

RESTORATION OF GIANT CANE AND CANEBRAKES: Native Bamboo for Habitat and Ecosystem Services

A McIntire-Stennis supported project

This research targets development of habitat restoration management guidelines and quantification of ecological benefits for giant cane (*Arundinaria gigantea*), a native U.S. bamboo, and canebrake ecosystems. Canebrake ecosystems are critically endangered with only 2% remaining. Giant cane supports a multitude of ecosystem services such as soil conservation, water quality enhancement, Native American cultural amenities, and wildlife habitat for rare species.

With McIntire-Stennis support, SIU cane research has developed management practices to efficiently and effectively restore canebrakes. This includes: 1) practical greenhouse and field propagation methods using rhizomes and containerized stock 2) field and lakeshore establishment techniques 3) rehabilitation procedures for remnant canebrakes 4) cane nursery establishment, development, and management practices and 5) techniques for utilizing prescribed fire and fertilization to rehabilitate remnant stands. Additionally, we showed that canebrake riparian buffers excel at improving water quality in agricultural runoff. Moreover, SIU and collaborators established studies at multiple locations and located 140 remnant cane stands across the region.



COLLABORATION

- U. S. Department of Agriculture (USDA) Forest Service
- U.S. Fish and Wildlife Service
- U.S. Army Corps of Engineers
- USDA Natural Resource Conservation Service
- Illinois Department of Natural Resources
- The Nature Conservancy
- Ducks Unlimited
- Kinkaid-Reeds Creek Conservancy District
- Jackson County Board and Farm Bureau
- Murphysboro Illinois Middle School
- City of Carbondale, Illinois



About McIntire-Stennis

The McIntire-Stennis program, a unique federal-state partnership, cultivates and delivers forestry and natural resource innovations for a better future. By advancing research and education that increases the understanding of emerging challenges and fosters the development of relevant solutions, the McIntire-Stennis program has ensured healthy resilient forests and communities and an exceptional natural resources workforce since 1962.



IMPACT

SIU giant cane research has developed science-based evidence of the ecological importance of canebrakes and practical solutions to restore canebrake ecosystems involving a collaboration of scientists, land managers, students and teachers from middle school to college, and the public.



15 acres

SIUs multi-source cane nursery provides genetically diverse, sustainable planting stock to restore 15 acres of canebrake yearly.



1000s

Cane outreach presented to thousands: land managers, forestry students, grade- and high-school teachers and students, and the general public.



15+50

15 M.S. and Ph.D. Forestry students
 50+ Undergraduate student researchers and workers.