Invasive Plant Survey

Invasive plants are an increasingly recognized topic of interest for gardeners, regulatory agencies, and environmental conservationists. This issue has grown in prominence in the last several years due to outreach programs from garden clubs, universities, and other organizations who have taken up the cause of preserving our native plants. Sometimes, with emerging issues like invasive plants there are differences between groups of people concerning the definitions and proper use of terminology. To investigate current perceptions regarding definitions of invasive plants and to better understand the level of concern for this issue, we conducted an informal on-line survey which ran from October through November of 2014.

Of approximately 200 email invitations, we received 66 complete reponses, for a response rate of approximately 33%, which was considered relatively good for this kind of survey. The respondents were asked to classify themselves as either amateur gardeners, master gardeners, professional (career) gardeners, flower/horticulture judges, or environmentalists/academics. The invitations were sent predominantly to master and amateur gardeners, so the proportion of responders was not surprising. Given the low number of respondents for the professional gardener and academic/environmentalist categories, the sample is insufficient to represent these professions. However, we did compare responses against these groups to see if differences existed which might warrant a follow up survey.

Table 2 lists the questions that were asked of all respondents. The most frequent characteristic of invasive plants cited in question 1 was answer c, plants which are officially listed by the state as invasive. With the exception of amateur gardeners, this was the most highly selected answer for all respondent classes. Choices b, spread uncontrollably, and d, should not plant, were also highly selected among respondents. In the case of amateur gardeners, b, uncontrollable spreading was chosen slightly more often than c, officially listed, but otherwise amateur gardeners followed the same trend as other groups. Answer a, non-native to my growing area, was selected across groups in approximately the same proportion. Question 2 asked whether all or any of the criteria in the first question should be present to identify a plant as invasive. For those respondents answering "all," the majority included option c, officially listed, as a criterion defining invasive plants.

When asked the level of importance for identifying invasive plants, only one respondent, a professional gardener, considered identification of invasive plants as unimportant. Amateur and master gardeners ranked the importance of identifying invasive plants as very important (57-69% of respondents) less often than horticulture judges and academics (83-100% of respondents). Likewise, only 3 respondents (2 master gardeners and 1 professional gardener) indicated they would grow invasive plants, while the majority of respondents (96%) indicated they would not.

The survey requested respondents to describe their activities combating invasive plants in question 5. All 6 respondents in the professional and academic/environmentalist categories indicated that they avoid planting and had removed invasive plants. Amateur gardeners had the lowest response rate (71%) for avoiding the planting of invasives, and amateur gardeners also scored low for removal of public invasives (24%) and participating in education about invasives (33%) compared to the overall average. While horticulture/flower judges scored low for removal of invasive plants from public lands (17%), they were equivalent to master gardeners on education efforts (55-58%).

Additional questions, tailored to each classification of respondents, were asked. For master gardeners, the questions in Table 3 were asked. According to master gardener respondents, only 50% of them received training on invasive plants as part of their master gardener curriculum, although 25% pursued the topic on their own and all master gardener respondents indicated that invasive plants should be part of the curriculum. One in 4 master gardeners have not reviewed the list of their state's invasive plants, either in printed or online materials. Nearly all master gardeners feel it is their duty to inform other gardeners and the public about invasive plants.

For horticulture/flower judges, additional questions are presented in Table 4. All but one judge respondent indicated that invasive plants should be prohibited on show schedules (92%). Most judges (67%) inform participants that an entry contains an invasive plant, whether or not it is permitted by the schedule. For academic/environmentalist classified respondents, both strongly agreed that invasive plants were an important issue for our environment, although just one reported teaching on the topic.  
  
All respondents could also provide a free text comment and 36 respondents left comments. Some of the comments made by respondents taking the survey, centered on education and learning to identify invasives. One person handed out cards listing invasives to family members and friends. What a great way to spread the word about this problem. Another person commented *“people also must have a willingness to not plant certain species or remove invasive they already might have in their yard or garden”’.*Still another was *“‘you can tackle them but may never get rid of them”*. Also mentioned was how invasive plants in their area are killing off the native plants which wildlife depends upon for their survival so one problem compounds another one.   
  
