

## Weed Science Society Professional Development Survey – June 2007

**Objective:** To obtain feedback from the WSSA membership to determine if WSSA Society is supporting its membership in the areas of career and professional development.

**Methods:** The survey was developed and implemented by Dr. Chad Brommer, Emory University, using Survey Monkey. Below release, the survey was reviewed and approved by the Professional Development Committee and the WSSA Board. A request for individuals to fill out the survey was emailed to all WSSA members as well as members of each regional society. The survey was available from June 4 to 24 at

<https://www.surveymonkey.com/s.aspx?sm=d6EgadpfKQwQjjYZgcwo3Q%3d%3d>.

Data were analyzed using SPSS software by Ms. Abby Javurek-Humig (New Mexico State University; M.Sc., Sociology). Data for each question were categorized by variable; respondent gender, primary career position, and societies to which respondents belonged were dichotomous level variables. Gender was coded 0 for men and 1 for women, and membership of each society and career positions were coded dichotomously, with "0" indicating that a respondent was not part of that group and a code of "1" indicating membership in that particular society or career position. Region of degree was a nominal level variable in which regions were arbitrarily assigned an integer. Once the complete SPSS data set was created, basic crosstabs, correlations, and t-tests were run to look for significant differences at the  $p < 0.05$  level between groups according to age and gender. Analyses employed list-wise deletion as a mechanism for handling missing values.

**Results Summary:** There were 301 respondents to the survey which is a response rate of ca. 20% (assuming all WSSA members total 1400 members as in June 2006); 27 graduate students responded for a response rate of ca. 30% (assuming student members total 90 as in June 2006). Each regional society and career position was represented in the responses. There were few significant gender or age differences with respect to survey responses. Most respondents had been members of WSSA for 11 or more years and have held between 1-3 positions in their career. More specifics on demographics are provided in the tables below.

Survey results support the need for WSSA to provide career and professional development programming with greater emphasis being placed on the development of new research skills and networking. Specifically, most respondents felt that on-line resources for career development were not important for their career advancement; however, felt annual meetings, journals, and job announcement opportunities provided by WSSA were helping advance their careers. A majority of the respondents would consider a new career opportunity if given the opportunity and thus, would like to continue to enhance their networking and job application skills; most respondents felt that learning new research skills was important to career development. Overall, respondents were more willing to act as mentors than they were to be mentored. Most respondents were in the undecided range about their desired level of participation in career forums, but felt that networking was the strongest career development need area. Developing professional skills was viewed as being moderately important to career development. Most respondents felt that the annual meeting was somewhat or slightly important to developing their careers. Data from each survey question is summarized by response groups below; individual comments and prevalent themes from those themes are presented below as well.

**Survey Results in Tables (See attached PDF file for Figures generated from Survey Monkey):**

<b>Demographics of Respondents</b>				
	Male	Female	No gender given	Total
	250	41	10	301
<b>Age of Respondent</b>				
Under 25	2	1	0	3
25-30	19	3	1	23
30-40	44	11	1	56
40-60	145	26	3	175
60 and over	40	0	0	40
<b>Primary Career Position (Up to Three chosen)</b>				
Academic Research	99	16	3	117
Academic Extension	68	10	4	82
Private sector research	59	3	1	63
Academic teaching	45	10	2	67
Government research	25	1	2	28
Private sector other	22	3	0	25
Graduate student or post-doc	22	1	1	27
Government other	12	4	0	16
Non-profit	3	2	0	5
Policy or law	2	2	0	4
Other	2	0	3	5

While there were only five respondents who marked “other”, there were a significantly larger number who wrote in other positions. The following is the breakdown of the other career positions written in:

**Men:**

Emeritus professor weed science = 1

Farmer = 1

Independent consultant= 1

Municipal enforcement and extension = 1

Private company efficacy research = 2

Regulatory consultant= 1

Retired = 3 (1 is teaching still, I was with the USDA)

UN Technical officer = 1

Weed control – local government = 1

**No gender:**

Private sector tech transfer = 1

Consulting = 1

**Women :**

Private crop consultant = 1

Undergraduate student = 1

There were very few areas where men and women were statistically different from each other with respect to their main career areas. The biggest differences were found in government research which had a higher proportion of men than women, and in the areas of Policy and law and Non-profit where there were higher representations of women than men.

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<b>Region of Country Highest Academic Degree was earned</b>				
	Male	Female	No gender given	Total
	250	41	10	301
Midwest	84	9	3	96
Southeast	56	6	1	63
Northeast	22	2	3	27
West	18	7	1	26
Southwest	21	3	0	24
Northwest	14	5	0	19
Canada	8	7	0	15
Not in North America	12	0	1	13
Other	2	0	0	2

There were no significant gender or age differences with respect to the region in which the respondent earned their highest academic degree. The majority of respondents attained their highest degree in the Midwestern or Southeastern portions of the United States.

