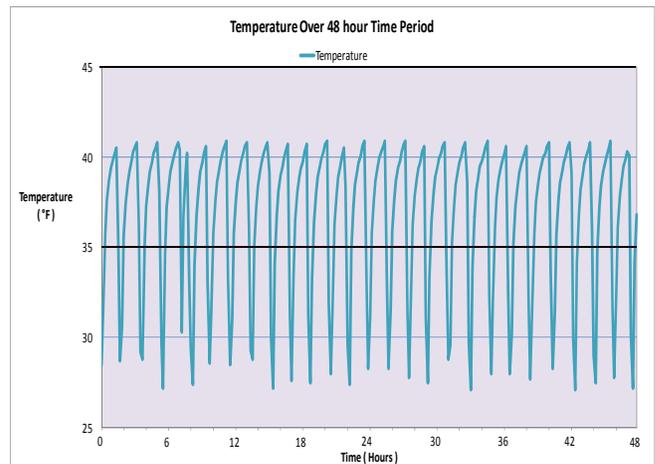


Vaccine handling study assists beef cattle producers with quality assurance

The Situation

The beef cattle industry contributes \$1 billion in cash receipts to the Idaho economy annually. In order to maintain consumer confidence and product demand, the Idaho Beef Quality Assurance (BQA) program trains and certifies beef cattle producers on recommended production practices related to end-product quality. The BQA program is a major component of an industry effort to produce a safe, wholesome, and high quality product. University of Idaho Extension Educators and specialists provide this critical education and training. Components of the training include vaccine handling, injection sites, cattle handling, and record keeping.

Studies conducted in Nevada and Arkansas identified areas of concern in those states regarding BQA recommendations for vaccine storage and handling. These studies showed that from 25% (Nevada) to 76% (Arkansas) of producers' refrigerators fail to maintain an acceptable temperature range for vaccine storage (Troxel and Barham, 2009 and Torell, 2006). Most animal vaccines require maintenance at refrigeration temperatures of 35-45° F. Veterinary vaccine product efficacy can be at risk if handled or stored improperly. The Nevada and Arkansas research found a large variation in proper setting, maintenance, and function of refrigerators. These studies also indentified a lack of awareness and training for producers and retailers when vaccines are being transported, handled, and stored. The results of these studies caused Idaho Extension educators to question whether or not there are similar issues among beef cattle operations and animal health product retailers in Idaho.



Graph of a producer's refrigerator showing unacceptable temperature variation and temperatures outside the recommended range of 35-45° F.

Our Response

In an effort to determine the extent and severity of the problem in Idaho and to recommend solutions; Extension Educators sought and received grant funding from the Idaho Beef Council to conduct a study of Idaho producers' compliance with BQA recommended practices and also the function of their vaccine refrigerators. The objectives of the study were to: 1) monitor refrigerator temperatures, 2) take inventory of the refrigerators with interest in expired and/or partially used products, and 3) identify compliance with chute-side BQA recommended practices. This information would then be used to tailor BQA workshops and certification trainings to address specific deficiencies of Idaho beef producers.

One hundred twenty-nine producers' refrigerators and forty-seven retailer refrigerators were monitored for temperature using LogTag® temperature data loggers to record refrigerator temperatures at 10

minute intervals. Study participants received a detailed report on the performance of their refrigerator along with specific recommendations to improve their compliance with BQA recommended practices.

Program Outcomes

The information gathered from Idaho beef cattle producers and Idaho animal health product retailers identified specific areas where improvement is needed. This has led to the development of best management practices for vaccine handling. The information has also been requested by vaccine distributors.

Knowledge gained by producers led several to request that their refrigerators be retested after they were serviced and/or adjusted. This request was also made by some of the retailers whose refrigerators failed. This information has allowed University of Idaho Extension faculty to better focus and tailor BQA trainings to address deficiencies among Idaho producers. Thus far, beef schools, producer workshops, newsletters and other publications have led producers to understand the problems and take action to correct them.

To date, the information gathered has been used at 14 producer meetings to train 477 producers. This information was also presented at three professional meetings. Two national popular press articles have also been published.

A survey of producers at a beef school in Lemhi County showed that 53% of those responding indicated that this information was new to them. Ninety-three percent of those responding indicated that the knowledge gained and information presented will affect their management decisions.

Management decisions that were specifically identified included:

1. taking more precautions on maintaining vaccine temperatures
2. monitoring vaccines more frequently
3. using more ice packs at the chute
4. improving record keeping procedures

The Future

The team of Extension Educators who conducted this research are now conducting follow-up data collection to determine the number of producers and retailers who have used this information to make changes in how they handle and manage animal health products. BQA trainers will continue to use this information in training beef cattle producers to follow BQA guidelines.

References

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