



FY 2024 ANNUAL REPORT

(October 1, 2023 - September 30, 2024)

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OVERVIEW

AUBURN UNIVERSITY
SOUTHERN FOREST NURSERY MANAGEMENT COOPERATIVE

FY 2024 MEMBER LIST

Full Members

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State Agencies

Arkansas
Georgia
North Carolina
Oklahoma
Tennessee
Virginia

Forest Industry

Rayonier
Westervelt
Weyerhaeuser

Non-Industrial – Private

ArborGen, LLC
PRT - International Forest Company
Meeks' Farms & Nursery

US Government

USDA Forest Service

AUBURN UNIVERSITY
SOUTHERN FOREST NURSERY MANAGEMENT COOPERATIVE

EXECUTIVE COMMITTEE ROTATION LIST

FISCAL YEAR [†]	Member 1	Member 2	Member 3
2023*	K&L Forestry ArborGen	ArborGen Tennessee	Tennessee N. Carolina
2024	Tennessee	North Carolina	Arkansas
2025	North Carolina	Arkansas	Meeks' Farms & Nursery
2026	Arkansas	Meeks' Farms & Nursery	Weyerhaeuser
2027	Meeks' Farms & Nursery	Weyerhaeuser	Virginia
2028	Weyerhaeuser	Virginia	US Forest Service
2029	Virginia	US Forest Service	Georgia
2030	US Forest Service	Georgia	Rayonier
2031	Georgia	Rayonier	Oklahoma
2032	Rayonier	Oklahoma	PRT - IFCO
2033	Oklahoma	PRT - IFCO	Westervelt
2034	PRT - IFCO	Westervelt	ArborGen
2035	Westervelt	ArborGen	Tennessee

[†] The fiscal year runs from October 1 through September 30 (ex: FY25 = October 1, 2024 through September 30, 2025.)

* K&L Forestry left the Nursery Cooperative before FY23 began, thus moving the rotation forward by 1 year.

THE EIGHT FUNDAMENTAL RULES OF ANTI-TRUST COMPLIANCE

1. Competitors may not agree on prices they charge for goods they sell.
2. Competitors may not agree on the prices they charge for services.
3. Competitors may not agree on terms of sale.
4. Companies may not use dominant market position to monopolize a market, control prices, or exclude competitors.
5. Competitors may not agree not to compete by allocating customers, territories, or markets.
6. Competitors may not agree not to compete on bids (i.e. bid-rigging).
7. Competitors may not agree on prices for products or services they buy.
8. Competitors may not join in a boycott of suppliers or customers to accomplish anti-competitive ends.

REQUIREMENTS TO OBTAIN “SFNMC-CERTIFIED SEEDLINGS” STATUS

As a product of the 50-plus years of research conducted by the Southern Forest Nursery Management Cooperative, use of the phrase “SFNMC-Certified Seedlings”, together with the Nursery Cooperative trademark logo, indicates that the nursery follows best management practices for growing seedlings using the most current and up-to-date research on seedling quality.

By following best management practices and being actively involved in the Nursery Cooperative, member nurseries earn the right to use the SFNMC trademark on their packaging and for the marketing of their seedlings to landowners in the southern US for the current fiscal year.

Nurseries must follow the guidelines listed below to be considered an active member:

1. Follow all State Plant Protection Policies and Procedures with respect to pesticide use, recording, and disposal.
2. Participate in the SFNMC Seedling Quality Analysis program by submitting at least one sample per nursery each production year.
3. Submit soil fumigation data to the SFNMC for annual soil fumigation use.
4. Participate and respond to USDA / APHIS / EPA pesticide usage reports as requested.
5. Attend and participate in the annual Contact Meeting.
6. Attend and participate in the annual Advisory Meeting.
7. Attend, participate in, and successfully complete the SFNMC Short Course when offered.
8. Distribute Research Reports, Technical Notes, Management Alerts, and Newsletters to nursery staff and post in a prominent place in the work area.
9. Submit annual production data to the SFNMC for inclusion in the National Seedling Inventory.
10. Cooperate with SFNMC research, when possible, to enhance continued knowledge of the production of the highest quality forest-tree seedlings.

