

Essential Skills for Success in the Cooperative Extension Service

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Historical Role of Cooperative Extension

- To facilitate the exchange of research-based information to stakeholders through educational programs and demonstrations.

The Changing Role of Extension Specialists

- **Original:** to disseminate research-based information to the stakeholder.
- **Current:** to develop and disseminate research-based information to the stakeholder.
- **Future:** to develop and disseminate research-based information to the stakeholder and to teach & train the next generation of applied researchers.

Trends in Extension Appointments

	1953	1965	1972	1982	1989	2007
Number of extension appointments	48	102	150	228	214	281
Number of 100% appointments	23	54	75	106	74	83
Number of 50-99% appointments	77	20	47	74	83	116
Number of < 50% appointments	8	28	28	46	57	82
Split appointments (%)	52	47	50	53	65	70
Number of FTE's	35	-	-	167	145	183

After : Jacobsen, Burrows and Ong. 2008

Region	2001			2007		
	FTE	FTE/ state	% split appoint- ments	FTE	FTE/ state	% split appoint- ments
Pacific	26.7	2.4	40	30.1	2.3	65
Northeast	17.8	2.2	72	27.1	3.0	75
Potomac	10.3	2.6	61	12.9	2.6	30
North Central	30.5	2.5	74	40.3	3.4	71
Southern	59.9	4.6	32	71.6	6.0	48

After : Jacobsen, Burrows and Ong. 2008

The Changing Face of Information Transfer

- ❖ Must account for the social etiquette and various learning behaviors of a diverse clientele as well as technological advances
 - Oral presentations
 - Communication of science to lay public
 - Social networking / interpersonal skills
 - Written publications
 - Demonstrations
 - Distance education
 - Internet-based technologies: e.g., websites, image galleries, Wikis, blogs, audio and video presentations, etc.
- ❖ eXtension: building communities of practice

The Need to Document Program Effectiveness

Quantitative measurement of program success through use of:

1. Surveys
2. Pre- & post-test questionnaires

The Need to Involve Stakeholders

Stakeholder input and involvement through participation in:

1. Advisory panels
2. On site demonstration and research plots

Campaign to Advance Plant Pathology as a Career Choice

- Middle & high school Career Days
- Teacher workshops and campus visits
- Science camps
- 4-H youth development projects / SET tracks
- High school counselor outreach

Trends in Graduate Education Affecting the Training of Future Extension Specialists

- De-emphasis of Masters degree
- Over emphasis of molecular-based research
- Linkage of graduate student assistantships to grant funds resulting in
 - a) early specialization
 - b) lack of flexibility in options
 - c) time constraints imposed by funding sources

Requirements for Future Specialists in Plant Pathology

- Must have
 1. broad training in plant pathology & plant sciences
 2. broad training in communication skills (oral, written & electronic)
 3. training in grantsmanship and program evaluation
 4. the social skills to interact with a very diverse clientele
- Must also be trained to be able to teach, do applied research & mentor graduate students

Requirements for a Masters in Plant Pathology at Louisiana State University

✓ **General Plant Pathology**

- Mycology (4)
- Phytobacteriology (4)
- Phytonematology (4)
- Plant virology (4)

✓ **Statistics**

✓ **Biochemistry**

plus 9 additional credit hours from those above in white and 4 credit hours of electives

- Advanced Topics in PP (1-4)
- Epidemiology & Crop Loss Assessment (3)
- Host-Parasite Interaction and Disease Resistance (3)
- Plant Disease Management & Control (3)
- Plant Molecular Biology (3)
- ✓ **Practicum in Plant Pathology** (Field Plant Pathology & Disease Diagnosis)
- Soil-borne Plant Pathogens (3)

Requirements for a Doctorate in Plant Pathology at Louisiana State University

- ✓ Mycology
- ✓ Phytobacteriology
- ✓ Phytonematology
- ✓ Plant virology

- ✓ Teaching
- ✓ Statistics
- ✓ Biochemistry

3 of the following courses:

- Epidemiology & Crop Loss Assessment
- Forest Insects and Diseases
- Host-Parasite Interaction and Disease Resistance
- Plant Disease Management & Control
- Soil-borne Plant Pathogens

plus 15 additional credit hours of electives
(which includes Practicum in Plant Pathology
if not taken previously)

Preparing Specialists of the Future: What Can Industry Do?

- Greater involvement in providing support for graduate education in areas that meet their needs through development of partnerships with universities capable of providing such training
- Become more actively involved in recruiting potential students through participation in career days, job fairs, etc. at the high school and college levels
- Provide more internship / on-the-job experience opportunities (applied opportunities)

Preparing Specialists of the Future: What Can Government Do?

- Provide support for graduate education in areas not funded through traditional granting agencies (e.g., internships in disease clinics, extension, etc.)