

MDA outreach priorities

Julie Smith

University of Vermont
Extension Dairy Specialist

October 18, 2014

Survey says . . .



The Mycobacterial Diseases of Animals (MDA) multi-state project team is interested in your feedback regarding bovine TB and Johne's disease outreach materials and activities. We invite you to answer a few questions that can help us identify what is working and what is needed for things to work better in this area of outreach. The survey should take no more than 10 minutes of your time. Your input is important to us.

Occupations of those who provided this information

- 25 Government veterinarians
- 10 Extension veterinarians
- 7 University-employed veterinarians
- 6 Extension professionals
- 5 Researchers
- 4 Consultants

Valuable aspects of TBc CE

1-Knowledge of US situation (32)

2-Knowledge of management practices to control or reduce the impact of the disease (19)

3-Knowledge of public health issues (26)

4-Knowledge of ways to motivate action to control the disease (11)

5-Knowledge of testing requirements (13)

6-Materials I could refer to later (14)

7-Knowledge of quarantine requirements (9)

8-Materials I could share with producers (9)

Valuable aspects of TBc producer education

1-Knowledge of US situation (14)

2-Knowledge of management practices to control or reduce the impact of the disease (15)

3-Knowledge of public health issues (15)

3-Knowledge of the biology of the disease (9)

4-Knowledge of testing requirements (10)

5-Materials for employees (7)

6-Materials for reference later (5)

7-Knowledge of quarantine requirements (3)

Valuable aspects of TBc CE

1-Knowledge of US situation (32)

2-Knowledge of management practices to control or reduce the impact of the disease (19)

3-Knowledge of public health issues (26)

4-Knowledge of ways to motivate action to control the disease (11)

5-Knowledge of testing requirements (13)

6-Materials I could refer to later (14)

7-Knowledge of quarantine requirements (9)

8-Materials I could share with producers (9)

Other items specifically requested

- Role wildlife can play in transmission.
- Risk from Mexico
- Risk/role of zoo animals
- Research, especially on vaccines



Valuable aspects of JD CE

1-Knowledge of management practices to control or reduce the impact of the disease (22)

2-Knowledge of testing requirements (12)

3-Knowledge of implications for sale of cattle (13)

4-Knowledge of ways to motivate action to control the disease (12)

5-Knowledge of US situation (13)

6-Knowledge of public health issues (6)

7-Materials I could refer to later when needed (12)

8-Materials I could share with producers when needed (8)

Valuable aspects of JD producer education

- 1-Knowledge of management practices to control or reduce the impact of the disease (17)**
- 2-Knowledge of the biology of the disease (11)
- 3-Knowledge of testing requirements (8)
- 4-Knowledge of implications for sale of cattle (5)
- 5-Materials that could be referred to later (5)
- 6-Materials that could be shared with employees (5)
- 7-Other
- 8-Knowledge of US situation (2)
- 9-Knowledge of public health issues (0)

Valuable aspects of JD CE

1-Knowledge of management practices to control or reduce the impact of the disease (22)

2-Knowledge of testing requirements (12)

3-Knowledge of implications for sale of cattle (13)

4-Knowledge of ways to motivate action to control the disease (12)

5-Knowledge of US situation (13)

6-Knowledge of public health issues (6)

7-Materials I could refer to later when needed (12)

8-Materials I could share with producers when needed (8)

Other items of interest

- Signs of illness, seriousness and contagiousness of the disease
- Possibility of vaccination to control and ultimately eliminate the disease

How important is all this?

Issue	Agree	Disagree
Dairy farmers should know about TBc	71	0
Beef farmers should know about TBc	69	0
Farmers should know about TB in humans	61	4

How important is all this?

