The Florida Forest Steward

A Quarterly Newsletter for Florida Landowners and Resource Professionals

Volume 18, No. 1 Spring-Summer 2011

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Your Story

By Chris Demers

As the economic crisis continues to unfold and state and Federal legislatures decide what projects and programs are next in line for cutting, it is becoming increasingly important for us to communicate the impacts of our educational and assistance programs. As a part of this process we are collecting feedback from people on all aspects of the Forest Stewardship Program. Please take a moment to share if you have been served by some part of Florida's Forest Stewardship Program:

Planning and Assistance

Do you have a Forest Stewardship Management Plan for your property? Has the plan helped you in the process of reaching the goals you have set for your property? Has a county forester, biologist, county extension agent, consultant or other professional provided valuable assistance with your management planning or practice?

Education and Networking

Have you attended any Forest Stewardship Program workshops, tours or other events? Did the information and materials presented there help you in some way with planning, management, or





pursuit of financial assistance or a tax related benefit? Did you get any new ideas, encouragement or inspiration from another landowner or professional? Did you make any new contacts that have helped you in some way?

What about this Newsletter? Has it provided useful information or ideas that have helped you in some way?

Your story is an important part of the Forest Stewardship Program. If you'd like to share any feedback please email me at cdemers@ufl.edu. If you are on Facebook, your feedback is also invited at the Florida Forest Stewardship Program and Cooperative Extension System pages.

Uneven-aged Management of Southern Pines

By Don M. Handley, Joshua C. Dickinson and Chris Demers

With fuel costs soaring and stumpage prices for small-diameter trees low as usual, many landowners may be seeing very little financial incentive to plant trees after a final stand harvest. Those with stands nearing financial maturity may be wondering if it will be worth it to replant after the current stand is harvested. In the last issue we discussed the important economic and ecological benefits that can be realized by extending pine rotations, in concert with thinning and prescribed fire. What happens next in your stand when it's ready for harvest? Let's take a look at another pine management system that can minimize, or even eliminate, the high upfront costs of site preparation and planting, maintain a continuous forest cover, provide more frequent income and achieve other important wildlife habitat and recreation objectives.

Uneven-aged management (UAM) of pine can offer many benefits to forest owners, the environment, foresters and the timber industry as a whole. UAM can offer the potential for more frequent and continuous income from the forest than even-aged management of a plantation or high-grading an unmanaged forest. Wildlife, hydrologic and aesthetic values may be better maintained as well. UAM involves a long-term relationship between the forest owner and a forester with the appropriate skills and experience, rather than the forester serving as a one-time broker for a sale, site preparation and planting.

History of uneven-aged management

Uneven-aged management is not new, only largely forgotten by foresters and forest owners. The practice of what evolved into uneven-aged management dates back to the mid 1920s in Arkansas when foresters L. K. Pomeroy and E. P. Connor founded the Ozark Badger Lumber Company. Their approach stood in sharp contrast to the "cut and run" logging of old growth pine forests that had prevailed for decades. Pomeroy's perspective was strongly influenced by observation of centuries-old German forestry practices. Pomeroy noted, "Their attitude of guardianship of this [forest] wealth for future generations was a point entirely strange to me as an American lumberman"

This model has been perpetuated in Arkansas by the U.S. Forest Service with establishment of the Crossett Experimental Forest in 1933. The "Good Farm Forestry Forty", a well-stocked shortleaf/loblolly stand was established to demonstrate to farmers that good income can be generated under uneven-aged management, even from relatively small

forest properties. This 40 acre parcel is still being managed and harvested today. Don Handley, of Handley Forest Services, began his forestry career working in UAM in southern Arkansas. He has successfully introduced UAM to clients in South Carolina and southeast North Carolina.

Your starting point

Unmanaged stands: If your timber stands are largely unmanaged with a mix of pine and low-value hardwoods, the idea of starting over may not be attractive. The cost of stand establishment is high and a return on the investment will be more than 2-3 decades in the future. If you are looking for revenue from an unmanaged stand, beware of the "We buy timber" signs along rural roads. These buyers may offer what appears to be an attractive price for the timber but the harvest likely won't result in a valuable or healthy residual stand. The best merchantable stems will be removed, leaving the poorest and/or unhealthiest trees as the residual stand.

