Farm Update:  March 1, 2019

This winter has been unusual and we have actually had snow several times which is a rarity for us here in Western Oregon. The snow was a shock for some of the younger members of our herd since this was our first snow in a couple of years. Several of our long awaited calves have been born and we are pleased with them. Hopefully those we still have coming in March, out of old Heritage Shorthorn bulls, will measure up to the ones that have already been born. As usual this time of year, both myself and the cows are in countdown mode until they go out on pasture. Optimistically speaking that should be around April 1st. No fooling.

Shorthorn Bulletin Change

Loyal readers will realize I have changed topics on them for this issue of the Shorthorn Bulletin. This issue’s topic was supposed to be “Turning The Cattle Business Upside Down”. I actually finished writing it but decided not to publish the article because I thought it would be too controversial.

Because writing the Shorthorn Bulletin takes up so much of my time I have decided to revert back to the original quarterly format with the next 3 issues being published July 1, October 1, and January 1, 2020. There is no shortage of topics just a shortage of time. For me it was either cut back on issues or stop writing.

Quarterly Topic:  Health And Genetic Considerations When Purchasing Shorthorns

Starting Out:

Nothing upsets me more as a Veterinarian and Shorthorn Breeder than to see people purchasing Shorthorns without doing due diligence, especially buyers new to the industry. Sometimes it is the buyer’s lack of knowledge and reluctance to ask questions. Sometimes it is the seller’s lack of knowledge about the health and genetic status of their own herd or reluctance to be upfront about any potential problems. Often it is both. When disaster strikes 2-3 years down the road it often is too late to salvage the situation without great financial loss or selling out. There is no fool-proof method of purchasing livestock of any type but with careful research, asking the right questions, and purchasing from a breeder who is knowledgable and forthright about his/her herd the chances of success are high.

Buyers often confuse price with quality. They often are not linked. Just because an animal is expensive doesn’t necessarily mean it is superior genetically or health wise. The bell shaped curve is the great equalizer. An example I often use is if a person buys 10 heifers, 1-2 are probably going to be better than expected, 6-8 will be about what was expected, and 1-2 you will wish you had never seen. With due diligence it is likely there will be a shift to more quality. Without proper research and careful evaluation prior to purchasing any cattle, disaster is probably the watchword.
Before purchasing it is important to decide what traits are most salient to you given your goals, your facilities, your location, and your finances. For instance if your farm is located in the Kentucky 31 tall fescue belt in Missouri it is not wise to purchase cows that grew up in California and have not adjusted to the endotoxins in Kentucky 31. Another example would be purchasing cows in South Dakota and expecting them to adjust to the heat and humidity in Texas. If you are starting a grass fed herd, purchasing cows that grew up with buckets of corn in front of them will not transition well to a grass fed diet. There have been a couple of recent studies which show that calves grown in grass fed conditions have completely different rumen flora than calves fed creep. The data shows that it may take up to two years for the rumens of grain fed calves to totally adapt their rumens to efficiently convert grass. Another mismatch is heifer calves growing up under range conditions do not usually make good small family farm cows because the lack of docility becomes a huge issue. Common sense dictates that one should try to purchase Shorthorns that are raised under conditions that best simulate their new destination from a climatic, handling, and dietary standpoint.

Health Considerations:

It is important to consider the health status of the herd where a buyer is considering purchasing. If the herd has a good vaccination program that includes all the common diseases plus Brucellosis in the heifers then the chances of a common cattle disease popping up in the newly purchased animals is almost eliminated. One disease included in vaccination programs that I would add a cautionary note about is Bovine Viral Diarrhea (BVD). I will not delve into all the details about BVD as this information is readily accessible on the internet. The most important thing for a buyer is not to buy a BVD PI (permanently infected) animal that can spread the problem. The risk is extremely low in properly vaccinated herds but many breeders constantly move animals in and out of their herds with it resulting in exposure from commingling carriers with non-infected animals. It is important to remember that calves who get quality colostrum from their dams usually run out of BVD immunity at 2-4 months of age even if their dam was properly vaccinated. There is a live animal test that can detect BVD PI animals and some buyers are starting to ask that it be done prior to any purchase. Asking specific questions about vaccination programs before purchasing is better than finding out you bought a problem/diseased animal later. APHIS, which is part of USDA, has an excellent fact sheet available on the internet that covers the basics of the BVD syndrome.

Two diseases that I think are extremely important to consider when making purchases are Bovine Leukosis (BLV) and Johne's Disease because of the devastating impact they can have on a herd and the potential human health implications. There is considerable information on both diseases on the internet but it is worth stressing the incredible damage they can do to a herd.

