

Horticulture

Issue: Lack of general knowledge of home horticulture best management practices resulting in environmental degradation/pollution

Work Group Names: Michael Womach, Logan Respass, Dennis Hale

Region: South **Circle which primary base program it addresses -** ANR

Section 1. Relevance

Relevance is included to provide the reason the educational program should be developed to address the identified issue. Within the relevance section, there are several questions that must be addressed. This section will seek to address these.

Where did this issue surface?

Sources where issue surfaced:

Texas Community Futures Forum
County Committees

Commodity / Industry / Special Interest Groups

Other: These questions constitute a large percentage of our day to day inquiries and outreach efforts including contracts by volunteers

Method Selected

What is the issue/problem?

General lack of knowledge by homeowners including but not limited to: pest and plant disease identification and treatment; irrigation bmps, fertilization bmps, plant selection and cultural practices, lawn fertilization which can lead to environmental degradation

Problem size and scope? (How many people does it affect? How wide spread?)

A large portion of residents (all folks dealing directly or indirectly) with landscapes, vegetable gardens and house plants.

Problem severity? (How serious is this issue?) High

Description: There is an obvious need for more information and more training based upon office inquiries. Based upon office inquiries application rates far exceed recommended rates which can lead to environmental degradation.

Target Audience? (Who does the problem impact and how many?)

Horticulture beginners and enthusiasts as well as landscape and nursery professionals.

What are some general characteristics of the audience this program targets?

Eager to learn. 1. General lack of knowledge and training in best horticulture management practices, but passionate in their hobby and demanding of quality answers produced in a timely fashion.

2. Limited training in BMPs for the specific locale, limited time, aware of bottom line economics, loyal clientele.

Section 2. Response

Response refers to how Extension intends to address the issue by developing an educational program.

State the goal of the program. This is a statement, usually general and abstract, of a desired state or outcome. It is usually one sentence. Example: To increase profits for beef cattle producers.

To increase knowledge of BMPs for the home and professional horticulturalist

State the outcome objectives. These are the objectives that describe the intended results of a program (e.g. attitudes, knowledge, skills, adoption of practice/technology, change of behavior). Examples include:

- Participants will increase knowledge in beef cattle selection practices
- Participants will change their attitudes about higher education options
- Participants will exercise for at least thirty minutes three times per week

It is important to write objectives for each of the six levels of change that we have identified (if possible). Even though your program may only be teaching toward knowledge, another program may be teaching toward a behavior. Also, remember to make these as specific as possible.

Client Change	At the end of this program, will....
<i>Knowledge</i>	increase knowledge on... Proper landscape irrigation options and BMPs, fertilization practices, pest management strategies and pesticide application rates, plant selection and cultural BMPs
<i>Skills</i>	develop skills... In basic horticulture landscape and lawn care (trimming and pruning) for their locale. In plant pest and disease ID, in determining best solution options utilizing IPM practices and strategies

<i>Attitude</i>	change their attitudes pertaining to... Reading and following labeled instructions is very important (pesticides, fertilizers, etc.) i.e. get away from if a little works a lot out to work a lot better; water conservation and environmental protection starts at the homeowner level
<i>Behavior Change</i>	adopt....
<i>New Technology</i>	adopt....
<i>Best Practice</i>	adopt BMP in pesticide applications, fertilization applications, irrigation applications, pruning, trimming, etc.

Program Design. In the space below, provide an explanation of the program design. Try to list the topics that could be addressed under this issue. For example, if this was an educational program for new ranch landowners, topics could include: pond management, introduction to beef cattle production, introduction to wildlife management, and general landscaping. Also, try and list resources that could be used to help develop or provide existing curriculum to address the issue.

