



# **HORTICULTURAL SCIENCE SUMMER INSTITUTE**

JULY 9-14, 2023



**NC STATE**

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# Horticultural Introductions

Horticultural Science Summer Institute - Sunday, July 9th, 2023

Welcome to the world of horticulture! This week we will dig deep into so many ideas with-in plant systems agriculture including plant propagation, nursery production, controlled environments, composting and farming systems and bring it all together with a landscape design. Get ready to make friends, have fun, and grow your interest in horticulture.

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|----------------|--|
| 3:30 – 4:30 PM | <b>Registration</b> (Sullivan Hall Lobby)<br>Liz Driscoll, HSSI Coordinator and HSSI Counselors:<br>Sydney Blair, Emily Eldridge, Sydney Loflin, Emma Jolly,<br>Taylor Carpenter, Andrew Quate, Adam Miller        |
| 4:45 – 5:45 PM | <b>Getting Acquainted</b> Meet in the Lounge of Sullivan Hall at 4:45 pm<br>to walk to Kilgore Hall <ul style="list-style-type: none"><li>• Icebreaker</li><li>• Collective agreements, weekly logistics</li></ul> |
| 5:45 – 6:30 PM | <b>Welcome Dinner</b> (159 Kilgore Hall)   |
| 6:30 - 6:45 PM | <b>Opening Remarks</b> (159 Kilgore Hall)<br>Liz Driscoll, Department of Horticultural Science   |
| 6:45– 7:30 PM  | <b>Succulents with Suitemates</b> <ul style="list-style-type: none"><li>• Overview of the program</li></ul>  |
| 7:30 - 8:00 PM | <b>Walking tour</b> with counselors and suitemates   |
| 8:00 PM        | Settle into rooms, Get to know your counselors + suitemates  |
| 10:00 PM       | In the rooms by 10:00 PM   Lights out by 11:00 PM (Sullivan Hall)  |



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# Global Horticultural Solutions

Horticultural Science Summer Institute – Monday, July 10th, 2023

We will explore the relationship between public horticulture at the JC Raulston Arboretum and investigate current agricultural research. The JC Raulston Arboretum is a nationally acclaimed garden with one of the largest and most diverse collections of landscape plants adapted for landscape use in the Southeast. The Plant Science Initiative is accelerating discovery and solutions that solve agricultural challenges through team-based science.

7:00 – 8:00 AM	Breakfast (Fountain Dining Hall)
8:15 – 8:30 AM	Load vans and drive to JC Raulston Arboretum
8:45 – 9:00 AM	<b>Welcome and introductions</b> (JC Raulston Arboretum) Mark Weathington, Director of JC Raulston Arboretum
9:00 – 10:30 AM	<b>JCRA Walking Tour + Plant Identification</b> Split the group into two and rotate through each 45-minute session (9:00-9:45AM & 9:45-10:30AM) <ul style="list-style-type: none"><li>• <b>Plant Propagation Adventures</b> (Sophia McCusker, Plant Breeding and Nursery Technician, JCRA)</li><li>• <b>Plant Identification</b> (Tim Alderton, JCRA Horticulturist)</li></ul>
10:45-12:15 PM	<b>Perennials + Controlled Environments</b> Split the group into two and rotate through each session (10:45-11:30AM & 11:30AM – 12:15PM) <ul style="list-style-type: none"><li>• <b>Perennials</b> (HFL) (Ms. Remi Ham, Assistant Teaching Professor, F2S Extension Specialist, Horticultural Science)</li><li>• <b>Controlled Environments Horticulture</b> (York Auditorium) (Dr. Ricardo Hernandez, Associate Professor and Dr. Cristian Collado, Horticultural Science)</li></ul>
12:15-1:00 PM	<b>Lunch</b> at JCRA, Ruby McSwain Building, York Auditorium
1:00-1:20 PM	Travel to Plant Sciences Building, Centennial Campus, NCSU,
1:20 – 1:40 PM	<b>Overview of the Plant Sciences Initiative</b> (Dr. Terri Long, PSI Platform Director for Education and Workforce Development, Associate Professor, Plant Microbial Biology)
1:40 - 2:30 PM	<b>Plant Sciences Building Tour</b> (Dr. Alex Goodnight, Program Specialist and Ms. Sarah Dinger, Education & Extension Manager)
2:30-5:00 PM	<b>Agriculture and Engineering</b> - courtesy of Dr. Grant Ellington, Biological and Agricultural Engineering (Esleyther Henriquez, Sarah Dinger, Alex Goodnight, Terri Long, Liz Driscoll and PSI Graduate students)
5:00 - 6:45 PM	Downtime and Dinner at Fountain Dining Hall
7:00 - 9:00 PM	<b>Botanical Soapmaking</b> Dr. Angel Cruz