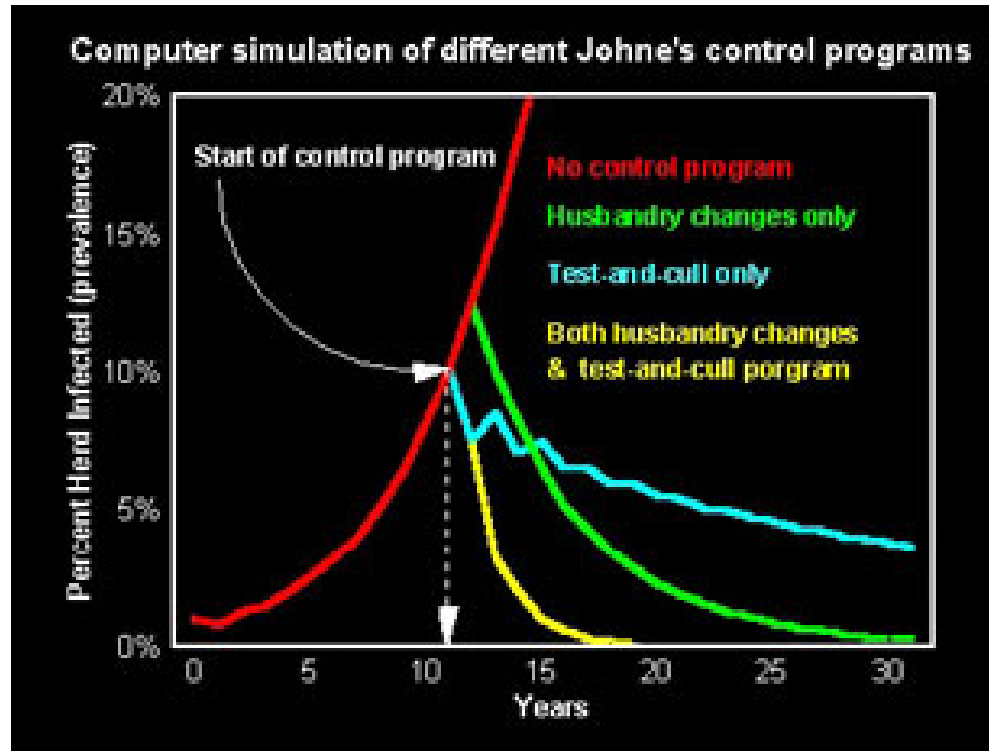
Issue	Agree	Disagree
Dairy farmers should know about TBc	71	0
Dairy farmers want to know about JD	46	13
Beef farmers should know about TBc	69	0
Beef farmers want to know about JD	30	24
Farmers should know about TB in humans	61	4

Not all on the same page

- Finally I believe that beef producers are ready to hear this information.
- I am not sure we have much (if any) TB or JD in our beef herds and so it is not a topic at our educational meetings other than this is what it is, looks like, does to you herd, and there is no cure except culling. Any suggestions will be considered.

What drives producer decision-making?

Epidemiology



Disclaimer: *This is only a mathematical model based on probability statistics and epidemiology. It is not designed to predict real results in herds; successful control of Johne's disease may be accomplished much faster or slower depending on many conditions specific to each farm or herd. Models of this type are most useful to demonstrate concepts and relationships for teaching purposes.*

Epidemiology

- Role of ID in efficient, effective tracing
- Awareness level in TB-free states
- Ranking of risk factors – can grazing that pasture infect my animals?
- Prevalence (especially in beef)
- Incidence and economic impact
- Zoonotic risk

Diagnostics

- Producers want to know which animals are truly infected (latent or subclinical)