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SOUTHERN FOREST NURSERY MANAGEMENT COOPERATIVE

RULES and POLICIES

MEMBERSHIP

1. Full membership in the Cooperative is open to companies with domestic operations and state and federal agencies that operate a forest-tree nursery. Associate membership in the Cooperative is open to domestic companies that do not operate forest-tree nurseries but plant forest-tree seedlings. Associate membership in the Cooperative is also open to manufacturers and distributors of commercial products used in the production of forest-tree seedlings in container or bare-root nurseries.
2. Full members are required to pay annual dues. Associate members are required to pay one-half the dues set each year for full members.
3. Voting rights will be granted to full members only.
4. Membership is for one year. Membership may be terminated by either the member organization or by Auburn University by giving 60 days written notice before October 1.
5. Membership will be contingent on signing a memorandum of agreement with Auburn University as outlined in this document.

ORGANIZATION

6. The Dean, College of Forestry, Wildlife and Environment, Agricultural Experiment Station of Auburn University, in consultation with the Cooperative Executive Committee, will appoint the Cooperative's Director. The Director will be responsible for:
 - A. Directing the activities of the Cooperative;
 - B. Employing a competent staff;
 - C. Developing the Cooperative's direction in conjunction with the Advisory Council;
 - D. Ensuring each member participates to a threshold level; and
 - E. Reporting research accomplishments to the Advisory Council
7. An Advisory Council consisting of one representative from each cooperating organization shall be established to:
 - A. Act as a liaison between the organization and the Director;
 - B. Develop Cooperative policies;
 - C. Advise the Director on the Cooperative's direction;
 - D. Approve the annual budget and membership fee.

The Advisory Council will have an annual meeting in the first quarter of each fiscal year.

8. An Executive Committee consisting of three Advisory Council members and the Director shall have the authority to meet and conduct routine business in the name of the Advisory Council. One Executive Committee member will be appointed annually according to a rotating schedule and will serve for 3 years. The Advisory Council chairman will be the senior member of the Executive Committee and will preside at the Executive Committee and Advisory meetings. Associate members are not eligible to serve on the Executive Committee.
9. Contact representatives will be designated by each cooperating organization. This individual may or

may not be the same person serving on the Advisory Council. Contact Representatives will be directly involved in research established with each member organization. A meeting of contact representatives will be held in the 3rd quarter of each fiscal year.

10. All data will be available to all members in the Cooperative.

DUES and BUDGET

11. Membership fees will be set by the Advisory Council at its annual meeting. Recommended fees will be computed annually by the Executive Committee based on the consumer price index (CPI) for the previous year, and will become effective October 1 of the following year.
12. Annual membership dues paid to Auburn University allows organizations to consist of two nursery production units (nurseries) per member. Organizations that operate more than two nursery production units will be charged an additional \$1500 per production unit as part of their annual membership to the Southern Forest Nursery Management Cooperative.
13. The Cooperative will operate on the fiscal year October 1 to September 30. Invoices for membership fees will be sent to all member organizations on October 1 of each year, or by special arrangement with the individual organization.
14. When a Cooperative member is acquired by another member organization, all, two-thirds, and one-third of the full membership fee will be paid for the lost member the first, second, and third years after acquisition, respectively, by the continuing member.

RULES CHANGES

15. Changes in, deletions from, and additions to the membership rules may be adopted by a two-thirds vote of advisory members in attendance at regularly scheduled or special sessions of the Advisory Council.

DIVISION OF RESPONSIBILITIES

16. Study plans will be developed by Auburn University in conjunction with the Cooperative's Executive Committee. Responsibilities will be delineated in individual study plans.
17. Auburn will do all data analysis and processing, as well as manuscript preparation, and will insure timely distribution of results to cooperators.
18. Auburn will be responsible for developing a procedure for uniform soil testing and analysis.
19. Auburn will act as a clearinghouse on current nursery management research and will disseminate appropriate information on these practices.
20. Auburn University graduate students will be utilized to work on specific problems.
21. All cooperators will be responsible for adhering to the study plans.