<b>Regional Societies Respondents Belong to</b>				
	Male	Female	No gender given	Total
	250	41	10	301
NEWSS	28	4	2	34
SWSS	73	6	0	79
NCWSS	85	7	4	96
WSWS	61	16	1	78
CWSS	14	5	0	19
IWSS	53	3	2	58
None	18	4	0	22

Most respondents regardless of gender had been members of WSSA for 11 or more years. There were no significant differences between gender and society membership.

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## On-line Resources

WSAA on-line resources are how important to career advancement (personal)				
	Male	Female	No gender given	Total
	250	41	10	301
Very important	19	0	0	19
Important	41	5	3	59
Somewhat important	54	12	0	66
Slightly important	59	12	1	72
Not important	67	11	3	81

Few respondents felt that online resources for career development were important for their career advancement (7.7% men, no women). Overall, regardless of gender, respondents were most likely to indicate that on-line resources were not at all important to their career advancement.

**The following is a list of the first choice activities that WSAA conducts, endorses or sponsors to help career advancement:**

### Number of Respondents / Answer:

#### **107 = Meetings and conferences associated with WSSA**

- 9 respondents also indicated that networking and interaction with other professionals at these meetings was beneficial
- 7 cited both national and regional meetings in specific
- 4 respondents felt that the presentations at these meetings were useful; one qualified they feel that presentations help faculty to get published and another respondent felt that presentations were useful in helping develop research projects

#### **56 = Journals**

- 8 respondents cited Weed Technology as being useful
- 3 felt that Weed Science was valuable
- 2 respondents felt that the 2 Herbicide Handbook was useful in their careers
- 2 respondents felt that the WSSA was the only appropriate outlet in which they could publish
- 1 felt that Weed Resistance Management was an important publication
- 1 felt that it was important to have a place for refereed pubs in the Weed Science field
- 1 felt that the Journals were useful for the editing of publications
- 1 respondent felt that the WSSA online publications were very useful

#### **38 = Job placement and job announcement opportunities**

- 6 = making contacts/ Networking
  - 7 = weed contests/team
  - 4 = Professional development symposia and workshops
    - 2 said that they enjoyed WSSA related symposia
    - 1 respondent said that workshops on teaching were important for career development
    - 1 respondent simply felt that WSSA workshops were valuable
  - 3 = graduate student activities
  - 2 = None
  - 1 = weed awareness week
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## Professional Positions

Number of professional positions in respondent's career				
	Male	Female	No Gender chosen	Total
0	8	2	0	10
1	60	9	4	73
2	68	142	2	82
3	54	9	1	64
4	28	5	0	33
5	14	3	0	17
6 or more	15	1	0	16

Most respondents regardless of gender have held between 1-3 positions in their career. There were no significant gender differences with respect to the number of positions held.

I am currently seeking out a new or different professional position				
	Male	Female	No Gender chosen	Total
Yes	23	7	0	30
No	143	20	2	165
Maybe, if the right opportunity came along	82	14	3	101

About 45% of respondents felt that if the right opportunity came along, they would accept a new professional position. Of these, 10% said they were actively looking. Female respondents were more likely than male respondents to say that they were actively looking for a new position.

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## Mentoring

Opinions				
	Male	Female	No gender given	Total
	250	41	10	301
<b>I would be willing to mentor another member of the weed science community</b>				
0 Resounding NO	22	5	0	27
1	19	6	0	25
2	13	3	0	16
3 Neutral	79	10	6	95
4	88	14	1	103
5 Absolutely YES	29	3	0	32
<b>I would like to be mentored by another member of the weed science community</b>				
0 Resounding NO	76	8	2	86
1	57	3	0	60
2	13	5	0	18
3 Neutral	61	12	2	75
4	26	11	2	39
5 Absolutely YES	17	2	1	20

Respondents in the 40-60 year old age range were most likely to indicate their willingness to be mentors, while men were more likely to indicate a strong desire to be mentors than were women. However, women were less likely than men to feel strongly that they did not want to be mentored. Overall respondents were more willing to act as mentors than they were to be mentored.

## Career Forums

Opinions				
	Male	Female	No gender given	Total
	250	41	10	301
<b>I would attend career forums at the WSSA annual meeting</b>				
0 Resounding NO	44	6	0	50
1	46	2	1	49
2	23	1	1	85
3 Neutral	71	12	1	84
4	43	16	3	62
5 Absolutely YES	23	4	1	28
<b>I would like to participate in career forums at the annual WSS A meeting</b>				
0 Resounding NO	44	5	0	49
1	51	4	1	56
2	27	3	0	30
3 Neutral	73	11	4	88
4	39	16	1	56
5 Absolutely YES	16	2	1	19

Most respondents, regardless of gender were in the undecided range about their desired level of participation in career forums.

## Career Development

<b>Research and Teaching</b>				
	Male	Female	No gender given	Total
	250	41	10	301
<b>My career development is learning new research skills or technologies</b>				
0 Resounding NO	19	3	0	22
1	18	5	0	23
2	13	0	1	14
3 Neutral	35	5	2	42
4	117	8	2	137
5 Absolutley YES	47	10	4	61
<b>My career development is learning new teaching or education skills</b>				
0 Resounding NO	33	3	0	36
1	32	3	1	36
2	24	2	1	27
3 Neutral	52	7	0	59
4	75	20	2	97
5 Absolutely YES	34	6	3	43

Most participants indicated that they felt learning new research skills is important to career development, though women were more likely to have strong positive feelings about this area than were men. Women were also more apt to feel that teaching and education skills were important to career development than were men.