BLV is rampant in dairy herds and is reaching the same point in an increasing number of beef herds. The insidious nature of BLV lends itself to the belief that one can “live with it”, however there are many negative subclinical effects. Carriers can seem asymptomatic yet they can be affected to the extent they are less fertile, less feed efficient, have shorter lifespans, and may ultimately develop a full blown case of leukemia. Obviously if you are starting a new herd or have a non-infected herd bringing in carriers is disastrous. There is an inexpensive simple blood test that can be done to detect carriers. Because spread can be from dam to offspring or through contaminated needles, tattoo equipment etc. the prudent thing to do is to start a herd with non-infected animals and have new additions tested before they enter the herd.

Johne's Disease is caused by Mycobacterium avian subspecies paratuberculosis (MAP). I highly recommend interested readers go to johnes.org where an extensive, constantly updated,
review of the disease can be found. Briefly, the Johne’s organism attacks the intestinal lining of the affected animal and slowly destroys it. It has a strong parallel to Crohn’s disease in humans. Probably the most overt clinical sign is an animal that is just wasting away. The organism is present in the feces, at varying concentrations in affected cows, resulting in contaminated soil and fecal spreading. Cattle on contaminated pastures or in barn settings ingest the organism and the disease cycle starts all over. It can also be spread from dam to offspring in colostrum/milk. Clinical signs of infection may takes years to show up in a cow all the while she is spreading the disease to the rest of the herd. Once soil is contaminated it can be difficult to decontaminate. In my view Johne’s is the worst health problem the beef cattle industry is currently facing because so may breeders simply are turning a “blind eye” to the problem. Incidence in beef herds is rapidly increasing and has probably reached at least the 10% infected level. Almost all dairy herds are infected but they have become proactive in trying to bring Johne’s under control by testing, culling, decontamination, and strict management protocols. Readers of the Shorthorn Bulletin know I was quite impressed by the efforts in the UK to control Johne’s. Both the government and cattle breeders in the UK realize the severe cost of Johne’s in animal health and pounds/dollars. Several years back the US government undertook a Johne’s control program but finally shut it down because of funding difficulties. There are several states (Iowa, Missouri, New York, Oregon, South Dakota, and Wisconsin) that have developed very similar Voluntary Johne’s Control Programs. They are all based on the original US program and can lead to certification of Johne’s free status after several years of participation. I think beef breeders need to recognize the threat that Johne’s presents to their livelihood and their pocketbook. If a direct link between Johne’s and human Crohn’s disease is ever established it is not too hard to figure out what will hit the fan.

Genetic Considerations:

The four most significant potential genetic problems in Shorthorns are Tibial Hemimelia (TH), Pulmonary Hypoplasia with Anasarca (PHA), Digital Subluxation (DS), and Myostatin (MYO) commonly known as double muscling. Fortunately there are accurate genetic tests available for all four conditions. The clinical picture picture of each defect is described in detail on the internet. All are recessive genes although MYO has 8 different alleles each with a different genetic expression in the homozygous form. There is some debate as to how these genetic defects ended up in Shorthorns but the most likely scenario is through the utilization of crossbreeding to “improve” the breed rather than a spontaneous mutation within Shorthorns.

The Myostatin defect presents a special problem because some Shorthorn breeders and other cattle breeders are trying to produce cattle that are carriers of particular alleles because it will result in higher carcass weights and leaner beef. Certain heterozygous MYO Show Shorthorns and Show Steers will have greater muscling which can lead to more success in the show ring. The long term impact still can be negative because inevitably homozygous animals are produced in the breeding program with the resultant negatives such as calving difficulties and deformities. MYO has finally bubbled to the top as a worldwide problem in Shorthorns and other cattle breeds with the potential to become an animal rights issue because breeders are producing genetic defects on purpose. Photos of grossly affected cattle are viewable on the internet and it is not a pretty picture. A recent post on Steer Planet regarding double muscling said “the days of sticking your head in the sand are over”. It is important to realize there is the potential for all of these defects to exist in Heritage and Modern Shorthorns so testing is the answer. Any breeder can find out the genetic status of their herd and rectify it simply by eliminating carrier animals and then making sure that all bulls they use in the future are free of these defective genes. Yes, there are significant upfront costs, but once carriers are eliminated no more testing is necessary, as long as defect free bulls are used. A herd free of the above defects has more marketing opportunities and fewer headaches.
Summation:

There is no question the beef industry trails the dairy industry in dealing with health and genetic problems because the dairy industry has recently been more aggressive in trying to correct both health and genetic issues while the beef industry has been more inclined to play down the implications of any health and genetic problems. Progressive Shorthorn breeders can “seize the bull by the horns” and take a leadership position in the beef industry by developing strict health and genetic protocols within their own herds. By doing so it will ultimately put more dollars in their pockets, reduce their management headaches, increase longevity in their herds and open up new marketing opportunities by providing a healthy source for new and/or expanding cattle breeders.

Joseph Schallberger, DVM, PhD
Whispering Hills Farm
Member Academy of Veterinary Consultants

Shorthorn Topic for Volume 4 Issue 3: Dubbo 2019