

HRI Projects

Project title	Year	State	Researchers		Funding
Alternative Methods of Handling Bare-Root Nursery Crops	1984	MO	Dr. Christopher J. Starbuck	University of Missouri	<i>\$1,500</i>
Defoliation, Bare-Root Storage and Crop Quality	1984	NY	Dr. Michael R. Boersig	Cornell University	<i>\$1,500</i>
Development and Control of Black Root of Blue Hollies	1984	KY	Dr. John Hartman	University of Kentucky	<i>\$1,500</i>
Effects of Incorporated and Applied Surfactant Material on Growth and Water Status of Container-Grown Plants	1984	NJ			<i>\$1,500</i>
Effects of Mycorrhizae on Containerized Nursery Plants Grown in Artificial Mix	1984	CA	Dr. James A. D'Albro	California Polytechnic State Univer	<i>\$1,500</i>
Effects of Scale Insect Infestation on Physiology and Growth of Euonymous	1984	KY	Mr. T.W. Kimmerer Dr. Daniel A. Potter	University of Kentucky University of Kentucky	<i>\$1,500</i>
Evaluating Critical Minimum Water Needs and Reducing Water Loses in Container Nursery Crops	1984	TX	Dr. Fred T. Davies, Jr	Texas A&M University	<i>\$1,500</i>
Evaluating Unlabeled Herbicides in Slow-Release Formations for Container Nursery Crops	1984	TX	Dr. Fred T. Davies, Jr Dr. Susan A. Duray	Texas A&M University Texas A&M University	<i>\$1,500</i>
Evaluation of Neem Seed Extract, a Natural Pesticide, Against Selected Leafmining Pests of Woody Plants	1984	MD	Mr. J.J. Knodel-Montz	University of Maryland	<i>\$1,500</i>
Fingerprinting Nursery Crops Based on a Computer-Aided Index of Isozyme Banding Patterns	1984	WA	Dr. Ricardo Menendez	National Clonal Germplasm Repos	<i>\$1,500</i>

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Heat Stress of Woody Plant Roots	1984	FL	Dr. Dewayne L. Ingram	University of Kentucky <i>\$1,500</i>
In Vitro Regeneration of Landscape Groundcovers with Stress Tolerance for Urban Sites	1984	IN		<i>\$1,500</i>
Nitrogen Induced Injury to Rhododendrons: A Possible Case of Inadequate Energy Allocation to Roots	1984	RI	Dr. Richard J. Hull	University of Rhode Island <i>\$1,500</i>
Optimizing Environmental Conditions for High Humidity Propagation	1984	MN		<i>\$1,500</i>
Woody Plant Root Growth Following Transplanting from Field or Container	1984	IN	Dr. Philip L. Carpenter	Purdue University <i>\$1,500</i>
Influence of Incubation Time on Phosphorus Leaching from Container Media	1984	FL	Mr. James E. Barrett	University of Florida <i>\$1,000</i>
Reference Book - Diseases and Environmental Damage of Trees and Shrubs	1985	NY	Dr. Warren T. Johnson Dr. Wayne A. Sinclair	Cornell University Cornell University <i>\$2,500</i>
Development of Lonicera Resistant to the Honeysuckle Witches Broom Aphid	1985	MN	Ms. Susan Moe Dr. Harold Pellett	Landscape Plant Development Cer Landscape Plant Development Cer <i>\$2,000</i>
Enhancing Growth and Survival of Water Stressed Landscape Plants	1985	TX	Dr. Fred T. Davies, Jr	Texas A&M University <i>\$2,000</i>
Herbicides for Nursery and Landscape Plants	1985	MN		<i>\$2,000</i>
Interaction of Nursery Source and Planting Site on the Establishment of Deciduous Trees	1985	WA	Dr. James R. Clark Dr. Daniel K. Struve	Hortscience Inc Ohio State University <i>\$2,000</i>
Isolation and Culture of Elm Protoplasts	1985	OH	Mr. Subhash C. Domir	USDA-ARS US National Arboretun <i>\$2,000</i>

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Optimizing Environmental Conditions for Softwood Cutting Propagation	1985	MN	Dr. Harold Pellett	Landscape Plant Development Cer	\$2,000
Public Parking Lot Landscape Maintenance Study	1985	WA	Dr. John A. Wott	Washington Park Arboretum	\$2,000
Redesigning Plant Containers to Reduce Water Consumption in Nurseries	1985	NY	Dr. Peter Trowbridge Dr. Thomas Whitlow	Cornell University Cornell University	\$2,000
Using Seed Leachate Conductivity as a Rapid Measure of Seed Quality for Landscape Plants	1985	MS			\$2,000
Assessing a Technique for Evaluating Woody Plant Drought Tolerance	1985	NY	Dr. Nina Bassuk Dr. Thomas Whitlow	Cornell University Cornell University	\$1,500
Winter Protection of Container Nursery Stock	1985	MN			\$1,500
Influence of Herbicides and Fungicides on Azalea Growth Phytophthora and Selected Weeds	1985	SC	Dr. Ted Whitwell	Clemson University	\$1,000
Determining Adequate Dimensions for Above-Ground Tree Containers Based on Tree Water Requirements	1985	NY	Dr. George L. Good Dr. Donald A. Rakow Dr. Thomas Whitlow	Cornell University Cornell University Cornell University	\$1,000
Develop a Machine for Potting and Setting Containers in Field	1981	GA	Dr. Braham P. Verma	University of Georgia	\$1,500
Effects of Hort. and Transplanting Practices that Relate to Mech. Injury Regeneration and Disease of Tree	1981	IL	Dr. Gary W. Watson	The Morton Arboretum	\$750
A Performance Appraisal of Fall Planted Trees, Shrubs and Ground Covers	1981	NY	Dr. George L. Good	Cornell University	\$750

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Plant Survival in Above-Grade Planters	1982	MT	Mr. Richard K. Pohl	Montana State University	\$2,000
Electrophytogram Control of Nursery Irrigation	1982	IL	Dr. L. Art Spomer	University of Illinois	\$1,000
Evaluating The Urban Rooting Environment and Its Effect on Root Growth	1982	NY	Dr. Nina Bassuk	Cornell University	\$1,000
In Vitro Propagation of Citrus Rootstocks	1982	FL	Dr. Gloria A. Moore	University of Florida	\$1,000
Osmotic Priming With Bioactive Agents to Accelerate Seed Germination of Woody Species	1983	ONT	Mr. Glenn Lumis	University of Guelph	\$2,000
Tissue Compatibility of Stock/Scion Graft Unions in Malus	1983	IL			\$1,000
An Eval. of Shade Tree Cultivars to Block or Filter Direct Solar Radiation During Their Defoliate Period	1983	NY	Dr. Curt J. Westergaard	Cornell University	\$1,000
Reducing frost injury of tender plants thro. control of Ice Nucleating Active Bacteria, Pseudomonas syringae	1983	OK	Dr. David W. Buchanan	Oklahoma State University	\$1,000
Biology and Control of the Flatheaded Apple Tree Borer in Nursery Grown Maples	1985	KY	Dr. Daniel A. Potter	University of Kentucky	\$2,500
National Crabapple Evaluation Program	1985	IL	Dr. Thomas L. Green	Western Illinois University	\$2,500
Eval. of Flowering Crabapples as to Their Resistance to Scab, Cedar-Apple, Rust, Fire Blight and Powdery Mildew	1985				\$2,500
Storage Conditions for Enhancing Survivals of Difficult to Store Deciduous, Bare-Root Nursery Stock	1985	MN			\$2,500

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Rock Phosphate as a Phosphorus Source for Mycorrhizal Woody Ornamentals	1985	FL	Dr. Thomas Yeager	University of Florida	<i>\$2,000</i>
Genetic Tolerance of Citrus Rootstocks to Preemergence Herbicides	1984	FL	Dr. Megh Singh	University of Florida CREC	<i>\$2,000</i>
Propagation of Pinus and Other Conifers by Cuttings	1984	MN	Dr. Harold Pellett	Landscape Plant Development Cer	<i>\$1,500</i>
Propagation of Hard-to_Root Wood Germplasm	1984	MD	Dr. Bruce J. Parliman	USDA-ARS	<i>\$2,000</i>
Role of Plant Growth Substances in Woody Plant Establishment and Growth	1984	IL	Dr. Gary J. Kling	University of Illinois	<i>\$1,000</i>
Effects of Root Damage to Trees as Influenced by Season of Damage and Soil Fertility Level	1984	MA	Dr. Michael Marcotrigiano	University of Massachusetts	<i>\$1,000</i>
Micropropagation of Citrus	1984	FL			<i>\$1,000</i>
Rock Phosphate as a Phosphorus Source for Mycorrhizal Woody Ornamentals	1984	FL	Dr. Charles R. Johnson	Washington State University	<i>\$1,000</i>
Evaluation of Shade Tree Clones for Adaptability in the Upper Midwest	1984	MN	Dr. Harold Pellett	Landscape Plant Development Cer	<i>\$1,500</i>
Business Analysis of Retail Nurseries	1983	PA			<i>\$2,000</i>
Effects of Dormant Pruning at Planting Time on Leaf, Shoot, and Root Production of Bare-Root Trees.	1986	CO			<i>\$2,500</i>
Woody Plant Root Resistance to Oxygen Stress	1986	WA	Dr. Barbara Smit-Spinks	University of Washington	<i>\$2,500</i>
Collecting in Japan of an Effective Parasitoid of the Japanese Beetle	1986	NC	Dr. Karen G. Wilson	North Carolina State University	<i>\$2,500</i>

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Develop. of a Potting Medium Compatible to Mycorrhizal Fungi and their Establishment on Citrus Plant Roots.	1985	FL			<i>\$1,500</i>
Predisposition of Woody Plant Roots to Phytophthora Root Rot by Heat Stress.	1986	KY	Dr. Dewayne L. Ingram	University of Kentucky	<i>\$2,000</i>
Development of High Quality Cold Hardy Viburnums	1986	MN	Dr. Harold Pellett	Landscape Plant Development Cer	<i>\$3,000</i>
Marketing Efficiency in the U.S. Horticultural Industry	1986	CT			<i>\$2,000</i>
Broad Spectrum Parasitic Nematodes as Insecticides in Horticulture	1986	NJ	Dr. Randy Gaugler	Rutgers University	<i>\$1,000</i>
Breeding of Azaleas Tolerant of Northern Climates	1986	MN	Dr. Harold Pellett	Landscape Plant Development Cer	<i>\$1,000</i>
Testing New Auxins	1986	OH	Dr. Daniel K. Struve	Ohio State University	<i>\$2,000</i>
Effects of Root Ball Size and Shape on Transplant Survival and Establishment.	1986	OH	Dr. T. Davis Sydnor	Ohio State University	<i>\$1,000</i>
Engineering Trees to Transplant More Successfully	1986	NY	Dr. Nina Bassuk	Cornell University	<i>\$3,000</i>
Predicting Freeze Tolerance of Woody Plants	1986	PA	Dr. Steve Wallner	Colorado State University	<i>\$3,000</i>
Chemical Plant Fingerprinting of Fruit Crops	1986	OR	Dr. Ricardo Menendez	National Clonal Germplasm Repos	<i>\$2,500</i>
Hybridization of Malus, Sorbus, Cotoneaster, Crataegus, Pyracantha, Amelanchier, etc.	1986	MN	Dr. Harold Pellett	Landscape Plant Development Cer	<i>\$2,500</i>

