

DEPARTMENT OF **HORTICULTURE** GRADUATE PROGRAMS at the **UNIVERSITY OF ARKANSAS**



horticulture.uark.edu

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For information regarding graduate school requirements
and the application process, please visit
<http://graduate-and-international.uark.edu/>

Excellence

The Department of Horticulture is involved in teaching, research and service in accordance with the land grant mission of the University of Arkansas. The faculty provide leadership for the development, production and culture of fruits, vegetables, turfgrasses, and ornamental plants of importance to Arkansas, the region and the nation.

Graduate Programs

The Department offers two options for a Masters Degree in Horticulture. One is a two-year thesis program in which students learn to conduct scientific studies and prepare research reports for scientific journals; the other is a non-thesis program requiring primarily coursework.

The Ph.D. degree in Plant Science is administered jointly with the Department of Plant Pathology. The Ph.D. program takes three to four years and requires original research and development of new knowledge.

The department has graduate assistantships that are awarded on a competitive basis at the discretion of the Department Head.

Horticultural Research

Horticultural research at the University of Arkansas includes: genetics, breeding, and cultivar development of fruit and vegetable crops, ornamentals, and turfgrasses; physiology and culture of fruit, vegetable, and ornamental crops; physiology and management of turfgrasses; biotechnology; and sustainable landscape management and design.

Interdisciplinary research is strong. There is excellent cooperation with Plant Pathology, Food Science, Entomology, Biological Sciences, Crop, Soils and Environmental Sciences and other departments. Plant production and processing systems that emphasize value added and utilize alternative pest control systems are encouraged.



Facilities

The Horticulture Department is located on the third floor of the Plant Sciences Building. In addition to offices for faculty, staff, and graduate students, there are five research laboratories. The Department shares greenhouse and teaching laboratory space in the state-of-the-art facility on campus. This facility includes conventional greenhouse space, growth chambers, containment facilities for genetic engineering, and bio-control research.

The Department also has nine 1,000 square feet greenhouses at the Arkansas Agricultural Research and Extension Center located north of the campus. The Arkansas Agricultural Research and Extension Center has 90+ acres of land devoted to horticultural field research. Plant Evaluation gardens are located on campus and at the Arkansas Agricultural Research and Extension Center.

Off-Campus Facilities

The Fruit Research Station at Clarksville is 85 miles from Fayetteville. Much of our fruit crops research is conducted there, including breeding programs for grape, blackberry, peach, blueberry, and nectarine; cultivar testing on numerous crops; and cultural research on tree fruits, small fruits, and grapes. This station has 230 acres of land, greenhouses, cold storage, laboratory and office space.

The Vegetable Research Station at Kibler is a one hour drive from the Fayetteville campus and is a vital component of the vegetable research program. Eighty-six acres of land, greenhouses, and cold storage for seeds and produce make this a valuable station. Although this station is only 50 miles from Fayetteville, it provides a different environment due to elevation and topography. It provides excellent conditions for screening for disease and insect resistance and for stress adaptation.

The Southwest Research and Extension Center at Hope is a large facility serving agriculture and forestry in that area. Resident program technicians contribute major efforts to fruits, vegetables, ornamentals, and forestry research as directed by department faculty.

Excellent Location

Located in the beautiful Ozark Mountains of Northwest Arkansas, greater Fayetteville is a thriving metropolis area of over 300,000 residents. In addition to being the home of the University of Arkansas, the area is home to such nationally known corporations as Walmart, J.B. Hunt Transportation and Tyson Foods.

Excellent Recreational and Cultural Opportunities

Northwest Arkansas offers a wide array of opportunities for camping, hiking, fishing, and mountain biking. The University of Arkansas and the City of Fayetteville sponsor numerous cultural activities including Broadway shows, musical, and international performers at the Walton Arts Center and the University of Arkansas Theater. Northwest Arkansas boasts its own symphony orchestra, world renowned Crystal Bridges museum, and live music is abundant in many venues along Fayetteville's Dickson Street.



Graduate Faculty in the Department of Horticulture

Dr. Wayne Mackay, Professor and Department Head
Phone: (479) 575-7319; **Fax:** (479) 575-8619; **E-mail:** mackay@uark.edu
Education: Ph.D.-University of Maryland; M.S.-University of Delaware; B.S.-Virginia Polytechnic Institute and State University
General Areas of Interest: Environmental Horticulture
Administrative Duties: Provides administrative leadership to the statewide horticulture teaching, research, and extension program. Coordination of extramural funding efforts.



Dr. John R. Clark, Distinguished Professor
Phone: (479) 575-2810; **Fax:** (479) 575-8619; **E-mail:** jrclark@uark.edu
Education: Ph.D., University of Arkansas, M.S. and B.S., Mississippi State University
General Areas of Interest: Plant improvement through classical plant breeding methods as well as molecular techniques.
Teaching: Responsibilities include advising undergraduate and graduate students; teaches HORT 4103-Fruit Production Science and Technology and HORT 5043-Advanced Plant Breeding.



Dr. Michael R. Evans, Professor
Phone: (479) 575-3179; **Fax:** (479) 575-8619; **E-mail:** mrevans@uark.edu
Education: Ph.D. and M.S. – University of Minnesota; B.S. – Virginia Tech
General Areas of Interest: Greenhouse management and controlled environments-Agriculture. Research on edaphics of horticultural substrates.
Teaching: Responsibilities include advising undergraduate and graduate students; teaches HORT 4703-Greenhouse Management and HORT 4803-Greenhouse Crops Production.



