

Master Gardener education produces better gardeners and changes in behavior

The Situation

For the past ten years the Master Gardener program has shown increases in the gardening knowledge of students. Students have consistently scored higher in post-tests than on pre-tests. These results have helped to highlight the successes of the Master Gardener Program.

There has, however, been a gap in program evaluation over the past years. Educators have not evaluated the Master Gardener students for changes in behavior. It is expected that graduates of the Master Gardener program would modify their gardening practices in the areas of irrigation, disease management, fertilization, and pruning to more closely comply with university recommendations and guidelines. Students changing their behavior in a positive direction would lead to less waste of precious resources such as irrigation water, pesticides, and fertilizers. It would also result in those gardeners having less of an impact on their environment while producing higher quality vegetables from their gardens.

Our Response

All of the past students, who completed the Master Gardener course since 1998, in Bannock, and Bonneville counties, were evaluated for positive changes in their behavior. Surveys were sent to each of the master gardeners. The return rate was 70%.

Each student was asked to rank positive changes in their behavior on a scale of 1 to 10. A response of 1 indicated no change in gardening behavior, and a response of 10 indicated a complete positive change in gardening practices based on what was learned during the Master Gardener course. Each question was followed by a response guide that assisted the students in ranking their behavior. The questions



Master Gardener students attending class in Idaho Falls.

were as follows: (The first three include their response guides. Other response guides were similar.)

- Have you changed the way you water your garden and/or landscape? 1= I water exactly as I watered before I took the class; 5= I keep in mind what was taught in the Master Gardener class and think about soil texture, and how fast the water is being used; 10= I think about the amount of water my soil can hold for every inch of crop root depth, and how fast it is being used up, and make the calculations needed to schedule the next irrigation.
- Have you changed the way you manage disease in your garden and yard? 1= I see what might be a disease, such as a leaf spot, then I spray; then I ask questions. 5= I try to identify the disease problem; then I spray chemicals. 10= I get a positive identification of the problem and then look for mechanical, cultural, or chemical ways to deal with the disease.

- Have you changed the way you select vegetable varieties to grow in your garden? 1= I just grow the same varieties I have always grown. 5= I look at the label on the seed package and determine if it is rated for zone 4. 10= I look at the label on the seed package and determine if it is rated for zone 4, has good disease resistance, and is less than 100 days to maturity.
- Have you changed the way you manage insects in your garden? 1= If something is crawling on my vegetables I quickly spray with an insecticide. 5= I first determine if it is a beneficial insect, and if it is not I spray. 10= I first get the insect identified then use multiple control measures (mechanical, biological, chemical) to deal with the pest.
- Have you changed the way you prune your trees? 1= When a branch is in the way I just lop the end off leaving a branch stub. 5= I prune branches back to the branch collar. 10= I remove all dead wood, crossing branches, and branches that head toward the center of the tree, by cutting at the branch collar.
- Have you changed the way you fertilize your garden?
- Have you changed the way you manage house plants?
- Do you use research based material in solving your gardening questions?
- Have you changed the manner in which you apply pesticides?
- Have you changed the way you manage your lawn?

Program Outcomes

All categories showed positive changes in student behavior as a result of completing the Master Gardener course. In the area of pruning, students rated their positive change in behavior at the level of 9 (on a scale of 1 to 10). The average rating of other questions are as follows: irrigation management, 6.8; disease management, 8.0; vegetable production, 8.1; insect management, 8.1; fertilization, 6.9; pruning, 9.0; house plant production, 7.4; use of research based information, 8.2; pesticide use, 8.6; and lawn management, 8.1.

Master Gardener students have modified their behavior and manage their gardens to more closely follow University of Idaho recommendations. These gardeners manage resources such as irrigation water, pesticides, soil, and seed in a more effective manor and reduce crop disease through better management behaviors.

These results highlight the positive influence the Master Gardener course has had on the behavior of students over the past ten years. Since some of these students graduated from the course many years ago, the results also demonstrate the longevity of these positive changes in behavior.

FOR MORE INFORMATION

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