BUDGET

AUBURN UNIVERSITY
SOUTHERN FOREST NURSERY MANAGEMENT COOPERATIVE

FY 2024 BUDGET PROJECTED VS. ACTUAL

	FY24 Projected	FY24 Actual	Difference
<u>REVENUE</u>			
Carryover from Previous Year	122,723	122,653	(70)
FY24 Dues	195,400	194,900	500
FY24 Other Income	10,000	15,190	5,190
Total Revenue	328,123	332,743	4,620
<u>EXPENDITURES</u>			
Personnel Costs			
Asst. Research Professor - Annakay Newell; 65%	48,024	48,024	
Outreach Asst. - Elizabeth Bowersock; 50%	32,585	32,585	
Research Associate - Nina Payne; 100%	77,740	77,740	
Technician - Vacant; 25%	0	0	
Graduate Students - PhD/MS	0	0	
Student Labor	2,000	1,169	831
Employee Benefits	50,672	49,084	1,588
Total Personnel Costs	211,021	208,601	2,420
Operating Costs			
Travel	10,000	6,686	3,314
Vehicle Mileage	7,500	6,448	1,052
Supplies	10,800	10,270	530
Equipment	2,000	0	2,000
Total Operating Costs	30,300	23,403	6,897
Total Expenditures	241,321	232,004	9,317
CARRYOVER FOR NEXT YEAR	86,802	100,739	13,937

AUBURN UNIVERSITY
SOUTHERN FOREST NURSERY MANAGEMENT COOPERATIVE

THREE-YEAR FINANCIAL STATEMENT (October 2024)

	\$13,300	\$13,800	\$13,800
	FY25 Projected	FY26 Projected	FY27 Projected
<u>REVENUE</u>			
Carryover from Previous Year	100,739	129,010	73,787
Fiscal Year Dues	195,400	201,900	201,900
Fiscal Year Other Income	10,000	10,000	10,000
Total Revenue	306,139	340,910	285,687
<u>EXPENDITURES</u>			
Personnel Costs			
Asst. Research Professor - Annakay Newell; 65%	0	50,000	50,000
Admin. Asst. - Elizabeth Bowersock; 50%	33,237	33,902	34,580
Research Associate - Nina Payne; 100%	79,295	80,881	82,499
Graduate Students - PhD/MS	0	22,000	22,000
Student Labor	2,000	2,000	2,000
Employee Benefits (<i>estimated at 29%</i>)	32,297	48,041	48,699
Total Personnel Costs	148,829	236,823	239,778
Operating Costs			
Travel	10,000	10,000	10,000
Vehicle Mileage	7,500	7,500	7,500
Supplies	10,800	10,800	10,800
Equipment	2,000	2,000	2,000
Total Operating Costs	30,300	30,300	30,300
Total Expenditures	177,129	267,123	270,078
CARRYOVER FOR NEXT YEAR	129,010	73,787	15,609

AUBURN UNIVERSITY
SOUTHERN FOREST NURSERY MANAGEMENT COOPERATIVE

TEN-YEAR PROJECTED PLANNING BUDGET

-- Dues increase \$500 every even year & \$1,500 nursery surcharge (over 2) --

<u>REVENUE</u> (x 1000)											
	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	
Carryover	100.7	129.0	73.8	15.6	(40.4)	(100.8)	(159.2)	(200.1)	(239.3)	(283.2)	
Income	205.4	211.9	211.9	218.4	218.4	224.9	224.9	231.4	231.4	237.9	
Total Revenue	306.1	340.9	285.7	234.0	178.0	124.1	65.7	31.3	(7.9)	(45.3)	
<u>EXPENDITURES</u> (x 1000)											
Personnel/Benefits	144.8	212.8	215.8	220.1	224.5	229.0	233.6	238.2	243.0	247.9	
Student Labor	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Graduate Students	0.0	22.0	22.0	22.0	22.0	22.0	0.0	0.0	0.0	0.0	
Travel	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	
Supplies	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	
Equipment	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Total Expenditures	177.1	267.1	270.1	274.4	278.8	283.3	265.9	270.5	275.3	280.2	
CARRYOVER BALANCE (x 1000)	129.0	73.8	15.6	(40.4)	(100.8)	(159.2)	(200.1)	(239.3)	(283.2)	(325.4)	

FY 2024 ACCOMPLISHMENTS

FY 2024 ACCOMPLISHMENTS

GOAL A: RESEARCH

Objective 1. Identify, test, evaluate, and promote the registration of cost-effective pesticides for use in forest-tree nurseries.

Fusiform Rust Control

The Rust Screening Center in Asheville will not be available for greenhouse studies in 2024. We will therefore conduct a field screening of fungicides that were found to be effective in the 2021 greenhouse study, namely Postiva® and Miravis® Neo. Fungicides will be applied to loblolly and slash seedlots at the Arborgen, Shellman nursery in Georgia (April-Nov. 2024) (Newell/Payne).

