



Healthy Lawns, Healthy Water

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Nontechnical Summary: The Capital District Counties of New York (Albany, Rensselaer, and Schenectady) are home to over 600,000 people, many of whom own a suburban lawn. The region's streams and rivers empty primarily into the Hudson River. As the development of the watershed increases, home sizes become larger and homeowners wealthier, more people are interested in having an attractive lawn. This project was designed to educate a large number of residents directly about how proper lawn care can positively impact water quality and the environment. A total of 224 people attended one of six programs offered. A survey conducted several weeks after the programs found that 100% of respondents gained a great or moderate amount of knowledge on four lawn care topics. Additionally, 42% adopted one or more IPM practices which will improve water quality.

Objective: Our overall objective was to educate Capital District homeowners about how integrated pest management methods for home lawns can have a positive impact on water quality. Although the approach was altered slightly (as described below), this objective was thoroughly achieved.

Approach: The original approach was to conduct one three-hour symposium, held at a centrally-located venue, and entitled "Healthy Lawns, Healthy Hudson." The following changes were made:

1. In recognition of the fact that people's time is limited, and that traveling is expensive, it was decided to hold a larger number of shorter programs in more locations. It was also estimated that this approach would reach a larger audience.
2. The parts of the region not directly bordering the Hudson River might not identify with the original title, so it was changed to "Healthy Lawns, Healthy Water" to better reflect the audience's perceptions of where they live in the watershed.
3. The evaluation was simplified to one survey sent to fifty participants, selected at random, at the conclusion of the last program (in June).

An attractive color brochure mailed to over 700 households, press releases and an email announcement sent to a list of over 500 gardeners were used for publicity. A Powerpoint presentation provided the basic format for each class. The Project Leader served as the speaker for each event. Audience participation and questions-and-answers during and after each event were encouraged. Each participant received copies of two Cornell bulletins, "The Homeowner's Lawn Care And Water Quality Almanac" and "Lawn Care Without Pesticides," as well as the colorful "Healthy Lawns, Healthy Water" magnet.

Results: The revised plan called for four programs in the three county Capital District region. As word about “Healthy Lawns, Healthy Water” spread, the Project Director was asked to make two more presentations, in Warren and Columbia Counties. As a result, 224 people were reached, 74 more than the 150 people set as the initial objective. Details are given in Table 1 below.

Table 1. Details of Individual Sessions of the “Healthy Lawns, Healthy Water” Program

| Date | Location | County | Program Length | Number Attending |
|---------|---------------------------------------|-------------|----------------|------------------|
| 3/28/08 | Capital District Flower & Garden Show | Rensselaer | 1 hour | 40 |
| 4/10/08 | Extension office | Rensselaer | 1.5 hours | 39 |
| 4/12/08 | Extension office | Albany | 2 hours | 25 |
| 4/21/08 | Niskayuna Library | Schenectady | 1.5 hours | 35 |
| 4/26/08 | Adirondack Flower & Garden Show | Warren | 1 hour | 10 |
| 6/6/08 | Kinderhook Lake Association | Columbia | 1 hour | 75 |

Given the amount of information presented in the Powerpoint, and the enthusiastic response from the audience, the one hour programs were somewhat rushed. It was found that the material could be presented in more depth at the 1.5 and 2 hour programs. In the future, the ideal length for this program would be at least 1.5 hours.

Impacts: The basis for evaluating the impact of the “Healthy Lawns, Healthy Water” program is the survey sent out in June, 2008. Twenty-nine of the fifty surveys (58%) were completed and returned. A copy of the survey is at the end of this report.

Attendees were asked to rate their knowledge gain in five areas critical to understanding lawns and water quality: fate of fertilizers and pesticides, best types of grass to grow given the site conditions, proper fertilization, mowing height, and the use of herbicides. Their responses are compiled in Table 2 below.

