bovine TB.

Comments:

- Our human counterparts have not been as effective in controlling human TB. One may wonder if this is not at least partially due to decreased international health requirements and reduced use of quarantine for human disease control. (State Official)
- Will our public health partners let us reduce our efforts to eradicate bovine TB? (State Official)
- Consideration needs to be given to the impact of TB on human health. (Producer)
- My family was exposed to *M. tuberculosis* several years ago and I found the literature in human medical texts interesting. Apparently, when people are exposed to the organism, the host-bacterium interaction takes one of three paths. The host destroys the organism and becomes sensitized, the host contains the organism and lesions may be seen but no clinical disease is seen and the host is sensitized, and third the organism multiplies; clinical disease is seen and the host becomes infectious when lesions open into the respiratory tract etc. It would seem to me a similar course happens in cattle. Essentially, only one-third of truly exposed humans become infectious. (Producer)

Regulations

APHIS Summary/Interpretation of Comments and Suggestions:
The language in the UM&R needs to be reviewed and potentially updated to take into consideration differences in testing and quarantine standards set by the various states and herds that are genetically unique.

Comments:

- The language within the Uniform Methods and Rules (UM&R) is very proscriptive for obvious reasons; however, this is also very confining relative to making reasonable, cost effective plans with herd owners to eliminate the disease from the herd, keep the majority of the animals "safe", i.e. alive, and to test negative and viable production units. (Producer)
- Further, ABS Global's recent involvement in a traceback from an affected herd in California revealed another serious flaw in the current TB eradication program. The State can require more stringent testing and quarantine standards than the UM&R for TB, with little regard for the current TB test status of the herd, herd biosecurity and management, and no regard for the value of the TB testing performed by the accredited veterinarians. The language within the UM&R as well as political considerations all fuel this behavior. (Producer)

Suggestions:

- I do feel that with any program changes USDA determines to make to the UM&R for TB, there needs to be open recognition that there are multiple herds within the U.S. that are genetically unique, representative of over 60 years of intense genetic selection by cattlemen in the U.S. and Canada and whose germplasm is in high demand throughout the world. These herds are intensively monitored for diseases of concern in international trade in germplasm and are tested intensively for TB before entry, in quarantine and once resident in these herds. These herds deserve special consideration within the UM&R for TB, and the argument could be made that these herds have a UM&R developed solely for their management, should a TB incursion happen again in one of these herds. (Producer)
- Any changes in the program must be done in the *Code of Federal Regulations* (CFR). APHIS' Veterinary Services (VS) memorandum should only be used for minor policy interpretation, and should be incorporated in the next CFR change. (State Official)

State Status

APHIS Summary/Interpretation of Comments and Suggestions:
Include State trading partners in decisions on control efforts; consider utilizing regionalized zoning or zoning within a State. Consider applying measures regarding identification and testing for animals moving within or outside the zone to mitigate the impact on a whole State and to reduce concerns over State status.

Comments:

- Of critical importance is the TB status of individual states with affected herds. I am not familiar enough with all the issues that need to be addressed in this area, but can say that State Veterinarians and their TB epidemiologists don't behave rationally or scientifically, and they appear to be more interested in protecting themselves and state status than working with affected herd owners. It is this behavior that forces herd owners to threaten administrative reviews of quarantines and hire attorneys to protect their legal rights and businesses. (Producer)
- The economic impact due to the loss of State status may be greater than the economic impact of the disease at this time. Whether or not that remains true if infection continues to spread remains to be seen. (State Official)
- Regionalization not based on political boundaries may require changes in State law outside of animal health laws for recognition and/or inclusion. (State Official)
- If herd owners opt to utilize a test-and-remove herd plan, some means of reducing the impact on other herds in that State must be found unless the State classification system is abandoned, which may lead to different consequences or problems. (State Official)
- USDA should evaluate the ability for areas in the country to be zoned for a specific disease (such as TB) and apply appropriate measures regarding identification, testing and movement of animals within a zone and animals moving to a location outside a zone. (Producer)

Suggestions:

- In an infected State, major State trading partners must be included in reviews of control efforts and decisions on State status or split-State status. (State Official)
- Criteria for split-State status must be defined in the CFR. (State Official)
- Movement requirements between zones within a split-status State should be equivalent to interstate movement requirements for the same status levels. (State Official)
- There has been conversation about the need for zoning of affected areas to mitigate the impact on a whole state when TB is discovered. Perhaps TB-free zones could be determined as tracebacks are accomplished. (Producer)
- The program should permit more flexibility in dealing with specific herd situations. (State Official)

Testing

APHIS Summary/Interpretation of Comments and Suggestions:
Timing of testing, methods of testing, accuracy of testing, and the use of comparative testing should all be considered to help limit the number of animals being disposed of unnecessarily because of inaccurate test results.

