Relating Extension Education to the Adoption of Sustainable Forest Management Practices

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• Family Forest owners are a vital part of the forest sector of the U.S.
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• Family Forest Owners comprise 92% of the private forest owners and 62% of the private forest land.
Family Forest Owners Provide:

Timber for a wide variety of wood products

Habitat for wildlife

Ecosystem services like

Clean Water    Wetlands
Virginia Forest Landowner Education Program (Est. 1996)

Shortcourses
- Woodland Options
- Wildlife Options
- Timber Marketing & Harvesting
- Forest & Farmland Conservation Strategies
- Financial Assistance Options

Web-Based Course
Field Tours
Newsletters
Landowner Retreats
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• The primary forest landowner organization is the Virginia Forestry Association (VFA).
Methods

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- From the respondents, three sets of landowners were created:
  
  (a) Landowners who had attended targeted Extension short courses offered through the Virginia Forest Landowner Education Program (VFLEP).

  (b) Landowners who had attended other education programs.

  (c) Landowners who had not attended any educational programs.
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• Analysis of variance was used followed by mean separation using either Tamhane’s test or Fisher LSD, depending upon equality of variance
• Requirements for use of ANOVA with dichotomous variable were met (Lunney 1970)
# Results

<table>
<thead>
<tr>
<th>Category</th>
<th>N</th>
<th>Age (yrs)</th>
<th>Education Level</th>
<th>% Forest Income</th>
<th>Household Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>VFLEP</td>
<td>484</td>
<td>62 a</td>
<td>4.4 a</td>
<td>3 a</td>
<td>3.1 a</td>
</tr>
<tr>
<td>Other</td>
<td>287</td>
<td>60 b</td>
<td>4.7 a</td>
<td>4 a</td>
<td>3.2 a</td>
</tr>
<tr>
<td>None</td>
<td>321</td>
<td>65 c</td>
<td>3.6 b</td>
<td>2 a</td>
<td>2.8 b</td>
</tr>
</tbody>
</table>
Results

Common Woodland Management Practices

Site preparation
Tree planting
Thinning
Pruning
Control of exotic species
Road and culvert maintenance
Boundary line survey
Fire hazard reduction
Prescribed burning
Fire Lanes

Common Wildlife Management Practices

Mgt. of trees species for wildlife
Habitat protection
Control of exotic species
Protection of special places (springs/ponds)
Protection against damage
Snags
## Results

<table>
<thead>
<tr>
<th></th>
<th>VFLEP</th>
<th>Other</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tree Cutting</td>
<td>91 a</td>
<td>92 a</td>
<td>81 b</td>
</tr>
<tr>
<td>Wildlife Mgt.</td>
<td>82 a</td>
<td>74 a</td>
<td>74 a</td>
</tr>
<tr>
<td>Woodland Mgt.</td>
<td>94 a</td>
<td>83 b</td>
<td>75 b</td>
</tr>
<tr>
<td>Best Mgt. Practices</td>
<td>65 a</td>
<td>89 b</td>
<td>66 a</td>
</tr>
<tr>
<td>Conser. Easements</td>
<td>6 a</td>
<td>11 a</td>
<td>6 a</td>
</tr>
<tr>
<td>Mgt. Plan</td>
<td>41 a</td>
<td>22 b</td>
<td>12 c</td>
</tr>
<tr>
<td>Technical Asst.</td>
<td>73 a</td>
<td>44 b</td>
<td>35 b</td>
</tr>
<tr>
<td>Financial Asst.</td>
<td>22 a</td>
<td>36 b</td>
<td>9 c</td>
</tr>
</tbody>
</table>
Relationship between number of workshops attended and adoption of forest management plans.

<table>
<thead>
<tr>
<th>No. of Workshops</th>
<th>Mgt. Plan Adoption Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>36</td>
</tr>
<tr>
<td>2</td>
<td>39</td>
</tr>
<tr>
<td>3</td>
<td>43</td>
</tr>
</tbody>
</table>
Relationship between number of workshops attended and adoption of technical assistance.

<table>
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<th>No. of Workshops</th>
<th>Technical Assistance Adoption Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>70</td>
</tr>
<tr>
<td>2</td>
<td>78</td>
</tr>
<tr>
<td>3</td>
<td>85</td>
</tr>
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Conclusions

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- VFLEP seemed to make a significant difference in adoption of woodland management practices, management plans, and technical assistance, which were the primary objectives of the shortcourses.
Conclusions

- In general, adoption of management plans and technical assistance increased with increasing participation in additional shortcourses.