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Influ of Growing Medium & Fertility on Growth, Visual Quality & Leaf Element Content of <i>Kalmia latifolia</i>	1986	WA	Dr. Rita L. Hummel	Washington State University	\$3,000
Root Growth Potential: Its Development in Shade Trees following Summer Digging and Transplanting	1986	IN	Dr. Robert J. Joly	Purdue University	\$3,000
Preparation of a Checklist of Woody Landscape Plants of the U.S. and Canada	1986	CA	Dr. Elizabeth McClintock	Elizabeth McClintock	\$3,000
Chemical Weed Control in Herbaceous Perennials	1986	SC	Dr. John W. Kelly	Clemson University	\$2,500
Development and Evaluation of Mycorrhizal Inoculation Techniques	1986	FL	Dr. Stephen D. Verkade	Clemson University	\$2,500
Development of <i>Lonicera</i> Resistant to the Honeysuckle Witches Broom Aphid	1986	MN	Dr. Harold Pellett	Landscape Plant Development Cer	\$2,500
Human Physiological Responses to Plants in Indoor Work Environments	1986	KS	Dr. Richard H. Mattson	Kansas State University	\$3,000
Recovery Program for Rhododendrons Infected with Phytophthora Root Rot	1986				\$2,500
Development of a Directory of Landscape Tree Cultivars	1986	IL			\$3,500
Image Analysis for Direct Measurement of Elusive Plant Growth Parameters	1986	IL	Dr. Mary Ann Lila Smith	University of Illinois	\$3,000
Anatomy of Bark Cankers in Flowering Dogwood	1986	TN	Dr. Effin T. Graham	University of Tennessee	\$1,500
Characterizing the Dispersal Behavior and Performance of Fungicides Applied to Nursery Crops	1986	OH	Dr. Charles Krause	USDA-ARS Appl Tech Research U	\$3,500

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Revise the Retail Section of the HRI Uniform Charts of Accounts	1986				<i>\$1,500</i>
Determining the Cause of Ash 'Soorch Decline	1987	WI	Dr. Gayle L. Worf	University of Wisconsin	<i>\$3,500</i>
Drought Tolerance and Water-Use Efficiency of Trees and Shrubs	1987	UT	Dr. Larry A. Rupp	Utah State University	<i>\$2,500</i>
Irrigation Requirements and Water-Use Efficiency of Container-Grown Woody Plants	1987	FL	Dr. Gary W. Knox	University of Florida	<i>\$2,000</i>
Research the Current Diagnostic Procedures on Sporotrichosis	1987	WI			<i>\$1,500</i>
Cold Hardines of Azalea and Rhododendron Cultivars	1987	MN	Dr. Harold Pellett	Landscape Plant Development Cer	<i>\$2,500</i>
Cost Effectiveness and Species Adaptability to a Copper- Treated Container Growing System	1987	OH	Attn: HRI Contact	Cornell Cooperative Extension	<i>\$2,500</i>
Effects of Phosphorus Nutrition on Acclimation of Woody Plant Root Membranes to Root-Zone Temperatures	1987	MS	Dr. Steven E. Newman	Colorado State University	<i>\$2,500</i>
Identifying Water-Use Efficiency and Drought Tolerance in Landscape Plants	1987	TX	Dr. Fred T. Davies, Jr	Texas A&M University	<i>\$2,500</i>
Influence of Field-Grow Fabric Container on Growth and Physiology of Nursery Crops	1987	ONT	Dr. Calvin Chong Mr. Glenn Lumis	Horticultural Research Inst of Onta University of Guelph	<i>\$2,500</i>
Cost of Establishing and Operating a Landscape Design and Installation Firm	1987	OH			<i>\$3,000</i>

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Characterization, Behavior and Performance of Fungicides Applied to Nursery Crops	1987	OH	Dr. Charles Krause	USDA-ARS Appl Tech Research U	\$3,000
Changing the Number of Chromosomes of Landscape Plants for Breeding Improved Varieties	1987	MN	Dr. Harold Pellett Ms. Kathy Zuzek	Landscape Plant Development Cer University of Minnesota	\$2,500
Olivine: A Slow Release Magnesium Source for Container Nursery Crops Productions	1987	NC	Dr. Stuart L. Warren	N C State University	\$2,000
Root Growth Potential: Its Development in Shade Trees Following Summer Digging and Transplanting	1987	IN	Dr. Robert J. Joly	Purdue University	\$3,000
Herbicide-Container Media Interactions	1987	CO			\$2,500
Determining if Ash Yellows is Responsible for Tree Losses	1987	MN	Dr. D. W. French	University of Minnesota	\$2,500
Nutritional Influences on Hardening and Drought Response In Woody Plants	1987	TN	Dr. Robert Auge	University of Tennessee	\$1,500
Urban Tree Root Hydraulic Conductivity	1987	IN	Dr. Michael N. Dana	Purdue University	\$3,000
A Simple Media Testing System for Container Grown Nursery Crops	1987	VA	Dr. Robert D. Wright	Virginia Tech (VPI&SU)	\$2,500
Effect of Wire Baskets on Root Function of Landscape Trees	1987	ONT	Mr. Glenn Lumis	University of Guelph	\$2,000
Factors Influencing Nursery Product Purchases	1987	CT			\$2,000
Crape-Myrtle Hybridization, Evaluation and Cultivar Introduction	1987	DC			\$2,000

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Determining Rootzone Gas Diffusion Influence on Plant Growth	1987	NC			<i>\$1,500</i>
Measuring Human Physiological Responses to Plants in Indoor Work Environments	1987	KS	Dr. Richard H. Mattson	Kansas State University	<i>\$1,000</i>
Winter Hardiness of Container Grown Herbaceous Perennials	1987	OH	Dr. Steven M. Still	Ohio State University	<i>\$2,000</i>
Establishing Minimum Water Requirements for Nursery Crops Production	1987	FL	Dr. George E. Fitzpatrick Dr. Stephen D. Verkade	University of Florida Clemson University	<i>\$1,500</i>
Effect of Ethylene and Auxin on Root Initiation of Woody Plants	1988	WI	Dr. Dennis P. Stimart	University of Wisconsin	<i>\$4,000</i>
Determining the Role of Anti-Fungal Proteins as Agents Responsible for Black Spot Resistance	1988	MS	Dr. Steven E. Newman	Colorado State University	<i>\$2,500</i>
Chemical fingerprinting of Plants by High Performance Liquid Chromatography	1988	FL	Dr. H. A. Miller	University of Central Florida	<i>\$2,000</i>
Testing Trichoderma as a Biocontrol for Canker Diseases	1988	NY	Dr. George W. Hudler	Cornell University	<i>\$2,000</i>
Rejuvenating Woody Plants to Increase Rooting Success	1988	TX	Dr. Fred T. Davies, Jr	Texas A&M University	<i>\$2,500</i>
Increasing Germination Rate of Double Dormant Woody Plant Seeds	1988	DE	Dr. John J. Frett	University of Delaware	<i>\$1,500</i>
Water and Nutrient Efficiency of Plants Grown in CuCO ₃ Treated Containers	1988	OH	Dr. Daniel K. Struve	Ohio State University	<i>\$3,500</i>

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Investigation of Somaclonal Variation for Weigela florida	1989	IA	Dr. Jack L. Weigle	Iowa State University	\$2,000
Identification and Control of Crown Gall on Mark Apple Rootstock	1988	OR	Dr. Larry W. Moore	Oregon State University	\$1,500
Techniques for Determination of Tree Tolerance to Soil Compaction	1988	MN	Dr. Harold Pellett	Landscape Plant Development Cer	\$3,000
Strategy to Reduce Nitrate Leaching from Container-Grown Plants	1989	VA	Dr. Alexander X. Niemiera	Virginia Polytechnic Inst & State U	\$2,000
Relationships between Canker Disease, Resistance and Predisposition of Honeylocust cv. to Insect Attack	1988	KY	Dr. Daniel A. Potter	University of Kentucky	\$4,000
Evaluation of Flowering Shrub Cultivars for Adaptability in the Upper Midwest	1989	MN	Dr. Harold Pellett	Landscape Plant Development Cer	\$2,000
Effects of Alternative Advertising and Promotional Techniques on Consumer Sales of Garden Centers	1988	NC	Dr. Horace O. Kelly, Jr	Wake Forest University	\$2,000
Effect of XE-1019, EL-500, and Dikegulac-Sodium on the Growth and Water Status of Landscape Plants	1989	FL	Dr. Jeffrey G. Norcini	Dr Jeffrey G Norcini	\$2,000
Optimizing Shade Tree Production:Vegetation Management, Nitrogen Rate and Timing of Application	1988	NC	Dr. Stuart L. Warren	N C State University	\$2,000
Olivine: A Slow Release Magnesium Source for Container Production	1988	NC	Dr. Stuart L. Warren	N C State University	\$3,000
Water Requirements of Woody Landscape Shrubs	1988	CO			\$2,000

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Characterization of Water Use Efficiency in Low Maintenance Landscape Roses	1988	TX	Dr. Fred T. Davies, Jr	Texas A&M University	\$2,500
Transplant Stress Reduction with Plant Growth Regulators	1988	NE	Dr. Mark O. Harrell	University of Nebraska	\$1,500
Conseq of Water and Nitro Mgmt on Growth and Aesthetic Quality of Drought Tolerant Semi-tropical Woody Plants	1989	CA	Dr. Timothy D. Paine	University of California	\$2,500
A Microcomputerized Image Analysis Method for Measuringg Woody Plant Root Growth	1988	IL	Dr. L. Art Spomer	University of Illinois	\$3,000
Development of Low-Cost Alternative Growing Media	1988	FL	Dr. George E. Fitzpatrick	University of Florida	\$2,000
Characterizing the Disperal Behavior and Performance of Fungicides Applied to Nursery Crops	1988	OH	Dr. Charles Krause	USDA-ARS Appl Tech Research U	\$4,000
Marketability of Woody Plants: Quality Attributes and Pricing	1989	AL	Dr. Charles H. Gilliam	Auburn University	\$2,000
Market Segmentation of Retail Nursery Customers by Activity Levels	1988	FL	Dr. John M. Browning	University of North Florida	\$3,000
Identifying the Cause and Factors Responsible for a Dieback of Norway Maples	1989	NJ			\$2,000
Predicting Soil Temperatures During Overwintering of Container Grown Herbaceous Perennials	1988	OH	Dr. Tim Rhodus	Ohio State University	\$3,500
Cold Acclimation and Mid-Winter Hardiness of Woody Landscape Plants Grown in Southern Nurseries and Ldsp.	1989	GA	Dr. Orville M. Lindstrom	University of Georgia	\$3,000

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Propagation of Quercus Species by Cuttings	1988	GA	Dr. Michael A. Dirr Mr. John J. Drew, III	University of Georgia University of Georgia	\$2,000
A.H.M.C. Market Research Study of Pacific Rim Countries	1988	FL			\$5,000
The Value Added Effect of Landscape Remolding on Residential Property	1988	DC	Mr. Craig Regelbrugge	Wholesale Nursery Growers of Am	\$5,000
Evaluation of Fruit Trees Marketed Through Retail Outlets	1988	PA	Dr. Neil Vincent	Delaware Valley College	\$3,000
Trade Flows Within the United States Nursery Industry	1989	TN	Dr. John R. Brooker	University of Tennessee	\$5,000
People/Plant Interaction Seminar	1989	VA	Ms. Diane Relf	People-Plant Council	\$4,000
Fertility Responses of Field-Grown Perennial Wildflowers	1989	TN	Dr. Douglas L. Airhart	Tennessee Tech University	\$2,000
Use of the Stem Flow Gauge for Measur. Water Use Efficiency in the Prod. and Estab. of Landscape Plants	1989	TX	Dr. Jayne M. Zajicek	Texas A&M University	\$2,500
Evaluation of Prairie Grasses for Home Landscapes	1989	TX	Attn: ANLA Contact	GIE Media	\$500
Identification, Pathogenicity, & Methods of Control for Cankers Which Develop During Storage of Woody Plants	1990	MN	Ms. Cynthia L. Ash	University of Minnesota	\$3,000
Weed Control in Winter Protection Houses	1989	SC	Dr. Ted Whitwell	Clemson University	\$2,000
The Influence of Herbicide on Shipping Quality of Nursery Stock	1990	SC	Dr. John W. Kelly	Clemson University	\$4,500

