Results from the 2008 Quail Action Plan
Landowner Survey

by

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Abstract: A survey was conducted in the spring of 2008 to determine the current practices and preferences of Virginia landowners. Landowners were chosen from fifteen counties that remain primarily rural, agricultural areas. Only landowners who owned fifty acres or more were chosen. Five geographic clusters were created, each containing three counties that exist in close proximity. One thousand surveys were sent to landowners in each cluster, for a total of 5,000 surveys mailed to landowners in these fifteen counties. Completed surveys were returned from 2,240 respondents for an adjusted response rate of 47.3%. Responses were evenly distributed among clusters and the average parcel size was 310 acres. Landowners had been farming/managing their land for an average of 22 years and 43% said that they had their primary residence on their land parcel. Sixty-nine percent of these parcels contained hardwood forests, 66% contained pine forests, 52% had pasture/hay, 42% contained at least some wetlands and 35% contained row crops. Seventy-two percent of landowners indicated some level of interest in managing for quail on their property and only 16% indicated low or no interest in managing for quail. Thirty-eight percent of landowners said they actively manage for wildlife on their property. Food plots was the most common type of wildlife management (72%), followed by 45% for field borders and hedge rows, 39% used pine thinning, and 33% used hardwood timber stand improvements. Forty-eight percent of landowners said they considered their land wildlife cover. Only 16.2% of landowners indicated that they received financial assistance through government programs. Fifty-six percent of landowners said they were interested in providing habitat for quail on their land. However, only 16% of landowners indicated that they were willing to convert some of their land into quail habitat; an additional 44% said maybe/unsure and 40% said they would not convert their land into quail habitat.
INTRODUCTION

In April 2008, 5,000 landowners in 15 Virginia counties were sent the Quail Action Plan Landowner Survey. The survey was developed as a tool for measuring the success of technical assistance programs that are offered to landowners either by the Virginia Department of Game and Inland Fisheries (DGIF) or through other federal and state programs, particularly as they relate to the Quail Action Plan objectives. Six goals were established for the Quail Action Plan: 1) Generate new funding mechanisms to support quail restoration. 2) Educate the public on the status of quail and other early-succession wildlife species. 3) Improve quail populations in their primary range in Virginia. 4) Establish quail and early-succession wildlife focus areas. 5) Increase statewide recreation related to quail. 6) Provide quail management demonstration areas.

This survey was designed to better address Quail Action Plan Objectives 3, 4, and 5. Results from this survey will help determine the direction of future quail management efforts. First, landowners were asked about the general characteristics of their parcel, current land uses, and wildlife management practices. They were asked about their participation in state and federal assistance programs and which activities were cost-shared by these programs (or their reasons for not participating in these programs). Finally, landowners were asked about their willingness to manage their land for quail, the types of assistance they would require to provide quail habitat, the number of acres they would be willing to devote to quail management, and the role of financial incentives.

The fifteen counties were chosen because they remain primarily rural, agricultural areas. Only landowners who owned fifty acres or more were chosen. Five geographic clusters were created, each containing three counties that exist in close proximity (usually contiguous, see Appendix A). The five clusters are:

Cluster 1: Southampton, Surry, Sussex; Cluster 2: Orange, Louisa, Culpeper; Cluster 3: Amelia, Lunenburg, Halifax; Cluster 4: Grayson, Pulaski, Wythe; Cluster 5: New Kent, King William, Essex.
One thousand surveys were sent to landowners in each cluster, for a total of 5,000 surveys mailed to landowners in these fifteen counties. A second mailing of the survey was sent in May 2008 to landowners who had not yet replied to first mailing. A total of 2,240 completed, usable surveys were returned; 265 surveys were unusable for a variety of reasons including: property was sold, bad addresses, or the landowner was now deceased. Thus, a total of 4,735 surveys were sent for an adjusted response rate of 47.3%.

RESULTS
The average size of the parcels owned by landowners (results only include landowners who own at least 50 acres) who responded to this survey was 310.7 (Q1). The average age of the responding landowner was 59.5 years (Q15) and had been farming/managing their land for an average of 22 years (Q16). Respondents were evenly distributed between the five clusters (see Appendix A for Cluster locations). Twenty percent of respondents owned land in Cluster 1, 20.5% owned land in Cluster 2, 18.6% owned land in Cluster 3, 21.2% owned land in Cluster 4, and 19.7% owned land in Cluster 5. Forty-three percent of landowners said their parcel was also their primary residence (Q2). Half of respondents said they leased their land to a farmer, 40% farmed the land themselves, and 10% said a family member farms their land (Q3). Landowners were asked to indicate which types of land they owned (landowners were told to check all that apply, thus percentages will add up to more than 100%). Sixty-nine percent said their land was forested with hardwoods, 66% was forested with pine trees, 52% was pasture/hay, 42% was wetlands or ponds, and 35% was row crops.