- *A replicated study testing two fungicides, Postiva® and Miravis® Neo, was installed at the ArborGen Shellman, Georgia Nursery in loblolly and slash pine seedling beds during the 2024 growing season. Control plots with no fungicide and plots treated with Proline® were also included in the study. Seedlings were sprayed at 21 days post-sowing then in 14 days intervals for 4 additional applications. Seedlings were lifted from the nursery in October 2024 and subsequently evaluated for fusiform rust incidence and seedling quality. Percent gall formation was not significantly different between untreated (control) seedlings and seedlings treated with Miravis®Neo, Postiva®, or Proline®. Results from this study indicate that neither Miravis®Neo or Postiva® have adverse effects on loblolly or slash pine seedling survival or quality. Because fusiform rust incidence was low in both loblolly (<1%) and slash pine seedlings (7%), we were unable to establish how well Miravis®Neo or Postiva® controls fusiform rust in nursery settings. Replicating this study in multiple nurseries where environmental conditions are favorable for disease incidence may increase seedling exposure to natural inoculum pressures. This information, along with their broad-spectrum control of damping off pathogens (e.g. *Fusarium circinatum*, *Rhizoctonia* spp.) warrants further testing of these fungicides under operational nursery conditions.*

Nursery Weed Control

At the recommendation of SFNMC member nurseries, trials will be designed and installed to investigate weed control methods, including use of herbicides in bareroot and container growing systems.

- **Post-emergent Herbicide Trial Targeting Yellow Nutsedge in Bareroot Pine and Hardwood:** Replicated trials of pyrimisulfan herbicide in the formulations of granular Vexis® and liquid Arkon™ will be conducted in multiple bareroot pine and hardwood nurseries. This post-emergent herbicide is labeled for nutsedge control, but conifer nurseries are not included on the label as an approved site for use. Communication with the manufacturer (PBI-Gordon) continues with the goal of producing Section 24(c) Special Local Needs labels for bareroot conifer and hardwood nursery use.
 - **Vexis® (Granular) on Bareroot Pine:** Bareroot pine nursery trials with Vexis® are contingent on the manufacturer's request for additional field data after 2023 field trial results are provided. If requested, field trials with rates of one and two times the labeled rates in multiple applications will be installed at member nurseries in loblolly and slash pine. This will be the FOURTH round of Vexis® trials in bareroot conifer nurseries. Rates and timing will be consistent on all installations. Data collected from these trials will be submitted to the manufacturer with the goal of requesting Section 24(c) Special Local Needs labels in the states where SFNMC member conifer nurseries are located. (Payne/Newell)

- *Because Cooperative member nurseries prefer to use liquid herbicides over granular for more accurate applications, the manufacturer of Vexis® recommended concentrating Nursery Cooperative staff field efforts on Arkon™ trials in bareroot pine to provide data for its potential labeling. No bareroot pine Vexis® trials were installed in 2024.*

- **Vexis® (Granular) on Bareroot Hardwood:** Field trials with rates of one-half, one, and two times the labeled rates in single applications will be installed at member nurseries in multiple hardwood species. Rates will be consistent on all installations. This will be the SECOND round of Vexis® trials on hardwood (6 species used in 2023 trials) in SFNMC member nurseries. In order to include as many hardwood species as possible (within the scope of SFNMC staff resources), cooperating nurseries may apply the herbicide at the direction of SFNMC staff. Data collected from these trials will be submitted to the manufacturer with the goal of requesting Section 24(c) Special Local Needs labels for specific hardwood species in the states where member hardwood nurseries are located. (Payne/Newell)

- *Vexis® trials were installed in 7 hardwood species in two Nursery Cooperative member nurseries: ArborGen's Selma, Ala. Nursery and Arkansas Forestry Commission's Baucum Nursery. Installations at the Baucum Nursery were shown during the field tour of the 2024 Contact Meeting. Due to personnel and time constraints within the Nursery Cooperative, seedlings in these trials were not collected in 2024. The AFC staff plan to monitor any carryover effect in their Vexis® hardwood plots during the 2025 growing season.*

Discussions with the Vexis® manufacturer on future labeling for nutsedge control in bareroot hardwood nurseries do not indicate a positive outlook for labeling in multiple hardwood species due to the investment from the company required to produce multiple individual species' labels in individual states.

