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Contact: Doc or Patricia Spitzer  
[spitzeranch@mindspring.com](mailto:spitzeranch@mindspring.com) or  
(864)972-9140 or (864)710-0257

## **Health Management And Vaccination Programs For Beef Herds Part 3: Diseases/Vaccines**

Over the past 2 months we have outlined development of **Health Management And Vaccination Programs For Beef Herds** by emphasizing **Part 1: Philosophy** and then **Part 2: Planning**. Now, **Part 3: Diseases/Vaccines** is an attempt to sort through all the rhetoric and get down to the basics of which diseases cause the most problems to the most cow herds across the country; and are the primary disease challenges to consider.

Let's begin with what this article is not. It is not a discussion of the literally hundreds of diseases around the world that can be problematic in cattle. It is not a listing of symptoms and treatment plans for individual diseases. Those are best learned by serious discussions with your local Veterinarian as part of the Veterinarian-Client-Patient-Relationship (VCPR) discussed in **Part: 2**. What this article does is create a "short list" of disease challenges probably affecting all beef herds and for that reason we are willing to purchase protection in the way of a vaccine. To do this an arbitrary separation will discuss CALF DISEASES and COW DISEASES although many cause problems in both groups of animals.

**CALF DISEASES --- CLOSTRIDIAL DISEASES** are a large group of common bacterial organisms. Blackleg is the general term used by many producers to describe clostridial disease. While technically incorrect, as there are specifically recognized diseases (albeit with somewhat overlapping symptoms), we will use the term as a bridge to discussing clostridia. Cattle 5 to 15 months old are the most susceptible, with those younger generally protected by passive immunity - if they get adequate colostrums at birth. The disease is seldom seen in animals over 3 years of age.

Specific to this discussion are the diseases Blackleg, Malignant Edema, Black Disease, Sordellii and several types of Enterotoxemia. Typically a **7-Way Clostridial Vaccine** is appropriate to combat these problematic disease challenges.

INFECTIOUS BOVINE RHINOTRACHEITIS (IBR) sometimes known as “red nose” is a very infectious and contagious viral pathogen. This virus infects the membranes of the nasal passages and trachea and interferes with the normal protective mechanisms of the upper respiratory system and lungs. PARAINFLUENZA TYPE 3 (PI3) is another upper respiratory virus which usually works in concert with IBR to cause much the same symptoms. In fact it is almost impossible to find one without the other.

BOVINE VIRUS DIARRHEA (BVD) is a viral disease that is somewhat “miss-named” since the general effect in calves is a respiratory problem. Additionally, BVD is very suppressive to the immune system and opens the door to further infection from a host of bacteria and other viruses. One of the key attributes of BVD is ability to cross the placenta and create a calf with a persistent infection to BVD (PI-BVD). These PI-BVD animals never clear the disease and shed absolutely huge amounts of virus particles into the environment and can be the cause of continuous re-infection at the herd level.

BOVINE RESPIRATORY SYNCYTIAL VIRUS (BRSV) is the last culprit in our list of viral agents involved in the Bovine Respiratory Disease Complex. While BRSV alone can produce signs of respiratory distress in cattle, it generally combines with IBR, PI3 and BVD to cause the full blown shipping fever commonly discussed.

There are now excellent vaccines available that protect against all four of these viral diseases in a single vaccination. The “**modified live virus vaccines**” certainly have the best track record as far as preventing these diseases.

LEPTOSPIROSIS (LEPTO) is a general term for a host of Leptospira bacteria which localize in the kidneys and cause destruction of red blood cells. Discussion in cattle generally identifies five LEPTO organisms of the most concern and typically a 5-Way Leptospirosis vaccine would be administered.

That's pretty much the "short list" of most seen CALF DISEASES problems and they can be handled with two shots. A 7-Way Clostridial vaccination and a vaccination with a modified live IBR/PI3/BVD/BRSV which additionally contains 5-Way Leptospirosis protection. However, setting up a herd to use these vaccines is not as simple as it sounds and requires tremendous planning with a Beef Veterinarian who understands how to initiate protection as disastrous consequences can occur if these vaccines are used contrary to label instructions.

**COW DISEASES** --- Already stated is the vast "dual infection" (with different or additional symptoms) of many bovine viruses and bacteria to cows as well as calves. For cows we will not go back through the list, but all diseases discussed for calves (with the general exception of Clostridial diseases) can additionally infect cows. IBR, PI3, BVD, BRSV and Leptospirosis can all or each be systemic infections in cows, but more importantly also cause infertility, embryo destruction and abortions. Fortunately the same vaccines recommended for calves apply here and it is again, or even more, critical to involve a Beef Veterinarian to avoid consequences of "off label" use of these vaccines.

CAMPYLOBACTERIOSIS (CAMPY) formerly known as Vibriosis would be our only other usual addition to our "short list" of commonly seen COW DISEASES. Campy is a true venereal disease (spread only at copulation) of cattle. This potent bacterium infects the female reproductive tract and while it can result in abortions, more commonly it causes very early embryonic death and the cow continually comes back into heat and is bred again. Oftentimes the effect is not noticed until pregnancy exam where sometimes up to 50% of the cows will be open.

Fortunately this disease can be prevented by vaccination. Generally an “oil adjuvant vaccine” is preferred as others have proven pretty ineffective. The “short list” of cow vaccinations would then be IBR/PI3/BVD/BRSV with Leptospirosis and an oil adjuvant Campylobacteriosis.

Many might add to these, but our goal was to cover the ones affecting most all beef herds and that had effective vaccine products on the market. We again emphasize how important it is to develop that VCPR with a knowledgeable Veterinarian. With calves worth \$1000 and commercial cows selling for \$2000 you just cannot afford to make mistakes with your Health Management and Vaccination Program. Next month we will present **Part 4: When to Vaccinate** and tie this four-part discussion together.

***NOTE: This is a very general outline of recommendations! Please contact your Veterinarian for specific questions on health practices for your beef herd. Every operation is unique and you absolutely must develop a relationship with a Veterinarian in your area. They will know best how to design a plan specifically tailored to the needs of your herd and the disease patterns prevalent in your environment.***

SPITZER RANCH has invested many years and much management effort developing a Health Management And Vaccination Program which, in addition to a well-designed vaccination program, involves a rigorous testing program to drastically reduce risk of their customers being exposed to disease through their bulls. The SPITZER RANCH PROFESSIONAL CATTLEMEN’S BRANGUS BULL SALE is scheduled for SATURDAY, FEBRUARY 22, 2014. If you wish your name added to their mailing list for Newsletters and current Bull Test Performance Reports call 864/972-9140, write SPITZER RANCH, 1511 HWY 59, Fair Play, SC, 29643 or send an email note to [spitzeranch@mindspring.com](mailto:spitzeranch@mindspring.com). Also visit their WEB SITE at [www.srbulls.com](http://www.srbulls.com) and you might enjoy their posts and QUOTE OF THE WEEK on Facebook.

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