In Question 5, landowners were asked about their interest in managing for different species of wildlife on their property on a seven-point Likert scale (1=Not at all interested, 4=Neither Interested nor Uninterested, 7=Extremely Interested). Complete results from this question are available in Appendix B. Seventy-two percent of landowners indicated some level of interest in managing for quail on their
property and only 16% indicated low or no interest in managing for quail. Among the other species landowners were asked about managing for in Question 5, 76% were interested in turkey; 69% were interested in managing for deer; 64% were interested in rabbits; and 54.5% were interested in waterfowl. Thirty-eight percent of landowners said they actively manage for wildlife on their property (Q6). Among those who indicated that they actively manage for wildlife, they were asked which types of management they do (Q6a). Food plots were the most common types of management (72%), followed by 45% for field borders and hedge rows, 39% used pine thinning, and 33% used hardwood timber stand improvements.

According to responding landowners (Q7), an average of 48.3% of their land could be considered wildlife cover. The most common type of wildlife cover was mature hardwood/mixed pine hardwood forests (70%), followed by brushy/weedy field for rabbits and quail (48%), pasture hay (39%), young forests (39%), and wetlands (38%).

Seventeen percent of landowners said they lease their land for hunting (Q8) and seventy-three percent said they allowed free hunting on their property (Q9). Only 16.2% of landowners indicated that they received financial assistance through government programs (Q10). Among those who participated in these programs, 34% participated in CRP, 31% participated in CREP and 21% were enrolled in EQIP. Among the total number of responding landowners, the percentage of participants in these programs drops even lower, with all of the programs having less than ten percent participation from all of the responding landowners. For example, only 5.6% of all landowners participated in CRP. Additionally, 5.2% participated in CREP and 3.4% participated in EQIP. Total participation in these state and federal programs by all landowners can be found in Table 1.
Those landowners who did not participate in government financial programs were asked why they did not opt to pursue cost share. Twenty-two percent said it was too complicated to apply, 22% did not want a long-term contract, 20% said there wasn’t enough financial incentive, 18% indicated that they need the land for agricultural production, and 40% indicated there were other reasons.

When asked if any of these programs provide wildlife assistance (Q11), 40% of those who answered yes to Question 10 answered yes to Question 11. Those who answered yes were asked which wildlife practices were being cost-shared and 43% said riparian buffers (CREP), 40% said warm season grasses, 34% said field borders and hedge rows, and 32% said fencing streams.

Next, landowners were asked how much importance they placed on different management goals for their property (Q12) on a seven-point Likert scale (1=Not at all important, 4=Neither important nor unimportant, 7=Extremely Important). Full results for Question 12 are available in Appendix B. Sixty-one percent of responding landowners indicated that agricultural income was important, 66% said forestry income, 76% said investment, 77% said game wildlife species, and 59% indicated non-game wildlife species.
Landowners were next asked if they were specifically interested in providing habitat for quail on their land (Q13) and 56% said they were interested. There was no significant difference at the .05 level between any of the five clusters for Question 13. Specifically, 57% of landowners in Cluster 1 said they were interested in providing quail habitat, 56% were interested in Cluster 2, 60% were interested in Cluster 3, 50% were interested in Cluster 4, and 57% in Cluster 5 indicated interest. For those who indicated interest, they were asked how important different types of assistance would be for providing quail habitat on a seven-point Likert scale (1=Not at all important, 4=Neither important nor unimportant, 7=Extremely Important). Eighty-two percent of the interested landowners said that on site technical assistance from a wildlife biologist was important, 86% thought that quail management literature was important, 80% indicated that a quail management video was important, 89% said that seed or plantings were important, 84% wanted a written plan, 70% thought equipment was important, 83% were interested in cost share incentives, 62% indicated that labor/contractors were important, and 75% said that time was important.

Finally, landowners were asked if they were willing to convert some of their land into quail habitat. Only 16% of landowners said yes to this question, an additional 44% said maybe/unsure and 40% said no. Among the landowners who answered yes, 40% said they would convert their land without any incentives and offered to convert an average of 15.8 acres. Sixty-three percent of the landowners who were willing to convert their land said they would do it with financial incentives and offered an average of 29.6 acres to be converted to quail habitat.