- **Arkon™ (Liquid) on Bareroot Pine:** Field trials with rates of one-half, one, and two times the labeled rates in multiple applications (at 7 and 7 + 12 weeks post-sowing) will be installed at member nurseries in loblolly and slash pine. This will be the SECOND round of Arkon™ trials. Rates and timing will be consistent on all installations. Data collected from these trials will be submitted to the manufacturer with the goal of requesting Section 24(c) Special Local Needs labels in the states where SFNMC member conifer nurseries are located. (Payne/Newell)

- *Arkon™ trials were installed in three Cooperative member nurseries: ArborGen's Shellman, Ga. nursery, Rayonier's Elberta, Ala. nursery, and Weyerhaeuser's Pearl River, Miss. nursery. Both loblolly and slash pine seedling beds were used. Two rates were used (1X label rate and 2X label rate) at two spray application timings (at 7 weeks post-sowing only and at 7 + 12 weeks sowing) were used to compare seedlings to non-treated control plot seedlings. Results of seedling measurements at the end of the growing season indicate no negative effects of the herbicide on seedling characteristics. In contrast, larger numbers of seedlings per square foot, larger root collar diameters, and increased root dry weights were measured in multiple treated plots when compared to non-treated control plots seedlings.*

All data and tables of results were submitted to the Arkon™ manufacturer, with positive reviews. These 2024 trials are the second year of Arkon™ trials conducted by the SFNMC, and any future testing requirements will be at the direction of the manufacturer. PBI-Gordon's current request is for a list of retail pesticide dealers where Nursery Cooperative member nurseries purchase Vexis® and Arkon™. Labeling of Arkon™ will depend on the economic viability of its sales within our market.

- **Pre-emergent Herbicide Trial Targeting Hyssop and Other Weeds in Container Pine:** Replicated trials of isoxaben herbicide in the formulation of Gallery® SC or Gallery® DF (choice of formulation used will be made based on recommendations from container nursery managers) will be conducted in multiple SFNMC container pine nurseries. This pre-emergent herbicide is labeled for use in container and field grown ornamentals, but the pine species grown by SFNMC container nurseries are not included on the label's list of tolerated species. An additional clause on the label indicates

that growers must assume risk of damage to seedlings if either product is applied to “pots less than 6 inches wide”. Applications of the product at one-half and one times the label rate will be made at the time of container sowing in multiple pine species. While trials are ongoing, communication with the manufacturer (Corteva Agriscience/Dow Agrosciences) to clarify whether or not SFNMC container nursery operations fall under current label use locations. (Payne/Newell)

- *Gallery® 75 DF trials were installed at PRT-IFCO’s Atmore, Ala. container nursery in longleaf, loblolly, and slash pine. Two rates were tested: 1/2X label rate and 1X label rate. Three separate timings were used within each species and rate: one application only at 1-week post-sowing, one application only at 6-weeks post-sowing, and a double application at 1-week and 6-weeks post-sowing.*

*Of the three installations in **longleaf pine**, no negative effects of the herbicide were found in either rate at any of the three application timings.*

*In **loblolly pine**, small (<1 mm and < 1 gram) differences were found in root collar diameters and plug weights in the 1/2X rate applied at 1-week post-sowing. In the 1 + 6-weeks post-sowing trial in loblolly pine, a lower percent tray fill was measured at the 1X rate (by 6.2%). No other negative effects of the herbicide were identified in loblolly pine.*

*In **slash pine**, no negative effects of the herbicide were found in either the 1-week post-sowing application or in the 1 + 6-week post-sowing application. The only negative effects seen were in the 1/2X label rate at 6-weeks post-sowing. Both shoot and root dry weights were lower by <1 gram than either non-treated control seedlings or those treated by 1X label rate.*

Nursery Cooperative staff are in contact with Corteva Agriscience representatives to determine if forest-tree nurseries and these species qualify as an allowable use site on the current US label.

- **Follow-up on Use of Ronstar®Flo (oxadiazon) for Pre-emergent Weed Control in Container Pine:** SFNMC staff will communicate with the manufacturer of Ronstar®Flo (Bayer) to clarify allowed use of the product in SFNMC container operations under the current label.
 - *Nursery Cooperative staff are in contact with Bayer CropScience representatives to determine if container forest-tree nurseries and these species qualify as an allowable use site on the current US label.*

Objective 2. Identify and develop economically feasible nursery cultural practices that enhance seedling quality.