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Epidemiology and Control of Black Root Rot of Nursery Crops	1989	OR	Dr. Fred M. Zeitoun	Agricare Inc	\$3,000
Postharvest Storage of B&B Landscape Trees: Efficient Water and Nutrient Management	1989	MI	Dr. Robert E. Schutzki	Michigan State University	\$2,000
The Significance of In Vitro & Ex Vitro Rooting Methods to the Quality of Micropropagated Nursery Crops	1990	IL	Dr. Mary Ann Lila Smith	University of Illinois	\$3,500
Transplanting Container Plants	1990	OH	Dr. Daniel K. Struve	Ohio State University	\$1,000
Breeding Evaluation and Propagation of New Magnolia Cultivars	1990	NY			\$1,500
Minimum Irrigation Needs of Ground Covers in the Landscape	1990	CA	Dr. Dennis R. Pittenger	University of California	\$3,000
Techniques for Determination of Tree Tolerance to Soil Compaction	1989	MN	Dr. Harold Pellett	Landscape Plant Development Cer	\$1,500
Root Development of Container-Grown Landscape Plants	1990	IL	Dr. Gary W. Watson	The Morton Arboretum	\$2,500
Affect of Field Nursery Fertilization on Ground Water Quality	1990	NC	Dr. Richard E. Bir	North Carolina State University	\$2,000
Affect of Field Nursery Fertilization on the Quality of Surface Water	1989	NC	Dr. Richard E. Bir	North Carolina State University	\$2,000
Porous Row Covers: Alternative Materials for Winter Protection of Container-Grown Nursery Crops	1990	NC	Dr. Stuart L. Warren	N C State University	\$3,000

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Accelerating Production of Caliper Nursery Trees	1990	ONT	Dr. Calvin Chong	Horticultural Research Inst of Onta	\$2,000
Nitrate Nitrogen Loss from Container Nurseries: A Seven State Cooperative Project	1990	FL	Dr. Thomas Yeager	University of Florida	\$2,000
Techniques for Evaluation & Selection of Landscape Plants for Drought Tolerance	1990		Dr. Harold Pellett	Landscape Plant Development Cer	\$3,000
Flowering Cherry Hybridization, Disease and Germplasm Evaluation & Cultivar Introduction	1990	DC			\$1,500
Biological Control of White Grubs in Turf with Milky Disease Bacterium	1990	CA	Dr. Harry K. Kaya	University of California	\$2,000
Evaluation of a Predatory Mite for Control of Mite Pests on Woody Plants	1990	FL	Dr. Russell F. Mizell, III	Agricultural Research and Educatio	\$1,000
Evaluation of Shrub Roses for Hardiness, Mildew Resistance & Bloom Period	1989	MN	Dr. Harold Pellett	Landscape Plant Development Cer	\$1,000
Symposium on the Role of Horticulture in Human Well- Being and Social Development	1989	VA	Ms. Diane Relf	People-Plant Council	\$3,500
Micronutrient Binding by Container Media Components	1990	FL	Mr. Timothy K. Broschat	University of Florida	\$2,000
Suppressiveness of Sphagnum Peat to Pythium and Rhizoctonia Diseases	1990	OH	Dr. Harry A. J. Hoitink	Ohio State University	\$9,000
Bibliography of Water Research on Nursery Crops	1989	FL	Dr. Thomas Yeager	University of Florida	\$6,500
Analysis of Carbohydrate Allocation to Root-shoot Systems in Woody Plants	1990	CO			\$2,000

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Arcillite: Reducing Water Usage and Nutrient Runoff in Container Nursery Crops Production	1990	NC	Dr. Stuart L. Warren	N C State University	\$3,000
Entry Level Skill Training in Horticulture for Persons with Disabilities	1989	TN	Dr. Douglas L. Airhart	Tennessee Tech University	\$2,000
Cold Hardiness of Landscape Plants Based on Location	1989	GA	Dr. Orville M. Lindstrom	University of Georgia	\$3,000
Role of Solution pH on Auxin Charge and Adventitious s Rooting	1990	WI	Dr. Dennis P. Stimart	University of Wisconsin	\$4,000
Root Regeneration on Bareroot Shade Tree Liners	1990	PA	Dr. Larry J. Kuhns	Pennsylvania State University	\$3,000
Developing an Electronic Computer Database for Vegetative Propagation	1990	CA	Mr. David W. Burger	University of California	\$1,000
Root Regeneration Potential of Bare-root Deciduous Plants following Prolonged Cold Storage	1990	OR	Dr. Tony H. H. Chen	Oregon State University	\$2,500
Factors Related to Consumer Choice of Retail Outlets for Nursery Products	1991	GA	Dr. Ellen Day	University of Georgia	\$2,500
Plant Exploration in the People's Republic of China	1991	DC	Dr. Edward J. Garvey	USDA-ARS	\$2,000
Replacing Peat and Pine Bark in Container Media with Composted Yard Wastes	1991	FL	Dr. Dennis B. McConnell	University of Florida	\$2,000
Application of Accelerated Growth Techniques to the Acclimation of Micpropagated Woody Ornamentals	1991	NY	Ms. Katherine L. Eckenrode	Cornell University	\$1,000
Evaluating the Susceptibility of Native and Exotic Hemlocks to Wooly Adelgid	1991	PA	Dr. Paul Meyer	University of Pennsylvania	\$3,500

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Cross Protection of Nursery Plants Against Virus Infection	1991	IL	Dr. Schuyler S. Korban	University of Illinois \$5,000
Development of Rearing Methodology for a Natural Predator of Euonymus Scale	1991	VA	Dr. Peter B. Schultz	Virginia Tech \$1,500
Affect of Field Nursery Fertilization on the Quality of Surface Water	1991	NC	Dr. Richard E. Bir	North Carolina State University \$3,000
Induction of Polyploids in Woody Landscape Plants	1991	DC		\$1,000
Optimizing Vegetation Management: Groundcovers, Row Width and Tree Growth	1991	NC	Dr. Stuart L. Warren	N C State University \$3,000
Comparative Consumptive Use of Water by Non-Turf Ground Cover Plants	1991	CO		\$1,500
Improving Nutrient Retention in Potting Media by Compost Amendments	1991	NC	Dr. Ted E. Bilderback	North Carolina State University \$2,000
Development of a Standard Method to Determine Nutrient Sufficiency Levels in Container Grown Nursery Crops	1991	SC		\$3,000
Regulation of Plant Growth With Light Quality	1991	SC	Dr. John W. Kelly	Clemson University \$3,500
Superior Rootstocks for Enhanced Stress Tolerance of Birches	1991	NC	Dr. Thomas G. Ranney	North Carolina State University \$2,000
Herbicide Leachate from Container Nurseries	1991	CO		\$2,000
Arcillite: Optimizing Water Usage and Nutrients in Container Production	1991	NC	Dr. Stuart L. Warren	N C State University \$3,000

Project title	Year	State	Researchers		Funding
Phenology and Prevention of Leafhopper Injury to Nursery Grown Maples	1991	KY	Dr. Daniel A. Potter	University of Kentucky	<i>\$1,000</i>
Technique for Providing Supplemental Protection to Structureless Winter Covers	1991	MO	Dr. Christopher J. Starbuck	University of Missouri	<i>\$2,000</i>
Evaluation of Selected Shade and Flowering Trees for Insect and Disease Resistance	1991	MI	Dr. N. Curt Peterson	Florida Southern College	<i>\$2,000</i>
Field Evaluation of Two Predatory Mites for Release in Nursery Crops	1991	FL	Dr. Russell F. Mizell, III	Agricultural Research and Education	<i>\$1,000</i>
Biological Control of Scale Insect Pests in Nurseries	1991	MD	Dr. Michael J. Raupp	University of Maryland	<i>\$2,000</i>
Comparing Development of Transplanted Container-, Field and Fabric Container-Grown Trees	1991	FL	Dr. Edward F. Gilman	University of Florida	<i>\$1,500</i>
Vegetative Propagation of Oaks	1991	FL	Dr. Bijan Dehgan	University of Florida	<i>\$1,500</i>
Testing Chinese Elm Hybrids for Pest Resistance and Landscape Traits	1991	WI	Dr. Eugene B. Smalley	University of Wisconsin	<i>\$4,000</i>
Use of In Vitro Somaclonal Selection to Increase Salt Tolerance of Nursery Crops	1991	TX	Dr. Tim D. Davis	Texas A&M University	<i>\$2,500</i>
Cold Hardiness of Rosa, Pyrus, and Hedera Cultivars	1991	MN	Dr. Harold Pellett	Landscape Plant Development Center	<i>\$1,000</i>
Nursery Industry Analysis of Target Market Awareness, Attitudes, and Usage	1991	NE			<i>\$3,000</i>
Evaluation of Native Deciduous Azaleas for Resistance Against Azalea Lace Bug	1991	GA	Dr. S. Kristine Braman	University of Georgia	<i>\$1,500</i>

Project title	Year	State	Researchers		Funding
Germplasm Improvement Through Tissue Culture Technology	1991	OH	Dr. Lawrence R. Schreiber	Nursery Crops Research Laborator	\$2,000
Development of Sweetgum Trees Resistant to Gypsy Moth	1991	OH	Dr. Mark Lagrimini	Ohio State University	\$2,500
Influence of Growing Medium & Mycorrhizae on Nutrients in Runoff from Container Nurseries	1991	WA	Dr. Rita L. Hummel	Washington State University	\$3,000
Development of a Collar for Multiple Chemical Delivery to Container-Grown Nursery Crops	1991	VA	Dr. Bonnie Lee Appleton	Virginia Polytechnic Institute & Sta	\$2,000
Determine Financial & Physical Requirements for Estab. . & Operation of a Garden Center	1991	DE	Dr. Susan S. Barton	University of Delaware	\$3,500
Consumer Marketing Preferences of Nursery Stock	1991	KS	Dr. Houchang Khatamian	Kansas State University	\$2,500
Development of a Simple Automated Bioreactor for the Production of Taxus Plants	1991	PA	Dr. Richard N. Arteca	Pennsylvania State University	\$2,500
Scope VI of the Nursery Industry	1991		Mr. Craig Regelbrugge	Wholesale Nursery Growers of Am	\$7,000
Horticultural Distribution Seminar	1991				\$500
Maturity Dvlpmnt of Deciduous Plnts & Its Relationship to Chem. Defoliation, Cold Hardiness & Sprng Bud Break	1974	HI	Dr. Leslie H Fuchigami	Oregon State University	\$500
Properties of Container Media	1974	MA	Dr. John R. Havis	University of Massachusetts	\$500
Holding and Storage of Nursery Stock	1974	MN			\$500
Salt Tolerance of Woody Environmental Plants	1974	IL	Dr. Michael A. Dirr	University of Georgia	\$500