Topic (Subject Matter)	Existing Resource(s)	Contact Person(s)
<i>Example: Beef Cattle Breeds</i>	<i>E-186 - Texas Adapted Genetic Strategies for Beef Cattle--I: An Overview</i>	<i>District Based Specialist (provide names if possible)</i>
	publications regarding pesticide recommendations, master gardeners, web sites, digital diagnostic lab, local experts	entomology specialist, pathology specialists, master gardeners, TDA, Tx forest service, industry members

Home Food Production, Variety Selection, Pest ID, Cultural Practices	Extension publications, website, master garden, Botanical Garden, publications regarding pesticide recommendations, master gardeners, web sites, digital diagnostic lab, local experts	Extension specialists
Home landscape irrigation/Water Conservation	extension publications, local water department publications, publications regarding pesticide recommendations, master gardeners, web sites, digital diagnostic lab, local experts	Roger Havlak, Doug Welsh, Guy Fipps, local water departments, Extension Specialists, Entomology, Horticulture, Soil Scientist
Lawn Management	extension publications, publications regarding pesticide recommendations, master gardeners, web sites, digital diagnostic lab, local experts	turf specialists
	extension publications, master gardeners, websites, plant societies, publications regarding pesticide recommendations, master gardeners, web sites, digital diagnostic lab, local experts	Horticulture Specialists, Horticulture agents, Master Gardeners, TX forest service
Landscape Design	Extension Publications, publications regarding pesticide recommendations, master gardeners, web sites, digital diagnostic lab, local experts	
Sports Field Management	publications regarding pesticide recommendations, master gardeners, web sites, digital diagnostic lab, local experts	

Topic (Subject Matter)	Existing Resource(s)	Contact Person(s)
Environmental Horticulture	publications regarding pesticide recommendations, master gardeners, web sites, digital diagnostic lab, local experts	
Wildscape and Nature Plants	publications regarding pesticide recommendations, master gardeners, web sites, digital diagnostic lab, local experts	

Section 3. Results

The last section deals with evaluation of this program. The evaluation content should mirror the objectives that are outlined in section two. Please try and list some specific questions that should be asked to the target audience to determine if the intended change took place. List as many potential questions as possible. The goal here is to create a question bank for each client change level so that the educator can review these questions to see if any of them are relevant to their program. If they are, then they can use them to measure change in their program. Remember, not all evaluation strategies have to be written questionnaires. They may also be interviews, direct observation, or focus groups. Please describe your method in this section where appropriate.

Client Change Level	Sample Questions (Review the objectives section to help place questions or statements in the space below)
<i>Knowledge</i>	Increases Awareness of website Pest ID questions New Varieties (awareness) Awareness of Horticulture Production Vegetable, Fruits and Nuts through Publications Use Pre-Post test
<i>Skills</i>	Adoption of PET network Water use monitoring Proper mix and application of pesticide (have measuring device)

Client Change Level	Sample Questions (Review the objectives section to help place questions or statements in the space below)
<i>Attitude</i>	Is your landscape unimproved? Evaluation of plant practices. What is your tolerance of the natural landscape.
<i>Behavior Change</i>	Reducing Pesticide Use <ul style="list-style-type: none">- Water use- Fertilizer use- Utilization of IPM- Recycling yard waste

Client Change Level	Sample Questions (Review the objectives section to help place questions or statements in the space below)
<i>New Technology</i>	<ul style="list-style-type: none"> - Use of internet to access horticulture information - Planting new varieties - Use of Row Cover in vegetable gardens - New Pesticides - Use of Drip Irrigation - Slow Release Fertilizer - Composting - Use of Biotechnology
<i>Best Practice</i>	<p>Participants are actually using Best Management Practices in landscape, plant selection, pest management determined through post questions.</p> <p>Use native plants.</p>

Economic Indicators. Are there economic indicators that can be measured concerning this issue?

YES

Please list them below.

Dollars invested in landscape (before and out)

Interpretation. The last step in the process is interpreting the results to our stakeholders. List internal and external stakeholders that would be interested in the results of this educational program. Do not forget to think about other state agencies and groups that would be interested in these outcomes.

Internal to Extension Stakeholders	External Stakeholders
Extension specialists (need better connection and tie into the county level) Administration (importance of horticulture with legislative finance)	County Commissioners Court State Legislatures "This impacts constituents in every county of the state" Garden associations, societies, and clubs Water boards (local and state) Environmental organizations Economic development organizations Tourism groups and organizations

Additional Resources. What additional resources are needed to address this issue? In other words, what is needed to design innovative programs that will impact our audiences? Use the space below or the back if needed.