Dr. M. Elena Garcia, Professor
Phone: (479) 575-2790; **Fax:** (479) 575-8619; **E-mail:** megarcia@uark.edu
Education: Ph.D. and M.S. – University of Arkansas, Fayetteville; B.A.-University of Arkansas, Little Rock
General Areas of Interest: Small fruits, tree fruits and sustainable protected agriculture.
Teaching: Responsibilities include advising undergraduate and graduate students; teaches HORT 2003- Principles of Horticulture; HORT 3901 – Horticulture Career Development; HORT 4103 – Fruit Production Science and Technology.



Dr. Douglas E. Karcher, Professor
Phone: (479) 575-5723; **Fax:** (479) 575-8619; **E-mail:** karcher@uark.edu
Education: Ph.D. and M.S. – Michigan State University; B.S. – The Ohio State University
General Areas of Interest: Turfgrass Science.
Teaching: Responsibilities include advising undergraduate and graduate students; teaches HORT 3403-Commercial and Residential Turfgrass Management, HORT 4913-Rootzone Management for Golf and Sports Turf and HORT 4932-Turf Best Management Practices.



Dr. Jackie Lee, Associate Professor/ Extension Horticulture IPM Specialist
Phone: (501) 671-2191; **Fax:** (501) 671-2252; **E-mail:** jalee@uaex.edu
Education: Ph.D. and M.S. – University of Arkansas; B.S. – Arkansas Tech University
General Areas of Interest: IPM practices and pesticide regulations.
Teaching: Lectures by invitation in various horticulture classes. Responsibilities include advising graduate students.



Dr. Garry V. McDonald, Clinical Assistant Professor
Phone: (479) 575-8780; **Fax:** (479) 575-8619; **E-mail:** gmcdonal@uark.edu
Education: Ph.D., M.S. and B.S. – Texas A & M University
General Areas of Interest: Sustainable landscape design, installation and management, water quality, irrigation recycling, and water conservation. Landscape plant development and evaluation.
Teaching: Responsibilities include advising undergraduate and graduate students; teaches HORT 4033-Professional Landscape Installation, HORT 4043-Professional Landscape Management, HORT 4603-Practical Landscape Planning, HORT 3113-Herbaceous & Indoor Plant Material, HORT 3103-Woody Landscape Plants, HORT 4403-Plant Propagation and PTSC6101-Colloquium in Plant Sciences.



Dr. Amanda McWhirt, Assistant Professor/ Extension Horticulture Production Specialist
Phone: (501) 671-2229; **Fax:** (501) 671-2252; **E-mail:** amcwhirt@uaex.edu
Education: Ph.D. –North Carolina State University; M.S. – Louisiana State University; B.S. – Tarleton State University
General Areas of Interest: Practices and technologies in production.
Teaching: Lectures by invitation in various horticulture classes. Responsibilities include advising graduate students.



Dr. Michael D. Richardson, Professor
Phone: (479) 575-2860; **Fax:** (479) 575-8619; **E-mail:** mricha@uark.edu
Education: Ph.D. – University of Georgia; M.S. and B.S.-Louisiana State University
General Areas of Interest: Turfgrass Science.
Teaching: Responsibilities include advising graduate and undergraduate students; teaches HORT 2303-Introduction to Turfgrass Management, HORT 4903-Golf and Sports Turf Management, and HORT 4921 – Golf Course Operations.



Dr. James A. Robbins, Professor/Extension Specialist - Commercial Ornamentals
Phone: (501) 671-2307; **Fax:** (501) 671-2303; **E-mail:** jrobbins@uaex.edu
Education: Ph.D. – University of California-Davis; M.S.- University of Georgia; B.S.- University of Wisconsin
General Areas of Interest: Nursery, greenhouse, landscape, woody plants, container media, fertilizers, container and turf fertility, nursery weed control, and plant evaluation.
Teaching: Lectures by invitation in various horticulture classes. Responsibilities include advising graduate students.



Dr. Ainong Shi, Assistant Professor
Phone: (479) 575-2670; **Fax:** (479) 575-8619; **Email:** ashi@uark.edu
Education: Ph.D. – North Carolina State University; M.S. – Graduate School of Chinese Academy of Agricultural Sciences; B.S. – Zhejiang University
General Areas of Interest: Molecular Vegetable Breeding and Genetics
Teaching: Responsibilities include advising graduate and undergraduate students; teaches HORT 6033 –Genetic Techniques in Plant Breeding.



Dr. Vibha Srivastava, Professor
Phone: (479) 575-4872; **Fax:** (479) 575-7465; **E-mail:** vibhas@uark.edu
Education: Ph.D. – Jawaharlal Nehru University – New Delhi, India; M.S. – G.B. Pant University of Agriculture and Technology, Pantnagar, India
General Areas of Interest: Crop genetic engineering and transgene genetics.
Teaching: Responsible for CSES 5233-Plant Genetic Engineering.



Dr. Margaret Worthington, Assistant Professor
Phone: (479) 575-2122; **Fax:** (479) 575-7465; **E-mail:** mlworthi@uark.edu
Education: Ph.D. – North Carolina State University; M.S. – University of California Davis; B.S. – Duke University
General Areas of Interest: Molecular Fruit Breeding and Genetics
Teaching: Responsibilities include advising undergraduate and graduate students; teaches HORT 5403 – Advance Plant Breeding



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