Project title	Year	State	Researchers		Funding
Rapid Estimation of Cold Hardiness of Woody Plants Using Electrical Impedance	1974	GA	Dr. Dean Evert	University of Georgia	\$500
Biology & Ecology of Insect Vectors of Lethal Yellowing of Coconut Palms with Emphasis on Mass Rearing	1975	FL	Dr. James Tsai	University of Florida	\$500
Shoot Tip Culture of Woody Plants	1975	WA	Dr. Wayne Loescher	Michigan State University	\$500
Indices of Full Dvlpmnt of Decid. Shd Trees Useful for Effective Chem. Defoliation & Earliest Accept. Harvest	1975	HI	Dr. Leslie H Fuchigami	Oregon State University	\$500
Eval. of Crabapple Spec, Var, & Cult as to Their Resist to Scab Cedar Apple Rust, Powdery Mildew & Fire Blight	1975	PA			\$500
Continuous Soil Pasteruization with Heat	1975	FL	Dr. Lawrence N. Shaw	University of Florida	\$500
Shipping Methods for Container Nursery Plants	1975	CT	Dr. John W. Bartok, Jr	University of Connecticut	\$500
Composed Sewage for Container Production	1975	MD			\$500
Winter Protection of Container-Grown Plants	1975	NY	Dr. George L. Good	Cornell University	\$500
Evaluation of Treated Jute & Plastic Burlaps for Nursery Sales & Marketing	1975	OH	Dr. T. Davis Sydnor	Ohio State University	\$500
Perennial Weed Control in Nursery Plantings	1975	IN	Dr. Philip L. Carpenter	Purdue University	\$500
A System for Handling Container Plants in Nursery	1976	GA	Dr. Braham P. Verma	University of Georgia	\$500

Project title	Year	State	Researchers		Funding
Evaluation of Betula Species for Resistance to the Bronze Birch Borer & Progeny Selection	1976	MN	Mr. Albert G. Johnson Mr. Michael E. Zims	Landscape Plant Development Cer University of Minnesota	\$500
Culturing Lethal Yellowing Disease-free Coconut Palms in Vitro for Vector Transmission Study	1976	FL	Dr. James Tsai	University of Florida	\$500
Evaluation & Documentation of the Oak Hybridization Project of Dr. Walter P. Cottam	1976	DC	Dr. Frank S. Santamour, Jr	USDA-ARS	\$500
Evaluation of Rooting Medias for Oxygen Content During Cutting Propagation Under Mist	1976	KY			\$500
Curative Disease Control of Crown Gall of Rose by Heat Treatment	1976	TX	Dr. Phillip F. Colbaugh	Texas A&M University	\$500
Hastening Germination of Seed of Acer griseum	1976	NJ	Dr. Elwin R. Orton, Jr	Rutgers University	\$500
Susceptibility and Resistance of Lilac Cultivars and Species to Infection by Powdery Mildew Fungus	1976	NY	Dr. Craig R. Hibben	Craig R Hibben	\$500
Materials Handling in the Nursery Industry	1976	NY			\$500
Winter Protection of Container-Grown Plants	1977	NY	Dr. George L. Good Dr. Peter L. Steponkus	Cornell University Cornell University	\$500
Rooting Cuttings of Woody Plants in Containers Under Microfoam	1977	MD			\$500
A Comparison of Winter Hardiness in Native & Cultivated Plants of Rosa, Prunus & Pyrus	1977	FL			\$500
Providing Superior Trees to the Nursery Industry	1977	TX	Attn: ANLA Contact	GIE Media	\$500

Project title	Year	State	Researchers		Funding
Effects of Fertility Level & Time of Planting on Landscape Establishment	1977	OK	Dr. Carl E. Whitcomb	Carl E Whitcomb	\$500
Cytotaxonomic-Cytochemical Studies in Cultivated Junipers	1977	IL	Attn: HRI Contact	The Morton Arboretum	\$500
Influence of Acclimatization Treatment on Foliage Plant Leaf Structure	1977	FL	Dr. Charles R. Johnson Dr. Terril A. Nell	Washington State University University of Florida	\$500
Potting Soil Sterilization for the Small Nursery Operation	1977	TX	Dr. Frank F. Willingham	Research Farms	\$500
Electron Microscopic Examination of the Deterioration of Anti-Transpirants on Evergreens	1977	KS	Dr. Frank D. Gibbons	California Polytechnic State Univer	\$500
Utilization of Waste Water Heated Greenhouse Facilities for Production of Nursery Lining Out Materials	1977	MN	Dr. Harold Pellett	Landscape Plant Development Cer	\$500
Timing of Irrigation by Use of Portable Pressure Chamber Evaluation of Plant Water Stress	1977	MN	Dr. Lawrence R. Parsons	University of Florida	\$500
Capillary Mat Watering of Container-Grown Nursery Stock	1977	OH			\$500
Control Release Herbicide for Container Nursery	1977	GA	Dr. Braham P. Verma	University of Georgia	\$500
Evaluation of Poly Films for Overwintering Nursery Crops	1977	OH			\$500
Composted Sewage Sludge as a Potting Media	1978	MD			\$500
Testing "Wooster Tube" a Method to Containerize Field- Grown Trees and Shrubs	1978	OH			\$500

Project title	Year	State	Researchers		Funding
Media Amendments for Plant Production	1978	GA	Dr. Max E. Austin	University of Georgia	\$500
Establishment & Management of Small Trees & Significant Conifers on Compacted Berm Soils	1978	NJ			\$500
Black Vine Weevil (taxus weevil) Control in Nurseries	1978	NY			\$500
Efficiency of Nitrogen Applications in Container-Grown Woody Plants	1978	AL	Dr. Charles H. Gilliam	Auburn University	\$500
Timing of Soluble Fertilizer Applications to Woody Nursery Crops	1978	VA	Dr. Robert D. Wright	Virginia Tech (VPI&SU)	\$500
Preliminary Work in Somatic Hybridization of America Elm	1978	CA	Dr. Keith Redenbaugh	Botanix	\$500
Critical Effects of Fertility on Root Growth	1978	IN	Dr. David F. Hamilton	Purdue University	\$500
Effect of Root-Inhibiting Herbicides on Root Growth of Container Nursery Stock	1978	IN	Dr. Philip L. Carpenter Dr. David F. Hamilton	Purdue University Purdue University	\$500
Microbial Pesticides for the Nursery and Urban Forestry	1978	NY	Dr. Warren T. Johnson	Cornell University	\$500
An Evaluation of Container Design for Nursery Liner Production	1978	AR	Dr. Gerald L. Klingman	University of Arkansas	\$500
Relationship of Fall Watering Practices to Winter Survival of Landscape Plants	1978	MN	Dr. Harold Pellett	Landscape Plant Development Cer	\$500
Development of Techniques for Production of Tap Rooted Tree Species	1978	MN	Dr. Harold Pellett	Landscape Plant Development Cer	\$500

Project title	Year	State	Researchers		Funding
A Comparison of Winter Hardiness in Native & Cultivated Plants of Vaccinium & Rhododendron	1978	FL			\$500
Chemical Control of Rhododendron Dieback	1979	NC	Dr. D. Michael Benson	North Carolina State University	\$500
Field Evaluation of Newly Imported Parasites for Control of Birch Leafminer	1979	MA	Dr. Roy Van Driesche	University of Massachusetts	\$500
Citizens Awareness of Street Trees in a Central Business District: Norwich, Connecticut, Part III	1979	PA	Dr. Glenn B. Geer	Temple University	\$500
Effects High Media Temperatures on Photosynthesis and Plant Water Potential	1979	FL	Dr. Dewayne L. Ingram Dr. Charles R. Johnson	University of Kentucky Washington State University	\$500
The Utilization of Systemic Insecticides in Trickle Irrigation	1979	OH			\$500
Determination of the Cause of An Unidentified Trunk Canker of White Dogwood (Cornus florida)	1979	VA			\$500
Essentiality of Mycorrhizal Fungi for Landscape Plant Establishment	1979	KY	Dr. James W. Hendrix Dr. Dale M. Maronek	University of Kentucky Oklahoma State University	\$500
Acclimatization of Temperate Plants from Tissue Culture to Field	1979	HI	Dr. Kim E. Brainerd Dr. Leslie H Fuchigami	Oregon State University Oregon State University	\$500
Screening Cold Hardiness of Native Azalea E-Rhododendron Seedlings	1979	VT	Dr. Norman E. Pellett	University of Vermont	\$500
Cuticle & Leaf Surface Char. Related to the Effectvnsns of Compounds Applied to the Foliage of Envirnmntl Plnts	1979	TX	Dr. David William Reed	Texas A&M University	\$500

Project title	Year	State	Researchers		Funding
Evaluation of Mycorrhizal Dependency in Woody Landscape Plants	1979	OH	Dr. L. H. Rhodes	Ohio State University	\$500
Computer Analysis of Containerized Nursery Stock Production Costs	1979	OH			\$500
Combining Preemergent Herbicides for Better Weed Control in Field Grown Nursery Stock	1979	OK	Dr. Carl E. Whitcomb	Carl E Whitcomb	\$500
Transmission of Lethal Yellowing of Enviromental Palms by Insect Vector	1979	FL	Dr. James Tsai	University of Florida	\$500
Detection and Control of Mineral Element Deficiencies of Woody Landscape Plants	1979	OH			\$500
Bionomics, Behavior, & Control of Bronze Birch Borer	1980	OH	Dr. David G. Nielsen	Ohio Agr Research & Dev Center	\$1,000
Cytogenetics, Breeding, and Evaluation of Malus	1980	DC	Dr. Paul E Read	University of Nebraska	\$1,000
Increasing the New University of Minnesota Hardy Azaleas by Tissue Culture	1980	MN	Dr. Paul E Read	University of Nebraska	\$1,000
Pest Management of Clearing Borers Infesting Woody Ornamentals	1980	KY	Dr. Daniel A. Potter	University of Kentucky	\$1,000
Protecting Urban Trees from Environmental Stress	1980	OH	Dr. Bruce R. Roberts	Ohio Wesleyan University	\$1,000
Accelerating the Growth of Taxus cuspidata capitata with Selected Mycorrhizae	1980	PA	Dr. Larry J. Kuhns	Pennsylvania State University	\$500
Screening Prgm to Eval. Juniper Cult. to Inoculatns w/ Cedar-apple, Cdr-hawthorne, Cdr-quince Rusts & P.B.F.	1980	KS	Dr. Frederick J. Crowe	Kansas State University	\$500

Project title	Year	State	Researchers	Funding
Capillary Irrigation for Nursery Containers	1980	MA	Dr. John R. Havis	University of Massachusetts \$500
Dormancy and Requirements for Growth in Rhododendron Rooted Cuttings	1980	MA	Dr. John R. Havis	University of Massachusetts \$500
Cold Hardiness of Southeastern Native and Ornamental Taxa	1980	MN	Dr. Michael A. Dirr Dr. Harold Pellett	University of Georgia Landscape Plant Development Cer \$500
Chemical Basis of Root Weevil Resistance in Rhododendron	1980	WA	Dr. Robert P. Doss	USDA-ARS \$500
Critical Effects of Fertility on Root Growth of Landscape Plants	1980	IN	Dr. David F. Hamilton	Purdue University \$500
Critical Effects of Light Intensity on Plant Growth	1980	IN	Dr. David F. Hamilton	Purdue University \$500
Effect of Acid or Base on Root Initiation in Woody Plants	1980	MD	Dr. Dennis P. Stimart	University of Wisconsin \$500
Seed Dormancy of Trifoliolate Maples	1980	MD	Dr. Dennis P. Stimart	University of Wisconsin \$500
Importance of Some Mycorrhizal Fungi in Establishment and Performance of Tissue Culture Explants	1980	OH	Dr. Dale M. Maronek	Oklahoma State University \$500
Nursery Management with Micro Computers	1980	SC		\$500
Propagation of Ericaceous Plants by Regeneration of Adventitious Shoots from Leaf Discs	1980	RI	Dr. William R. Krul	University of Rhode Island \$500
Selection, Propagation & Culture of Native & Exotic Perennial Plants for Use in the Chihuahuan Desert Area	1980	TX	Attn: ANLA Contact	University of Arizona \$500

