

## **A Snapshot of the Feedlot Industry in Western Canada and how Pfizer Animal Health Partners With Producers.**

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There are 4.2M mother cows in Canada. Consider a generous 20% replacement rate each year and we end up with 3-4M head on feed each year depending on feeder cattle export numbers to the United States. The predominant breeds are British crossbreds, Simmental and Charolais. The growing season in much of Western Canada is short – typically May till October. The rest of the year the forages are dormant and in many cases under a blanket of snow. Unlike much of the Cattle production in Brazil where grass fat beef is common, it is very uncommon in Canada. Forage and cereal grains are grown on crop land and then stored to be fed throughout the winter. Cattle are raised intensively in feedlots either directly from weaning till slaughter or they may be backgrounded on smaller farms less intensively through their first winter, sent to grass as a yearling and then finished in a feedlot. Feedlots vary in size from small pen yards of 200 head to large pen (350 head) yards of over 100,000 head capacities. Intensive livestock production certainly has its problems in the cattle industry similar to what we have witnessed in other species. Morbidity rates as high as 40% and mortality rates of up to 5% are what producers can expect if they prefer to take a “minimal intervention” attitude. For those producers that take care of business morbidity rates of less than 10% and mortality rates of 1% are more realistic. Pfizer Animal Health is committed to partnering with feedlot owners and managers to address many of the challenges that they face.

### **Animal Procurement**

There are few vertically integrated operations in Canada. Large corporate ranches are inevitable but for the time being 95% of the cattle produced come from smaller (40-2000 head)

family owned ranches. Approximately 80% of these calves are marketed directly off of the cow at weaning. Some of these Ranchers retain ownership and either background the calves in a small feedlot on their premise or send them out to a feedlot to be custom fed and finished. Backgrounded calves may go to grass the following summer or they may go directly to a feedlot for finishing depending on their weight. Some calves are sold Ranch direct to feedlots but the majority of calves are sold through Auction Markets to investors or feedlot owners and transported directly to a feedlot. Calves are sold in drafts through the auction ring. A draft may consist of 1 to over 100 calves of similar sex, phenotype and weight. Pre-sort sales are common which is where a producer may bring his calves to the market and they will be sorted into groups of similar sex, phenotype and weight with other producer's cattle to allow for larger drafts of calves. Larger drafts will usually bring better money because of convenience to the buyers.

The stress of weaning transporting and commingling with strange cohorts is the foundation for much of the problems facing the feedlot Industry when we look specifically at health and production. We attempt to categorize calves into various risk categories from Ultra high risk to Low risk for developing respiratory disease based on pre-immunization, genetics, how they are procured and how far and the conditions under which they are transported. The risk category then helps a consulting Veterinarian determine the appropriate arrival protocol that would best help minimize Bovine Respiratory Disease (BRD) in that population. The majority of calves marketed in Western Canada would be considered "Ultra High Risk" for developing BRD.

### **Common Diseases**

It is well documented how stress plays an important role in the BRD complex. Stress causes immuno-suppression which renders calves very vulnerable for the primary BRD pathogens to take a hold and cause their effects. I'm sure the primary pathogens in Canada are no different than in Brazil but for completeness I will mention them here. The primary viral pathogens and often first on the scene are Infectious Bovine Rhinotracheitis (IBR), Bovine

Respiratory Syncytial Virus (BRSV) and Bovine Virus Diarrhea (BVD types 1 and 2). Corona Virus is being isolated more often now and is being considered a primary pathogen by many feedlot consultants in Western Canada. The primary bacterial pathogens are *Manheimia hemolytica*, *Histophilus somni*, and *Pasteurella multocida*. *Biberstenia trehalosi* is being isolated occasionally and is certainly on the radar screen. *Mycoplasma bovis* is a common isolate and is a very frustrating pathogen to control.

Clostridial disease is certainly a concern and all feedlot cattle require protection.