Most unmanaged stands across north Florida and much of the Southeast consist of loblolly pine mixed with various hardwood species. Loblolly is the most forgiving of the southern pine species, producing abundant seedlings when hardwoods are removed and a prescribed burn carried out. A single herbicide application is generally required to release the pine seedlings from hardwood competition, after which the dominant seedlings become the second age and size class in an uneven-aged stand. Once the new trees are established, the original pines in the unmanaged stand can be thinned to generate revenue. The hardwoods can also be sold as pulpwood or chipped for biomass fuel, where markets exist.

Managed pine plantations: Owners of plantations nearing rotation age have a few options to continue forest management on the site. They can be cut and regenerated artificially by preparing the site and planting seedlings, regenerated naturally using an even-aged seed tree or shelterwood approach, or converted, via periodic harvests and natural regeneration, to an uneven-aged stand structure. Don Handley has successfully converted loblolly plantations to profitable uneven-aged stands.

Making Uneven-aged Management work

The secret to the success of uneven-aged management is maintaining a balanced structure of age classes across the stand through periodic sales of mature trees. Pines are shade intolerant so they will generally require larger gaps to regenerate naturally. This is generally best accomplished by harvesting groups of trees vs. single trees throughout the stand. This periodic harvesting of groups of trees assures abundant replenishment of young seedlings and competition control in a multi-aged forest, while maintaining near full stocking. Some smaller, low quality, sick or damaged trees should also be removed in order to improve stand health and value. Steady income, coupled with the hydrological, wildlife, and aesthetic value of maintaining a fully stocked forest ecosystem, are among the benefits of uneven-aged management.

Economics

Comparison of even and uneven-aged management is complex, but critical if

	Uneve	n-Age Man	agement	vs Eve	en-Age Manageme	nt	
	Actual Case History	45 Acre Stand		Estima	ted earnings - 30 year rotation un	der even-age manag	jement
John Livingston Land Company				Final harvest value based on cruise made in 1995			
YEAR	ACTIVITY	COST	GROSS	YEAR	ACTIVITY	COST	GROSS
			INCOME				INCOME
1988	First pulpwood thinning		\$15,188	1988	First pulpwood thinning		\$15,188
1993	Small sawtimber sale		\$35,367	1993	Small sawtimber sale		\$35,367
1997	Sawtimber sale		\$49,148	1997			
1998	Herbicide application	\$4,320		1998	Final harvest @ age 30		\$112,500
1999		7.1		1999	Prepare site & replant	\$7,740	
2003	Sawtimber sale		\$40,650	2003			
2008	Sawtimber sale		\$31,605	2008			
	Fees mgt plan, etc.	\$17,599			Fees mgt plan, etc.	\$16,306	
2010	TOTALS	\$21,919	\$171,958	2010	TOTALS	\$24,046	\$163,055
NET INCOME			\$150,040	NET II	NCOME		\$139,010
Marketable timber present in 2010 inventory			\$77,000	Marketable timber present in 2010 inventory			\$0
UNEVEN-AGE MANAGEMENT >			\$227,040	EVE	N-AGE MANAGEMENT>		\$139,010

family forest owners are to have a valid basis for judging which management option to choose.

The table above illustrates an example of a forest owner in South Carolina with a 20 year-old loblolly plantation. He chose to convert the stand to uneven-aged management. Actual economic returns are compared with a simulation of returns had even-aged management been continued. The results illustrated are comparable to cases where the owner chooses to convert an unmanaged stand to uneven, rather than even-aged management. Were the comparative model shown to be extended through a second rotation, the economic benefit of uneven-aged management increases significantly. Note again that revenues reflect yields in South Carolina and that the table reflects only the merchantable timber present after the cut. The future value of the planted even-age stand is not reflected.

Conclusion

Uneven-aged management can offer many benefits to landowners with multiple-use objectives. Income from the stand will be from smaller, but more frequent, harvests of high value trees. This management option creates a diverse mosaic of horizontal and vertical vegetative structure which, when combined with prescribed

fire, is beneficial to a variety of game and nongame wildlife. Finally, for landowners who want a diverse and beautiful forest, an uneven-aged stand is second to none. The Forest Management Trust is prepared to facilitate opportunities for forest owners and foresters to observe successful UAM in the field. In the next article Jeff Main, a Florida consulting forester, provides some local perspective on this topic.

