

Range Beef Cow Symposium XX

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Prepare the Immune System

by Troy Smith

FORT COLLINS, Colo. (Dec. 14, 2007) — With understanding of diseases, response to treatment and the role of the immune system, producers can improve animal health and minimize long-term costs. That was the message Gordon Brumbaugh, veterinary specialist for Pfizer Animal Health, carried to attendees of the 2007 Range Beef Cow Symposium in Fort Collins, Colo., Wednesday, Dec. 12.

Brumbaugh called attention to the often-overlooked costs of disease. Despite producers' best efforts, some animals will become sick and require treatment. Calves with bovine respiratory disease (BRD) that require more than one treatment may exhibit reduced performance, decreased carcass quality and lower economic returns than calves that did not develop BRD, or those that responded to one treatment.

Brumbaugh said that illustrates why the health of young stock requires attention.

He explained that treatment with antibiotics serves only one purpose: to overcome the disease organism. It's then up to the animal's immune system to clean up, repair and restore function to damaged tissue.

"What can producers do to help prepare the immune system to participate in healing? Most important are the simple things that we sometimes don't want to do," Brumbaugh stated.

Preparation starts with reducing exposure to infectious organisms. Cleanliness of



► Gordon Brumbaugh

feeders, water troughs or tanks, bedding and handling facilities can reduce the number of organisms to which animals are exposed. Enhancement of the immune system usually concentrates on vaccination against diseases. Appropriate use of biologics in the calf and the cow herd is necessary to prepare them for the challenges of infectious agents.

Preparation may start long before animals are eligible for vaccination, Brumbaugh added. Studies have identified genetic contributors to disease resistance. As more is learned about particular genetic markers,

selection for resistance to specific diseases may be possible.

Phenotypic profiles are now being used to identify cattle with desirable performance characteristics, and those that are at greater risk of contracting BRD. Behavioral traits are outward expressions (phenotypic traits) that have been shown to be associated with relative risk of illness, as well as performance characteristics.

"There is exciting potential for 'profiling' and managing cattle based on that risk," Brumbaugh said. "Targeted selection and management could lead to development of appropriate expectations for health care programs and could substantively enhance judicious use of medication."

The cooperative extension services and animal science departments of Colorado State University, South Dakota State University, the University of Wyoming and the University of Nebraska hosted the Range Beef Cow Symposium Dec. 11-13 at the Larimer County Fairgrounds and Events Complex near Fort Collins.

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Editor's Note: API coverage of the event is made available for distribution to all media via an agreement with the Range Beef Cow Symposium Committee and API. Headquartered in Saint Joseph, Mo., API publishes the Angus Journal and the Angus Beef Bulletin, as well as providing online coverage of events and topics pertinent to cattlemen.