Table 2: Knowledge Of Five Lawn And Water Quality Topics Gained

| Topic | Knowledge greatly improved (%) | Knowledge moderately improved (%) | Knowledge did not change (%) |
|------------------------------------|--------------------------------|-----------------------------------|------------------------------|
| Fate of fertilizers and pesticides | 62 | 38 | 0 |
| Best types of lawn | 76 | 24 | 0 |

| | | | |
|----------------------|----|----|----|
| grass | | | |
| Proper fertilization | 59 | 41 | 0 |
| Mowing high | 48 | 31 | 21 |
| Use of herbicides | 41 | 59 | 0 |

One-hundred percent of the respondents reported gaining a great or moderate amount of knowledge on four of the five topics. For mowing height, 79% gained a great or moderate amount of knowledge, while 21% did not gain knowledge. We might assume that 21% of the audience already understood that mowing a lawn to a height of 3 inches is the accepted practice, but it could also be that the audience did not understand this topic thoroughly. When presenting this program in the future, the Project Director will ask the audience how much they know about mowing to discern more information. Overall, these numbers indicate that the participants found the “Healthy Lawns, Healthy Water” program to be very educational.

An important part of this program was providing participants with printed materials which they could refer to in the future, and which might also encourage them to adopt better lawn care practices. In response to a question related to this, 69% of the respondents found the printed materials given to them to be very informative, while the remaining 31% found them somewhat informative. We can therefore conclude that the Cornell printed materials were very effective.

An open-ended question asked if respondents were planning on making changes in their lawn care practices, or if they already had, as a result of attending the “Healthy Lawns, Healthy Water” program. Twenty-two respondents answered this question, most offering more than one change already implemented. These are summarized in Table 3 below.

Table 3: Lawn Care Changes Made By 21 Respondents

| Lawn care change made | Number of respondents |
|--|-----------------------|
| I’m mowing at 3 inches | 9 |
| I am fertilizing at the proper time | 5 |
| I am fertilizing less | 4 |
| I am adopting wiser watering practices | 4 |
| I have chosen seed more carefully | 4 |
| I am using fewer pesticides | 3 |
| I have checked soil pH | 3 |
| I am applying fertilizer more carefully | 2 |
| I will seed in mid-August rather than spring | 2 |
| I am sharpening the mower more often | 1 |
| I am attempting to reduce run-off | 1 |
| I have decided not to use pesticides and fertilizers – too much work | 1 |
| I passed the printed material on to my lawn care person | 1 |
| I have encouraged my customers to adopt better lawn care practices | 1 |

From the varied answers, we can conclude that the program addressed a wide variety of concerns, and that a variety of positive IPM messages were received by the attendees. Interestingly, the largest number (9) reported raising their mowing height, while in the previous part of the survey, a significant number (21%) indicated that they did not gain knowledge in this area.

These results clearly demonstrate that the program encouraged 42% (21 out of 50) of the survey respondents to change one or more of their lawn care practices. All of these changes will benefit water quality, as well as improve the health and aesthetic quality of lawns. Additionally, in a broad context, we can conclude that this same 42% has adopted at least one IPM practice, since all of these actions might be considered part of an IPM program.

Given information about lawn care and water quality, some of the general population of lawn owners is willing to make positive IPM changes. This has encouraged the Project Director to:

1. Plan to offer “Healthy Lawns, Healthy Water” again during the winter 2008 – spring 2009 programming season
2. Seek ways to share this program with other Extension educators in the Northeast
3. Develop additional programs in the realm of horticulture/gardening which can have a positive environmental impact

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Healthy Lawns, Healthy Water Survey – Please Help!

*As an attendee at our “Healthy Lawns, Healthy Water” class this spring, we are sending you this short survey. Your answers to the questions below will be used in our report to the Northeast IPM Program, which helped sponsor the class. All replies will be kept confidential. Please return this form to us by **June 26** in the stamped, self-addressed envelope provided. Thanks!!*

David Chinery, Extension Educator, Cornell Cooperative Extension

Please circle the statement below each question which applies to you as a result of attending the “Healthy Lawns, Healthy Water” program.

1. My knowledge of what can happen to fertilizers and pesticides (i.e., leaching or runoff) when applied without care to a lawn:

Improved greatly Improved moderately Did not change

2. My knowledge on how which types of grass are best for my type of lawn:

Improved greatly Improved moderately Did not change

3. My knowledge of how to fertilize my lawn with water quality in mind:

Improved greatly Improved moderately Did not change

4. My knowledge of why it is important to mow my lawn high:

Improved greatly Improved moderately Did not change

5. My knowledge of how to use lawn herbicides safely:

Improved greatly Improved moderately Did not change

6. I have found the printed materials from the class:

Very informative Somewhat informative Not useful at all

7. Have or will you in the future make any changes in how you take care of your lawn? If so please tell us briefly:

8. If there is anything else you would like to tell us about your lawn or the class, please do so here:

Thank You!