

# Evaluating the Use of Pearl Millet to Reduce Nutrient Run-off in the Southeast Piedmont Region of Georgia

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## **ABSTRACT**

The Southeastern Piedmont (SEP) region of Georgia is a high nutrient status area for phosphorous and nitrogen. With the objective of reducing nutrient runoff, 6 farm fields modified their pasture methods and implemented a new practice, with two of the fields being switched to pearl millet. Recently, there has been much interest in the Southeast, especially in Georgia, for growing pearl millet for grain due to its increased drought tolerance, lower production costs, and higher protein composition. Pearl millet has also been shown to be a viable alternative for poultry feed, which could have a positive impact on Georgia's valuable broiler industry. The objective of the study was to evaluate the profitability of raising pearl millet and determine if it was economically viable as a nutrient management practice.

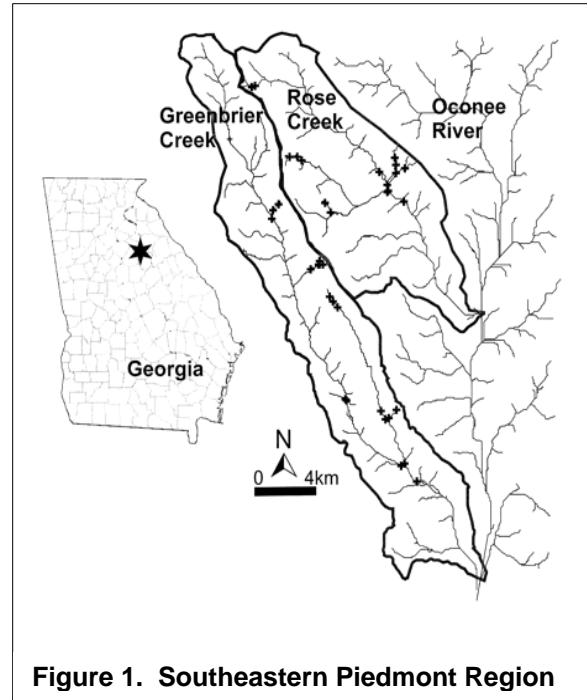


Figure 1. Southeastern Piedmont Region

Table 1. Enterprise Budget Analysis Results							
	Farm A			Farm B			Overall Means
	2005	2006	Mean	2005	2006	Mean	
<b>Yield* (bu/ac)</b>	63.5	55.0	59.3	26.1	27.1	26.6	42.9
<b>Revenue(\$/ac)</b>	\$115	\$126	\$121	\$47	\$62	\$55	\$88
<b>Total Cost (\$/ac)</b>	\$276	\$316	\$296	\$292	\$249	\$270	\$283
<b>Avg Net Revenue (\$/ac)</b>	(\$161)	(\$189)	(\$175)	(\$245)	(\$187)	(\$216)	(\$195)
<b>Breakeven Price (\$/bu)</b>	\$4.34	\$5.74	\$4.99	\$11.19	\$9.20	\$10.17	\$6.60
<b>Breakeven Yield (bu)</b>	152.7	174.8	163.8	161.5	138.1	149.8	156.8

\*One bushel is 57.5 pounds.

Two farms in cooperation with USDA/ARS planted pearl millet as part of a larger demonstration project during 2005 and 2006. The producers were interviewed and their production records were documented. Costs were standardized across producers and results were determined using farm enterprise budget analysis. The results indicate that in order for the production of pearl millet for grain to be profitable in the Southeastern Piedmont region, a producer must receive a price higher than \$0.11/lb, which was nearly three times the price in 2006. From a nutrient management standpoint, early water quality analysis suggested that there were improvements in the levels of nitrogen and phosphorus. It may be necessary to provide government assistance to entice producers to plant pearl millet for nutrient reduction in the future if market prices do not improve.