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BUYING BULLS: PROTECTING YOUR INVESTMENT & PROTECTING YOUR HERD

For many California producers it is that time of the year when we consider adding new bulls to our herds. We're looking for the best in EPD's for calving ease, growth, and carcass quality. We're looking for bulls that will be able to breed cows and scratch out a living in our mountains, rangelands, and pastures. We want bulls that are thrifty and can travel well—good feet, good legs, and good eyes. In short we want the performance and genetics that will move our herd forward. What we sometimes forget about are the diseases that might affect the bulls when we bring them home or the diseases that they might bring into our herd. We will consider the most important of these diseases in this column. We'll consider them alphabetically as their actual importance varies from herd to herd.

Anaplasmosis. This is the blood disease of cattle caused by *Anaplasma marginale* and often transmitted by ticks. If you live in an anaplasmosis area—your veterinarian can tell you if you do—you will want your bulls to be vaccinated and immune to this disease before you bring the bull home and turn him out with your cowherd. Remember, if you live in an anaplasmosis area your native cattle may never get sick—only the adult cattle brought in from other areas may be susceptible to illness.

What vaccines are available to help prevent anaplasmosis? In California we currently have two vaccine options. The first is a live vaccine available from Poultry Health Laboratories and is called **Anavac®**. **It is safe and effective when given to young cattle (4 to 11 months of age).** The cattle become infected with the vaccine strain of Anaplasma and are "immune carriers". This method of preventing disease is basically a controlled infection. If this vaccine (Anavac®) is given to older cattle, they will become sick and could die, just as with the natural disease. Vaccination of mature bulls with Anavac® will cause death loss or infertility. Also, there is an investigational vaccine available for use in California. This investigational vaccine is a killed vaccine and when the cattle are vaccinated, they develop enough immunity to prevent illness when they become infected. ***There is no vaccine that will prevent infection by the anaplasma organism.*** When the vaccinated cattle are infected by the *Anaplasma marginale* organism under field conditions, they go through a normal incubation period of about 45-90 days, have a slight drop in their red blood cell count, and remain normal in appearance. These vaccinated cattle do not become ill; but, they do carry the field strain *Anaplasma* organism after they become infected. Most infected cattle then carry the organism for their entire life. They are "immune carriers". That is to say, they are "immune" to becoming sick from the agent; but, are carriers of the agent. If you were to take a small amount of blood from one of these "immune carriers" and put it into a susceptible cow, that cow would become infected and sick. These two vaccines are very important. If you purchase bulls or heifers for replacements and live in an anaplasmosis

area, be sure these incoming cattle are protected. If the cattle were vaccinated with the live vaccine (Anavac®) as calves and not fed tetracyclines in the feedlot, they will be immune carriers and safe from getting sick. If they were fed tetracyclines (a common procedure for bulls being grown in a feedlot), they will lose their immunity after 1-2 years if they do not become re-infected. If the cattle are over a year of age when first vaccinate, be sure they were vaccinated with two doses of the killed investigational vaccine. They should be protected against becoming ill when naturally infected on your ranch.

Where can I get these vaccines? The live vaccine, Anavac® is available through Poultry Health Laboratories, in Davis, California. It must be shipped on dry ice or in liquid nitrogen and cost about $3.00 per dose plus shipping. There are often advertisements in the CCA magazine for this product and their phone number is (530) 753-5881. The killed, investigational vaccine is available through California Woolgrowers Association, at (916) 444-8122. This vaccine costs about $6.50 per dose and is shipped via normal refrigeration.

