

# Hill Farm Research Station Profile



Report to Stakeholders

April 2010

## About the LSU AgCenter

The LSU AgCenter is dedicated to providing innovative research, information and education to improve people's lives. Working in a unique statewide network of parish extension offices, research stations and academic departments, the LSU AgCenter helps Louisiana citizens make the best use of natural resources, protect the environment, enhance agricultural enterprises and develop human and community resources.



## Research Highlights

### Beef Cattle

The Hill Farm Research Station has a long history of research in support of the Louisiana beef cattle industry. Past research has involved various aspects of beef cattle management and breeding to enhance productivity and profitability of cow-calf enterprises in pasture-based production systems. Grazing strategies for stocker cattle programs and replacement heifer development have also been studied. Continuing research will include evaluation of opportunities to reduce inputs and increase production efficiency to maintain profitability of beef cattle production.



### Forages

Forage research at the Hill Farm Research Station has provided improved varieties, fertilizer recommendations, and weed control approaches for highly productive bermudagrass pasture and hay production. Recommendations for use of poultry litter as a pasture fertilizer, while maintaining quality of run-off water, are also important contributions of past forage research at the Hill Farm. Current forage research involves assessment of approaches for using various additional forage species, including legumes, to complement forage systems based on the warm-season perennial grasses, bermudagrass and bahiagrass.

### Forestry

The current forestry program at the Hill Farm Research Station involves both research and extension components, which are expanding on a base of long-term research supporting production of pulpwood, timber, and agroforestry grazing. Forest fertilization, pine straw harvest, stand regeneration, and agroforestry systems for biofuel production are examples of on-going research areas providing new insights for enhanced profitability of forestlands in Louisiana.

### Mastitis

Bovine Mastitis Research has been conducted at the Hill Farm Research Station for over 50 years and continues to serve the dairy producers of Louisiana and the nation. Research on antimicrobial susceptibility of mastitis pathogens, therapeutic products and efficacy of teat dips are current topics of interest. A new area of interest is the Louisiana Mycoplasma Mastitis Control Program.

### Poultry

A new area of research and extension activity at the Hill Farm supports the poultry industry. Two broiler houses will demonstrate new poultry production techniques. The initial evaluations will compare tube heat to radiant brooders. Temperature sensors, ammonia sensors, humidity sensors, and feed scales will be used and results recorded daily. Comparisons will be made between the two methods for bird production, bird health and cost of production. In addition, microbiological samples will be collected from birds and litter. Organisms will be compared to similar strains from beef, humans and the environment for antimicrobial susceptibility.

### Water Quality

Because agricultural practices have the potential to impact water and soil quality, scientists at the Hill Farm Research Station are studying these practices to ensure the continued safety of our water supplies and the food we eat. Guidelines called BEST MANAGEMENT PRACTICES are used by dairy, poultry, forestry and beef producers to ensure that agriculture does not negatively impact the environment. Research is being conducted at the Hill Farm Research Station to determine which of these management practices work best.

## Hill Farm Research Station Office

**Address:** 11959 Hwy 9  
Homer, LA 71040

**Location: From I-20 :**  
Take the Arcadia / Homer exit (#67), Turn north on LA 9, Station office is approximately 16 miles on the right.

**Phone:** 318-927-2578

**Fax:** 318-927-9505

**Email:**  
Hillfarm@agcenter.lsu.edu

**Web site:**  
LSUAgCenter.com/HillFarm

**Office Hours:**  
7:30 a.m.-4:30 p.m.

**Contact:**  
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**Hill Farm Research Focus**  
is to enhance research in:

- Beef Cattle
- Forestry
- Forages
- Mastitis
- Poultry
- Water Quality



## Significance of Research

-- Results of long-term research programs in beef cattle, pastures, and forestry continue to contribute to profitability and competitiveness of these industries in north Louisiana.

-- Along with the extensive contributions from mastitis research over the years, the recent Louisiana Mycoplasma Mastitis Program has provided particularly timely and effective support of the dairy industry throughout Louisiana through identification of cows and herds with the highly contagious mycoplasma form of mastitis.

-- Evaluation of Best Management Practices for beef, forestry, and poultry contributes to selection of appropriate management practices for these enterprises.

-- Bermudagrass varieties and management programs from past research at the station contribute to productivity and sustainability of hay production across the region.

## 2009 Industry Facts

-- Forestry in Louisiana contributed \$2.5 billion to the state economy and involved 150,000 landowners on 14 million acres.

-- Poultry in Louisiana contributed \$884 million to the state economy and involved 800 producers providing 800 million pounds of meat and 255 million eggs.

-- Beef cattle in Louisiana contributed \$365 million to the state economy and involved 11,500 producers with 602,000 head of cattle and calves.

-- Hay production in Louisiana contributed \$130 million to the state economy and involved 3,440 producers on 326,800 acres producing 1.1 million tons plus additional hay that was produced for on-farm use.

-- Dairy production in Louisiana contributed \$114 million to the state economy and involved 165 dairy herds producing 273 million pounds of milk.

**Data from the Louisiana Ag Summary**  
**Web site: [LSUAgCenter.com/agsummary](http://LSUAgCenter.com/agsummary)**

## Louisiana Agricultural Experiment Station

Louisiana's unique combination of crops — ranging from corn, cotton, rice and sugarcane to extensive forestry, poultry, cattle and fisheries industries — presents challenges for providing research-based information to ensure sustainable agricultural production systems.

To address the needs of these industries, the Louisiana Agricultural Experiment Station operates 11 departments shared by the LSU AgCenter and the LSU College of Agriculture, as well as 20 research locations across the state. To fund the basic and applied research, scientists compete for federal and state grants and checkoff dollars provided by some farmers' groups, along with state and federal dollars. Many of the facilities also sustain their research operations through the sale of agricultural commodities produced on the stations.

The LSU AgCenter has the most successful record of commercialization of intellectual property in the LSU System. Since 2000, nine new companies have been started based on licensed technology from LSU AgCenter. The income is distributed among the LSU System, the inventors and more research.

## Future Plans

-- Recent and continuing biomass production research is providing an information base for landowners in the region to share in anticipated opportunities for new sources of income from forests and grasslands.

-- Contributions from developing collaborative research and demonstration efforts from the Hill Farm Research Station, LSU AgCenter Extension programs, and the poultry industry are expected to provide opportunities for improved economic efficiency and profitability in local broiler production.

-- New directions in beef cattle research will provide insights for increasing efficiency of production from pasture-based management strategies.

## Other Goals

-- Continue to help dairy producers with mastitis problem herds.

-- Evaluate dairy bulk milk samples quarterly for mycoplasma mastitis.

-- Screen poultry and beef cattle for high interest human pathogens and determine antimicrobial susceptibility of these organisms.

-- Continue long-term forestry research assessing alternatives for enhanced profitability of forest lands with an increasing emphasis on opportunities presented by demands for biomass-derived fuels.

-- Provide information on beef cattle management options to increase production efficiency of enterprises based on forages.

-- Identify forage plants and pasture management approaches which can decrease cost of production of beef cattle in Louisiana.



For the latest research-based information on just about anything, visit our Web site:  
**[LSUAgCenter.com](http://LSUAgCenter.com)**