### **Growth promotion**

Growth promotants are allowed in Canada and are commonly utilized. There are some “natural” or “organic” niche markets that do not use these products but the majority of beef produced in feedlots are produced using growth promotant technology. Calves often receive a steroid implant while still on the cow, again on arrival to the feedlot and then again during the feeding period. All calves on feed will be fed an Ionophore to increase feed efficiency and reduce the incidence of bloating. Most heifers on feed will be fed Melengestrol Acetate (MGA) to suppress estrus and improve feed efficiency and gain. MGA also helps to buffer the leaning effects of implants and beta agonists such that a more desirable marbled carcass is produced. Finally many calves are fed a beta agonist in the last month of the feeding period to help bolster lean muscle production. Many of these practices are controversial worldwide but Canadian producers are allowed to benefit from the increased feed efficiency and gain provided by this technology.

### **Disease Prevention and Control**

#### **Vaccines**

Many producers have adopted the practice of calf-hood vaccination which is where they vaccinate calves at approximately 2 months of age, while nursing, just prior to being turned out to summer grazing. These protocols vary depending on disease prevalence but will often

include a modified live virus vaccine that contains antigens for IBR, BRSV, PI3 (parainfluenza) and BVD types 1&2. They may also vaccinate for *Manheimia hemolytica*, *Histophilus somni* and clostridial diseases. Some producers will booster these vaccines pre-weaning or at weaning but the majority of the vaccinating occurs on arrival at the feedlot. Common arrival protocols are very similar to the calf protocol already described. Killed viral vaccines are not commonly utilized in calf protocols. Because of the IBR and BRSV challenge in feedlots that contain multiple source cattle, calves will often receive another MLV booster at about 90 days on feed. Autogenous vaccines are not commonly used in Canada.

### **Metaphylaxis**

Because of the animal procurement procedure in Canada a large part of the control of BRD in the feedlot is dependent upon the use of anti-infective products on arrival in every calf. There have been many studies conducted that have determined the benefit to health and production parameters in calves that receive on arrival antibiotics. These studies have not only shown a physical benefit but have also shown positive returns on the investment. The vast majority of calves on feed in Canada receive an antibiotic on arrival to the feedlot. Products such as Tulathromycin, Tilmicosin, Gamithromycin or Oxytetracycline are used successfully as a metaphylactic treatment. Tulathromycin (Draxxin®) has a dominant market share in the Ultra and High risk categories of calves. Studies have determined that BRD morbidity and mortality may be reduced by as much as 75% if Draxxin is used as a metaphylactic treatment as compared to Tilmicosin or Oxytetracycline in Ultra high risk calves.

### **Pfizer's commitment to the Industry**

Pfizer is committed to the health and well being of animals as well as helping ensure that producers are profitable. By leveraging our huge portfolio of animal health products as well as the people in technical services, sales and marketing we are able to partner with feedlot owners and Veterinary consultants to optimize health, production and hence the bottom line. We are blessed at Pfizer Animal Health Canada to have an abundance of skilled people that hold great respect within the industry. We have a strong presence in the field that is evident by our 47%

market share in the MLV vaccine market and 75% market share in the premium anti-infective market. This market share has been earned because of the quality of Pfizer products and our commitment to support our products and the confidence this bestows to producers. Below are some of the initiatives PAH Canada has adopted in our attempt to partner with Industry.

### **Product Performance Evaluations (PPE)**

We will often use the PPE process to instil confidence with a producer that has been a non user of a particular product. PPEs are meant to be a tool to help grow business for the Veterinary consultant – who is our customer. PAH will supply enough product to vaccinate or treat an entire group of animals to show the benefit over what was being practiced before. Veterinary Services will oversee this small “trial” with the help of the consulting Veterinarian. A PPE is by no means a proper clinical trial and interpretation of results will often need to be put in perspective.

### **Client Education**

Because of the depth and talent of the technical services within Pfizer we are able to provide an abundance of one on one consultations with Veterinarians and producers with regard to our product portfolio. Our Territory Managers organize producer meetings that may have 20 – 100+ of a Veterinarian’s customers come together to hear one of our Technical Service Veterinarians discuss various issues such as BRD, antimicrobial therapy, vaccine technology and the list goes on. For many producers this is their only forum for continuing education and it is appreciated very much in the Veterinary community. With the launch of new products and technology Pfizer will bring Veterinarians together from across the country to hear key opinion leaders provide the technical download.