Project title	Year	State	Researchers		Funding
Tissue Culture Propagation of Perennial Plants	1980	PA	Dr. Chiko Haramaki	Pennsylvania State University	\$500
Investigations to Control Canker Diseases on Nursery Trees	1982	MN	Dr. Robert A. Blanchette	University of Minnesota	\$2,000
Measuring Cold Hardiness by Differential Thermal Analysis	1982	CO	Dr. Steve Wallner	Colorado State University	\$1,500
The Effect of Soil Compaction on Root Growth and Mycorrhizal Development of Woody Plants in Urban Soils	1982	MI	Dr. Gary W. Watson	The Morton Arboretum	\$1,500
Weed Control In Groundcovers	1982	CA	Dr. Robert P. Rice, Jr	California Polytechnic State Univer	\$1,000
Elimination of Plant Pathogens with Halogens	1982	VA	Dr. George H. Lacy	Virginia Polytechnic Inst & State U	\$1,000
Incorporation of Rapid Planting Techniques into Nursery Prod.; Elimination of Manual Shearing of Nursery Crops	1982	WI	Dr. Brent H. McCown	University of Wisconsin	\$1,000
Evaluation of Media and Mycorrhizal Fungi on Establishment of Tissue Cultured Woody Plants	1982	FL	Dr. Charles R. Johnson	Washington State University	\$1,000
Oxyfluorfen (Goal) as a Broad Spectrum Herbicide for Preemergence Weed Control in Nursery Crops	1982	CA	Mr. Clyde L. Elmore	University of California	\$1,000
Develop and Publish a Windbreak Handbook	1982	VT			\$1,000
Monitoring Seasonal Populations of Pseudomonas Syringae on Nursery Crops to Develop Predictive Disease Control	1982	OR	Dr. Larry W. Moore	Oregon State University	\$1,000
Evaluation of Genetic Resistance to Fireblight in Malus	1982	IL	Dr. Schuyler S. Korban	University of Illinois	\$1,000

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Elimination of Virus Diseases in Nursery Production of Grapes	1982	VA	Dr. Richard E. Veilleux	Virginia Polytechnic Inst & State U \$1,000
Epidemiology and Control of Phytophthora Collar Rot of Sugar Maple	1982	MN	Dr. Michael J. Drilias	University of Wisconsin \$1,000
Effect of Shoot Pruning on the Establishment of Transplanted Shade Trees	1982	FL	Dr. Rita L. Hummel Dr. Charles R. Johnson	Washington State University Washington State University \$1,000
Identification and Development of Lonicera taxa Resistant to the Honeysuckle Aphid	1982	MN	Ms. Laurie Mainquist Dr. Harold Pellett	University of Minnesota Landscape Plant Development Cer \$1,000
Eval. of Flowering Crabapples as to Their Resistance to Scab, Cedar Apple Rust, Fire Blight and Powdery Mildew	1982	RI		\$1,000
Availability of Selected Micronutrients in Soil Incorporated Micronutrient Fertilizers Overtime	1982	FL	Mr. Timothy K. Broschat	University of Florida \$1,000
In Vitro Propagation of Endangered Plant Species	1981	FL		\$1,000
Minimum Nutrient Levels for Optimal Growth of Container Grown Nursery Plants	1981	VA	Dr. Robert D. Wright	Virginia Tech (VPI&SU) \$1,000
The Qual. of Unrooted Cuttngs in Storage & the Incidnce of Botrytis Blight as Affected by N & Ca Stk Plnt Nutri	1981	IL	Dr. Barry A. Eisenberg	California Polytechnic State Univer \$1,000
The Use of Ionic & Non-Ionic Surfactants to Control Rose Aphids	1981	CA		\$1,000
The Utilization of Tissue Culture Techniques to Produce Optimum Liners for the Container and Field	1981	IL		\$500

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Optimal Tree Location to Maximize Shading Benefits on Residential Buildings	1981	FL	Dr. Dennis E. Buffington	Pennsylvania State University	\$500
The Role of State Nursery Assns in the Development and Revision of Curricula at Post Secondary Institutions	1981	ME	Dr. Richard C. Churchill, Jr	Southern Maine Technical College	\$500
Evaluation of Shade Tree Clones for Adaptability in the Upper Midwest	1981	MN	Ms. Laurie Mainquist Dr. Harold Pellett	University of Minnesota Landscape Plant Development Cer	\$500
Coordination of Root and Shoot Growth in Rhododendrons	1981	RI	Dr. Richard J. Hull	University of Rhode Island	\$500
Virus Disease of Dogwood	1981	TN	Dr. M. R. McLaughlin	USDA ARS	\$500
Prevalence, Significance, and Control of Pseudomonas syringae on Shade Tree Nursery Crops	1981	OR	Dr. Larry W. Moore	Oregon State University	\$500
Interactions of Stock Plnt Light Intensity & Harvesting Date on the Rooting of Cuttings of Selected Woody Plnts	1981	IL	Dr. David F. Hamilton	Purdue University	\$500
Use of Outdoor Plant Materials in Energy Conservation Within Buildings	1981	SC	Dr. Adrienne G. Graves	Clemson University	\$500
Field Survival of Tissue Culture Propagated Amelanchier laevis	1981	OH	Dr. R. Daniel Lineberger	Texas A&M University	\$500
Water Relations of Transplanted Container Soils	1981	IL	Dr. L. Art Spomer	University of Illinois	\$500
Moss as a Carrier of Mycorrhiza for Use by the Nursery Industry	1981	OR	Attn: ANLA Contact	USDA-ARS	\$500

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Investigations of Potential Tree Wrap Materials	1981	MN	Dr. Margaret Litzow Dr. Harold Pellett	Landscape Plant Development Cer Landscape Plant Development Cer	\$500
Malus (Crabapple) Breeding and Evaluation	1981	DC			\$500
Identification of Willow Rooting Substance	1981	OH			\$500
Investigation of the Development of Trunk Canker of White Flowering Dogwood	1983	VA	Dr. George H. Lacy	Virginia Polytechnic Inst & State U	\$1,500
Tip Blight of Blue Spruce	1983	WI	Dr. Gayle L. Worf	University of Wisconsin	\$1,500
Transmission of Honey Locust Canker Disease	1983	MN			\$1,500
Variation, Genetic Control & Inheritance of Resistance to Fireblight in Malus	1983	IL	Dr. Schuyler S. Korban	University of Illinois	\$1,500
Biological Control of Phytophthora Species Causing Root Rot of Woody Plants	1983	VA			\$1,000
Ca, Mg and pH Requirements of Container Grown Nursery Plants	1983	VA	Dr. Robert D. Wright	Virginia Tech (VPI&SU)	\$1,000
Chemical Fingerprinting for Patented Nursery Crops	1983	FL			\$1,000
Economic Feasibility of Mycorrhizal Inoculation for Nursery Use	1983	IN	Dr. Stephen D. Verkade	Clemson University	\$1,000
Evaluation of a Parasitic Nematode to Control Japanese Beetle	1983	NJ	Dr. Randy Gaugler	Rutgers University	\$1,000
Evaluation of Landscape Plants for Kansas and the Great Plains	1983	KS	Dr. David L. Hensley	University of Arkansas	\$1,000

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Genetic Tolerance of Citrus Rootstocks to Preemergence Herbicides	1983	FL	Dr. Megh Singh	University of Florida CREC	<i>\$1,000</i>
Investigations of the Pine Wood Nematode in Nursery Grown Pines	1983	MN	Dr. Robert A. Blanchette	University of Minnesota	<i>\$1,000</i>
Producing Shade Tree Liners in Citrus Containers	1983	MD			<i>\$1,000</i>
Propagating Difficult-to-Root Tree Species Using Softwood Cutting Etiolation	1983	NY	Dr. Nina Bassuk	Cornell University	<i>\$1,000</i>
Relative Tolerance of Pine Foliage to Acid Precipitation Injury	1983	MT	Mr. Peter M. Rice	University of Montana	<i>\$1,000</i>
Response of Liners to Pruning at Time of Potting	1983	AL	Dr. Charles H. Gilliam	Auburn University	<i>\$1,000</i>
Revise the Grower & Landscape Sections of the HRI Uniform Charts of Accounts Publication	1988	MD			<i>\$2,000</i>
HRI Operating Cost Survey - 1988	1988				<i>\$1,000</i>
Nitrate Nitrogen Loss from Container Nurseries: A Seven State Cooperative Project	1990	VA	Dr. Robert D. Wright	Virginia Tech (VPI&SU)	<i>\$2,000</i>
	1990	NC	Dr. Ted E. Bilderback	North Carolina State University	<i>\$2,000</i>
	1990	NJ	Mr. James R. Johnson	Rutgers Cooperative Extension	<i>\$2,000</i>
	1990	OH	Dr. Randall H. Zondag	Ohio State University	<i>\$2,000</i>
	1989	AL	Dr. Charles H. Gilliam	Auburn University	<i>\$2,000</i>
	1990	WA	Dr. Rita L. Hummel	Washington State University	<i>\$2,000</i>

Project title	Year	State	Researchers		Funding
Ornamental Herbicide Movement in Runoff & Surface Water	1992	SC	Dr. Ted Whitwell	Clemson University	<i>\$1,500</i>
Increasing the Rootability of Stem Cuttings from Difficult-to-root Tree Species	1992	MN			<i>\$1,000</i>
Cuttage Propagation of an Aesculus Landscape Tree Clone	1992	MN			<i>\$1,000</i>
Computer-controlled Drip Irrigation of Greenhouse and Nursery Crops	1992	CA	Attn: HRI Contact	University of California	<i>\$2,000</i>
Determining Herbicide Leachate from Various Container Media	1992	CO			<i>\$1,000</i>
Use of RFLP's for the Identification of Red Maple Cultivars	1992	GA	Dr. Michael A. Dirr	University of Georgia	<i>\$2,000</i>
Effect of Altered Irrigation & Fertilizing Regimes on Groundwater Pollution & Growth & Dev. of Cont. Plants	1992	CA	Attn: HRI Contact	Iowa State University	<i>\$2,500</i>
Propagating Chestnut Blight Resistant American Chestnut	1992	MI	Dr. Dennis W. Fulbright	Michigan State University	<i>\$3,000</i>
Influence of Growing Medium & Mycorrhizae on Nutrients in Runoff from Container Nurseries	1992	WA	Dr. Rita L. Hummel	Washington State University	<i>\$3,500</i>
Genetic Engineering of Birch to Improve Borer Resistance	1992	ID	Dr. Robert R. Tripepi	University of Idaho	<i>\$4,000</i>
Evaluating Paper Sludge as a Substitute for Peat in Container Media	1992	ID	Dr. Robert R. Tripepi	University of Idaho	<i>\$2,850</i>