Bovine Virus Diarrhea (BVD). This viral disease of cattle is common and can cause problems such as abortions, diarrhea, and death loss. This is one of the most important diseases of cattle and all cattle should be vaccinated. Beyond vaccinating cattle, new bulls and replacement heifers should be tested to see if they are persistently infected (PI) carrier animals. If a pregnant cow or heifer becomes infected with a non-cytopathogenic strain of the BVD virus before the fetus is 125 days old the virus may set up an infection in the fetus that becomes "persistent" and stays with the calf after birth and through all of its life. These persistently infected carriers can be "poor doers" or they can appear to be normal. These animals shed billions of virus particles in every bodily secretion—saliva, urine, nasal secretions, and feces—which can then infect herd mates. Currently, there are newer tests available to detect these PI carrier animals. A simple notch of skin from the margin of the ear can be tested for PI status. Also, serum samples can taken from cattle and tested. In most cases the ear notch is the most convenient and cost effective sample. Bulls and replacement heifers coming into your herd should all be tested for BVD PI status before coming into contact with your cattle. Your veterinarian can easily show you how to take samples from your cattle. You can test a herd of 1000 cows for the price of one very good new bull ($3,000). All cattle should be given BVD vaccine boosters once per year; however, vaccination does not necessarily protect against the damage done by PI animals. Take some time and plan with your veterinarian about BVD prevention; particularly regarding the testing of new cattle coming into your herd. The introduction of a PI bull can precipitate a crisis in the health of your herd.

Johne's Disease. This is another disease that purchased bulls or replacement heifers can bring into your herd. Johne's Disease is a bacterial infection caused by *Mycobacterium avium paratuberculosis* (MAP). Usually, cattle become infected with this agent early in their life, have a long incubation period (2-9 years), and then shed high numbers of the bacteria before dying of severe weight loss and diarrhea. Before they become obviously ill, they shed large numbers of this agent in their feces and serve as a source of infection for the entire herd. The bulls with Johne's Disease are a particular

problem as they are with the herd when the calves are young and can easily infect these young calves. The problem with Johne's' Disease is detecting the infected cattle before they are obviously ill. The current tests become positive only shortly before an infected animal starts to lose weight and have diarrhea. Therefore, testing 1 or 2 year old bulls before they come into your herd will rarely detect an infected animal. Additionally, there is no vaccine available to prevent this disease. The prevention lies in management. If you are considering buying a bull, you should have your veterinarian review the source herd's Johne's Disease prevention program and give an opinion of possible risk of introducing this problem into your herd. If a seed stock producer has never heard of Johne's Disease this should be a red flag.

Trichomonosis. This is a venereal disease that is harbored by the bulls, transmitted to the cows during breeding, and causes the death of the fetus early in pregnancy. Thus, it results in open cows, repeat breeding, low fertility rate, and a reduced calf crop. All new bulls should be tested for this disease before being turned out with the cow herd. The testing methods have become very accurate and standardized. All bulls should be sexually rested for 10 days prior to taking the samples for this test. This is an important consideration that is frequently overlooked. Discuss the appropriate testing procedures with your veterinarian, and make sure these recommendations are followed before bringing a new bull home if at all possible. Certainly make sure all bulls are tested and are negative before turning them out with your cow herd—this goes for newly purchased bulls and those already in your herd. Keeping your bulls free of this disease is central to maintaining a clean herd.

Parasite control and vaccinations. Good preventive health procedures are important for the bulls as well as the cow herd. Bulls should be given a broad spectrum dewormer before being turned out with the cow herd. Typically, one of the pour-on dewormers is adequate. These bulls will be working hard and a parasite load of worms or external parasites will decrease their general health and performance. All cattle should have a good vaccination program and bulls should receive yearly boosters with an 8-way Clostridial vaccine, modified live viral vaccination (BVD, IBR, BRSV, and PI3), and a Lepto-Vibrio combination as a minimum.

The above disease considerations are those common to most all cattle in California. However, you may have specific problems in your herd or area and you should discuss these with your veterinarian to be sure you don't bring a new disease into your herd and that new bulls are protected against diseases on your operation.

John Maas, DVM, MS
Diplomate, ACVN & ACVIM
Extension Veterinarian
School of Veterinary Medicine
University of California, Davis