

Impact

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Interactive training teaches 4-H youth how to care for livestock

A new, interactive and self-directed training is improving how 4-Hers learn and retain the 'meat quality assurance' standards they need to understand for proper animal care and food safety. This in turn leads to a future of safe food production practices as youth become agricultural producers.

Issue

Since 1995, Colorado 4-Hers enrolled in livestock projects have been required to attend Meat Quality Assurance (MQA) trainings. Colorado State University Extension 4-H and livestock agents began presenting the MQA curriculum via classroom-based PowerPoint presentations. However, this format didn't actively engage youth. In particular, younger members often failed to retain important skills and information.

Extension's Response

In 2006, Colorado State University Extension 4-H agents piloted 10 interactive and self-directed MQA trainings in Northeast Colorado counties. The revised MQA training uses interactive, topic-based learning stations and forgoes classroom teaching. Each station integrates one or more visual learning tools, such as models, displays, hands-on activities and digital picture frames that show the right and wrong way to handle and care for livestock. Participants go at their own pace from station to station, completing activities and answering questions on a companion worksheet.

Following the pilot trainings, youth and parent feedback indicated that the new learning format was more interesting, fun and helpful than classroom instruction. Based on this success, the Northeast Colorado MQA team acquired funding to create more stations, standardize the curriculum for all counties and agents, and offer the program regionally. In 2009, the Northeast Colorado MQA team turned the interactive MQA training into a mobile learning lab that features 14 stations and travels March through mid-May. Stations cover:

- evaluation of facilities
- animal identification
- health issues
- injection site determination
- proper drug and biological product use and storage
- nutrition
- feed manufacturing
- animal handling skills

Youth pay a one dollar re-stocking fee to participate. All first year 4-H members and all first year senior members who are enrolled in livestock projects must attend MQA trainings, although these requirements vary from county to county.

In 2011, 2,400 youth from 35 counties attended one of 44 mobile MQA trainings. CSU Extension agents logged 7,500 miles traveling the length of Eastern Colorado to the San Luis Valley, Western Slope, Yampa Valley and along the Front Range. Even so, the learning lab cannot serve all Colorado counties due to time and distance constraints.



The Bottom Line

- Extension's interactive mobile MQA learning lab does a better job teaching 4-Hers how to produce a safe, wholesome and nutritious product than lecture-style instruction.
- The new MQA training format has increased parent involvement. More parents attend MQA trainings than ever before.
- Parents who farm and ranch often change production practices to align with what their children learn through MQA.
- CSU Extension's interactive MQA format is designed to engage multiple learning styles and all ages.

By the Numbers

From 2011

- Number of interactive MQA trainings: 44
- Number of youth trained: 2,400
- Total trailer miles traveled: 7,500

Impact

In 2009, 706 Colorado 4-H members from 18 counties were surveyed after attending an MQA training. In the study, 323 youth from five counties attended MQA trainings delivered in the self-directed, hands-on format and 383 youth from 13 counties attended MQA trainings delivered in the lecture-style format.

All youth completed an eight-question knowledge survey. Results showed significantly higher knowledge gains among hands-on learning versus classroom instruction in some areas: antibiotics, animal identification, and the labeling and administration of prescription medication. This is the only survey to date that compares knowledge gains between learning formats. According to Mick Livingston, Golden Plains Area Extension 4-H agent, future MQA evaluation will continue measuring the difference between the two learning formats.

In the meantime, follow-up evaluation data from subsequent MQA trainings reinforces the effectiveness of the hands-on learning format. The 2011 MQA survey asked participants to rank their knowledge gains relative to information presented. The survey also asked participants to rate the likelihood that they will properly care for and handle animals, make ethical decisions, be more careful about storage of medications and ask others for help. As a result of attending the workshop:

- 94.5 percent report that they already do, or always will use proper animal care and handling.
- 93 percent report that they already do, or always will be more careful about medication storage.

Youth evaluation responses indicate that interactive learning has a positive impact:

- *I liked the stations instead of the lecture.*
- *I learned more from MQA. It was fun.*
- *More exciting and fun to learn than last year.*

Many parents had similar comments, including:

- *I liked the hands on. My son got a lot more out of it.*
- *I think the hands-on (approach) did a better job of keeping their attention.*
- *Really like this new program with hands on instead of reading and testing.*

Livingston says parent involvement in the interactive MQA training is a strong improvement over classroom instruction. "Parents used to just drop the kids off and come back at the end. Now they stick around and go through the training with their kids," he says. "I even have parents telling me that they are going to have to change the way they do things at home because of what their kids have learned and shared."

To cut down on travel miles and expense, CSU Extension 4-H agents from Western Slope counties are developing a second mobile MQA learning lab that will primarily serve Mesa, Delta, Montrose, Gunnison and San Miguel counties. It will be available for use anywhere in the state.

"It's great to see the excitement as the youth go through the various stations, from feed to medications to ethics. We knew we developed a teaching model that works."

– Mick Livingston
Golden Plains Area Extension 4-H agent

What's Inside

Each of the MQA mobile lab's 14 stations covers one of the 'Ten Good Production Practices' developed by the pork industry in the 1990s and the foundation for 4-H MQA in Colorado. The 10 practices are:

1. Establish and implement a herd health management plan;
2. Use a veterinarian/client/patient relationship as the basis for medication decision-making;
3. Use antibiotics responsibly;
4. Identify and track all treated animals;
5. Maintain medication and treatment records;
6. Properly store, label, and account for all drug products and medicated feeds;
7. Educate all animal caretakers on proper administration techniques, needle-use procedures, observance of withdrawal times, and methods to avoid marketing adulterated products for human food;
8. Follow appropriate on-farm feed processing and commercial feed processor procedures;
9. Develop, implement, and document an animal caretaker training program; and,
10. Provide proper animal care to improve animal well-being.

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