UAM Resources:

Uneven-aged Silviculture for Loblolly and Shortleaf Pine Forest Cover Types, http://www.srs.fs.usda.gov/pubs/gtr/gtr_so118.pdf

Opportunities for Uneven-aged Management in Second Growth Longleaf Pine Stands in Florida, http://edis.ifas.ufl.edu/fr132

Uneven-aged Management of Longleaf Pine Forests: A Scientist and Manager Dialogue, http://www.srs.fs.usda.gov/pubs/gtr/gtr_srs078.pdf

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The Passive Alternative: Is the Group Selection System a Viable Forest Management Regime in the North Florida Flatwoods? By Jeff Main

Since the advent of commercial forestry in the 1950's upland pine management in north Florida has predominantly been by successive even-age plantation establishment and harvest rotations. There is much to be said for the financial and productivity advantages of this type of regime. However, drastic changes in timberland ownership, stumpage markets and owner goals and objectives have caused resource professionals to seek alternatives that would better serve a portion of the timberland owning public. One alternative making the rounds is a variant of the selection system.

Traditionally used in the hardwood regions of the upper and mid-south, the selection system involves the periodic harvest of individually selected trees to maintain and improve an uneven aged hardwood forest. A similar approach has been practiced on Longleaf pine forests in the pine producing Piedmont and Coastal Plain regions. Referred to as the Stoddard-Neel approach after its two best known practitioners, an uneven aged, naturally regenerated pine forest is managed at low stocking levels by the individual and thoughtful selection of harvest trees. Selections are based on tree qualities, spacing, the need for openings and other factors. The beautiful quail plantations of the Red Hills regions of north Florida and South Georgia are a result of this approach.

However, in the pine forests of north Florida the hardwood selection model does not work due to pine trees being intolerant, meaning they cannot live in shade. They require full sunlight to regenerate and prosper. Single tree selection as practiced in hardwoods does not provide openings large enough for pine regeneration.

The Stoddard-Neel approach gets around this by carrying very low stocking levels. Where a 30 year old thinned commercial pine stand will carry 100 square feet of basal area, the Longleaf quail plantations are maintained at 30 square feet. These low stocking levels limit total volume growth and thus the financial returns possible from the land. Of course timber production is not the primary goal of the quail plantations. In truth this system has limited application outside the Longleaf pine regions due to species and soil differences.

So if you can't regenerate a stand due to lack of sunlight but still want more stocking than a quail plantation what do you do? One option may be the Group, or Gap selection system. With it, gaps are periodically made in the timber base large enough for intolerant species to grow and prosper but sized appropriately for natural seeding from the adjacent trees. The effect is a variety of even aged units scattered throughout the land base. When successful, this system reduces site preparation and regeneration costs significantly when compared with commercial planted pine regimes.

Success is not automatic. The quality and quantity of the seed source, timing and type of harvests and competition control are some of the factors affecting the establishment of an acceptable stand. Once established, naturally regenerated stands will always have stocking levels that are too high or too low (or both) as measured by optimum productivity. While the carpet-like natural regeneration

that occurs in some pine stands is familiar to all of us, we know that it is not necessarily the norm, nor is it desired. Finally, economies of scale require a fairly large land base to make this system feasible. Contractors must have enough work to make their site prep and harvest operations profitable.

Natural regeneration requires adequate seed quantity and bare mineral soil. Pine seedfall in north Florida occurs in the fall, so harvest should be timed in mid to late summer if the harvested trees do not contain cone bearing trees (to allow the logging process to produce bare mineral soil) or October/November if they do (to get scarification and viable seed directly on the site). Seedfall varies from year to year with a heavy seedfall about every three years. If the groundcover is thick and impenetrable a burn may be required. Seed trees may be necessary in the gaps if adjacent seed sources are inadequate. Some form of mechanical scarification may be in order. However, keep in mind that in a good seed year every square inch of exposed mineral soil will be covered with seedlings. Bottom line is there is a balance required to achieving and maintaining a good stand.

A primary appeal of Group selection is that this approach provides benefits beyond stand establishment. Stand edges, the boundaries between stands of different ages favored by wildlife, are increased. Flora and fauna diversity within the forest holding increases the recreational and aesthetic qualities of the property. One obvious advantage is the reduced stand establishment costs although this can be overstated.

