



Extension Programming in Manure Management

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and the Environment

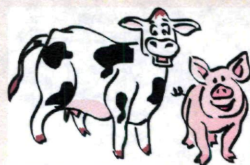


Focus

The mission of the Institute for Livestock and the Environment at Colorado State University is to solve problems at the interface of livestock production and science-based environmental management. Solving problems requires both research and educational activities. This poster highlights two educational programs that target different audiences; however, both programs share the intention of improving manure and livestock environmental management in the West.

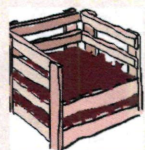


4-H Manure Management Curriculum



Rationale

According to EPA regulations, almost every 4-H livestock project could be classified as an Animal Feeding Operation. The western states have more than 150,000 youth involved in 4-H livestock projects. To keep up with the current state of animal production, 4-H curricula need a manure management component.



Action

In every 4-H lesson, there are three components: do, reflect, and apply. We used the same approach in our manure management curriculum so that youth can learn by doing. We developed the curriculum around the following topics:

- Livestock and the Community
- Animal and Human Health
- Protecting Water Quality
- Protecting Air Quality
- Composting
- Manure Utilization
- Economics of Manure Management

The curriculum is widely available on our website (www.manuremanagement.info).



Outcomes

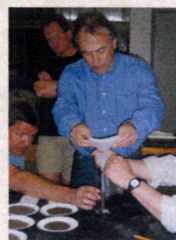
We are enhancing awareness of environmental issues related to livestock production and increasing knowledge of manure management practices among extension 4-H agents and volunteer leaders. We aim to increase the agents' and leaders' ability to provide educational programs in manure management to 4-H youth. Behavioral changes in participants may include:

- ✓An increased number of youth who compost manure,
 - ✓Changes in the corrals to prevent manure-contaminated runoff, and
 - ✓Utilization of manure at agronomic rates.
- The inclusion of manure management in livestock 4-H curricula has the potential to have a significant environmental impact as these future leaders move into the workforce.

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Rocky Mountain Compost School



Rationale

Composting manure transforms an odorous, heterogeneous by-product into an earthy-smelling, uniform, fine-textured soil amendment. Converting manure into high-quality compost opens up markets and an additional income stream to livestock producers, while simultaneously reducing manure disposal problems. However, these outcomes are dependent on knowledgeable composters who understand the principles at work. The objective of the Rocky Mountain Compost School is to train professional composters in the principles and practices of composting and in using the latest research results to improve their management and compost quality.

Action

The Rocky Mountain Compost School offers the growing compost industry a solid technical background. The RMCS has drawn professional composters from Idaho, Washington, and Wyoming, in addition to Colorado. The format of the school includes:

- Classroom teaching,
- Laboratory exercises that are designed to learn about composting processes,
- Hands-on composting exercises at CSU's composting research site, and
- Field trips to commercial compost sites.

We are focusing on experiential learning techniques in both field (evaluating compost) and lab (evaluating compost) exercises. We also use both individual and group exercises to enhance the learning experience. Information about the school is available at www.rockymountaincompostschool.info



Outcomes

The outputs of this project include:

- ✓The delivery of an annual, weeklong, hands-on workshop for professional, large-scale composters, and
- ✓Partnership with the Rocky Mountain Organics Council and composters throughout the region.

We are increasing both knowledge and skills of composters, so that they have the necessary foundation and motivation to optimize their composting practices.

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