Comments:

- Programs of note that have not been successful include those found in New Zealand and Europe, especially the TB program in the UK. The reasons for these program failures are plentiful. Real reasons need to be sorted away from the excuses and complicating factors commonly heard when these programs are reviewed. My personal observations are confined to the TB program in the UK. This program's current flaws include poor compliance with proper testing technique; inappropriate testing frequencies given the level of infections in dairy and beef herds nationally; inappropriately short quarantine periods and testing frequencies after finding active TB in a herd; and a lack of proper funding in areas (resulting in testing-and-removal of individual animals, rather than whole-herd depopulation), that could have reduced or eliminated TB from an area. (Producer)
- I am of the opinion that the overall problem in eradicating TB is multifaceted and includes a lack of continued annual, biannual, or triennial testing of dairy herds as part of milk marketing ordinances and the lack of testing beef herds with any regularity, (Producer)
- Other concerns are the need for more accurate methods of testing. Most of our tests are as old as the USDA TB program. (Producer)

Suggestions:

- Testing calves within 60 days of shipment does not give producers enough time to market calves. This rule should be changed to a minimum of 120 days since some producers background their calves for 100-120 days. Also, testing calves around weaning time would be more efficient since some vaccinations could be incorporated at this time. (Producer)
- In regards to whole-herd testing, this could be simplified for producers with different groups within their herd by recognizing a whole-herd test as completed as long as every mature animal on the premises has a current (under 12 months) negative test no matter what the testing date. With the use of electronic identification (EID) tags, this should be a relatively simple process to track. (Producer)
- One of the greatest issues with bovine tuberculosis is the test itself. If a farm is found to have bovine TB, many animals may be destroyed unnecessarily because of the inaccuracy of the test. To limit the numbers of animals being disposed of unnecessarily, a better test needs to be developed. (Producer)
- Another aspect of the TB program that needs revamping is considering the addition of at least two different tests, and a change in the regulations

regarding the use of the comparative cervical test. The gamma-interferon and florescent polarization assay are two tests that need serious consideration for routine use, either as stand-alone tests, or as tests to be used as part of a battery to confirm or refute intradermal test results. I believe the Canadian Food Inspection Agency (CFIA) is using this methodology in Artificial Insemination center herds with very low risk of infections and expensive consequences due to false positive results with intradermal testing. The use of the comparative cervical tests in specific herds as a methodology to increase the sensitivity and specificity of herd testing is another area of change to consider. (Producer)

- Validation of a rapid objective TB test must be expedited. (State Official)
- Veterinarians performing caudal fold (and single cervical Cervidae) tests must be required to meet minimum professional standards such as those in Appendix C of the 2005 bovine TB Uniform Methods and Rules (UM&R). (State Official)
- As a veterinarian with over 50 years of small and large animal practice experience, your article has prompted me to comment on this topic of bovine tuberculosis eradication. I believe that the usual manner of testing suspect and positive herds is neither time-efficient nor cost-effective. The slaughter of animals suspected of having the mycobacterium is simply a reactive control solution, rather than a solution of eradication.

Traceability

APHIS Summary/Interpretation of Comments and Suggestions:
A uniform traceability system is key to identifying problem animals and reducing the overall impact to the livestock industry.

Suggestions:

- One major step we can take to address the changes in agriculture is to implement a uniform animal disease traceability system which will not only help in the case of bovine tuberculosis, but will also allow animal health officials to address other disease eradication efforts. (Producer)
- A critical step in the control of any livestock disease is to have a functioning traceability system. Producers will be most protected if test-positive animals can be rapidly located during a traceback so that costly testing at producer and taxpayer expense can be avoided. A traceability system is key to identifying problem animals and reducing the overall impact on the livestock industry. (Producer)

Wildlife

APHIS Summary/Interpretation of Comments and Suggestions:
The connection between wildlife-livestock contact and the prevalence of TB should be investigated.