Some professionals believe Group selection financially outperforms traditional planted pine silviculture, primarily because the carrying costs of the site prep and planting are reduced or eliminated. I have yet to find a real world example of this in north Florida. Although site prep costs are high and stumpage rates are what they are, the poor genetics, reduced growth, stocking dynamics, competition and other factors inherent in naturally regenerated stands make group selection less profitable than a planted stand on the same site. If production is the goal, reasoned order must be brought to the crop. Farmers don't arbitrarily throw corn seeds on their fields for a reason. Despite that, the initial positive effect on personal cashflow (i.e. not paying for site prep and planting) makes this system appealing to some landowners. Of course, certain timberland holdings are better suited to this system than others.

As stated, maximum profitability is not the only end pursued by many forest landowners. I practice both selection and planted pine silviculture on my personal land. I enjoy the diversity and aesthetics of the natural stand and the productivity of the planted pines. This provides the best of both worlds.

Jeff Main is President of Land & Timber Services Group, Tallahassee, FL and member of the Association of Consulting Foresters.

Congratulations Bill McMillan: Florida's Tree Farmer of 2010

by Cathy Hardin, Florida Division of Forestry

Bill McMillan, a lifelong resident of Gadsden County, received the 2010 Tree Farmer of the Year award for his outstanding commitment to responsible forest management. The 400+ acre property has been in his family for five

generations. Mr. McMillan has worked hard to make his working forest sustainable, aesthetically pleasing and attractive to wildlife.

Bill McMillan says the work he does each year on his farm is his "stress relief". When asked how the family has maintained an interest in the land generation to generation, Mr. McMillan replied, "It's not something you can teach. It's a connection to the land. It's putting your own time and effort into it to take ownership —something that is more than buying and selling a piece of property." The pride and love he has for his land shows in the healthy, frequently burned stands of mature pines, wildlife openings and food plots.



Bill McMillan shares his land management story at a tour of his property last December, photo by Cathy Hardin, DOF.

Also enrolled in Florida's Forest Stewardship Program, Bill McMillan's farm demonstrates good stewardship of wood, water, recreation and wildlife. His forest and its products are used and enjoyed, but he is careful that it is all done in a manner that will allow his children and grandchildren to gain the same benefits.



Congratulations Brian Cobble: Tree Farm Inspector of 2010 By Phil Gornicki, Florida Forestry Association

It only took a few years of working with the Tree Farm program for Brian Cobble (Senior Forester, Suwannee County, pictured above) to claim the distinction as the top Tree Farm Inspector in Florida. As part of his job working for the Florida Division of Forestry, Brian has put much energy behind bringing the Tree Farm message of forest conservation, management and sustainability to the landowners of Suwannee County. During calendar year 2010 Brian conducted 45 inspections, on 13,809 acres, including bringing 9 new properties into the American Tree Farm system. Brian has proven himself as a valuable asset to Florida's Tree Farm program, and is a very deserving recipient of the Tree Farm Inspector of the Year Award!

Get Email Updates!

Don't miss out on upcoming events. Send an email to <u>cdemers@ufl.edu</u> to be added to the Stewardship listserv.

Congratulations Certified Forest Stewards and Tree Farmers!



Doug Smith (L) and Tony Golden, Holmes County



Bruce and Karen Butts, Holmes County



George & Claudia Barthelmes, Suwannee County



Al Hartzog (R) with Geoff Cummings (DOF), Bay County



Roger Bryan, Suwannee County



Jason Sapp (L) and son with Brian Cobble (DOF), Suwannee County

For more information about becoming a Certified Forest Steward or Tree Farmer, call your County Forester or learn about it at:

http://www.fl-dof.com/forest_management/cfa_steward_index.html http://www.floridaforest.org/tree_farm.php

Florida's Forest Stewardship Program' &

The FL-GA Game Management Update Series

Present:

Balancing Timber & Wildlife for Upland Game Tour

May 13, 2011; 8:30 am – 1 pm Cobey Family Property, Gadsden County

Join us for a tour of the Cobey Property. At this Gadsden Co family game reserve, you can see for yourself the result of 25+ years of professional forestry/wildlife management focused on converting rolling pasture to a quail-plantation landscape of planted loblolly pine. Trees have been marked and thinned to optimize both the return from timber products as well as wildlife habitat for upland game. Prescribed fire and herbicides have been used regularly. Planted food plots and wildlife corridors are embedded in the upland timber stand. An extensive hardwood drain and a naturalistic man-made lake compliment the uplands. Pasture to plantation in 20 years... a field tour of the Cobey family's "Mary Land" is an excellent opportunity to see what a landowner can accomplish with consistent, aggressive management!