Seedling Counting/Measuring

Dr. Yin Bao will continue to work on developing the system to count seedlings for inventory using the stand-alone robotic machine. Nursery Cooperative funds will not be used on this project, but there is \$2,500 available annually from a USDA-funded grant to cover travel of Nursery Cooperative staff to assist with this process. (Bao/Newell/McDonald)

- *No work was done on this project as Dr. Yin Bao moved his research program to the University of Delaware. Dr. Bao did express that he was still willing to work with the Nursery Cooperative should we wish to continue this research.*

Nanocellulose/Lignin Impregnated with Insecticides on Seedlings

Dr. Peresin will prepare a grant proposal for funding to continue the nanocellulose project in pine production. If funded, the project will assess the use of wood based cellulose nanomaterials as cost-effective adjuvants for the controlled delivery of Fipronil for extended protection of loblolly pine against pine tip moth at lower application doses. (Newell/Peresin/Payne)

- *In this three-year project, replicated trials were installed in February 2024 at two sites (Sylvester, Ga. and Eutaw, Ala.) with the cooperation of PRT-IFCO, Westervelt, and Auburn University's Sustainable Bio-Based Materials Laboratory. Five treatments were included at each site: a non-treated control, a treatment with 1X label rate of fipronil only, a treatment with 1X label rate of fipronil with nanocellulose, a treatment of 1/2X label rate of fipronil with nanocellulose, and a treatment of 1/4X label rate of fipronil with nanocellulose. Six months after planting, damage to terminal buds and lateral shoots of each seedling were rated. Needles from each seedling were collected to be processed for quantities of fipronil remaining in the needles.*

Due to personnel and time constraints within the Nursery Cooperative, preliminary data has not yet been analyzed. These two sites will be evaluated in October 2025 for tip moth damage, and needles will again be collected for processing.

Objective 3. Develop methodologies to minimize the environmental impact of nursery cultural practices while maximizing their effectiveness including the development of integrated pest management programs.

Objective 4. Further define the “optimal seedling” to maximize the cost effectiveness of artificial regeneration forestry systems.

Seedling Storage

A trial will be done to assess the effect of seedling storage and lift date on the seedling quality and outplanting survival of bareroot and container seedlings from Coastal and Piedmont families.

- *From December 1, 2024 to February 15, 2025, a total of 768 loblolly pine seedlings were collected from the PRT-IFCO Nursery in Pine Hill, Ala., and transported to the SFNMC to either be hot planted or placed in cold storage before being outplanted at Auburn University. Seedling quality and survival data will be evaluated and compared using 4 lift dates (Dec. 1, Dec. 15, Jan. 16, Feb. 15) and 4 storage length treatments (0 weeks, 2 weeks, 4 weeks, 6 weeks) per lift date. For each lift date and storage treatment, 12 seedlings per stocktype (bareroot and container) and provenance (Coastal and Piedmont) were used. Outplanting at Auburn University began on December 1, 2024 and extended through March 28, 2025. Seedlings were lifted on April 10, 2025, and survival data was collected. Due to personnel and time constraints within the Nursery Cooperative, seedling quality evaluations were not completed until July 16, 2025. Data processing and analysis is ongoing. A final Research Report will be released to Nursery Cooperative member nurseries by September 30, 2025.*

GOAL B: TECHNOLOGY TRANSFER

Objective 1. Serve as a clearinghouse of information related to nursery production and tree planting.

Methyl Bromide

In collaboration with MBr manufacturers, the Methyl Bromide Industry Panel (MBIP), the Chloropicrin Manufactures Task Force (CMTF) and applicators, the Nursery Cooperative staff will continue to keep abreast of EPA actions and/or possible legislative initiatives that may affect the future availability of soil fumigants. We will continue to inform the membership through the Advisory Committee to keep the membership knowledgeable of these activities.

The Nursery Cooperative staff will continue to keep abreast of activities related to the Quarantine pre-shipment (QPS) process. We will inform the membership of any EPA initiatives and continue to work with the AF&PA, the Crop Protection Council, USDA, and APHIS to provide input and influence the QPS process if necessary.

The Nursery Cooperative staff will continue to work with the AF&PA, and USDA to inform and influence the EPA deliberations regarding pesticide regulation as it pertains to the soil fumigation re-registration decisions that were released in 2013. (Newell/Payne)

Re-registration of Nursery Pesticides

The Nursery Cooperative staff will continue to follow the re-registration process for pesticides currently under review under the Food Quality and Protection Act (FQPA) used in seedling production and will provide information to the necessary regulatory agencies (USDA, APHIS, EPA) when necessary. (Newell/Payne)

Labeling of Nursery Pesticides

Using data and results from pesticide trials, SFNMC staff will work with cooperating members, product manufacturers, state agriculture departments, and Auburn University's 24(c)/Section 18 Pesticide Committee to obtain label modifications, 24(c) (Special Local Use), or Section 18 (Emergency Exemptions) labels for chemical products successfully tested in member nurseries. This includes Vexis®. (Payne/Newell)