### **Beef Information and Exchange System (BIXS)**

The Canadian Cattlemen’s Association (CCA) with the assistance of federal funding has developed an initiative to help cow-calf producers, feedlot owners and packers share relevant

information across the value chain. This information exchange is made possible because of the mandatory tagging and identification of every calf that is born with a unique Radio Frequency Identification tag (RFID). The CCA with its federal funding have set up a central data storage warehouse where producers may voluntarily submit their information to be shared with other participants in the value chain. If a producer wishes to participate there is minimal mandatory information that must be entered. The cow-calf producer must submit birth date and premise location, feedlot producers submit date in, date out, weight in and weight out and the Packers submit carcass data. A participant in the value chain may only have access to information tied to an RFID if they in turn submit information tied to that RFID as well. The information tied to the RFID does not stop at the minimal mandatory information required to participate. The possibilities are endless from vaccination verification, hormone free status, antibiotic free status, genomics information and the list goes on. The vaccination verification and genomics potential garnered attention by PAH and is the cornerstone of the Pfizer Gold Plus Guarantee that I will discuss shortly. PAH has decided to support the BIXS program and has exclusive participation among pharmaceutical companies for the first 2 years.

### **BRD Guarantee**

The Bovine Respiratory Disease (BRD) Guarantee is an outcome based program that our marketing people put together several years ago. Since the launch of Draxxin in Canada clinical studies have repeatedly shown that Ultra High Risk calves that receive Draxxin on arrival as well as a MLV 5 way vaccine rarely have BRD relapse rates of more than 5%. PAH Canada coins the phrase “BRD control program” as the protocol of Draxxin, 4 or 5 way MLV vaccine as well as *Histophilus somni* vaccine for every calf on arrival to the feedlot. PAH will compensate producers up to \$20 for treatment costs for all BRD treatments over 5% of the pen within the first 30 days on feed provided the calves received the BRD control program. The producer’s treatment protocol must be verified by their Veterinarian and compensation is paid to the Veterinarian in free goods of their choice.

The BRD Guarantee was a resounding success the first year and we are just finalizing the second year now. In the first year, the fall of 2010, there was over 1 million calves enrolled in the program and approximately 0.2% of calves were compensated for BRD treatment over the 5% allowable relapse rate. The BRD guarantee for 2011 has been as successful with very few claims and the BRD Guarantee program has generated significant growth in both our MLV and Draxxin sales.

### **Pfizer Gold Plus Guarantee**

The Pfizer Gold Plus Guarantee was put together in 2011 to consider the added value of a calf that is born to a cow that has been vaccinated with a Pfizer fetal protection vaccine according to label, that calf itself has received one of the Pfizer Gold vaccination protocols pre-weaning **and** it receives the BRD control program on arrival to the feedlot. Calves must be registered in the BIXS program mentioned above to qualify. A calf of such status is guaranteed to be free of BVD because of its mother's vaccination status and can be verified through BIXS, has a priming immune response before it reaches the feedlot and has the benefit of Draxxin metaphylaxis on arrival. PAH guarantees that no more than 1% of these calves will require additional treatment for BRD within the first 30 days on feed. Protocol verification and compensation are the same as with the BRD Guarantee described above.

Veterinarians and producers recognize the confidence that PAH has in their vaccine and anti-infective portfolio which translates into growing market share.

### **Quality Medicine Program (QMP)**

The QMP is essentially Pfizer's guarantee to support our products. Should any of our products cause an adverse drug event or appear to provide a lack of efficacy, our technical services Veterinarians may become involved with the attending Veterinarian in the investigation. PAH will help support diagnostics to determine cause and if necessary assist with fair compensation to the producer. Many Veterinarians support Pfizer because of the support we provide to our customers.

Partnering with Industry has been mutually beneficial for PAH and the Feedlot Industry in Canada. Outcome based guarantees, PPEs, continuing education, a huge product portfolio and a QMP unmatched by any other Pharmaceutical company has garnered respect from the Industry and allowed us to continually increase market share.