Essential Skills for Success in the Cooperative Extension Service

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innovate . educate . improve lives
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

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Number of 100% appointments</td>
<td>48</td>
<td>102</td>
<td>150</td>
<td>228</td>
<td>214</td>
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<td>Number of 50-99% appointments</td>
<td>23</td>
<td>54</td>
<td>75</td>
<td>106</td>
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<td>Number of &lt; 50% appointments</td>
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<td>20</td>
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<td>74</td>
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<td>116</td>
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<tr>
<td>Split appointments (%)</td>
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<td>28</td>
<td>28</td>
<td>46</td>
<td>57</td>
<td>82</td>
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<tr>
<td>Number of FTE’s</td>
<td>35</td>
<td>-</td>
<td>-</td>
<td>167</td>
<td>145</td>
<td>183</td>
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After: Jacobsen, Burrows and Ong. 2008
<table>
<thead>
<tr>
<th>Region</th>
<th>2001 FTE</th>
<th>2001 FTE/state</th>
<th>% split appointments</th>
<th>2007 FTE</th>
<th>2007 FTE/state</th>
<th>% split appointments</th>
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<tbody>
<tr>
<td>Pacific</td>
<td>26.7</td>
<td>2.4</td>
<td>40</td>
<td>30.1</td>
<td>2.3</td>
<td>65</td>
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<tr>
<td>Northeast</td>
<td>17.8</td>
<td>2.2</td>
<td>72</td>
<td>27.1</td>
<td>3.0</td>
<td>75</td>
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<tr>
<td>Potomac</td>
<td>10.3</td>
<td>2.6</td>
<td>61</td>
<td>12.9</td>
<td>2.6</td>
<td>30</td>
</tr>
<tr>
<td>North Central</td>
<td>30.5</td>
<td>2.5</td>
<td>74</td>
<td>40.3</td>
<td>3.4</td>
<td>71</td>
</tr>
<tr>
<td>Southern</td>
<td>59.9</td>
<td>4.6</td>
<td>32</td>
<td>71.6</td>
<td>6.0</td>
<td>48</td>
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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.)