# Nursery Production in North Carolina

Horticultural Science Summer Institute - Tuesday, July 11th, 2023

Green industries play a vital role in North Carolina, contributing approximately \$135 billion to the state's economy and supporting more than 900,000 jobs. 'Green industry' includes the variety of businesses involved in the production, distribution and services associated with ornamental plants and landscape and garden supplies and equipment. We will explore two exceptional nurseries and apply these ideas with workshops in the afternoon.

7:00 - 8:00 AM	Breakfast (Fountain Dining Hall)
8:15 – 9:15 AM	Load vans and travel to Hoffman Nursery
9:15 -11:00 AM	<b>Tour Hoffman Nursery</b> (Mr. David Hoffman, Chief Operating Officer)
11:00 - 11:30 AM	Lunch at Hoffman Nursery
11:30 - 12:00 PM	Travel to Plantworks Nursery
12:00 - 1:15 PM	<b>Tour of Plantworks</b> (Ms. Dana Massey, Owner and staff)
1:15 - 2:00 PM	Travel to BASF
2:00 - 4:00 PM	<b>Visit BASF's Sustainability Center and Career Panel</b> (Dr. Carl Andre, Project Leader BASF and Adjunct Faculty, Plant & Microbial Biology)
4:00 – 4:45 PM	Travel back to campus
5:00 - 6:45 PM	Downtime and dinner at Fountain Dining Hall
7:00 - 9:00PM	<b>Paper Making Workshop</b> (Fox Headhouse) (Ms. Liz Driscoll and Counselors)



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# Sustainable Landscape Management

Horticultural Science Summer Institute – Wednesday, July 12th, 2023

Managing our natural resources to optimize agricultural production and landscape maintenance occurs in every aspect of horticulture. From using sustainable techniques at the Agroecology Education Farm to understanding the proper way to prune our fruit trees. Explore fundamental ideas in horticulture: plant propagation, breeding, vegetable and fruit production.

7:00 – 8:00 AM	<b>Breakfast</b> (Fountain Dining Hall)
8:15 - 8:45 AM	Load vans and travel to the Central Crops Research Station
8:45 – 9:00 AM	<b>Introduction to Central Crops Research Station</b> (Mr. Keith Starke, Superintendent)
9:00 - 11:00 AM through	<b>Vegetable and Fruit Production</b> Split the group into two and rotate each session (9:00-10:00AM & 10:00-11:00AM) <ul style="list-style-type: none"><li>• <b>Sweetpotato Production + Breeding</b> (Mr. Russell Mierop, Research Technician, Horticultural Science)</li><li>• <b>Tree Fruit Production</b> (Kilgore 121) (Dr. Mike Parker, Associate Professor and Tree Fruit Extension Specialist, Ms. Bernadette Clark, Research Technician, Horticultural Science)</li></ul>
11:00 – 11:30 AM	Travel to Agroecology Education Farm, Lake Wheeler Field Lab, NCSU
11:30 AM - 12:15 PM	Lunch at AEF
12:15 - 1:15 PM	<b>Farm Tour and Sustainability Assessment</b> (Ms. Sara Snyder, AEF Manager, Oh Stone and Leah Guercio, Undergraduate Farm Interns)
1:15 - 1:35 PM	Travel to Kilgore Hall
1:35 - 2:45 PM	<b>Food Systems + CEFS introduction</b> (Dr. Angel Cruz, Academic and Extension Initiatives Manager, Center for Environmental Farming Systems, Horticultural Science)
2:45 - 3:00 PM	Break
3:00 - 5:00 PM	<b>Plant Propagation + Plant Breeding</b> Split the group into two and rotate through each session (3:00-4:00 PM, 4:00-5:00PM) <ul style="list-style-type: none"><li>• <b>Plant Propagation</b> (Marye Anne Fox Labs, Room B21) (Ms. Lis Meyer, Lecturer, Horticultural Science)</li><li>• <b>Plant Breeding</b> (Marye Anne Fox Labs, Room B31) (Dr. Hsuan Chen, Assistant Professor, Horticultural Science)</li></ul>
5:00–6:45 PM	Downtime and dinner at Fountain Dining Hall
7:00 – 9:00 PM	<b>Floral Design Workshop</b> (Fox Headhouse) (Ms. Jodi Riedel, Senior Lecturer and AGI Coordinator, Horticulture)



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# Functional Landscapes

Horticultural Science Summer Institute – Thursday, July 13th, 2023

Incorporating smarter, more efficient design strategies into the overall layout of a landscape can help to conserve natural resources, as well as save money. Today we will continue to explore landscape management ideas and synthesize the concepts we have explored throughout the week and put them into a functional landscape design.