<b>Networking and Professional Skills</b>				
	Male	Female	No gender given	Total
	250	41	10	301
<b>My career development is networking with professionals in my desired career area</b>				
0 Resounding NO	7	0	0	7
1	6	1	0	0
2	9	0	0	9
3 Neutral	37	5	1	43
4	118	17	2	137
5 Absolutely YES	74	17	4	95
<b>My career development is developing professional skills as they relate to interviewing, grant writing, time/ money management, etc.</b>				
0 Resounding NO	20	2	0	22
1	32	4	0	36
2	23	3	0	26
3 Neutral	48	8	2	58
4	92	18	2	112
5 Absolutely YES	35	6	3	44

Networking was the strongest career development need area for both men and women, though women almost twice as likely to feel that it was essential. Developing professional skills was moderately viewed as being important to career development, and men had more strong feelings at both extremes when compared to women.

Overall respondents did not seem to see mentoring as something that interested them, but wanted networking opportunities and knowledge of research skills and technology that could potentially come from a mentoring relationship.

## Feelings about the Annual Meeting

In terms of career development, the WSSA annual meeting is or has been.....				
	Male	Female	No gender given	Total
	250	41	10	301
Very important	58	10	3	71
Somewhat important	89	15	2	106
Slightly important	57	9	2	68
Not important	46	7	0	53

Most respondents felt that the annual meeting was somewhat or slightly important, but did not have strong feelings regardless of their gender or age.

Overall, there were very few gender and age differences in this survey, and respondents were apt to be more similar to each other than they were different based on their demographic information.

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**The following are condensed responses and themes for the question: “Please provide any comments, ideas, suggestion, or other feelings you have concerning the WSSA and your career development.”**

- Many respondents felt that their own regional conferences are of more help than national conferences (12)
  - Two respondents felt that there were simply too many conferences to attend and that the regional conferences were easier and cheaper to attend
  - Two other respondents felt that the material presented at the regional conferences better matched their research interests and needs than did the national conference
- There were several respondents who were either retired or at a comfortable enough stage in their career that they felt that the WSSA was not important to them at the present, but who all indicated that it was useful for younger faculty members (9)
  - One specifically said that WSSA was important for student mentoring
- Several respondents felt that there was not enough training at the WSSA meetings for professionals (4) Areas that concerned them included:
  - Specific information on research and teaching
  - Workshops on: statistics and modeling; teaching, conflict resolution, and social interaction
  - Leadership at all career levels
- Several respondents commented that their WSSA network had helped me to find a job in their career field (3)
- Several respondents did not feel that the WSSA pays enough respect and attention to international weed science community and international issues (3)
  - Two felt that international members were often excluded
  - One felt that more attention needed to be paid to students from developing nations

- Several Respondents felt that networking at the WSSA has helped to strengthen their careers (3)
- Feeling that leadership is close minded to alternative research and thinking (2)
  - I.e. action research is praised but applied is overlooked
- Feel academics are too powerful within WSSA (2)
  - One feels they are dominant
  - Another wants some information for non-academics to be included
- Feel that traditional weed science is being ignored in favor of new techniques and would like to see WSSA help get back to the basics as being accepted
  - Would like to see career development material in regional too (2)
- “None” (2)
- **Original Responses Summarized:**
  - Survey should include “not familiar” instead of just “not important” – several other responses reflected that people were unfamiliar with career development programs
  - “Journals are great”
  - “I am not active in WSSA”
  - Need to continue expanding early career and graduate student programs
  - Continue to promote open mindedness (ie. Present both biological and chemical control options)
  - Make job listings broader to include positions whose specifications are not just weed science, but to which weed scientists could bring a lot of knowledge/ talent
  - Fear that trainings conducted for grad students / young scientists in terms of how to get grant monies and competitive research positions are not equitable
  - Do mock interviews
  - I am not aware of career development
  - More activity in relation to the short courses
  - There should be a list serve for career development
  - More time for networking and collaboration instead of being so busy with presentations
  - Publications are wonderfully unique – there are few places to publish my research
  - Get more late career people involved with graduate student programs
  - Too many e-mails being sent out
  - Unfamiliar with this org. I am new
  - I only attend career forums to help me advise students
  - Unsure if committees are impacting the direction of the society
  - Need more non-herbicidal techniques explored
  - Information on job trends, not just specific jobs
  - Presentation opportunities are great for a professional career
  - Should work more to increase participation of underrepresented groups
  - See development as job announcements and networking
  - Like it if the job section could include some sabbatical opportunities for university faculty members
  - Feel Career development information is biased to industry
  - Feels Weed Science is a dying field and that focus needs to be on revitalizing it