

Small Acreage Livestock Pollution Prevention:

Developing and Conducting a 4-H Volunteer Training Program in Rhode Island

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Situation

Throughout Rhode Island and New England, small acreage livestock and horse owners often “slip through the cracks” for receiving education and assistance that encourages the adoption of livestock Best Management Practices (BMPs) that protect water quality. Properties usually consist of small residential lots that are close to water resources including private drinking water wells. This target audience often has different goals, conditions and resources compared to large scale livestock operations.

Objectives

1. Identify barriers and benefits to adoption of livestock management practices for water quality protection.
2. Design an adoption-outreach Extension education program that minimizes the barriers and maximizes the benefits to adoption of BMPs for water quality protection.
3. Determine the effectiveness of the train-the-trainer model to influence behavior norms of livestock management practices among the target audience.
4. Recruit and train 20 volunteers by the end of year two.
5. 95% of trained volunteers and the target audience will indicate an increased awareness and knowledge of hydrology, the water cycle and the interaction between watersheds and aquifers by the end of year three.
6. 95% of trained volunteers and the target audience will indicate an increased awareness and knowledge of pollution and health risks associated with small acreage livestock activities by the end of year three.
7. 90% of trained volunteers and the target audience will be capable of identifying the most common pollution and health risks associated with livestock activities on their properties by the end of year three.
8. 90% of trained volunteers and the target audience will be capable of identifying appropriate BMPs to minimize pollution and health risks associated with small acreage livestock activities.
9. 90% of trained volunteers and the target audience will consider adopting at least one BMP for water resource protection by the end of year three.
10. 50% of trained volunteers and the target audience will adopt at least 1 BMP by the end of year 3.
11. 80% of trained volunteers (10 teams of 2 volunteers per team) will provide a minimum of 20 hours of direct educational programming to their club members, families and other affiliated organizations by the end of year three.
12. 75% of trained volunteers will indicate that they intend to provide at least 10 hours of education and outreach programming to their clubs and other affiliated organizations for an additional 2 years beyond the end of the project.
13. 90% of trained volunteers will increase their public presentation skills and express increased confidence in their abilities to teach in a small group environment by the end of year three.

Adoption-Outreach Education Program

The University of Rhode Island Cooperative Extension (URI CE) Home*A*Syst and 4-H Programs, URI's Department of Fisheries, Animal and Veterinary Science and URI's Department of Communication Studies are developing and conducting a train-the-trainer education program for small acreage livestock owners. We are working primarily with URI 4-H Program volunteers.



Needs Assessment

- Conducted a needs assessment of the target audience to identify gaps in knowledge as well as barriers and incentives for adopting BMPs.
- Developed outreach and educational tools and message content based on the results of the needs assessment.
- View methods and results on-line at www.uri.edu/ce/healthylandscapes.

Outreach and Educational Tools

- Post Card
- Poster Display - 2 posters
Manure & Livestock Yard Management
Pasture Management & Stream Buffers
- URI Small Acreage Livestock Fact Sheet & Self-assessment Series
- Program Website
www.uri.edu/ce/healthylandscapes
- PowerPoint Slideshow
- Video – in progress



4-H Volunteer Training Program & Evaluation Plan

Phase I – train-the-trainer. November 2008 – January 2009. Developed and conducted a training program for URI 4-H Program adults and teens based on the needs assessment and pilot education conducted with first year URI Animal Science students.

- **Indoor Session:** 2-hour slideshow, groundwater model demonstration and binder containing various fact sheets and resources.
Introduce issues and concerns including animal stocking rates, the water cycle, land use impacts to water quality, and pollution and health risks. Identify BMPs for proper manure, livestock yard and pasture management.
- **Field Session:** 1.5-hour site assessment of URI Peckham Farm using URI fact sheet series.
Learn how to identify pollution risks and plan BMPs for livestock yards and manure storage areas.
- Administered written evaluation of training program.
- Assigned independent site assessments and written evaluation of URI fact sheet series.
- Conducted 1.5 hour follow-up workshop to review and evaluate independent site assessments / URI fact sheet series, and initiate **volunteer adoption-outreach education – Phase II.**
- Plan Effective Presentations Training – February / March 2009.

Phase II – volunteer adoption-outreach education. February – September 2009.

Trained 4-H volunteers will:

- Conduct educational activities that serve the target audience and volunteer a minimum of 20 hours each by the end of September 2009.
Educational activities may include formal or informal presentations, staffing the poster display at events, review and assign URI fact sheet series to 4-H club members, etc.
- Administer program evaluations to the target audience and track educational activities.

Program staff will:

- Monitor and support volunteer educational activities.
- Track program objectives and outcomes through formative and summative program evaluation plan and tracking volunteer activities.
- Refine and produce final set of educational tools based on program evaluation.
- Disseminate tools and methods to partners and stakeholders through Extension network and Project Steering Committee.



Current Impacts

- Recruited and trained 15 URI 4-H Volunteers – 9 adults and 6 teens.
- 87% of trained volunteers (100% adults) gained knowledge about hydrology, the water cycle, and the interaction between watersheds and aquifers.
- 100% of trained volunteers gained knowledge about pollution & health risks associated with livestock.
- 93% of trained volunteers (100% adults) are capable of identifying pollution & health risks on a small acreage farm.
- 93% of trained volunteers (100% adults) are capable of identifying BMPs to reduce pollution & health risks.
- 100% of trained volunteers are considering the adoption of at least 1BMP to reduce pollution & health risks.

Visit our website

www.uri.edu/ce/healthylandscapes



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