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Evaluation of Green Ash Susceptability to the Mycoplasmal Disease, Ash Yellows	1992	NY	Dr. Thomas Whitlow	Cornell University	<i>\$4,000</i>
Development of Virus Resistant Nursery Plants	1992	IL	Dr. Schuyler S. Korban	University of Illinois	<i>\$5,000</i>
IPM of Azalea Lace Bug Using Biocontrol and Biorational Pesticides	1992	NC	Dr. Christine A. Nalepa	North Carolina Dept of Agriculture	<i>\$1,500</i>
Development of a Rapid Means of Sex Determination in Seedlings of Dioecious Woody Plants	1992	NJ	Attn: HRI Contact	Rutgers University	<i>\$3,000</i>
Consumer Marketing Preferences of Nursery Stock	1992	KS	Dr. Houchang Khatamian	Kansas State University	<i>\$4,000</i>
Rejuvenation of Conifer Meristems in Relation to Clonal Propagation	1992	MN	Dr. Barry Goldfarb	University of Minnesota	<i>\$1,000</i>
Effectiveness of Spun Bonded Polypropylene Fabrics for Winter Protection of Cont. Grown Herbaceous Perennials	1992	OH	Dr. Steven M. Still	Ohio State University	<i>\$1,500</i>
Cultivar Selections for Urban Landscape IPM	1992	KY	Dr. Monte P. Johnson	University of Kentucky	<i>\$2,000</i>
Compost Container Amendment: Reducing Water and Fertilizer Usage	1992	NC	Dr. Stuart L. Warren	N C State University	<i>\$2,000</i>
Reducing Runoff from Container Nursery Productn Areas Using Computer Based Irrigation Management	1992	VA	Dr. Ronald Walden	Hampton Roads AREC	<i>\$1,000</i>
Utilizing Recycled Landscape Wastes	1992	OH			<i>\$3,000</i>
Split Interval Irrigation Evaluation on Water Use and Run-off Effluent in Container Nursery Production	1992	AL	Dr. Charles H. Gilliam	Auburn University	<i>\$4,750</i>

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Dogwood Anthracnose and Environmental Stress	1992	TN	Dr. Robert Auge	University of Tennessee	\$3,000
The Effectiveness of Industry Trade Shows as a Marketing Tool for Ornamental Plants	1992	FL	Dr. John J. Haydu	University of Florida IFAS	\$2,000
Development of Stress Tolerant Ornamental Pear Cultivars	1992	MN	Dr. Harold Pellett	Landscape Plant Development Cer	\$2,000
Effect of Growth Regulators on Water Use & Establishment of Container-grown Plants	1992	GA	Dr. John M. Ruter	University of Georgia	\$2,000
Developing and Testing an Automated Container Irrigation System	1992	OH	Dr. Daniel K. Struve	Ohio State University	\$2,000
Biological Control of Hemlock Woolly Adelgid in Nursery & Landscape Plantings	1992	CT			\$5,000
Suppressiveness of Sphagnum Peat to Pythium and Rhizoctonia Diseases	1992	OH	Dr. Harry A. J. Hoitink	Ohio State University	\$4,000
Examining Potential for Use of Grass Filter Strips to Reduce Nitrate & Phosphate Runoff from Cont. Nurseries	1992	NJ	Mr. James R. Johnson	Rutgers Cooperative Extension	\$3,000
Ornamental Plants: An Environmental Marketing Opportunity	1992	GA	Dr. Mel Garber	University of Georgia	\$3,000
Plant Material Trends as Viewed by Landscape Architects	1992	GA	Dr. Mel Garber	University of Georgia	\$3,000
Timothy Bigelow Scholarship(s)	1992	MA	Mr. Craig Regelbrugge	Wholesale Nursery Growers of Am	\$4,000
SCOPE of the Nursery Industry	1992	DC	Mr. Craig Regelbrugge	Wholesale Nursery Growers of Am	\$4,000

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Watering Bans Brochure Revision	1992	DC	Mr. Craig Regelbrugge	Wholesale Nursery Growers of Am	\$2,000
Horticultural Distribution (Rewholesaling) Survey	1992	DC	Mr. Craig Regelbrugge	Wholesale Nursery Growers of Am	\$1,900
People-Plant Council	1992	VA	Ms. Diane Relf	People-Plant Council	\$1,000
Operating Cost Study	1992	DC	Mr. Craig Regelbrugge	Wholesale Nursery Growers of Am	\$1,000
Stress Tolerance and Tatter Resistance of Sugar Maple Cultivars	1993	KS			\$2,000
Evaluation of Flowering Cherry & Crabapple Taxa for Natural Resistance to Eastern Tent Caterpillar	1993	NC	Dr. Thomas G. Ranney	North Carolina State University	\$1,000
People-Plant Council, Linking Horticulture with Human Well-Being	1993	VA	Ms. Diane Relf	People-Plant Council	\$1,000
Controlling Tissue Proliferation & Variation in Tissue- cultured Rhododendron	1993	CT	Dr. Mark H. Brand	University of Connecticut	\$2,000
Cultural Controls for Phomopsis Blight of Junipers	1993	ONT	Dr. Tom Hsiang	University of Guelph	\$3,000
Stem Cutting Propagations of Aesculus Parviflora & Aesculus Pavia Utilizing Glycol Solvents	1993	NC	Dr. Richard E. Bir	North Carolina State University	\$1,500
Improving Transplant Success by Predicting Seasonal Root Flushes	1993	NY	Dr. Nina Bassuk	Cornell University	\$1,000
Genetic Engineering of Birch to Improve Borer Resistance	1993	ID	Dr. Robert R. Tripepi	University of Idaho	\$2,000
DNA Analyses of the Dogwood Anthracnose Fungus - <i>Discula destructiva</i>	1993	TN	Dr. Robert N. Trigiano	University of Tennessee	\$1,500

Project title	Year	State	Researchers		Funding
The Impact of Adding Plants to a Stressful Setting	1993	WA	Ms. Virginia Lohr	Washington State University	<i>\$1,750</i>
Spruce Spider Mite Activity and Distribution on Nursery Plants	1993	OH	Dr. David J. Shetlar	Ohio State University	<i>\$2,500</i>
Variety Identification of Rhododendron by DNA Finger- printing	1993	MI	Mr. A. Lane Rayburn, III	University of Illinois	<i>\$3,000</i>
Biological Control of Sweetpotato Whitefly Infesting Poinsettias	1993	CA	Dr. Michael P. Parrella	University of California	<i>\$3,250</i>
Sel. of Amur mackia genotypes for Rapid Growth, Stress Resistance, & Efficiency of Nitrogen-fixing Symbioses	1993	IA	Dr. William R. Graves	Iowa State University	<i>\$1,500</i>
Determining Elasticities of Demand for Price Determination in Marketing Nursery Stock	1993	KY			<i>\$3,000</i>
Reducing Fertilizer Runoff Through Timed Nitrogen Applications of Episodic Nursery Crops	1993	SC	Dr. Mary C. Halbrooks	Mass Hort Society	<i>\$2,500</i>
Development of Stress Tolerant Small Trees	1993	MN	Dr. Harold Pellett	Landscape Plant Development Cer	<i>\$3,000</i>
Use of Simulation Modelling to Optimize Fertilizer Placement in Large Containers	1993	GA	Dr. John M. Ruter	University of Georgia	<i>\$3,500</i>
Evaluating Paper Sludge as a Substitute for Peat in Container Media	1993	ID	Dr. Robert R. Tripepi	University of Idaho	<i>\$3,000</i>
Interaction of Herbicides and Mulches on Landscape Weed Control	1993	VA	Dr. Jeffrey F. Derr	Virginia Polytechnic Inst & State U	<i>\$2,500</i>
Biological Control of Fire Blight in Rosaceae	1993	IL	Dr. Schuyler S. Korban	University of Illinois	<i>\$5,000</i>

Project title	Year	State	Researchers		Funding
Engineering Virus Resistance in Nursery Plants	1993	IL	Dr. Schuyler S. Korban	University of Illinois	\$5,000
Breeding Cold Hardy, Disease Resistant Shrub Roses	1993	MN	Dr. Harold Pellett	Landscape Plant Development Cer	\$2,000
Strategy to Reduce Fertilizer Runoff from Container-Grown Crops	1993	VA	Dr. Alexander X. Niemiera	Virginia Polytechnic Inst & State U	\$2,000
Targeting Seasonal Development of Landscape Insect Pests Using Flowering Plant Phenology in the Southeast	1993	KY	Mr. Guy Mussey	University of Kentucky	\$1,250
Suppression of two insect pests with two nematode species	1993	CA	Dr. Harry K. Kaya	University of California	\$2,250
Nutrient Losses from Commercial Fertilizers and Compost	1993	NC	Dr. Stuart L. Warren	N C State University	\$3,000
Identifying Important Factors That Influence Consumer Purchases of Nursery Products	1993	NC	Dr. Charles D. Safley	North Carolina State University	\$4,000
The Contribution of Landscaping to Housing Prices	1993	SC	Dr. Mark S. Henry	Clemson University	\$3,000
Reduce Leaching with Minimal Nitrogen and Water Applicatons	1993	FL	Dr. Thomas Yeager	University of Florida	\$4,250
Timing of Fertilizer Applications for Reduced Nitrogen Runoff	1993	FL	Dr. Thomas Yeager	University of Florida	\$3,000
Protection of Nursery Crops from Plant Pathogens with Moisturin	1993	OR	Dr. Larry W. Moore	Oregon State University	\$3,000
Resistance of Flowering Crabapple & Rose Cultivars to Japanese Beetles	1993	KY	Dr. Daniel A. Potter	University of Kentucky	\$2,000

Project title	Year	State	Researchers	Funding
Introduction of New Plants to the Nursery Trade	1993	NE	Dr. Arthur H. Ode, Jr	The Nebraska Statewide Arboretur \$2,000
Factors Influencing Taxane Concentrations in Ornamental Cultivars of Taxus	1993	CT	Dr. Mary Jane Incorvia Mattin	Connecticut Agricultural Experimer \$4,000
Breeding Resistance to Dogwood Anthracnose	1993	TN	Dr. Effin T. Graham	University of Tennessee \$3,000
Biological Control of Azalea Lace Bug by Anagrus sp.	1993	GA	Dr. S. Kristine Braman	University of Georgia \$1,000
Horticultural Distribution	1993	DC	Mr. Craig Regelbrugge	Wholesale Nursery Growers of Am \$4,750
SCOPE of the Nursery Industry	1993	DC	Mr. Craig Regelbrugge	Wholesale Nursery Growers of Am \$20,000
Documentation of Rose Cultivars Using DNA Analysis	1993	PA	Dr. Richard Craig	Pennsylvania State University \$1,000
Timothy Bigelow Scholarship[s]	1993	DC	Mr. Craig Regelbrugge	Wholesale Nursery Growers of Am \$5,000
Naturally Occuring Insecticides and Allelochemicals in Rosaceous Trees	1994	NC	Dr. Thomas G. Ranney	North Carolina State University \$10,000
Best Management Strategies for Improved Water Quality at Container Nursery Facilities	1994	AL	Dr. Charles H. Gilliam Dr. Kenneth M. Tilt	Auburn University Auburn University \$5,000
Weed Control Strategies for Herbaceous Perennials	1994	MN	Dr. James B. Calkins	University of Minnesota \$4,500
Cold Hardiness Database	1994	GA	Dr. Michael A. Dirr Dr. Orville M. Lindstrom	University of Georgia University of Georgia \$4,000
Breeding Multiclonal Series of Resistant Red-Tip Photinia x fraseri	1994	DC	Dr. Michael A. Dirr	University of Georgia \$3,000

