Introduction

Deer are an economically and socially important game species.

Increased in abundance and expanded their geographic range over the past century:

- traditional harvest methods

Deer are keystone herbivores:

- overabundant populations can lead to chronic overbrowsing
  - alter the structure and composition of the forest understory
  - deer herd and habitat deterioration

Doesn’t just effect deer!
Quality Deer Management (QDM) is increasingly practiced throughout the whitetail’s range.

QDM depends on hunter harvest to obtain management goals.

Hunter satisfaction can have a considerable influence on harvest levels.

Information evaluating both hunter attitudes and effects of QDM are essential for managers.
**Objectives**

Examine hunter satisfaction following implementation of QDM (2004 – 2009)

Determine effects of harvest restrictions and recommendations (2002-2009) on:
- buck, doe, and fawn harvest rates
- age structure of buck harvest
- hunter success
- gross score of buck harvest

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**Ames Plantation (18,430 acres)**

Coastal Plain phys. province
- 69% forested
- 13% early success
- 11% row crops
- 6% pasture / hayfields
- 1% cultural sites

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**Ames Plantation**

2004 - Doe harvest quota and antler/age restriction (110-inch gross B&C score or ≥ 5½ years old)

2006 - Restriction changed to 120-inch gross B&C score or ≥ 4½ years old

Goals
- protect bucks until ≥ 3 ½ years old
- harvest appropriate number of does (~180)

Membership number varied among years
Methods

Surveys and educational meetings have been conducted annually at Ames Plantation since 2004.

Sex and age have been recorded for all deer killed at Ames Plantation since 2002.

- allows for comparison of harvest pre- and post-QDM

Jawbones were aged using tooth replacement and wear.

Statistical Analysis

Harvest Results

- Response variables:
  - average buck/doe harvest
  - % buck fawns in antlerless harvest
  - mean gross B&C antler score

- Mixed model ANOVA (SAS, 2009)
  - repeated measures by year
  - compare harvest pre-to post-treatment

- Contingency table (SAS, 2009) (≥ 1 ½ year old bucks)

Results

% hunters in favor of harvest recommendations at Ames Plantation, TN, 2002-2009

- antlerless harvest
- protecting buck fawns

% hunters in favor of harvest recommendations

- 2004: 80%
- 2005: 100%
- 2006: 80%
- 2007: 60%
- 2008: 40%
- 2009: 20%
Results

Age structure of the ≥ 1 1/2 buck harvest at Ames Plantation, TN, 2003-2009

Pearson Chi-Square = 267.1348, df = 21; P < 0.0001

Results

Hunter effort and success at Ames Plantation, TN, 2002-2009

Deer harvested / hunter: pre = 1.81, post = 2.54; P = 0.34

Results

Hunters who feel a max gross antler score of 160+ is capable of being produced at Ames Plantation, TN, 2002-2009
Results

Mean gross antler score at Ames Plantation, TN, 2003-2009

Discussion – doe harvest

Hunter attitudes following implementation of QDM favored:
• Antlerless deer harvest (> 90%)

Percentage of does in total deer harvest post-QDM
• > 30% increase

Average doe harvest per hunter post-QDM
• > 120% increase

Discussion – buck harvest

Hunter attitudes following implementation of QDM favored:
• Restricting buck harvest to individuals ≥ 3.5 year old (>85%)

Older age classes (≥3.5) now represent a greater proportion of buck harvest post-QDM
• > 78% in 2009

Mature buck harvest per hunter post-QDM
• Increased 4x over pre-QDM levels
Discussion – buck fawn

Hunter attitudes following implementation of QDM favored:
• protecting buck fawns (> 79%)
• % buck fawns in antlerless harvest post-QDM has declined (18.5% to 11.2%)

Hamilton et al. (1991) noted a similar decline (17% to 10%) following hunter education

Discussion – hunter satisfaction

Overall hunter support and satisfaction since 2004:
• > 73% in other management programs have ranked Ames as a ‘better experience’
• > 89% feel that the QDM restrictions are working towards goals
• > 91% state that they plan to hunt deer there again next year

Management Implications

Annual educational meetings to answer questions and summarize:
— program goals and expectations
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- program goals and expectations
- population characteristics
- harvest characteristics
- habitat management
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- program goals and expectations
- population dynamics
- harvest characteristics
- habitat management

Annual surveys should enable hunters to provide feedback and measure satisfaction

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Questions?