In conclusion, the survey indicated a high degree of agreement that invasive plants are a topic of great importance among gardeners, judges, and academics/environmentalists. The defining characteristic of an invasive plant most often cited was that of an official designation through state government, although the characteristics of uncontrollable spreading and the need to avoid planting are clearly linked to the term 'invasive'. On the topic of education about invasive plants, it appears there is room for improvement. While all agree that invasive plants should be covered in master gardener courses, only half of master gardeners reported learning about invasive plants in their curriculum. The opportunity for increased involvement of amateur and master gardeners in education programs would seem apparent. In terms of action, professional gardeners and academic/environmentalists are highly active in removal of invasive plants from private and public lands and amateur and master gardeners would do well to follow their lead.

Table 1. Respondents by self-classification

|  |  |
| --- | --- |
| **Classification** | **Number of respondents** |
| Master gardener | 29 (43%) |
| Amateur gardener | 21 (31%) |
| Professional gardener | 4 (6%) |
| Horticulture/flower judge | 12 (18%) |
| Academic/environmentalist | 2 (3%) |

Table 2. Survey questions for all respondents, with responses

|  |  |
| --- | --- |
| 25 (37%)  46 (68%)  51 (75%)  39 (57%) | 1. What does "invasive plant" mean to you?  a. Plants that are non-native to my growing area  b. Plants that spread uncontrollably  c. Plants officially listed by the state as "invasive" or "noxious weeds"  d. Plants that should not be introduced to gardens or landscaping |
| 17 (25%)  50 (75%) | 2. Referring to the previous question, for a plant to be considered invasive it must...  a. Meet all criteria in question 1  b. Meet any of the criteria in question 1 |
| 47 (69%)  20 (29%)  01 (01%) | 3. For you, identifying invasive plants is  a. Very important  b. Somewhat important  c. Not important |
| 03 (04%)  65 (96%) | 4. If I know a plant is invasive, I would still consider growing or selling it  a. True  b. False |
| 56 (84%)  52 (78%)  22 (33%)  35 (52%)  09 (13%) | 5. I have done the following to help eradicate invasive plants  a. Avoid planting invasive plants  b. Remove existing invasive plants on my property or worksite  c. Remove existing invasive plants from public properties (for example, volunteer programs)  d. Educate other how to identify invasive plants  e. Other (please specify) |

Table 3. Survey questions for master gardeners only, with responses

|  |  |
| --- | --- |
| 14 (50%)  06 (21%)  08 (29%) | 6. Regarding my master gardener training,  a. Invasive plants for my region were identified  b. I studied invasive plants on my own  c. Invasive plants were not covered in my training |
| 28 (100%)  00 (00%) | 7. Invasive plant identification should be part of master gardener training  a. Agree  b. Disagree |
| 07 (25%)  14 (50%)  07 (25%) | 8. I have reviewed the list of invasive plants for my state  a. on the state's official website  b. in printed material  c. I have not reviewed the list |
| 26 (93%)  02 (07%) | 9. A master gardener should inform other gardeners and the public about the need to eradicate invasive plants  a. Agree  b. Disagree |

Table 4. Survey questions for horticulture/flower judges only, with responses

|  |  |
| --- | --- |
| 11 (92%)  01 (08%) | 6. When judging, invasive plants should be prohibited on the schedule of allowed plants  a. Agree  b. Disagree |
| 04 (33%)  08 (67%)  00 (00%) | 7. I inform participants when they have used an invasive plant  a. only when not permitted by the schedule  b. whether permitted or not by the schedule  c. I do not consider whether plants are invasive when judging |

Table 5. Survey questions for academic/environmentalist only, with responses

|  |  |
| --- | --- |
| 1 (50%)  1 (50%) | 6. I teach about invasive plants and their identification  a. Agree  b. Disagree |
| 2 (100%)  0 (0%)  0 (0%) | 7. Invasive plants are an important issue in our environment  a. Strongly agree  b. Somewhat agree  c. Disagree |

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