Project title	Year	State	Researchers	Funding	
Evaluation of Pulse Irrigation and Fertilizer Method	1994	AL	Dr. Joe Eakes Dr. Charles H. Gilliam Dr. Gary J. Keever	Auburn University Auburn University Auburn University	\$6,000
Minimizing Non-Target Herbicide Losses	1994	AL	Dr. Charles H. Gilliam Dr. Gary J. Keever	Auburn University Auburn University	\$3,000
Organic Waste Media For In-Ground Container Shade Tree Culture	1994	ONT	Dr. Calvin Chong Mr. Glenn Lumis	Horticultural Research Inst of Onta University of Guelph	\$2,000
Survivability of Bracted Cornus Species, Cultivars and Interspecific Hybrids in the Urban Landscape	1994	DC	Dr. Edward J. Garvey	USDA-ARS	\$3,000
Evaluation of Antimicrobial Proteins for Use in Controlling Diseases in Chestnut	1994	CO	Dr. Harrison G. Hughes	Colorado State University	\$2,000
Anatomy and Morphology of Tissue Proliferation in Rhododendrons	1994	GA			\$4,000
The Retail Garden Center Environment and its Effect on Consumer Shopping	1994	NE	Attn: HRI Contact Dr. Raymond Marquardt	University of Nebraska-Lincoln University of Nebraska	\$10,000
Ash Yellows Disease Suppression in Susceptible Scions on Tolerant Rootstocks	1994	NY	Dr. Helen Griffiths Dr. Wayne A. Sinclair	Cornell University Cornell University	\$3,000
Understanding Species Differences in Tolerating Compacted Soil Conditions	1994	NY	Dr. Nina Bassuk Ms. Susan Day	Cornell University Virginia Polytechnic Institute & SU	\$1,000
Developing a Soil Planting Medium for Urban Trees to Maximize Rooting Volume Under Pavement	1994	NY	Dr. Nina Bassuk	Cornell University	\$6,000
Developing Phenology Forecasting Models for Nursery and Landscape Pests	1994	MN	Attn: HRI Contact	University of Minnesota	\$5,000

Project title	Year	State	Researchers	Funding
Factors Influencing Azalea Lace Bug Distribution: Natural Enemies and Habitat Diversity	1994	MD	Ms. Paula Leddy Dr. Michael J. Raupp	University of Maryland University of Maryland <i>\$3,000</i>
Pulse Irrigation: Effects on Plant Growth and Water and Nutrient Efficiency	1994	NC	Dr. Ted E. Bilderback Dr. Stuart L. Warren	North Carolina State University N C State University <i>\$10,000</i>
RAPD Markers for Fingerprinting Cultivars and Detecting Tissue Culture Variants of Blueberry, Azalea & Rhodos.	1994	MD	Dr. Lisa Rowland Dr. Richard H. Zimmerman	USDA ARS Fruit Lab USDA-ARS <i>\$3,000</i>
The Effect of Rate and Timing of Nitrogen Fertilization on Azalea Lace Bug Injury to Azalea	1994	MD	Dr. Michael J. Raupp	University of Maryland <i>\$2,000</i>
Evaluation of Cultivars and Seed Sources of Trees for Drought Tolerance	1994	MN	Dr. Steve McNamara Dr. Harold Pellett	University of Minnesota Landscape Plant Development Cer <i>\$2,000</i>
Development of an in Vitro Resistance Selection Protocol for Dogwood to the Antracnose Fungus	1994	SC	Dr. Frank Tainter	Clemson University <i>\$4,000</i>
Growth of Nursery Plants Produced in Varying Rates of Yard Waste Compost	1994	OH		<i>\$10,000</i>
Genetic Mapping of Blackspot Resistance in Roses	1994	SC	Mr. Sriyani Rajapakse	Clemson University <i>\$3,000</i>
Propagation and Replicated Field-Plot Establishment of American Elm Clones	1994	DC	Dr. Alden Townsend	USDA-ARS <i>\$2,000</i>
Consumer Selection of Garden Center Type: Conventional vs Mass Merchandiser	1994	VA	Dr. Alexander X. Niemiera Dr. Kenneth E. Stone	Virginia Polytechnic Inst & State U Iowa State University <i>\$3,000</i>
Establishing Resistance to Dogwood Anthracnose, In Vitro and In Viva	1994	TN	Dr. Effin T. Graham	University of Tennessee <i>\$8,000</i>

Project title	Year	State	Researchers	Funding	
Minimum Fertilizer and Irrigation Input System for Container-Grown Plants	1994	CA	Attn: HRI Contact	Iowa State University	\$4,000
The Persistence of the Fungicide Propiconazole in Treated Trees	1994	TX	Dr. David Appel	Texas A&M University	\$5,000
Screening Out Bedding Plant and Propagation House Pests	1994	NC	Dr. James R. Baker	North Carolina State University	\$2,000
Biological Control of the Banded Ash Borer (<i>Podesia aureocincta</i>) using Nematodes	1994	NJ	Ms. Deborah Smith-Fiola, M.	Rutgers Cooperative Extension	\$2,500
The Effect of Irrigation Water Quality and Fertilizer on pH, Calcium, and Magnesium Mgt. of Peat Based Media	1994	MI			\$3,000
Greenhouse Trials: Fungi for Management of Thrips and Whiteflies	1994	VT	Dr. Michael Brownbridge Dr. Bruce L. Parker	University of Vermont University of Vermont	\$10,000
Effectiveness of Foam Inserts and Copper in Reducing Container Heat Stress	1994	AL	Dr. Joe Eakes Dr. Charles H. Gilliam Dr. Gary J. Keever	Auburn University Auburn University Auburn University	\$5,000
Insects that Feed on Trees and Shrubs, New Illustrations and Life-Cycle Information	1994	NY	Dr. Warren T. Johnson	Cornell University	\$2,000
Project Concept for a Study to Analyze the Attitude and Behavior of Nursery Product Consumers	1994	IL			\$5,000
Horticulture Distribution Center Customer Survey	1995	DC	Mr. Craig Regelbrugge	Wholesale Nursery Growers of Am	\$5,000
Evaluation of Control Tactics for Minimizing White Grub Infestations in Nurseries	1995	OH	Dr. David G. Nielsen	Ohio Agr Research & Dev Center	\$15,000

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Consumer Perceptions of Garden Center Product and Service Quality	1995	AL	Mr. Jay Hudson	Auburn University	\$5,000
An Investigation into the Causes and Prevention of Tissue Proliferation of Rhododendron	1995	NY	Dr. Kenneth Mudge	Cornell University	\$6,500
Screening Woody Plants for Alkalinity Tolerance	1995	NY	Dr. Nina Bassuk	Cornell University	\$5,000
Identification of Traits Linked to Winter Hardiness of Forsythia	1995	IN	Dr. Edward N. Ashworth	Purdue University	\$2,000
Pollination Mechanisms and Pollen Storage Techniques in Cornus florida	1995	TN	Dr. Effin T. Graham	University of Tennessee	\$5,000
Water and Fertilizer Use Efficiency of Plants Grown in Pot-in-Pot Production Systems	1995	GA	Dr. John M. Ruter	University of Georgia	\$3,500
Effect of Using Processed Recycled Newspaper as a Container Growing Medium Component on Plant Quality and Growth	1995	OK	Ms. Janet C. Cole	Oklahoma State University	\$2,500
Impact of Nitrogen Management Practices in the Nursery on Plant Performance and Establishment in the Landscape	1995	NJ	Dr. Raul I Cabrera	Texas A&M University	\$4,000
Effect of Irrigation Volume and Cyclic Irrigation on Nutrient Efficacy, Water Efficiency and Plant Growth	1995	NC	Dr. Ted E. Bilderback Dr. Stuart L. Warren	North Carolina State University N C State University	\$5,000
Reduced Leaching Fractions: Effects on Water Efficiency, Nutrient Efficacy, and Plant Growth	1995	NC	Dr. Stuart L. Warren	N C State University	\$7,500
Can Humates Reduce Fertilizer Use in Nursery Crops	1995	GA	Dr. John M. Ruter Dr. Timothy J. Smalley	University of Georgia University of Georgia	\$2,500

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Cultural Control for Juniper Tip Blight	1995	ONT	Dr. Tom Hsiang	University of Guelph \$5,000
Survivability & Post-Stress Performance of Selected Container-Grown Nursery Stock to Cold Temperatures	1995	MI	Ms. Jennifer Dwyer	Michigan State University \$3,000
Development of Stress Tolerant Trees	1995	MN	Dr. Harold Pellett	Landscape Plant Development Center \$5,000
Controlling Root Distribution and Reducing Irrigation H ₂ O Requirement through Fert Practice, Irr Tech & Mgt & Mulc	1995	NJ	Dr. Raul I Cabrera Dr. Craig Storlie	Texas A&M University Rutgers University \$9,000
Dev of Molecular Markers for Blackspot Resistance in Roses (Continuation of research funded by HRI in 1994)	1995	SC	Mr. Sriyani Rajapakse	Clemson University \$4,500
Effect of Biorational Insecticides on Natural Enemies of Woody Landscape and Nursery Plant Insect Pests	1995	IL	Dr. Fredric D. Miller, Jr	Dr Fredric D Miller \$2,000
Use of Phytochrome Gene to Dwarf Holly by Genetic Engineering	1995	MD	Dr. Harry Jan Swartz	University of Maryland \$5,500
Use of Natural, Plant-Derived Fumigants for Control of the Black Vine Weevil	1995	ID	Mr. J P McCaffrey Dr. Robert R. Tripepi	University of Idaho University of Idaho \$8,500
Evaluating the Effectiveness of Low Light During Rooting of Difficult-to-Root Woody Plants	1995	PA	Dr. Charles W. Heuser Dr. Kim Steiner Mr. Francis Whitham Dr. James Zaczek	Pennsylvania State University Pennsylvania State University Pennsylvania State University Pennsylvania State University \$3,500
Dev of Sampling-Monitoring Methods for Improved Timing of Pest Mgt Applications against Borers in Tree Nurseries	1995	SC	Dr. David R. Alverson	Clemson University \$3,000

Project title	Year	State	Researchers		Funding
Embryo Reescue to Enable Hybridization Success with Wide Crosses	1995	MN	Dr. Harold Pellett Dr. Carol D. Robacker	Landscape Plant Development Cer University of Georgia	\$13,000
Management of Thrips and Whiteflies with Insect-Killing Fungi Greenhouse Spray Trials	1995	VT	Dr. Bruce L. Parker	University of Vermont	\$5,000
Evaluation of New Species and Cultivars for the Great Plains Region	1995	KS			\$2,000
Evaluation of Herbicide-Coated Fertilizers for Container Crop Production	1995	AL	Dr. Joe Eakes Dr. Charles H. Gilliam Dr. Gary J. Keever	Auburn University Auburn University Auburn University	\$7,000
Above Ground Pot-in-Pot Tree Production System	1995	VA	Dr. Alexander X. Niemiera	Virginia Polytechnic Inst & State U	\$3,000
Youth Guide for Planting and Caring for Trees in the Landscape	1995	FL	Mr. Greg Davis Dr. Kathleen C Ruppert	University of Florida University of Florida	\$4,500
Engineering Virus Resistance in Nursery Plants	1995	IL	Dr. Schuyler S. Korban	University of Illinois	\$12,000
Use of Subirriagation to Replace Mist and Improve Propagation of Trees and Shrubs from Softwood Cuttings	1995	IA	Dr. William R. Graves Mr. Keith Warren	Iowa State University J Frank Schmidt & Son Co	\$4,500
Peroxidase Activity as a Predictive Marker of Rooting Performance for Woody Plant Cuttings	1995	MB	Dr. Campbell G. Davidson	Agri-Food Diversification Research	\$4,000
Using Cryolite for Control of Black Vine Weevil in Field Nurseries	1995	MA	Dr. Karen Iodine Dr. Ronald F. Kujawski	University of Maine University of Massachusetts	\$3,500
Enhancing Survival and Water Usage of Landscape Plants with Mycorrhizal Fungi that Tolerate Nsy Fertility Sys	1995	TX	Dr. Fred T. Davies, Jr	Texas A&M University	\$5,000