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|------------------|---|
| 7:00 - 8:00 AM   | Breakfast (Fountain Dining Hall)  |
| 8:15 - 8:30 AM   | Travel to Kilgore Hall and Fairmont United Methodist Church   |
| 8:30 - 11:45 AM  | <b>Tree Climbing and Integrated Pest Management</b> Split the group into two and rotate through each session (8:30-10:00 AM, 10:15-11:45 AM) <ul style="list-style-type: none"><li>• <b>Tree Climbing</b> (Ms. Jodi Riedel and Bartlett Trees)</li><li>• <b>Integrated Pest Management</b> (Mr. Ryan Adams and Ms. Alisha Ray)<ul style="list-style-type: none"><li>• <b>Managing Pollinators and Beneficials in the Landscape</b> (125 Kilgore)</li><li>• <b>Sustainable methods for Greenhouse Pest Control</b> (B31 Fox)</li></ul></li></ul> |
| 11:45 - 12:30 PM | Lunch in Kilgore (Room 159)   |
| 12:30 - 1:00 PM  | Travel to Brie Arthur's Garden  |
| 1:00 - 2:30 PM   | <b>Brie Arthur's Foodscape Walk</b> (Ms. Brie Arthur, Garden Communicator and Author)   |
| 2:30 - 3:00 PM   | Travel to Kilgore   |
| 3:00 - 5:00 PM   | <b>Landscape Design</b> (Kilgore Design Lab) (Ms. Anne Spafford, Associate Head, Professor, Landscape Design, Horticulture)   |
| 5:00 - 6:45 PM   | Downtime, Dinner at Fountain Dining Hall  |
| 7:00 - 9:00 PM   | <b>Horticultural Reflections</b> (159 Kilgore Hall) <ul style="list-style-type: none"><li>• Tea Tasting, final reflections + presentations</li></ul>  |



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# Horticultural Futures

Horticultural Science Summer Institute – Friday, July 14th, 2023

What does the future of horticulture hold for you? This morning we will share what students and parents need to know before applying to NC State. This session will cover academic and extracurricular considerations and ways to prepare, financial aid, internships, and job opportunities. We will also celebrate the week with an informal presentation by students sharing their adventures.

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|------------------|--|
| 7:00 – 8:00 AM   | Breakfast (Fountain Dining Hall)   |
| 8:00 - 9:00 AM   | Pack up dorm rooms   |
| 9:00 – 9:15 AM   | Travel to JCRA, Ruby McSwain Education Center  |
| 9:15 - 9:45 AM   | <b>Evaluations and wrap-up</b> (JCRA Ruby McSwain Center)  |
| 10:00 – 11:00 AM | <b>Making College Decisions</b> (JCRA Ruby McSwain Center)<br>Joanna Eglinton, College of Agriculture and Life Sciences Recruiter, Academic Program, Ms. Kaylee Gabriel, Agricultural Institute Recruiter, and Dr. Helen Kraus, Director Undergraduate Program Chair, Horticultural Science  |
| 11:00 – 1:00 PM  | <b>Final Luncheon Program</b> (Ruby McSwain Center, JCRA)<br>Institute participants, family members, sponsors, faculty + staff <ul style="list-style-type: none"><li>• Welcome and program summary (Ms. Liz Driscoll)</li><li>• Student presentations</li><li>• Remarks by Ms. Anne Spafford, Associate Department Head, Horticultural Science</li><li>• Remarks by Bill Wilder, Founding Donor, HSSI</li><li>• Final comments</li><li>• Lunch</li></ul> |
| 1:00 - 2:00 PM   | <b>Check out of Sullivan Hall</b><br>Students return with parents/guardians/mentors to Sullivan Hall to pick up luggage and return keys to dorm office.<br><br>Safe Travels Home!  |



# Staff and Instructors

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### **North Carolina Department of Agriculture & Consumer Services**

#### **Central Crops Research Station**

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### **Industry and Community Partners**

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#### **Plantworks Nursery**

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#### **BASF**

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#### **Community Partners**

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Bill Wilder Founding Donor, [blwilder@bellsouth.net](mailto:blwilder@bellsouth.net)

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