NC-1186 Meeting Minutes

On 8 July 2025, there were several tours NC1186 members attended, including two manufacturing tours from Pack Manufacturing (0830-0930; 1219 Belmont Dr, McMinnville, TN 37110) and Bouldin and Lawson (0945-1045; 70 Easy St, McMinnville, TN 37110). These two businesses provide critical equipment to the industry to ensure automation and production efficiency remains throughout the production season, particularly with regards to potting lines. The group thereafter drove to Tennessee Valley Nursery (1300-1400; 145 Tennessee Valley Dr, Winchester, TN 37398) and Hidden Hollow Nursery (1420-1520; 214 Tanager Hill Ln, Belvidere, TN 37306), getting a well-rounded tour of each nursery operation facilities, their challenges, and discussed possible improvements in production management techniques. After the tours, the group met at the Jack Daniels Distillery in Lynchburg (1600-1700; 133 Lynchburg Hwy, Lynchburg, TN 37352), and then everyone attended dinner together.

On 9 July 2025, the NC1186 group conducted their station reports, follow by their annual business meeting (0800 – 1200) at the Tennessee State University Nursery Research Center (TSU NRC; 472 Cadillac Lane, McMinnville, TN 37110). The station reports were opened by Jake Shreckhise, and followed by a background of TSU NRC and the Tennessee Nursery Industry by station director Karla Addesso. Jeanette Thurston delivered updates on Hatch Multistate projects and administration, discussed background of multistate, awards, peer-reviewed processes, and presented national updates regarding U.S. budget reallocations (Hatch and Smith-Lever), USDA priorities, capacity programs, and the recent “Big Beautiful Bill”.

Following the federal updates, state-level updates across universities and facilities were addressed. From University of California, Gerry Spinelli discussed irrigation trials through lysimetry and VWC measurements, irrigation delivery designs, and substrate qualifications. University of Florida, Jeb Fields, discussed SCRI Beyond Peat updates, stratified substrates, and rootzone temperature trials. Michigan State University, Tom Fernandez, discussed bioreactors to reduce pesticide and nutrient runoff from nursery and greenhouse operation trials. University of Missouri, Xi Xiong, introduced their program, highlighting turf, growing media, and soil hydrophobicity. Rutger’s University in New Jersey, Raul Cabrera, discussed integrative nutrient diagnostic systems, global annual budgeting for nitrogen, and estimating water footprints of ornamentals. Garett Owens from The Ohio State University was unable to attend and deliver a station report. James Altland from the USDA-ARS discussed SCRI Beyond Peat updates, specifically characterizing substrate components and analyzing microbial decomposition, as well as plastic reduction in the industry. Lloyd Nackley at Oregon State University proposed a call for graduate students, discussed sensors for environmental and plant physiological measurements, the pot influence on water retention, and delivered energy balance projects scaled multi-state collaborations with FL, TN, and OH. The group break for coffee.

Thereafter, Sarah White at Clemson University discussed P sustainability, HRI grants for water quality mapping across the U.S., and plastic sustainability. University of Tennessee discussed

counterbalanced scales to measure leaching fractions, water infiltration, and preferential flow studies, as well as SCRI LEAP project updates. Jake Shreckhise at the USDA National Arboretum discussed rootzone temperatures mitigated by container color, its effect on CRF release rate and shade structures, and delivered updates regarding energy budget projects in modelling rootzone temperatures. Virginia Tech, Kristopher Criscione, discussed rootzone management and its implications as a bottleneck in production/research, and discussed current projects including irrigation, PGR, and soilless substrate effects on root development. Ping Yu at University of Georgia discussed biochar substrates for peatmoss alternatives and working groups with young faculty members in pest management. Jake Shreckhise presented Damon Abdi's report for Louisiana State University, discussing bioreactors and different substrate materials and rain garden research.

After station reports, the business meeting was conducted. The group agreed on shorter, more concise presentation and a Q&A session took place from station updates. There was discussion on NC1186 website, SCRI large increases in funding, possible NC1186 sub-group leading an SCRI proposal, and industry funding for travel scholarships. The group agreed to plan a session for the next SCRI meeting to brainstorm a few ideas for an SCRI proposal. Some possible topics include drought, heat stress, and agrivoltaics. Amy Fulcher delivered a NC1186 New Zealand Meeting and grower workshop, serving 25 growers and contributed to over $950 thousand potentially saved New Zealand dollars from intended change3 in productions. The group discussed the NC1186 2026 meeting location. Ping Yu in GA and Gerry Spinelli in CA both expressed interests in hosting the meeting. Jake Shreckhise agreed to send out a voting poll for the member to vote on location and time of year. Lastly, Lloyd Nackley nominated Jeb Fields to serve as the NC1186 secretary beginning the next cycle year, seconded by Tom Fernandez.

After the business meeting, the group toured Hale and Hines Nursery (1300-1415; 416 Hines Ln, McMinnville, TN 37110) and Turner and Sons Nursery (1430-1545; 10647 Smithville Hwy, Smithville, TN 37166). The group had the opportunity to see innovative in-house manufacturing of concrete, pot-in-pot container designs, mushroom compost / worm castings, and white pots in production. After the tours, the group set up demonstrations for the grower workshop hosted at TSU NRC.

On 10 July 2025, a team of Extension Specialists and scientists conducted a workshop that included one day of demonstrations and classroom sessions in McMinnville as an outreach effort of the USDA NC1186 working group. The event attracted 22 nursery producers from middle Tennessee. Growers rated their knowledge gain from the demonstrations and presentations on a 1 to 5 scale. On average, growers increased their knowledge by 1.5 points on 9 topics. After the workshop, 93% of participants planned to improve their management of substrate, irrigation, and fertilization at their nursery. More than 50% of participants plants to change specific practices related to managing salt levels, container color and rootzone temperature, measuring pH, EC and alkalinity, calculating lime rate, and measuring distribution uniformity and leaching fraction.

Growers estimated saving $42,923 per nursery as a result of changing their practices due to information gained at the workshop for a total economic impact of $944,308.

The grower workshop concluded the activities of the 2025 annual meeting of NC1186.