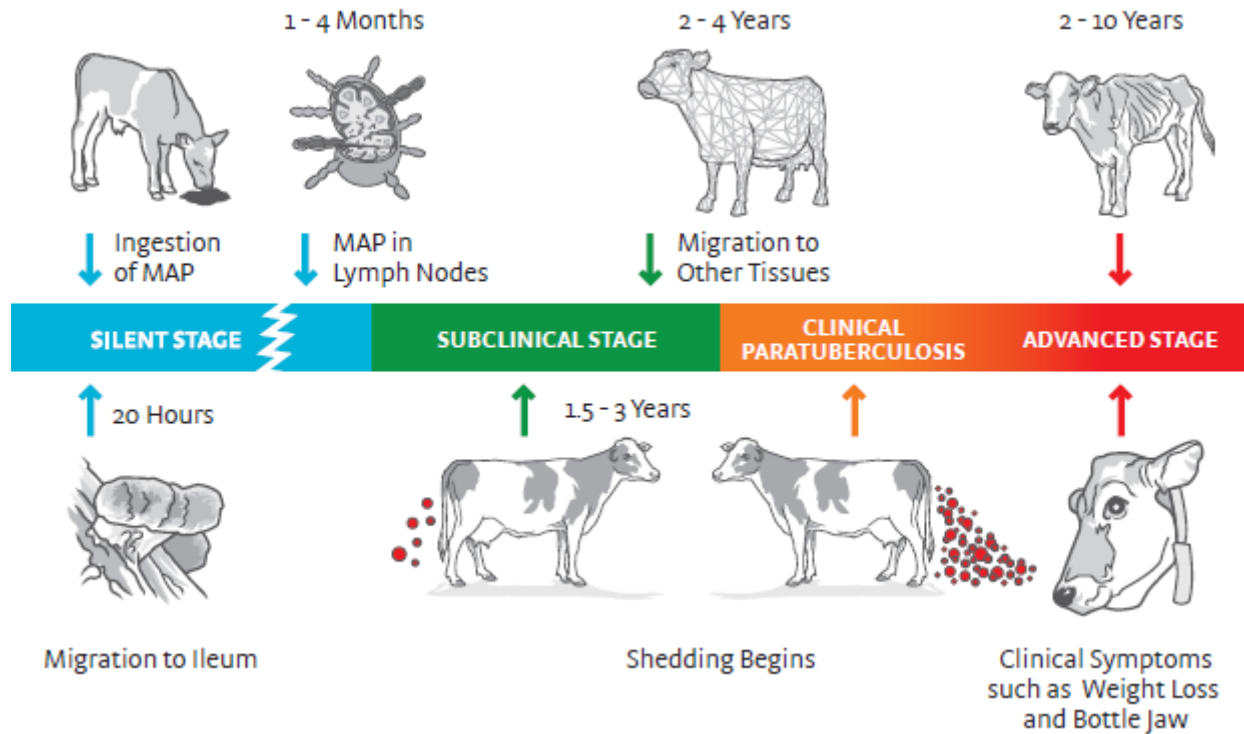
Diagnosics

Cost of Testing

ELISA (KELA)/sample	\$5.00
Fecal Culture (ESP)/sample	\$40.25
Fecal PCR (individual)	\$36.75
Shipping and handling/submission	\$15.00

Biology and pathogenesis

- Producers need understanding of the basics



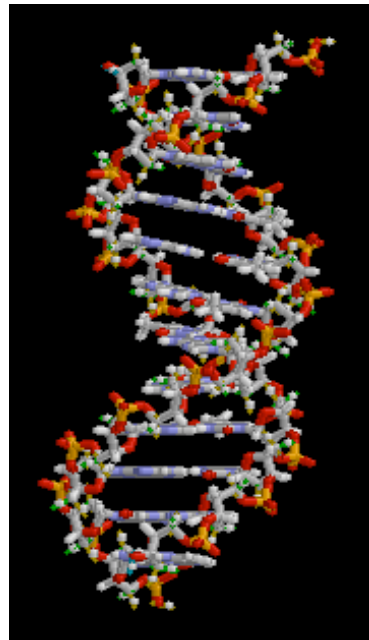
Biology and pathogenesis

- Economic (cost/benefit) analysis of management effort relative to potential production/profit losses



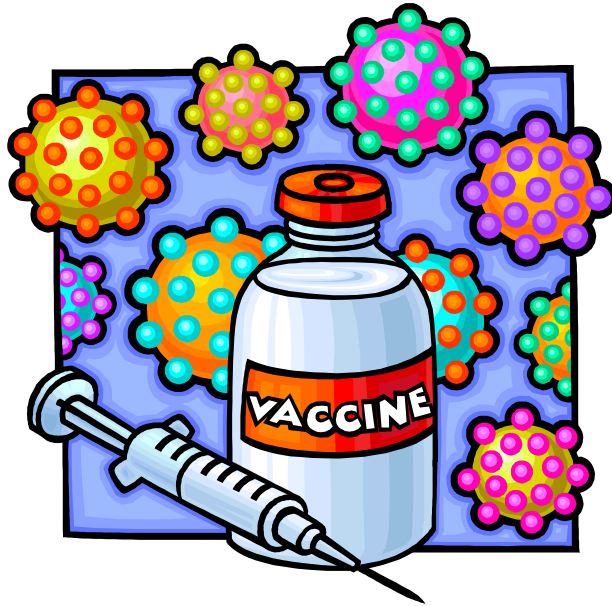
Genetics

- Producers are interested in minimizing disease risk through genetic selection – as long as it doesn't impact other profitable characteristics



Vaccines

- Solution in a bottle often preferred to holistic disease risk management



A way forward

We need a more holistic approach. Extension efforts will not be successful by trotting out more science.

What drives behavior change? What are the most effective communication strategies?

Data -- Dollars -- Demonstrations -- Don't give up