# Cogongrass Control and financial returns for Non-Industrial Private Forest Landowners in the United States Mid-South

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Invasive plant species are increasingly occupying land area that could be used in other productive capacities such as growing timber or agricultural crops. In the United States Mid-South, Cogongrass (*Imperata cylindrica* (L.) Beauv.) has been steadily spreading throughout the region over the last century. It is an aggressive plant species that can dominate a site and greatly inhibit the establishment and growth of native plant species. We evaluate alternative management control regimes and the reduction in soil expectation values that can occur on infested sites when control is not implemented. A simulation approach is used to evaluate six management control regimes using either aerial or ground-based applicators with pine afforestation using Mississippi as a case study. Results show that spraying 14.7 oz Accord Concentrate, 1.7 oz Arsenal AC, with 7.4 oz of surfactant and afforesting to pine yields the highest land expectation value and lowest reduction in soil expectation value.

***Key words:*** invasive species, Cogongrass (*Imperata cylindrica* (L.) Beauv.), financial analysis, herbicide control

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