- *PBI-Gordon worked with SFNMC staff and Dr. Wheeler Foshee of AU's Pesticide Committee to develop applications and proposed labels for Vexis® use to control annual sedge and nutsedge in bareroot loblolly and slash pine in 5 southern states: Alabama, Arkansas, Georgia, North Carolina, and South Carolina. **The EPA approved these labels in 2024.** Bareroot SFNMC member nurseries in these states can now use Vexis® as directed on their state label. Member nurseries in other states may continue to test Vexis® as SFNMC works to obtain labeling for Arkon™ (liquid formulation of the same active ingredient as Vexis®).*

Maintain and Update Nursery Cooperative Website

The Nursery Cooperative staff will continue to update the website for use by its members. Staff will also research campus services or outside companies for complete renovation of the site. (Bowersock)

- *The current website is only being updated as needed to add Research Reports and Newsletters, with no other major changes having been made. Elizabeth has been working with a colleague in Auburn University's Office of Information Technology to make decisions about how to proceed with the website. As the university is updating all servers and web templates in early August, it has been decided to create an entirely new website that will be up to date with required programming languages and ADA standards, as well as being more concise and easier to navigate. Elizabeth is scheduled for training on the new site builder program (Cascade) during the fall semester.*

Leveraging Nursery Cooperative Data

The Nursery Cooperative staff will continue to stress the importance of Nursery Cooperative membership and, when possible, leverage Nursery Cooperative information for grant proposals and data site licenses for the seedling production survey. (Staff)

SFNMC Crop Certification for Members

As part of the benefits offered to its members, Nursery Cooperative staff will supply member nurseries with a "Certificate of Nursery Cooperative-Grown Seedlings" that can be placed on their seedling boxes/bags each season to market their seedlings as meeting a list of best-management practices. This certificate will be contingent upon each Nursery Cooperative member completing this list of practices and will be outlined in the Annual Report. (Newell/Bowersock)

- *Nursery Cooperative staff has been negligent in keeping up with this task. However, the staff has devised a*

plan to keep track of each members' participation of the best-management practices list and then distribute certificates to Advisory Members annually, along with dues invoices, on October 1.

Objective 2. Efficiently and regularly transfer the results of Nursery Cooperative research to the membership.

Contact Meeting

The 2024 Southern Forest Nursery Management Cooperative Contact Meeting will be held in the summer of 2024, in conjunction with the Southern Forest Nursery Association in Arkansas. The Arkansas Forestry Commission will serve as host. (Newell/Bowersock/Payne)

- *Annakay Newell and Nina Payne attended this meeting and presented current research updates to Nursery Cooperative members. James Shelton hosted both groups for a field tour of facilities, equipment, and test plots at the Arkansas Baucum Nursery in North Little Rock.*

Information Sheets

"A Closer Look" is an outreach document for the SFNMC. This information sheet on pests/diseases will be produced biannually and will become the centerpiece for each newsletter. (Staff)

- *This article was last published in the Spring 2024 Newsletter. Staff plans to pick it back up with the next newsletter (Fall 2025) and continue from there. Suggestions from member nurseries regarding problems (diseases/insects) to be featured are encouraged!*

Research Reports

We plan on producing Research Reports and Technical Notes in FY24 that document all research conducted by the Nursery Cooperative. All publications will be disseminated to Nursery Cooperative members. (Staff)

- *SFNMC staff produced three Research Reports and distributed them to members:*
 - » *RR24-01: A Third Year of Vexis® (Pyrimisulfan) Trials for Nutsedge Control in Bareroot Pine Seedling Beds*
 - » *RR24-02: Arkon™ (Pyrimisulfan) Trials for Nutsedge Control in Bareroot Pine Seedling Beds*
 - » *RR24-03: Vexis® (Pyrimisulfan) Trials for Nutsedge Control in Bareroot Hardwood Seedling Beds*

Newsletters

Newsletter distributions are planned for Spring and Fall of 2024. ***Members are encouraged to submit articles and organizational updates.*** (Staff)

- *One newsletter was published in Spring FY24. We are confident that, with the SFNMC's new leadership fully in place and all positions fully staffed, newsletters will once again be published 2x per year, in Spring and Fall.*

Objective 3. Provide a limited consultancy function to the membership in the area of nursery seedling production and outplanting.