ACKNOWLEDGEMENTS
The authors would like to express their appreciation to the many people who assisted with this study. Cale Godfrey was instrumental in the creation and design of this survey. Additionally, the dedication and perseverance of Bill Bassinger, Mike Dye, Jay Howell, and Brian Moyer were critical to the completion of this project.
Appendix B
Landowner Questionnaire

1. How many acres of land do you own? Mean=310.7Acres
If you own more than one parcel of land, please answer the following questions about the largest parcel of property you own in one of the designated counties.
For a list of counties, please see the letter that accompanied this questionnaire.
(If you own less than 50 acres, please do not go any further. Place the survey in the envelope and mail it back to us as soon as possible.)

1a. In which Virginia County is this parcel located?______________________

2. Is this parcel your primary residence?
   □ Yes  43.0%
   □ No   57.0%

3. How many acres of this parcel are agricultural? Mean=83.0 Agricultural acres
   If you own agricultural land, who farms the land?
   □ I farm the land 39.8%
   □ Family members farm the land 10.2%
   □ I lease the land to a farmer 50.0%

4. Which types of land do you own? (Please check all that apply)
   □ Pasture/hay 52.3%
   □ Row crops 35.3%
   □ Forested with pine trees 66.1%
   □ Wetlands/Ponds 41.6%
   □ Forested with hardwoods 69.1%

5. Please indicate your level of interest in managing each of the following species on your property:

<table>
<thead>
<tr>
<th>Species</th>
<th>Not at all Interested</th>
<th>Neither Interested nor uninterested</th>
<th>Extremely Interested</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Quail</td>
<td>12.0  2.2  1.9  11.7  12.7</td>
<td>19.6  39.8</td>
<td></td>
</tr>
<tr>
<td>b. Deer</td>
<td>15.3  2.9  2.7  10.4  10.7</td>
<td>16.8  41.1</td>
<td></td>
</tr>
<tr>
<td>c. Turkey</td>
<td>11.5  1.7  1.8  8.9  11.1</td>
<td>19.5  45.5</td>
<td></td>
</tr>
<tr>
<td>d. Rabbit</td>
<td>14.5  3.8  3.6  14.3  14.3</td>
<td>17.3  32.2</td>
<td></td>
</tr>
<tr>
<td>e. Waterfowl</td>
<td>21.6  5.1  4.0  14.8  12.0</td>
<td>13.8  28.7</td>
<td></td>
</tr>
<tr>
<td>f. Other:</td>
<td>30.4  4.1  2.2  14.6  7.2</td>
<td>9.9   31.5</td>
<td></td>
</tr>
</tbody>
</table>
6. Do you actively manage for wildlife on your property?

☐ Yes 38.3%
☐ No 61.7%

6a. If yes, what types of management do you do? (☑ all that apply)

☐ Food plots 72.1%
☐ Field borders and hedge rows 44.9%
☐ Understory burning 8.8%
☐ Rotation discing 11.4%
☐ Pine thinning 39.4%
☐ Fencing livestock out of streams/woodlots 21.2%
☐ Fallow cropping/idle land management techniques 15.5%
☐ Hardwood timber stand improvements 32.5%
☐ Maintenance of wildlife nest structures 21.7%

7. What percentage of your land would you consider wildlife cover?
Mean=48.3%

7a. What type of cover do you have? (☑ all that apply)

☐ Brushy/weedy field for rabbits and quail 48.0%
☐ Mature hardwood/mixed pine hardwood forests 69.5%
☐ Young forests (including newly planted pines) 38.8%
☐ Food plots 25.5%
☐ Warm season grasses 25.5%
☐ Pasture hay 39.3%
☐ Wetland 38.3%
☐ Other (please describe):________________________ 6.5%

8. Do you lease your land for hunting?

☐ Yes 16.8%
☐ No 83.2%

9. Do you hunt or allow hunting on your property? (without charging a fee)

☐ Yes 73.2%
☐ No 26.8%
10. Do you receive financial assistance through any state or federal programs?  
   □ Yes  16.2%       □ No  83.8%  

10a. If yes, which programs do you participate in? (☑ all that apply)  
   □ Conservation Reserve Program (CRP)  33.9%  
      □ CRP Pine  16.7%     □ CRP Grass  16.4%     □ Both  6.9%  
   □ Conservation Reserve Enhance Program (CREP)  31.3%  
   □ Grassland Reserve Program (GRP)  0.9%  
   □ Environmental Quality Incentive Program (EQIP)  20.7%  
   □ Wetland Reserve Program  1.7%  
   □ State BMP  15.2%  
   □ Wildlife Habitat Incentive Program (WHIP)  9.8%  

10b. If no, why did you opt not to pursue cost share? (☑ all that apply)  
   □ Too complicated to apply  22.0%  
   □ Don’t want long-term contract  21.6%  
   □ Not enough financial incentive  19.8%  
   □ Need the land for agricultural production  17.7%  
   □ Other (please specify):  40.3%  

