On-Farm Conservation and Nutrient Management in Maryland: A 2010 Snapshot

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The 2010 UMD BMP Survey

• Mail survey asking about best management practice use, cost sharing, and nutrient management planning.
• Sent to 1,000 Maryland farm operations with telephone follow-up conducted by Maryland Agricultural Statistics Service.
• Stratified random sample.
• 523 responses.
• Weights based on farm sales used to create a sample that reflects commercial farming in the state.
Best Management Practices (BMPs) Included in the Survey

- Vegetative Cover
- Water Conveyance and Storage
- Cover Crops
- Conservation Tillage/No-till
- Contour Farming
- Strip Cropping
- Retirement of Highly Erodible Land
- Riparian Buffers (Forest and Grass)
- Wetland Restoration
- Stream Fencing, Stream Crossing, Water Trough
- Poultry Manure or Livestock Waste Storage Structure or Lagoon
- Heavy Use Poultry Area Concrete Pad
Most Maryland farmers use at least one BMP
Large operations use more BMPs than small ones.
Percentages of farmers with crop operations using crop BMPs
## Use of cost-sharing for BMP adoption

<table>
<thead>
<tr>
<th>Practice</th>
<th>Percent Using</th>
<th>Not Receiving Cost-Share</th>
<th>Receiving Cost-Share</th>
<th>Ratio Not Receiving to Receiving Cost-Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegetative Cover</td>
<td>21%</td>
<td>17%</td>
<td>4%</td>
<td>4.3 : 1</td>
</tr>
<tr>
<td>Water Conveyance and Storage</td>
<td>20%</td>
<td>12%</td>
<td>7%</td>
<td>1.7 : 1</td>
</tr>
<tr>
<td>Cover Crop</td>
<td>24%</td>
<td>12%</td>
<td>12%</td>
<td>1 : 1</td>
</tr>
<tr>
<td>Conservation/No Till</td>
<td>42%</td>
<td>38%</td>
<td>4%</td>
<td>10 : 1</td>
</tr>
<tr>
<td>Contour Farming</td>
<td>9%</td>
<td>9%</td>
<td>1%</td>
<td>12.8 : 1</td>
</tr>
<tr>
<td>Strip Farming</td>
<td>13%</td>
<td>12%</td>
<td>0%</td>
<td>25.5 : 1</td>
</tr>
<tr>
<td>Retirement of Highly Erodible Land</td>
<td>7%</td>
<td>6%</td>
<td>1%</td>
<td>5.5 : 1</td>
</tr>
<tr>
<td>Forest or Grass Riparian Buffer</td>
<td>33%</td>
<td>22%</td>
<td>10%</td>
<td>2.2 : 1</td>
</tr>
<tr>
<td>Wetland Restoration</td>
<td>7%</td>
<td>4%</td>
<td>3%</td>
<td>1.2 : 1</td>
</tr>
<tr>
<td>Stream Fencing, Stream Crossing, or Water Troughs</td>
<td>34%</td>
<td>19%</td>
<td>14%</td>
<td>1.4 : 1</td>
</tr>
<tr>
<td>Poultry Manure or Livestock Waste Storage Structure or Lagoon</td>
<td>19%</td>
<td>9%</td>
<td>9%</td>
<td>1 : 1</td>
</tr>
<tr>
<td>Heavy Use Poultry Area Concrete Pads</td>
<td>37%</td>
<td>19%</td>
<td>18%</td>
<td>1 : 1</td>
</tr>
</tbody>
</table>
Receipt of cost sharing was more common in large operations using larger numbers of BMPs

\[ y = 0.057x \]
Do you have a nutrient management plan?

- Yes: 63.1%
- No: 36.9%
NMP non-compliance is widespread among smaller operators
Conclusions

• Significant room for further reductions in nutrient runoff through expanded BMP adoption, cost sharing--especially on small farms.

• Small farms may contribute a significant share of nutrients: Farms with sales under $50,000 account for 21% of cropland, 26% of cattle, and 83% of horses.

• Documentation of runoff potential by farm size should be a research priority.