Comments:

- There's a lack of appreciation of the level of wildlife-cattle contact now and in the past when TB was much more prevalent in cattle, and may be yet undetected in wildlife. It seems to me that there is at least one and maybe several niduses of TB in the U.S. that are undetected that continue to plague the eradication effort. (Producer)
- Another observation I have made is the history of Michigan's extensive TB infection rate in the cattle population in the past (1920's-1960's) surely exposed deer to TB and was the "seed" that sprouted into extensive TB infections in managed and fed deer populations and re-infection in cattle. (Producer)
- At least two states (Michigan and Hawaii) have an established wildlife reservoir of bovine TB. (State Official)
- If wildlife are excluded from consideration (similar to GYA Brucellosis proposal) this may limit the will of wildlife agencies to address the disease in the wild. An example might be a position by a wildlife agency that essentially states that if TB or another disease no longer impacts our State's livestock industry then we have no reason to control it in the wild. (State Official)
- I wonder if USDA or State officials have studied their past TB infection prevalence by county to get an indication where to focus surveillance, especially those States with very large white-tailed deer populations? (Producer)

Suggestions:

- A definition should be created to delineate when a State is considered to have a wildlife reservoir. (State Official)

Miscellaneous

Comments:

- Agriculture is the one bright star in today's economy. (Producer)
- It is imperative that thought be given to the impact a TB outbreak has on international and interstate trade. (Producer)
- Most of the bovine TB cases are point introductions. Within-herd and between-herd spread has been relatively minimal. (State Official)
- Most of the recent TB herd infections are in beef herds and have been primarily small beef herds. However, the trend of expansion is definitely toward larger herds. (State Official)
- The potential exists to create the equivalent of 50 separate countries if States are not assured that adequate protection from TB infection due to interstate movement is in place. (State Official)
- You are likely aware of ABS Global's experiences with TB in the mid 1960's. This case alone demonstrates that when good science, cautious judgment, commitment to disease eradication, and salvaging a genetically unique population are employed, TB can be eliminated from a herd without a herd buy-out and disposal. (Producer)
- The bovine TB control and eradication program has been around in one form or another for about 90 years. Infection has been reduced from upwards of five percent of cattle in 1900 to a small number of animals in a very limited number of herds today. (State Official)

Suggestions:

- Has anyone at the state level seriously considered feeding supplements to the herds for a designated time period? More and more research is becoming available to us about the effectiveness of a probiotic approach. The use of ionophores in nutriceuticals could be the key to eliminating Johne's disease, and hopefully tuberculosis as well. In field studies, I have found that ions take no prisoners (ie. E.coli, tuberculosis, Johne's, Staph, etc.), so we end up with no resistance that develops in the animals and birds. (Producer)
- In more recent years, my experiences and research have led me to take particular interest in discovering ways to increase health and production in the animal industry. The all natural, organic products I have developed utilize probiotics in combinations, in addition to nutraceuticals that capitalize on the effectiveness of ions. These products, in field studies, have been successful in eliminating the devastating effects of conditions associated with bacteria, protozoa, toxins, viruses, and fungi. I share this information not as an advertisement for my products, but to share my sincere belief that we need to start thinking out of the box. (Producer)
- While alternative and probiotic approaches have come under criticism, researchers are making it clear that the overwhelmingly positive effects of

their use cannot be disputed. By using the technology we now have at our disposal to eliminate the deadly pathogens that are so costly to our industry, success in eradicating bovine tuberculosis is closer than we know! (Producer)

Roles and Responsibilities

State

- The United States Animal Health Association (USAHA), the nation's animal health forum for over a century, is a science-based, non-profit, voluntary organization. Its 1,400 members are State and Federal animal health officials, national allied organizations, regional representatives, and individual members. USAHA works with State and Federal governments, universities, veterinarians, livestock producers, national livestock and poultry organizations, research scientists, the extension service, and seven foreign countries to control livestock diseases in the U.S. USAHA represents all 50 states, 4 foreign countries and 34 allied groups serving health, technical, and consumer markets. (State Official)
- As the nation's principal animal health forum, the USAHA is uniquely positioned to be actively engaged in discussions surrounding the future of the tuberculosis program. Currently, our Executive Committee (EC) includes State Veterinarians from three states experiencing recent detections of bovine tuberculosis and thus the EC understands all too well the challenges ahead. Furthermore, the EC recognizes that the program will undergo significant changes in the immediate future and we urge the USDA to use USAHA and its Tuberculosis Committee as a forum for deliberation and discussion. The USAHA also is eager to explore the possibility of sponsoring a topic-specific forum on TB during 2009. (State Official)

These summaries and points reflect the observations, opinions, and knowledge of listening session participants and other commenters. They are not fact-checked, nor do not they reflect the views of USDA.