



CISMA—Resource Networking to Control Invasive Plants and Animals

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SITUATION/OBJECTIVES: Nonnative invasive species cost land owners and tax payers millions of dollars annually in Florida. Pressure from numerous sources (including agriculture) caused legislation to form CISMAs (Cooperative Invasive Species Management Areas) to address the problem. The Central Florida CISMA Steering Committee formed in 2008, bringing with it solutions as well as new problems. Extension Agent facilitation and participation began to address the objectives of invasive species management and public perceptions of the Agricultural Community. **EDUCATIONAL METHOD:** Three County Extension Agents were to join the Steering Committee and do “classic community resource development work” while networking with new audiences to address environmental issues. **Results:** Public environmental agency staff, private environmental concern groups, leaders from the farm industry, Disney, parks, private landowners, Deseret Ranch, and other interested parties are now networking through cooperative educational programs and addressing serious and potentially confrontational issues in a positive manner. The concerns of the committee have shifted from criticizing agriculture and County Extension Programs, to addressing the issues of invasive exotics on public lands through educational programs and work days. **Conclusion:** UF/IFAS Extension’s future depends, in part, on networking with environmental issue work groups, which can become challenging. Extension Agents are still best at leading issue-based programming, especially when agriculture is threatened. Multiple CISMA trainings are conducted annually, which provide Pesticide Applicator CEUs. The Central Florida CISMA has been rewarded with numerous grants from the U.S. Fish and Wildlife Service and the Florida Exotic Pest Plant Council (FLEPPC).

The native landscape of Florida is constantly challenged by the exponentially increasing Florida population. Urban landscapes bring with them many challenging species of plants and animals (Grumbine, 1990). Of the 4,373 plant species known to grow without cultivation in Florida, 30% are nonnative. Unfortunately, many of these nonnative species are introduced by homeowners as neglected garden ornamentals. Other species have been introduced through improperly screened introductions. After escape, these plants became naturalized by spreading on their own without cultivation into natural areas. Some species are not a problem, while others displace native plants and disturb natural processes such as fire, giving them the title of invasives (Wunderlin and Hansen, 2003).

Invasive vegetation management requires methods that minimize disruption of non-target plant material and soil. Control methods should allot adequate time for planning to reach an acceptable level of suppression. Many groups unique to Florida are devoted to nonnative invasive control through education, land management, and networking (Langeland et al., 2011). The Natural Areas Training Academy is a partnership between the University of Florida and The Nature Conservancy that provides natural areas management training to both private and public natural resource managers. The Florida Exotic Pest Plant Council (FLEPPC) is a nonprofit professional organization devoted to public awareness of nonnative invasive plant pests. FLEPPC maintains a comprehensive list of plant species deemed to be invasive by a commit-

tee of botanists, ecologists, and land managers. The list does not have statutory authority and plants regulated by statute are listed on the Florida Noxious Weed List (Langeland et al., 2011). The Florida Invasive Species Partnership (FISP) is a partnership of federal, state, and local agencies along with non-government organizations with the common goal of managing nonnative invasive species in Florida (University of Georgia, 2013a). FISP encourages increased communication, coordination, and sharing of resources among governmental and private entities to protect the natural landscape of Florida. FISP is able to extend its outreach throughout the state by facilitating the formation of Cooperative Invasive Species Management Areas (CISMAs). CISMAs are an alliance of governmental and private stakeholders addressing invasive species management in geographic regions within Florida (University of Georgia, 2013b). CISMAs are unique in the fact that they address nonnative invasive plants as well as nonnative invasive animal species. A total of 17 CISMAs are in operation throughout the state and are generally broken up by county lines with various counties working in cooperation.

Situation/Objectives

The Central Florida CISMA is a collaborative effort between Orange and Seminole counties. The Central Florida CISMA steering committee was formed in 2008. This committee was formed to facilitate the CISMA mission in Central Florida and is comprised of Orange County and Seminole County government employees, private landowners, Florida Forest Service employees, University of Florida/IFAS Extension employees, and environmental

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consultants. Initially, the steering committee did not contain any UF employees, but expressed a desire to obtain Extension funds without Extension involvement. University employees quickly became involved with the Central Florida CISMA for the best interest of the organization. Prior to Extension Agent inclusion, the invasive species issues of the Agricultural Community were not addressed by the Central Florida CISMA.

Educational Methods

The Central Florida CISMA steering committee is supported by three University of Florida Extension Agents. These agents are able to conduct classic community resource development work by providing a link between university research and the general public. Through Extension Agent contacts, the Central Florida CISMA is able to attract University of Florida researchers from multiple disciplines to educate the public on a vast array of invasive species topics.

A grassy weed control workshop and an aquatic weed control workshop are provided on a biannual, rotational basis. Both workshops offer classroom and hands-on field education. The grassy weed control workshop attracts an average of 77 attendees and the aquatic weed control workshop averages a crowd of 123. A “Spring Meeting” is conducted annually and covers a wide range of topics from weed control to invasive animal introductions. Workshop attendees are from a multitude of disciplines, but a large number hold pesticide applicator licenses in the Natural Areas Weed Control and Aquatic Weed Control categories. Pesticide applicators are required to obtain Continuing Education Units (CEUs) in order to renew their respective licenses. CEUs are not widely available for the two categories listed above, which creates a premium for seats in CISMA trainings.

The Central Florida CISMA provides educational opportunities to the public through hands-on “clean-up” days. One annual event is an Air Potato Raid, which is a coordinated air potato mitigation activity at multiple locations throughout Orange and Seminole counties. The event educates the public on the physiology of the air potato (*Dioscorea bulbifera*) and gives a first-hand look at the vast amount of land infested with this extremely invasive vine. Contributing a total of 3,584 man-hours, 1,792 volunteers have collected 24,161 lb of air potato bulbils (aerial tubers) in a 3-year span (2011–13).

An environmental consultation firm (and member of the Central Florida CISMA steering committee) has led a mitigation effort at Oakland Nature Preserve in Oakland, FL. Areas that were heavily infested with cogongrass (*Imperata cylindrica*) were treated with a glyphosate and adjuvant blend. After treatment,

approximately 90% of the cogongrass in the preserve has been suppressed. This effort could not have been successful without networking and grant funding through the Central Florida CISMA. Re-establishment plantings will also be administered through grant funding with this firm.

Results and Conclusion

The formation of the Central Florida CISMA has attracted interest from a broad spectrum of organizations ranging from private landowners to environmental advocacy groups. CISMA steering committee members include: public sector employees, environmental consultation firms, Disney, Deseret Ranch, and the University of Florida/IFAS. These groups do not always completely agree with one another, but are able to combine strengths to address the issues of invasive exotics on public and private lands through the organization of educational events. The Central Florida CISMA has been able to acquire \$2,900 in grant funding from the U.S. Fish and Wildlife Service and the Florida Exotic Pest Plant Council (FLEPPC) to support mitigation efforts on public lands and to host educational events at no charge to participants. The numerous educational events have provided natural areas and aquatic management companies with difficult to obtain continuing education units (CEUs) for their pesticide applicator’s licenses. University of Florida/IFAS Extension’s future is partly dependent on networking with environmental issue working groups, which may become challenging. However, Extension Agents are still best suited to deliver issue-based education when agricultural lands are threatened. Resource networking is a viable solution to controlling invasive plants and animals in a diverse spectrum of settings.

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