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A Progress Report of the Brevard County Brazilian Pepper Busters Public Education Activities and Training Manual

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Abstract

The Brevard Pepper Busters originated from the Brevard County Brazilian Pepper Symposium, held in the fall of 1994. The symposium arose from a need to increase public awareness of the critical problems that Brazilian pepper (*Schinus terebinthifolius* Raddi) poses to Florida's native plant communities. This dedicated task force is comprised of representatives from several governmental agencies, civic and private organizations, and concerned citizens. It is resolved to promote an understanding of Brazilian pepper as a highly invasive, flagship species of the many invasive pest plants within Brevard County. The Brevard County Brazilian Pepper Committee's educational and organizational efforts, from 1994 to the present, is discussed. The committee's most recent endeavor is to develop a Florida Brazilian pepper training manual whose purpose is to provide instruction to the general public on techniques to remove Brazilian pepper, and present a process to organize Pepper Buster community events.

Introduction

The 1994 Brevard County Pepper Buster Symposium provided approximately 300 people with the opportunity to learn about the invasive nature of *Schinus terebinthifolius* Raddi (Brazilian pepper), how it first invaded Florida, and the ongoing control and eradication efforts throughout the state. Symposium organizers were the first members of what came to be called the Brazilian Pepper Busters (BPB). Each person provided a unique contribution in meeting the group's stated goals of educating homeowners and the general public about the need for eradicating Brazilian pepper (and the methods available to do it) in Brevard County. The group decided to form two subcommittees, Training and Action, to accomplish its two objectives of (1) developing a training program for would-be trainers and homeowners, and (2) organizing "pepper busting days" to increase awareness while controlling

Brazilian pepper within Brevard County.

Training the Trainers

The Training Subcommittee spent nine months preparing and editing a Pepper Buster Certification Program for the target audience of homeowners and the general public. Training program information is disseminated in different formats: handouts, a classroom slide presentation, and a field demonstration. The classroom portion consists of a slide presentation that includes the history of Brazilian pepper, field tips to avoid confusing Brazilian pepper with similar looking native plants, and safety procedures for using equipment and applying chemicals for herbicide treatment methods.

Handouts on the above topics and pressed plant specimens are passed around to participants. Participants are asked to volunteer in exchange for the free instruction at Pepper Buster training sessions. Volunteer hours can be credited for helping with a Pepper Buster workday or by giving the training program; busting workdays are generally arranged at pre-selected sites after the training program.

A master list of approximately 50 people that have completed one of the five Brazilian pepper training programs is maintained by a committee member, the Horticultural Agent for the Cooperative Extension, who also happens to be one of the training program instructors. Outside groups, like the Hillsborough Pepper Busters, sent representatives to join in a training program and return information to their local organizations. The first few class participants received a Pepper Buster Certificate at the completion of the training. The certification was later dropped from the training due to concern over liability regarding who would be the recognized certifying authority. The program is not officially a part of the Agricultural College Land Grant system or any state regulated testing requirement, such as the pesticide applicator's license. Identification of a certifying agency was discussed at several meetings. However, the legal ramifications and the length of time needed to accomplish it stopped the BPB from pursuing an officially recognized certification.

While developing the training program, it was important to offer current information and techniques that the average person could understand and use at home. The subcommittee has been criticized for promoting the use of the herbicides "Roundup" and "Rodeo" for the cut-stump method, rather than more efficient basal bark treatments. It was decided that less efficient methods and herbicides were best for homeowners because some of the herbicides could not be purchased over the counter, or practical and reasonably priced quantities of herbicides were not available at retail outlets. The committee contacted retail stores to survey products and prepared a list of recommended herbicides for homeowners. The list was a compilation of herbicide availability (including container size and cost)

throughout the county and was provided to participants of the training program.

Drive-by Survey

The BPB realized that there was no shortage of sites infested with Brazilian pepper. In 1995, the BPB agreed to develop a county-wide five year control plan at selected sites within Brevard County. The site selection process, “to start small and focused”, was to limit sites to property that was publicly owned, visible to the public, useful for educational demonstration sites, and geographically representative of the three regions of the county.

While work progressed on the training objectives, the Action Subcommittee worked to select and prioritize the sites. Subcommittee members selected county parks, Environmentally Endangered Lands (EEL) Program properties, and the right-of-way adjacent to a county park and causeway. Members literally did a drive-by survey of the larger barrier island county park sites and completed an on-site evaluation of smaller properties. The following information was collected to assess site attributes: (1) public ownership, (2) area of infestation in linear feet, (3) county Commissioner District may or may not be applicable in your area, (4) visibility to the public, (5) presence or absence of endangered species, (6) priority ranking, (7) removal method recommended, (8) follow-up instructions, (9) permit requirements, (10) volunteer group, (11) land management agency responsible for the site, and (12) additional notes.