Individual and Organization Contacts

An on-going activity handled as individual situations for each Nursery Cooperative member organization as cases arise during the growing and planting season. (Newell/Payne)

Seedling Production Survey

The Nursery Cooperative staff will continue the seedling production survey initiated in FY03. The same questionnaire will be used to obtain production figures for the 2023 - 2024 planting season. The survey will be sent out in summer of 2024. (Newell/Bowersock)

- *Data and tables from the FY24 production survey (2023-24 growing season) are completed. Text and summarization are currently being composed and will be presented in TN 25-01 before the end of the fiscal year. This project is being turned over to Kelsey Shoemaker with intentions of restructuring the survey before being distributed later this calendar year to collect 2024-2025 data.*

Extramural Presentations & Activities

Over the past several years, as schedules and travel permits, Nursery Cooperative personnel have participated in customer (*internal and external*) meetings at nurseries in an effort to encourage and improve customer relations and educate nursery customers on seedling planting and successful plantation establishment. Thirty-minute presentations such as “*Why Did My Seedlings Die?*” and “*The Ten Commandments of Seedling Survival*” are examples of presentations the staff have made. (Staff)

- *Nina Payne presented “10 Commandments for Better Seedling Survival” to Alabama Forestry Commission employees and other attendees at CFWE’s Solon Dixon Forestry Education Center in Andalusia, Ala.*
- *Nina Payne gave a tour of SFNMC facilities and an overview of Nursery Cooperative activities to the CFWE Silviculture class.*
- *Nina Payne presented “Nursery Weed Identification and Control” to the CFWE Forest Regeneration class.*
- *Nina Payne obtained seedlings for and donated to CFWE’s Kreher Preserve, CFWE’s Student Services Office, and for CFWE graduate student projects.*

Short Course

A short course will be offered in September 2024. Nursery Cooperative staff will also explore the possibility of producing a structured online course that can be accessed throughout the year. (Newell/Payne/Bowersock)

- *A successful short course was held in person at Auburn University’s College of Forestry, Wildlife and Environment in September 2024, with 23 students from various member agencies completing the course. The next short course will tentatively be offered in September 2026.*
- *There have been no developments on creating a structured online course.*

GOAL C: COOPERATIVE DEVELOPMENT

Objective 1. Provide for the continual relevancy and efficiency of the Nursery Cooperative research and technology transfer programs.

Advisory Committee Meeting

The FY25 Advisory Committee Meeting will be held on November 6-7, 2024. A two, half-day meeting will be planned to cover FY24 Accomplishments, FY24 and future budget, and the FY25 Work Plan. (Newell/Payne/Bowersock)

- *The FY25 Advisory Committee Meeting was postponed and is being held in conjunction with the FY25 Contact Meeting in July 2025.*

Nursery Cooperative Membership

The Nursery Cooperative staff will continue to recruit new members among those nurseries that will benefit from activities of the Nursery Cooperative. There is also discussion with non-nursery production members to include an Associate status. (Staff)

- *There has been some discussion amongst the Nursery Cooperative staff regarding a new, tiered approach to membership, but it has not gained much traction outside of brainstorming sessions. This will most likely be revisited in the upcoming FY.*

Update the Nursery Cooperative Membership and Nursery Directories

An on-going activity with an updated directory distributed annually to each member. (Bowersock)

- *An updated membership directory is complete and will be distributed via email. This directory will also be available on the new web site when established. Elizabeth is going to establish a better system of checking for and updating the directory on a quarterly basis.*

Objective 2. Increase the visibility and effectiveness of the Nursery Cooperative as a source of information on issues related to seedling production and plantation establishment.

Presentations at Regional/National Meetings

Nursery Cooperative staff is encouraged to participate as a speaker or attendee in regional and national meetings related to artificial regeneration. (Staff)

- *Nina Payne attended SESAF, the Georgia Forestry Association Landowner Meeting, and the National Association of Consulting Foresters Meeting.*

Publications

Nursery Cooperative staff is encouraged to publish results outlined in annual Research Reports and Technical Notes in scientific journals after a period of 2-3 years have elapsed. (Staff)

Extramural Funding of Nursery Cooperative Projects

Nursery Cooperative staff is encouraged to locate and generate extramural funding opportunities directly related to artificial regeneration. (Staff)

Interaction with other Research Cooperatives

The Nursery Cooperative staff will make efforts to interact, attend, and work with other regional and national forest research cooperatives to broaden and strengthen research ties that can benefit seedling production. (Staff)