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Measuring Impacts in Risk Management Education--The Beehive Master Beef Manager Program

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Abstract

The purpose of Extension risk management education is to assist clientele by helping them make better management decisions. The results of this effort can sometimes take months or years to be expressed. It is difficult for Extension faculty to wait for this interval because administrators and funding entities demand results for programs usually within the space of one year. Curriculum-based programming enables faculty member(s) to develop enough data about attitude changes and knowledge transfer over several workshops to demonstrate statistical changes, compared to single workshops. Using multiple evaluation instruments, Extension faculty can show implementation patterns that further demonstrate program value.

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Introduction

Many agricultural producers recognize there is risk in their operation. However, they often overlook some areas of risk that, if managed, could optimize productivity and improve profitability. Some of this lapse can be attributed to the fact that "many agricultural decisions have outcomes that take place months or years after the initial decision is made" (Kay & Edwards, 1994). This interval also becomes problematic to Extension professionals, who must demonstrate the value of their educational programs to guarantee continued funding (Radhakrishna & Martin, 1999; O'Neill & Richardson, 1999; Bailey & Deen, 2002).

Utah State University Extension developed a program to teach cattle producers to identify risks and develop skills to mitigate those risks. Through a long-term, curriculum-based program and the use of various evaluation tools, Extension educators can measure immediate knowledge transfer

and implementation of management practices taught through the program.

Objectives

The organizing committee made up of Extension faculty and cattle industry personnel determined that the objectives would be to teach cattle producers:

1. The different types of risk,
2. To identify and prioritize risk factors in their operation, and
3. To implement Best Management Practices (BMPs) to manage their risk.

Procedures and Outcome

Initial funding for the pilot project came from the National Cattlemen's Beef Association Beef Quality Assurance program, and pilot workshops were held during the fall and winter of 2005-2006 in Sevier and Tooele Counties. Later program funding was through a grant from USDA/CSREES through the Western Center for Risk Management Education, and the program was expanded to three additional teaching sites in Duchesne, Rich, and Beaver Counties.

During initial producer meetings, the Right Risk® computer simulation software was used to introduce cattle producers to the impact of risk and the benefits of risk management. The producers were then asked to complete a survey to prioritize their specific educational needs within six broad risk categories and to prioritize which broad categories were most important to them. The results were then compiled, averages were calculated, and the curriculum was developed for each teaching site based on producer priorities.

The survey instrument used to establish site priorities was patterned after a matrix used in a Web-based risk management education program developed by Oklahoma State University Cooperative Extension (Oklahoma State University, 2006). Because the matrices were the same for all sites, curriculum topics were similar across sites. However, the priority of various topics and the order in which topics were addressed were different for each site. For example, at one location institutional risk relative to cattle management on public lands might have the highest priority, while another location might rate management of calfhood disease within the area of production risk highest.

The reference text for the workshops was the *Cow-Calf Management Guide and Cattlemen's Library*, which consists of more than 900 fact sheets covering 14 different subject areas. This text is broad-based, encompassing fact sheets on traditional risk management topics such as finance, marketing, and management, and also production-oriented topics. It is updated annually, enabling dissemination of the most current information for use by the producers and is available in both print and electronic versions, which make it appealing to both traditional and younger audiences.

Three to five workshops were held per teaching site each year. Pre- and post-workshop evaluations were conducted for each workshop. These evaluations determined self-assessed understanding for each participant before the workshop and at the workshop's conclusion. The evaluations were analyzed using a two-sample t-test assuming unequal variances.

At the conclusion of year 2, a two-page survey was mailed to each participant asking simple yes/no questions about the changes in attitudes and abilities relative to risk management. It asked respondents to list management changes implemented, which sessions they attended, and the educational value and priority for additional future training on that workshop's topic. The survey results were compiled as simple percentages of respondents answering yes/no for each question.

More than 70 cattle producers managing over 27,500 head have participated at five regional teaching sites. A total of 17 workshops have been conducted at the five sites.

Workshop topics included an introduction to risk, Right Risk® decision-making software, fall management and weaning strategies, preconditioning calves, financial records, production records, managing disease in calves and adult cattle, mineral nutrition, selecting heifers, understanding and using Expected Progeny Differences in bull selection, and marketing opportunities for calves and culls.

The t-test analyses conducted on pre- and post-workshop self-tests showed that, with only one exception, significant learning occurred across the majority of topics covered ($P < 0.05$). The exception was an introductory workshop where fall cattle management and weaning strategies were included, suggesting that many participants already understood the concepts or had implemented the suggested Best Management Practices. However, relative to the discussion on the different types of risk, significant learning did occur among this group ($P < 0.05$).

The return rate for the annual evaluation was 26%. Eighty-nine percent of respondents were better able to identify and manage risk factors taught during the workshops. Ninety-five percent indicated they examine their management decisions more closely relative to risk than they did prior to

attending the workshops. The following changes to management were indicated.

- Five producers changed their mineral supplementation programs to promote better overall productivity.
- Three producers use the Cow/Calf Management Guide as a reference manual when making management decisions.
- Cow/calf & breeding records are being kept on the Excel Integrated Resource Management record book received as part of the classes.
- Better recognize how and where to take appropriate risks.
- Testing herd for persistently infected BVD cattle.
- Using expected progeny differences (EPDs) when selecting bulls.
- Examine seasonal prices of calves and commodities as demonstrated with Right Risk®.
- Use better information to make decisions.
- Revised vaccination programs.
- Changed cattle handling facility.

Conclusion

The Beehive Master Beef Manager Program is an effective avenue to convey risk management education to cattle producers. The programming and evaluation platforms employed for this program enable faculty to measure initial knowledge transfer and implementation of program materials in the management of participants' cattle operations. The success of the program is due to producer buy-in as a result of establishing the curriculum priorities for their teaching location. We will continue to use it as an effective way to disseminate timely information to our cattle producers and hope to expand the program in the future to encompass more teaching sites throughout the state.

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