

Cooperative Ventures**Ames Plantation, Demonstration and Research Project**

Investigators: W. Daryl Jones, Bruce Leopold, Adam Tullos, Wildlife and Fisheries; Alan Blaine, North Mississippi Research and Extension Center; Allan Houston, University of Tennessee at Ames Plantation; Rick Carlisle, Ames Plantation

Project Goal:

Establishment of a wildlife habitat demonstration project focused on enterprise interests on Ames Plantation. Evaluate where capabilities may be limited and investigation is needed to understand the dynamic nature of sustaining wildlife habitats and help recognize the ecological and economic attractiveness in effective habitat management. Furthermore, to assist with the understanding of how improved habitat management increases the potential for recreational fee access activities, and attractiveness to potential clients. Collect brief benefit/cost information from leasing land, allowing the uses of these resources as amenities, or provide daily permits for recreational access.

Project Objectives:

Provide individual management applications or specialized techniques that will be desirable and considered advantageous from the standpoint of promoting Sustainable Wildlife Enterprises including but not limited to:

1. Upland and open field management projects involving compatibility with agricultural and livestock operations, burning, native grassland establishment methods, strip planting, tilling, mowing, and describing legal means of providing hunting opportunity associated with these

manipulations.

2. Wetland management projects including moist-soil, agriculture, farm pond and lakeshore, forested wetlands, and riparian wetlands or riverine corridors to benefit targeted wildlife and fish species, and describing legal means of promoting hunting opportunity associated with these manipulations.
3. Forest management projects such as establishing forested corridors, management of existing stands, management of SMZ's, prescribed fire, selective harvest, supplemental food plot design and implementation, and herbicide application designed to promote utilization by various wildlife species, hence increasing marketability to the public.

Synopsis of research activities per objective:

Although data collection has begun on hunting and other enterprise development activities on the plantation, no data analysis has been performed to evaluate project success. Collectively, project collaborators are in the process of establishing an evaluation and research protocol, and recruiting a graduate student to perform these investigations. Plans for this research project include understanding the compatibility issues between wildlife and fisheries enterprises and existing livestock, row crop, and production forestry operations. Investigating

the satisfaction rate of various user groups involved with Ames Plantation, and performing economic analyses to predict how revenues from established enterprises impact long-term plans for bolstering the hunting, fishing and other wildlife related activities on site.

Significant findings/results per objective to date:

Since the inception of the cooperative agreement between Ames Plantation and Mississippi State University, significant progress has been made on the wildlife enterprise development potential of the site. With the new habitat projects on the ground, and seasonal prescriptions well underway, the plantation is taking on a new appearance for wildlife enthusiasts and hunters looking for recreation access.

The upland and open field management objective is being met by providing modifications to existing upland habitats and accommodating better mourning dove and bobwhite quail management. The areas used for these prescriptions occur along designated corridors and idle portions of the plantation. So far, no negative impacts have been observed on the livestock, row crop, or forestry operations on the plantation resulting from establishment of these wildlife enhancements. In total, we have enhanced approximately 60 acres of upland habitat. Since



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2006, the revenue generated from wildlife enterprises simulated by these upland projects was approximately \$40,000. Projected future earnings from these wildlife enterprise endeavors are estimated to be upwards of \$50,000 annually.

The wetland enhancement objective is being met by incorporating a new management strategy to several existing wetland types across the plantation. We have been able to better incorporate waterfowl management across the plantation by installing shallow water areas in agricultural and moist-soil areas. This project has enhanced nearly 75 acres of wetland impoundments and improved hunting resources for plantation patrons. Response from these activities has stimulated very positive results for both attracting wetland wildlife and increasing hunter interest.

We have also contributed to the creation and enhancement of five farm pond and small lake impoundments on the Plantation. These water bodies have been enhanced to provide improved recreational fishing opportunities. Since the fall of 2006, these enhancements have increased awareness and interest from hunters and anglers for future recreational opportunities. Altogether, these wetland enhancements are expected to generate an additional \$50,000 in annual gross income for

plantation staff.

Several other projects were completed during 2007 helping to meet the forest management objective for the property. Nearly 20 acres received reduced basal area cuttings or patch clear-cuts to stimulate the creation of wildlife openings and increase wildlife production in those areas. Other areas received herbicide application to control unwanted hardwood species within existing pine stands to provide these stands with increased wildlife potential.

Other significant findings:

Since 2005, Ames Plantation intensified its fee hunting, angling, and shooting sports enterprises to supplement and diversify incomes taken from existing agricultural and forestry operations. These enterprise examples portray how existing farms are able to combine wildlife and fisheries recreation with their main sources of generating income, agriculture and forestry. By incorporating hunting options for bobwhite quail *Colinus virginianus*, waterfowl, morning dove *Zenaida macroura*, increasing recreational shooting sports, and developing recreational fishing impoundments, wildlife associated income increased from \$25,000 to \$205,500. This represents a two-year income increase of \$9.69/ac or 700% increase in income

Fund Leveraging

Ames Plantation

\$80,454

collected on plantation property engaged in recreational enterprises. Contributing factors for Ames success involved initiation of a quality white-tailed deer *Odocoileus virginianus* management program and unbundling hunting opportunities for eastern wild turkey *Meleagris gallopavo*. Importantly, these enterprises were established without measured negative impacts to the existing cattle, row-crop, corn silage, or silvicultural production on the plantation.

Applications or broader impacts of significant findings, including economic impacts or projected impacts:

This project has very broad impacts for landowners looking to increase revenues or extend profits garnered from their properties. The demonstrations at Ames allow landowners to

view the types of management activities that increase wildlife abundance and increase interest from hunters, anglers, and other wildlife enthusiasts.

Project success relative to original objectives:

Overall, project timelines are on target and the initial success of our habitat demonstrations seem to be extremely successful. The objectives for this project are being met within the project budget. These demonstrations and other habitat enhancement activities have not negatively impacted production of the existing agricultural commodities generated on the plantation, and the Ames staff has been very supportive of the projects and the landscape level changes occurring as a result.