Topics include:

Thinning pines for timber and wildlife production
Using prescribed fire for habitat management
Wildlife food plots
Bahiagrass control
Best Management Practices for protecting water quality

Where:

The Cobey Property
Off CR 159 in Gadsden County, FL (directions on back)

Registration: Please RSVP by May 11th. Fee is \$10, includes lunch and materials. To register or for more information, please go to **http://flgagmus.eventbrite.com** or contact Chris Demers at (352) 846-2375, cdemers@ufl.edu.













Driving directions to "Balancing Timber and Wildlife for Upland Game" May $13^{\rm th}, 2011$

Coming from Tallahassee, and east and south of Tallahassee: From I-10 in Tallahassee, take the US 27 N exit (Monroe St) toward Havana. Cross the Ochlockonee River into Gadsden Co. About 1 mi past the bridges, turn L onto SR 270. Travel approx. 2.5 mi to the first intersection with CR 159, and turn L. Go approx. 3/4 mi down CR 159. Gate is at top of hill on R.

Coming from east and north of Tallahassee: From US 27 or SR 12 in Havana, take US 27 S of Havana to the 2nd intersection with CR 159 to the R (the first one is marked "To Quincy"). At the 2nd one, turn R and travel approx 2 mi until CR 159 T's into CR 270. Turn L onto CR 270 and go about 1/4 mi to where CR 159 T's in from the R. Turn R on CR 159. Go approx. 3/4 mi down CR 159. Gate is at top of hill on R.

Coming from west of Tallahassee and Quincy northward: Driving E on SR 12 toward Havana, turn R and take CR 159 S at the blinking light outside Havana, and proceed for approx. 1/2 mi to its junction with US 27 S of Havana. Turn R and go S on US 27 for approx. 1.5 mi. At the intersection with CR 159 to the R, turn R and travel approx. 2 mi until CR 159 T's into CR 270. Turn L onto CR 270 and go about 1/4 mi to where CR 159 T's in from the R. Turn R on CR 159. Go approx. 3/4 mi down CR 159. Gate is at top of hill on R.

Coming from west of Tallahassee and Quincy southward: From I-10 W of Tallahassee, take the US 90 N exit toward Quincy. In approx 2 miles you'll reach the crossroads of "downtown" Midway, turn R onto CR 159. Go approx. 5 mi N on CR 159. Gate is on L along the hilltop, right before the hill drops off.

Look for "Forest Stewardship Tour" signs as you get close.

Just in case, Chris Demers' cell #: (352) 514-0819

Timber Price Update

The timber pricing information below is useful for observing trends over time, but does not necessarily reflect current conditions at a particular location. Landowners considering a timber sale are advised to solicit the services of a consulting forester to obtain current local market conditions. Note that Southeast average price information for biomass fuel is now included.

Price ranges reported in the 1st Quarter 2011 Timber Mart-South (TMS) report were:

Florida Stumpage Prices

- <u>Pine pulpwood</u>: \$20 \$33/cord (\$7 \$12/ton), ↓from 4th Qtr 2010
- Pine C-N-S: \$31 \$56/cord (\$11 \$21/ton), ↑ slightly
- Pine sawtimber: \$64 \$96/cord (\$24 \$36/ton), \
- Pine plylogs: \$65 \$102/cord (\$24 \$38/ton), same
- Pine power poles: \$130 \$172/cord (\$49 \$64/ton), _ slightly
- Hardwood pulpwood: \$15 \$27/cord (\$5 \$9/ton), ↑ slightly

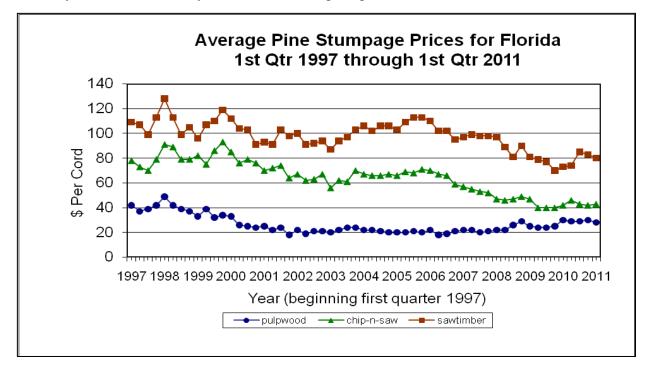
Biomass Fuel Prices*

- In-woods
 - whole tree pine: \$14 \$21/ton ↑
- In-woods
 - whole tree hardwood: \$12 \$20/ton ↑

