

# DAIRY VETERINARY NEWSLETTER

September 2023

## Vaccinations for Dairy Calves - is There Some Consensus on Recommendations?

It is probably not a surprise to most of us that indeed there is no consensus on all vaccinations to be administered to dairy calves, or at what ages they should be given. Therefore, for this article, I researched as much information as I could find and put together the most commonly recommended vaccinations for dairy calves, along with some perspective based on my own experience. Nearly all dairy calf vaccine recommendations from published or veterinary practice sources included all of these following on the next page. Also, we need to recognize that on many dairy farms, large numbers of calves are born and handling each calf when they reach an exact age is a practical challenge. Therefore, as the calves age, the recommended vaccinations should be administered on at least one day, preferably the same day, each week.



### As soon as possible after birth:

- Oral bovine rotavirus and bovine coronavirus vaccine (In my experience, this is often associated with better control of rotavirus and coronavirus than vaccinating pregnant cows. Quality of colostrum antibodies can never be taken for granted, especially antibodies against specific pathogens which are not evaluated in virtually all “colostrum quality” testing.)

### 1-7 days old (sometimes recommended at 3 -7 days) old:

- Intranasal IBR/PI3/BRSV

### 5 to 6 weeks old:

- Injectable IBR/BVD/PI3/BRSV (Modified live vaccine [MLV] often recommended, but killed vaccine also recommended by some; they are safer than MLV.)

### 2 to 3 months old:

- Injectable IBR/BVD/PI3/BRSV (MLV often recommended, but killed vaccine also recommended by some.)

### 3 to 4 months old:

- Injectable IBR/BVD/PI3/BRSV (MLV often recommended, but killed vaccine also recommended by some.)

### Vaccines often recommended at 2 to 4 months old, but not by consensus:

- Lepto 5-way (*Leptospira* Canicola-Grippotyphosa-Hardjo-Icterohaemorrhagiae-Pomona bacterin.)
- 7 or 8-way clostridial bacterin/toxoid. (*Clostridium chauvoei*, *septicum*, *novyi*, *sordellii*, *perfringens* Types C & D bacterin-toxoid. 8-way also includes *Clostridium haemolyticum* bacterin-toxoid.)
- *Histophilus somni* (Still labeled as *Haemophilus somnus* vaccines by former bacterial name.)
- *Mannheimia haemolytica* and *Pasteurella multocida* bacterins. (Often in combination, but there are separate vaccines for each, some injectable, some intranasal.)

**NOTE:** Based on a retrospective study of dairy cattle deaths diagnosed at necropsy at the Utah Veterinary Diagnostic Laboratory over an 11 year period, and my other experiences in Utah, I would strongly consider the 7 or 8-way clostridial vaccines and the respiratory bacterial pathogen vaccines above. However, some field trials have shown efficacy for the respiratory bacterial vaccines and some have not.

**4 to 12 months old:** In Utah, this is the age range for RB-51 *Brucella abortus* vaccination.

**After 4 months of age:** There is almost no agreement between any two different published recommendations on dairy calf vaccines. Which pathogens to vaccinate against, the use of MLV or killed, or ages of administration are “all over the board”. Experience with disease in one’s geographical area and past history of calf diseases on each specific dairy farm are critical in deciding which vaccinations to administer.

Of course, the most important element of any vaccination program is that the vaccines need to be stored and handled correctly and actually administered when they are intended to be.

I was surprised to see how few vaccinations for dairy calves, especially those against pathogens other than the respiratory viruses, were recommended by anything close to consensus. Vaccines for enteric pathogens such as *E. coli*, etc. were not mentioned in most of the written materials of any kind that I found. What are your thoughts on vaccinations that - at least on most farms - should be administered to all dairy calves?