Table 1 is an example of the results of the 1995 survey conducted for the BPB. A separate form for measuring progress in terms of area treated was created. However, most progress reports were given verbally at BPB meetings. The long-term success of Pepper Days can only be assessed by follow-up. Sites that had repeated pepper busting activity apart from Busting Days, and where an assigned staff person monitored and continued control treatments, are the best examples of the BPB program’s success. Table 1 includes two county parks and an EEL property known as the Enchanted Forest Sanctuary. The two county parks have staff who regularly complete visual surveys and perform maintenance treatments. The Enchanted Forest Sanctuary had few Brazilian peppers initially and most plants were removed in 1995 by a volunteer group. The sanctuary has an active volunteer group, the Friends of the Enchanted Forest, who constantly work at the site.

Pepper Busting Days - Organizing a Volunteer Work Day

Two county-wide Pepper Busting Days have been successfully completed. Collectively, the events drew 105 volunteers and treated approximately 15 ac of Brazilian pepper. The events were organized according to an outline provided by a member of the Action Subcommittee and addressed three main areas: project details, peo-

Table 1. Site recommendations for removal of Brazilian pepper.

Project site	Mgmt entity ¹	Priority rank ²	Removal method	Estimated area (ft ²)	Plant Y/N	Follow-up treatment	Permit	Target date	Volunteer group	Notes
Pineda Landing	P&R	2	Aquatic herbicide	4000	Y	Resprouts	County	1995	Rotary, P&R Central	Limited parking, restrooms, high visibility to public
Enchanted Forest	EEL, P&R	1	Basal	< 500	N	New infestation			FEF	Completed in 1995
Long Point Park/Scout Island	P&R	3	Aquatic herbicide, basal	>10 000	Y	Resprouts	FDEP	1995	Boy Scouts, Advisory Com., P&R South	High volume of recreational users

¹ P&R, Brevard County Parks and Recreation; EEL, Environmentally Endangered Lands Program.

² 1, area easily treated within 1 year; 2, area easily treated within 1-2 years; 3, area easily treated within 1-5 years.

ple details, and peripherals. These are discussed separately in the paragraphs below

Project details

- Know your site (where and how much to clear, proximity to water, wild-life and other factors).
- Select removal methods.
- Select date and time.
- Assemble Brazilian pepper removal equipment and supplies: herbicides, glass and plastic jars, paint brushes, mulchers, dumpsters, etc.
- Monitor entire workday operation from set-up to securing, and ensure that everything runs smoothly.

People details

- Identify volunteer pool (local environmental organizations, high schools, dive clubs, homeowner associations, amateur radio operators, etc.).
- Compile list of volunteers and contacts, and phone numbers from each organization.
- Relay details on proper attire and what to bring and what to expect beforehand.
- Ensure that you will have volunteers bringing chain saws, loppers, trucks, etc., if needed.
- Have volunteers fill out registration and sign-up sheets and liability forms.
- Instruct volunteers on Brazilian pepper identification and proper removal methods.
- Give volunteers a safety briefing (allergic reactions, chain saws, herbicides, bee and wasp stings, etc.).
- Provide follow up recognition (thank you letters, certificates).

Peripherals

- Arrange for food and water (get items donated from stores, fast food outlets, etc.).
- Arrange for Port-O-Lets, if needed.
- Arrange for trash cans, tables, chairs, tarps. if needed.
- Provide a first aid kit.
- Take care of publicity (newspapers, flyers, newsletters, phone calls).
- Provide perks and incentives (buttons, T-shirts, etc.).

The first Pepper Busting Day was held 28 October 1995, on the National Make-A-Difference Day. The BPB believed that the date would bring attention to the event and create awareness. An evaluation of the event proved otherwise; there was too much competition for media coverage. Competition for volunteers and donations of food and drinks may also have been abnormally stiff. The subcom-

mittees agreed that future pepper busting events would be held before seeds formed on the Brazilian peppers, and would avoid holidays and national competition events. It was resolved that food and drinks (aside from drinking water) would be optional. The second event, held in September 1996, was thus changed accordingly. Instead of hosting an event in 1997, the BPB became involved in editing a training manual for publication.

Training Manual

The *Brazilian Pepper Training Manual*, written by the Training Subcommittee and edited by the BPB, was initially a two part document: the full version for the trainer, and a set of handouts for the homeowner. Earlier versions contained Material Safety Data Sheets, detailed methods using herbicides that were not included as recommended treatments for the homeowner's purpose. The manual was modified after the early training programs in an attempt to make it an easy-to-read document for homeowners and general public use. The manual is in subcommittee review and about 90% complete. The goal is to publish it for use and distribution in Florida wherever Brazilian pepper is the dominate exotic problem.

The Future

The BPB plans to continue to host symposia and conferences, training programs, and Pepper Busting Days aimed at controlling Brazilian pepper on the sites listed in the Five Year Plan. Brazilian pepper was chosen due to its presence in Brevard County and the availability of treatment methods for homeowners. The BPB is concerned with other invasive exotics in the county that pose a threat to natural systems. It may be possible to increase awareness of other exotics by using Brazilian pepper as a flagship exotic, to draw attention to the harm caused by invasive exotics in Florida. BPB will keep working with other groups throughout Florida to update recommended treatment methods and information used for public education.