*Southeast average low and high price ranges per ton, fuel quality chips from tops, limbs, limited bole material or otherwise precommercial material

Trend Report

Average stumpage prices in the first quarter 2011 were very similar to last quarter's across much of Florida and the Southeast region, but all were well below prices in the same period last year. Continuing weak housing markets and high fuel prices are keeping prices down for most products. Several new bio-energy projects across the south reinforce this new market for biomass products. In Florida, construction on American Renewables' 100-MW biomass power facility in Gainesville is scheduled to begin this summer, while ADAGE's proposed 50-MW facility in Hamilton County is on hold due to "poor power market conditions".



University of Florida School of Forest Resources and Conservation PO Box 110410 Gainesville, FL 32611-0410 Non Profit Org. US Postage PAID Florida Gainesville Permit No. 94

Upcoming Stewardship, Small Farm and Other Events							
Date	Event, Location, Contact						
May 4	Forest Stewardship Workshope: Tree / Plant Identification, 9 am - 3 pm ET, Morningside Nature Center, Gainesville, FL. \$10 fee includes lunch and materials. Details and registration online at http://fsp-workshop050411.eventbrite.com/						
May 12	Forest Stewardship Workshop: Manage the Pond, Mind the Creek, 9 am - 3 pm ET, UF-IFAS Highlands County Extension Office, 4509 George Blvd, Sebring, FL 33872. Details and registration on-line at: http://fsp-workshop051211.eventbrite.com/						
May 12	Lee County Natural Areas and Woods Workshop in Fort Myers, UF-IFAS Lee County Extension Office, Fort Myers, FL. Will focus on non-native invasive species management. CEU's offered for pesticide use categories. Details at http://lee.ifas.ufl.edu/AgNatRes/AgNatResHome.shtml . To register, contact Martha Avila, (239) 533-7506, avilamc@leegov.com .						
May 13	2010-11 FL-GA Game Management Update Series, Balancing Timber & Wildlife for Upland Game, Cobey Property, Gadsden County, FL. Cost is \$10, lunch and materials included. Details and registration on-line: http://flgagmus.eventbrite.com/						
May 20	Orchard Management Series Part 3: Spring Orchard Management, UF-IFAS Suwannee Valley Research and Education Center, Live Oak, FL. For more information, contact Sarah White at 386-362-1725 ext. 102 or sewhite@ufl.edu .						
June 16	Lee County Tree Farming and Tree Health Workshop, Division of Forestry Office in Fort Myer, FL. Will discuss management plans, tree crops to consider; creating a fire safe forest; silvicultural BMP's, and food plot options. \$15 fee in advance, \$20 at door. Call Michael Weston at (239) 690-3500 Ext. 118 or email Michael.Weston@freshfromflorida.com for info.						
June 26	Hendry County Tree Farming and Tree Health Workshop, UF-IFAS Hendry County Extension in LaBelle,FL. Will discuss management plans tree crops to consider; creating a fire safe forest; silvicultural BMP's, and food plot options. \$15 fee in advance, \$20 at door. Call Michael Weston at (239) 690-3500 Ext. 118 or email Michael-Weston@freshfromflorida.com for info.						
July 15-17	2011 Florida Small Farms and Alternative Conference, Osceola Heritage Park, Kissimmee, FL. Hosted by University of Florida - IFAS and Florida A&M University. Details at http://conference.ifas.ufl.edu/smallfarms/index.html.						
July 31	2011 Wildlife Expo , UF-iFAS West Florida Research and Education Center, Milton, FL. For more information please contact Ms. Robin Vickers at (850) 983-5216 x 113 or rvickers@ufl.edu						
August 11	Orchard Management Series Part 4: Summer Orchard Management_UF-IFAS Suwannee Valley Research and Education Center, Live Oak, FL. For more information, contact Sarah White at 386-362-1725 ext. 102 or sewhite@ufl.edu .						
August 26	WFREC Extension Farm Field Day, UF-IFAS West Florida Research & Education Center Research Facility, Jay, FL. For more information please contact Ms. Robin Vickers at (850) 983-5216 x 113 or rvickers@ufl.edu						

For more Forest Stewardship Program information see: sfrc.ufl.edu/forest_stewardship

The Florida Forest Steward is a University of Florida Cooperative Extension Service, Florida Division of Forestry and Florida Tree Farm joint project:

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