## Mean Entry Level Hourly Wage is Approaching the Farm Milk Price

In looking at the mean entry hourly wage by state, and comparing it to the farm milk price per cwt, I noticed something that I do not think has been the case in my lifetime, if ever. In some states (not Utah, but it is true in others including Washington and Colorado), the hourly wage for entry level jobs is approaching the milk price per cwt. For most of the records I could find, that go back as far as 55 years ago in 1968, the milk price/cwt was nearly always between double and triple the mean entry level hourly wage. There is no financial commentary on this that I can find, and what exactly this means in financial terms is beyond my expertise. Also, if one considers that the cost of one hour of farm labor is the same amount that can be grossed per 100 pounds of milk produced, this may not sound like a bad deal for dairy farms. However, on increasing numbers of dairy farms, the cost of milk production exceeds the price paid for milk. In any case, I strongly suspect the

above relationship between wages and milk price indicates why finding farm labor is often reported to be difficult, and more automation including using automated milking systems is being driven by labor shortages and costs. I wonder when it will become the case that the mean wage for entry level jobs is higher than the milk price/cwt. The latter has certainly not increased nearly as much as wages - or the cost of living - have over the last 50 years.



The entry level job hourly wage is nearly as high as the milk price/cwt in some states.

### **Passing of Dr. Bruce Hull, Dairy and Food Animal Veterinarian and Teacher**

When I was in vet school at Ohio State, we had many great large animal teaching rotations and other opportunities. We had Columbus Ambulatory, Marysville (Ohio) Ambulatory, and Food Animal Medicine and Surgery in the teaching hospital. We had time in clinics as juniors and seniors, and could elect to repeat any rotations as part of our elective course choices. I could easily fill at least one newsletter describing these rotations and some of the colorful faculty and memorable experiences I had with many of my classmates, but most of us could do the same recounting our vet school days. Instead, I would like to mention the passing of my favorite and most influential teacher in veterinary school, Dr. Bruce Hull. He passed away a few months ago.

The food animal faculty at Ohio State at that time included Drs. Glen Hoffsis, who pioneered LDA diagnosis and some of the corrective surgical methods, Dr. Mike Rings, and Dr. Sheila McGuirk, a Resident then who later became a dairy calf care expert. However, the most important influence I had in veterinary school was from Dr. Hull. In addition to being a good teacher in lecture format, he was the Section Head of Food Animal Medicine and Surgery. My class had 35% female membership, which was a great increase even from the year before back then. We also had students from a veterinary technician program at a technical institute, all but one of them female, working with us in clinics. Dr. Hull was always courteous and inclusive of all students, including those that clearly had no background in food animal medicine as well as female students. In some other parts of the vet school, this attitude was not at all universal at that time. One of my first experiences with him in clinics was where we needed another set of hands from a vet tech student, and he said to her, "I don't know your name ma'am but I could sure use your help." In most parts of Ohio people did not routinely say "ma'am". His kindness and inclusiveness made a lifelong impression on me. He was also a knowledgeable teacher.

One of the many things I learned from Dr. Hull was related to the fact that he could and did correct LDA's from the right paralumbar fossa, left paralumbar fossa, or ventral midline surgical approaches. Early in a rotation he would do some of each as the LDAs came in (we received quite a few of them back then), and then as the rotation went on we could vote on which approach we wanted to use. We performed all sorts of surgical

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procedures including some major fractured bone pinnings on injured stud bulls from Select Sires in Plain City, Ohio. Whether we treated goats, sheep, dairy cattle, beef cattle, or other ruminant patients, he was a wealth of information. He conducted rounds in a way that expected students to explain diagnoses and treatments, but he also helped teach us about every case and formulate and execute the treatment plan. If students showed interest, which nearly all did on that rotation because it was such a great environment, as the rotation went on he would leave more of the activity throughout the day to us. We gained a lot of confidence in diagnosis and treatment procedures from him. He or another senior clinician would oversee every new case that came in, but expect us to participate in diagnosing it. If we had questions about any ongoing case, we could always go to him and ask him. I had many more great experiences seeing Dr. Hull over the years after graduation, but it had been more than 10 years since I had seen him following his retirement. I can only hope that I have been somewhat as good of a mentor to some of the students I have had contact with as Dr. Hull was to so many of us.

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](mailto:David.Wilson@usu.edu).

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