Controlling Horn Flies on Pastured Cattle

By John Paterson, Executive Director Education

The horn fly alone is estimated to cause animal losses to the U.S. beef industry of $700 million. Horn fly feeding causes irritation, blood loss, decreased grazing efficiency, reduced weight gains and a decline in milk production. Furthermore, horn flies have been implicated in the spread of summer mastitis. The annoyance, irritation and blood loss caused by flies can reduce weaning weights of calves by 12 to 14 pounds and daily gain of grazing veal steers may be reduced by 12 to 14 percent, or as much as 30 pounds during the grazing season. When horn fly populations reach 100 to 200 per animal it is economically advantageous to begin a control program. Studies at the University of Nebraska demonstrated calf weaning weights were 10 to 20 pounds higher when horn flies are controlled on the mother cows. At the treatment threshold of 200 horn flies/animal, normal grazing patterns are altered as cattle attempt to gain relief from infestation by: decreasing grazing time, traveling more, increasing tail swishing, standing in groups, and standing in water.

Horn flies pierce the animal’s skin to ingest blood 20 to 30 times each day. Thus, a cow with 1,000 horn flies may be “bitten” from 60,000 to 1,200,000 times in a 30-day period. Horn flies are usually found on the backs of cattle, out of reach of the animal’s head or tail. During the hot part of the day flies move to the shaded side or underside of the animals. The sensitive skin area around the navel and central midline often becomes covered with sores from horn fly feeding.

Methods of Controlling Horn Flies

When designing a horn fly control program, several factors need to be considered such as efficacy, cost, convenience and herd health management practices. Productions in general are familiar with the numerous methods of fly control such as sprays, dust applicators, pour-ons, ear tags, fabric bags (usually heavy canvas or burlap and available commercially from most farm or feed outlets) that contain an insecticide dust. As a part of Beef Quality Assurance, please read product labels carefully for target pest information and for precautions to avoid contaminating milk and meat.

EAR TAGS - Ear tags are applied too early, they may fail late in the season because of normal loss of insecticide activity. Do not use the same insecticide class year after year. Instead rotate among synthetic pyrethroids, organophosphate, organochlorine and macrocyclic lactone insecticide classes. With cow-calf pairs, it is more effective to tag cows than calves. Most fly tags provide good coverage for only 30-60 days. Remove insecticide ear tags when they are no longer effective, or when the label recommends removal in the fall. Fly tags should be just one part of your fly control plan.

Insect Growth Regulators (IGR) and Larvicides - Insect growth regulators and larvicides prevent horn fly larvae from developing into adults. The mode of action of larvicides and IGRs differs. IGRs disrupt normal molting and development of immature horn flies (maggots) whereas larvicides are traditional toxins that kill the maggots. Cattle must consume a specified amount, preferably on a daily basis, to be effective. If consumption is below the recommended rate, either increase the number of feeding stations or relocate stations to areas more frequented by cattle.

Pour-On Insecticides - Pour on insecticides are ready-to-use formulations applied along the back line of cattle at a dose based on body weight. Pour on insecticides will normally provide control from 2 to 4 weeks following application.

Insecticide Spraying - About 1 to 2 quarts of an insecticide solution is applied with a power sprayer at a pressure of 150-200 psi. One drawback to high pressure spraying is the increased cattle handling required to make multiple applications throughout the fly season.

Dust Bags and Oils-Insecticide dust is applied to the animal as it passes through an opening such as a gateway. Dust bags are constructed of close mesh fabric bags (usually heavy canvas or burlap and available commercially from most farm or feed outlets) that contain an insecticide dust. As a part of Beef Quality Assurance, please read product labels carefully for target pest information and for precautions to avoid contaminating milk and meat.

A Call to Action on Transportation

A groundbreaking Cattle Transportation Symposium, was held May 14-15 in Ft. Collins, Colo. The event brought together all sectors of the beef industry to discuss and evaluate current transportation issues in the beef industry, with a focus on potential research areas and solutions for the future of cattle transport in the United States. This effort was led by the National Cattlemen’s Beef Association, with support from the Beef Checkoff funded Beef Quality Assurance (BQA) program and Colorado State University. Nearly 100 attendees were on hand to hear from industry leaders and transportation experts, and to participate in hands-on demonstrations involving trailer design and safety during the two-day symposium.

Speakers presented to cow-calf producers and auction markets to packers and retailers, on the challenges that each sector faces regarding cattle transport. All shared a commitment to continuously evaluate current practices to increase the well-being of cattle and the quality of the product for consumers. Dr. Karen Schwartzkopf-Genswein, a world renowned beef cattle welfare research scientist with Agriculture and Agri-Food Canada, and Dr. Clyde Lane, 2014 BQA Educator of the Year and Professor Emeritus at University of Tennessee, shared their perspectives on reducing cattle stress and the principles of proper stock trailer inspection and loading of cattle in a session that focused on cow-calf and dairy producers.

Auction market leaders and the Livestock Marketing Association (LMA) presented on the challenges of being the “middle man,” where shipping of cattle happens. Kristen Parmen, LMA, vice president of member services, shared the current educational and training programs that are available for auction markets. Larry Schnell, owner of Livestock Marketing Exchange in North Dakota, shared the expectations of “downer” cattle and other emergencies.

Beef packers JBS and Cargill were on hand to describe the increasingly scrutinized cattle transportation environment they work in, and to provide a call to action for the industry to continue to not only offer training but to develop a more robust certification system for livestock transporters. Mike Siemens of Cargill put it clearly when he said, “We need a Cattle Transportation Quality Assurance program that is verifiable and works for producers and transporters to ensure customers that animals are well cared for from pasture to plate.”

Day two included interactive breakout sessions that allowed attendees to view various fed cattle trailer designs on display and do a stock trailer inspection for themselves. The symposium ended with attendees sharing thoughts on next steps for cattle transport, with the agreement that, as one participant said, “the pieces are in place, they just need tweaking and a certification component.” Things are already moving forward with a white paper being developed from the presentations and perspectives shared at the symposium. A working group was appointed by the BQA Advisory Board to assess current programs and move forward with updating of training with a certification provision for cattle transportation.