11. Do any of the programs provide assistance to incorporate wildlife management on your property?  
   □ Yes  39.5%       □ No  60.5%  Includes only those who said yes to Q10  

11a. If yes, what wildlife practices are being cost-shared? (☑ all that apply)  
   □ Riparian buffers, (CREP)  42.9%  
   □ Fencing streams  31.7%  
   □ Field borders and hedge rows  33.5%  
   □ Understory burning  13.7%  
   □ Idle crop lands  10.6%  
   □ Warm season grasses  39.8%  

12. Please indicate the level of importance for each of the following management goals for your land:  

<table>
<thead>
<tr>
<th>Goal</th>
<th>Not at all Important</th>
<th>Neither Important nor unimportant</th>
<th>Extremely Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Agricultural income</td>
<td>19.0</td>
<td>5.1</td>
<td>14.2</td>
</tr>
<tr>
<td>b. Forestry income</td>
<td>13.9</td>
<td>4.2</td>
<td>18.9</td>
</tr>
<tr>
<td>c. Investment</td>
<td>9.0</td>
<td>2.9</td>
<td>24.3</td>
</tr>
<tr>
<td>d. Game wildlife species</td>
<td>8.3</td>
<td>1.8</td>
<td>25.1</td>
</tr>
<tr>
<td>e. Non-game wildlife species</td>
<td>13.5</td>
<td>5.9</td>
<td>19.5</td>
</tr>
</tbody>
</table>
13. Are you specifically interested in providing habitat for quail on your land?

☐ Yes 55.8%
☐ No 44.2%

13a. If yes, please indicate the level of importance you place on each of the following for providing quail habitat on your property:

<table>
<thead>
<tr>
<th>Item</th>
<th>Not at all Important</th>
<th>Neither Important nor unimportant</th>
<th>Extremely Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. On site technical assistance from wildlife biologists</td>
<td>4.2</td>
<td>8.2</td>
<td>28.7 39.8</td>
</tr>
<tr>
<td>b. Quail management literature</td>
<td>3.3</td>
<td>4.2</td>
<td>9.2 13.5 28.7 39.8</td>
</tr>
<tr>
<td>c. Quail management video</td>
<td>5.5</td>
<td>4.1</td>
<td>1.7 11.3 31.5 46.4</td>
</tr>
<tr>
<td>d. Seed or plantings</td>
<td>1.9</td>
<td>1.6</td>
<td>2.7 16.8 25.0 30.6</td>
</tr>
<tr>
<td>e. Written management plan from a wildlife biologist</td>
<td>4.0</td>
<td>1.6</td>
<td>4.2 29.6 40.0</td>
</tr>
<tr>
<td>f. Equipment</td>
<td>10.0</td>
<td>4.3</td>
<td>1.7 15.9 25.0 30.6</td>
</tr>
<tr>
<td>g. Cost share incentives</td>
<td>5.8</td>
<td>1.9</td>
<td>1.9 12.5 25.0 45.1</td>
</tr>
<tr>
<td>h. Labor/contractors</td>
<td>13.6</td>
<td>5.8</td>
<td>3.5 16.8 26.9 24.4</td>
</tr>
<tr>
<td>i. Time</td>
<td>7.3</td>
<td>3.1</td>
<td>1.3 15.9 23.9 35.3</td>
</tr>
</tbody>
</table>

14. To have quail on your land would you be willing to convert pasture, hay, row crops into quail habitat?

☐ Yes 16.0%
☐ No 40.4%
☐ Maybe/unsure 43.6%

14a. If yes, please indicate if you required financial incentives to provide quail habitat on your property.

☐ I am willing to provide quail habitat without any financial incentives 39.5%
  Mean= 15.8 # of acres with no financial incentives

☐ I am willing to provide quail habitat with financial incentives 63.0%
  Mean= 29.6 # of acres with financial incentives

15. What is your age? Mean=59.5 Years

16. How long have you been farming/managing your land? Mean=21.9 Years

This program received Federal financial assistance in Sport Fish and/or Wildlife Restoration. Under Title VI of the 1964 Civil Rights Act, Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act of 1990, the Age Discrimination Act of 1975, Title IX of the Education Amendments of 1972, the U.S. Department of the Interior prohibits discrimination on the basis of race, color, national origin, age, sex, or disability. If you believe that you have been discriminated against in any program, activity or facility as described above, or if you desire further information please write to the Office for Human Resources, U.S. Fish and Wildlife Service, 4040 N. Fairfax Drive, Room 300, Arlington, VA 22203.