

DAIRY VETERINARY NEWSLETTER

January 2019

Upcoming Dairy Extension Conference in Brigham City, Utah

Coming soon there will be a dairy extension conference in Brigham City at the Extension building.

Please register (no charge; lunch provided): <https://qualitymilkconference.eventbrite.com>

We hope to see you and your dairy clients there:

Milk Quality Seminar

January 17, 2019

10:00 am -2:30 pm

Brigham City Campus

989 South Main Street

Agenda:

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| 10:10 Mycoplasma Mastitis & Arthritis | Dr. Dave Wilson, USU Dairy Extension Veterinarian |
| 10:45 Mammary Gland Involution Study | Justine Britten, USU Graduate Student |
| 11:20 Public Perception of Milk | Dr. Kerry Rood, USU Extension Veterinarian |
| 12:00 Catered Meal | Compliments of IFA Quality Feeds |
| 12:45 Milk Quality with Robotic Milkers | Dr. Allen Young, USU Extension Dairy Specialist |
| 1:15 Risk Management Tools for Dairies | Brandon Willis, USU Ag Policy |
| 1:45 Controlling Birds on Dairy Farms | Chad M. Heuser, APHIS-WS |

Safety of RB 51 Brucellosis Vaccine for Humans Working With it

I used Strain 19 brucellosis vaccine for 20 years. I knew two veterinarians with a history of accidental inoculation with Strain 19 who subsequently developed undulant fever for the rest of their lives. RB 51 *Brucella abortus* vaccine was licensed in 1996 as a safer vaccine with antibodies that could be differentiated from those following natural infection. Beginning in 1997 there are reports of veterinarians and others exposed to RB 51 brucellosis following bovine abortions or from having handled vaccine; this has been a recent subject of interest among

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bovine veterinarians. What evidence exists regarding the relative safety of RB 51 for humans working with it while vaccinating cattle?

There are few refereed publications regarding study of RB 51, and very few regarding safety when handling the vaccine while immunizing livestock. Safety information is largely concerning those handling *Brucella*-positive samples in laboratories. Post-exposure prophylaxis (PEP) treatment with doxycycline 100 mg twice daily, and rifampin 600 mg once daily for three weeks is recommended if one is considered exposed, including via RB 51.

Some information from a case reports study by Ashford et al., Vaccine, September 2004:

- 26 people (21 veterinarians, 2 vet students, 2 technicians, one ranch employee) were accidentally exposed to RB51 while vaccinating livestock (additional procedures or breeds vaccinated were not reported)
- 21 (81%) needle stick injuries, 4 (15%) conjunctival sprays, one (4%) spray of the vaccine on broken skin
- Illness signs including fever, chills or fatigue were reported by 10 (38%) of those exposed
- 25 (96%) took post-exposure prophylaxis, most 200 mg of doxycycline for 21 days
- 7 (27%) reported persistent fever, chills, fatigue, muscle or joint pain 6 months following RB 51 exposure

There are online speculations and questions regarding RB 51 brucellosis in humans. Chronic infections and danger to human fetuses or secretion in milk of lactating women are postulated and often included in exposure warnings. Given the pathogenesis of *Brucella* spp., and the above reports of persistent signs, these might be expected. However, there is little reporting of blood (CDC recently reported one human blood culture RB 51-positive), milk, or other specimens being tested for *B. abortus* post-exposure in humans even after needle sticks, inhalation, etc. with RB 51, and there is no human serology test. Further investigation is warranted. If any of our readers have direct experience with testing of human milk, blood or other specimens following RB 51 exposure, this would be of interest. It seems that undulant fever is less common with RB 51 than Strain 19, but this bacterin should still be handled with great caution.

Please let us know your comments and suggestions for future topics. I can be reached at (435) 760-3731 (Cell), or David.Wilson@usu.edu.



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