Project title	Year	State	Researchers	Funding
Dev of Quantifiable & Reproducible Bioassay for Evaluating Disease Suppressiveness in Composta	1995	FL	Dr. Anne Barkdoll	Full Circle Solutions Inc \$7,000
Effect of Groundcovers and Mulching Materials on Weed & Japanese Beetle Grub Infestation in Woody Orn Prod Sys	1995	KY	Dr. Daniel A. Potter Dr. Leslie A. Weston	University of Kentucky Cornell University \$4,500
Alternatives to Chlorpyrifos as Dip Treatments for Disinfesting Scarab Larvae from Container Grown Nsy Stck	1996	CT		\$10,000
Exploiting Natural Pest Resistance in the Genus Prunus	1996	NC	Dr. James Burton Ms. Cindy Patton Dr. Thomas G. Ranney	North Carolina State University North Carolina State University North Carolina State University \$3,000
A Gypsy Moth Management Program for Nurseries	1996	MI	Dr. David Smitley	Michigan State University \$8,000
Evaluation of Minute Pirate Bug for Suppressing Azalea Lace Bug Populations in Production Nurseries	1996	MD	Ms. Paula Leddy	University of Maryland \$5,000
Evaluation of Irrigation Water Recirculation Systems for Potensial Spread of Root Pathogens - Container Nsy Operat	1996	OR	Dr. Jay W. Pscheidt	Oregon State University \$8,000
Marketing to Retailers: How Midwestern Wholesale Nurseries Can Better Serve Their Retail Clients	1996	IA	Dr. William R. Graves Dr. C L Haynes Dr. Jeffrey K. Iles Dr. Kenneth E. Stone	Iowa State University Iowa State University Iowa State University Iowa State University \$6,000
Using Entomopathogenic Nematodes to Control Gypsy Moth in Nursery and Landscape Settings	1996	MD	Dr. Michael J. Raupp	University of Maryland \$4,000

Project title	Year	State	Researchers	Funding
Comparison of Incorporated, Topdressed, and Fertigate Fertility and Overhead, Pulse and Capillary Mat	1996	MN	Dr. James B. Calkins	University of Minnesota \$10,000
Evaluation of Herbicides for Use in Container Grown Herbaceous Perennials	1996	MN	Dr. James B. Calkins	University of Minnesota \$2,000
Hort Applications of Agrobacterium rhizogenes (hairy- root): I. Propagation: Enhanced Rooting of Difficult...	1996	NC	Dr. Anne Stomp Dr. Kim E. Tripp	North Carolina State University Harvard University \$4,500
New Technologies for Sprinkler Irrigation in Ornamental Container Production	1996	FL	Dr. Richard C. Beeson, Jr Dr. Dorota Haman Dr. Gary W. Knox Dr. Thomas Yeager	University of Florida University of Florida University of Florida University of Florida \$15,000
Using Copper to Prevent Rooting-Out of B & B Stock	1996	RI	Dr. Brian Maynard	University of Rhode Island \$2,500
Engineering Virus Resistance in Nursery Plants	1996	IL	Dr. Schuyler S. Korban	University of Illinois \$10,000
Evaluating Somaclonal and Induced Variants of Malus for Fire Blight Resistance	1996	IL	Dr. Schuyler S. Korban	University of Illinois \$4,500
Root Cold Hardiness of Herbaceous Perennials as Influenced by Concentration and Treatment Duration	1996	VT		\$1,500
Landscape Maintenance Firms and the Marketing of Nursery Crops	1996	GA	Dr. Mel Garber	University of Georgia \$8,000
Landscape Design and Quality of Life: Is there a Link?	1996	NE	Dr. Ellen T. Pappozzi Dr. Steve Rodie	University of Nebraska University of Nebraska \$5,000

Project title	Year	State	Researchers	Funding	
Cyclic Irrigations and Zero Leaching Fraction: Effects of Water Quality & Fertilizer Levels on Plant Growth	1996	AZ	Dr. Chris A. Martin	Arizona State University	\$4,000
Fertilizer Efficiency and Nutrient Efficacy as Effected by Method of Application	1996	NC	Dr. Ted E. Bilderback Dr. Helen Tyler Dr. Stuart L. Warren	North Carolina State University Texas Tech University N C State University	\$4,000
What is Quality and How Much Will the Consumer Pay for It?	1996	NC	Dr. Ted E. Bilderback Dr. Tom Glasgow Dr. Charles D. Safley	North Carolina State University North Carolina State University North Carolina State University	\$8,000
Leaching Reduction of Nursery Herbicides by Adjuvant Polymers	1996	FL	Dr. Megh Singh	University of Florida CREC	\$5,000
Manipulating Resistance to Leafminer Pests in White- Barked Ornamental Birches	1996	WI	Dr. Brent H. McCown	University of Wisconsin	\$10,000
Evaluation of Control Tactics for Minimizing White Grub Infestation at Nurseries	1996	OH	Dr. David G. Nielsen	Ohio Agr Research & Dev Center	\$15,000
Liverwort Management in Container Nurseries	1996	NY	Dr. Andrew F. Senesac	Cornell University	\$2,500
Improvement of Containerized Plant Quality and Stress Tolerance with Reduced Phosphorus Fertilizer	1996	PA	Dr. Kathleen Evensen Dr. E. Jay Holcomb Dr. Larry J. Kuhns Dr. Jonathan Lynch	Pennsylvania State University Pennsylvania State University Pennsylvania State University Pennsylvania State University	\$7,500
Bioremediation of Indoor Air Pollutants through the Use of Interiorscape Plants	1996	PA	Dr. John Skelly	Pennsylvania State University	\$5,000
Evaluation of Oriental Beetle Synthetic Pheromone for Nursery Monitoring and Geographic Distribution Studies	1996	NY	Dr. Michael Villani	Cornell University	\$5,000

Project title	Year	State	Researchers	Funding
Research on Display: Developing BMPs for Urban Landscape Maintenance	1996	GA	Dr. Joyce G. Latimer	University of Georgia <i>\$10,000</i>
Interpreting Lab Cold Hardiness Data of Nsy & Lpse Plant for Use by Growers in Various Regions of the Country	1996	GA	Dr. Orville M. Lindstrom Dr. Harold Pellett	University of Georgia Landscape Plant Development Cer <i>\$5,000</i>
Resistance to Powdery Mildew in White Flowering Dogwoods	1996	TN	Dr. Robert N. Trigiano	University of Tennessee <i>\$5,500</i>
American Horticultural Society Heat Tolerance Map of the United States	1996	VA		<i>\$15,000</i>
Suppression of Crown Gall in Nursery Plantings with Antagonistic Agrobacteria	1996	MO	Dr. Robert Goodman	Southwest Missouri State Universit <i>\$5,000</i>
Use of a Bacterial Bioremediation Product for Reducing Nitrate-Nitrogen Concentrations in Nursery Cltcn Ponds	1996	GA	Dr. John M. Ruter	University of Georgia <i>\$5,000</i>
Trends in Environmental Horticultural Marketing Research 1987-97	1996	VA	Dr. Alan McDaniel Ms. Diane Relf	Virginia Polytechnic Institute & Sta People-Plant Council <i>\$5,000</i>
Development of Sterile Cultivars of Selected Woody Plant Species	1996	MN	Dr. Harold Pellett	Landscape Plant Development Cer <i>\$10,000</i>
Development of Stress Tolerant Trees	1996	MN	Dr. Harold Pellett	Landscape Plant Development Cer <i>\$7,500</i>
Biological Control of Verticillium Wilt of Shade Trees	1997	OH	Dr. Harry A. J. Hoitink Dr. Randell Rowe Dr. Daniel K. Struve	Ohio State University Development Center Ohio State University <i>\$15,000</i>

Project title	Year	State	Researchers	Funding
Differences in Winter Survival, Root Freezing Tolerance and Landscape Establishment among Ten Deciduous Shade Tree Species	1997	MA	Dr. William Bramlage Dr. Reeser Manley	University of Massachusetts University of Maine <i>\$5,000</i>
Weed Control in Container Grown Ornamental Grasses	1997	NY	Dr. George L. Good Dr. Joseph C. Neal	Cornell University North Carolina State University <i>\$2,000</i>
Garden Writers and the Marketing of Nursery Crops	1997	GA	Dr. Mel Garber Dr. Gary Wade	University of Georgia University of Georgia <i>\$10,000</i>
Evaluation of Best Management Strategy for Minimizing White Grub Infestations in Nurseries	1997	OH	Dr. David G. Nielsen	Ohio Agr Research & Dev Center <i>\$15,000</i>
Techniques for Improving B & B Stock Holding	1997	VA	Dr. Bonnie Lee Appleton Dr. Peter B. Schultz	Virginia Polytechnic Institute & Sta Virginia Tech <i>\$5,000</i>
Using Growth Regulators to Improve Transplanting Success	1997	IL	Attn: HRI Contact Dr. Gary W. Watson	The Morton Arboretum The Morton Arboretum <i>\$5,000</i>
Determining Optimal Duration of Exposure to Low Light Levels During Rooting of Difficult-to-Root Woody Plants	1997	PA	Dr. Charles W. Heuser Dr. Kim Steiner Dr. James Zaczek	Pennsylvania State University Pennsylvania State University Pennsylvania State University <i>\$5,000</i>
Tolerance of Green Ash and White Ash Cultivars to Ash Yellows	1997	IA	Dr. Edward Braun Dr. Mark Gleason	Iowa State University Iowa State University <i>\$5,000</i>
The Artillery Fungus-A Real Threat to the Continued Use of Wood/Bark Mulch by Landscape Firms and Sales of Mulch by Retail Garden Centers	1997	PA	Dr. Donald Davis Dr. Larry J. Kuhns Dr. Elwin Stewart	Pennsylvania State University Pennsylvania State University Pennsylvania State University <i>\$3,000</i>
Evaluation of Chemical Growth Retardants in Nursery Production of Herbaceous Perennials	1997	AL	Dr. W.A. Dozier, Jr Dr. Gary J. Keever Dr. J. Raymond Kessler	Auburn University Auburn University Auburn University <i>\$4,000</i>

Project title	Year	State	Researchers	Funding
Management of Anthracnose Dieback and Fungicide Resistance in Euonymus	1997	CT	Dr. James A. LaMondia	Connecticut Agricultural Experimer \$5,000
Rootstock Trial of Disease Resistant Crabapples	1997	WA	Attn: HRI Contact Dr. Allen Pettibone	Washington State University Washington State University \$3,000
Disease Resistant Crabapple Trial	1997	WA	Attn: HRI Contact Dr. Allen Pettibone	Washington State University Washington State University \$4,000
Determining Biomass Productivity in Nursery Crops for Projections and Management of Seasonal Water and Fertilizer Use	1997	NJ	Dr. Raul I Cabrera Mr. James R. Johnson Mr. Tom Orton	Texas A&M University Rutgers Cooperative Extension Rutgers University \$4,000
Production of Female-Sterile Cultivars of Woody Plant Species	1997	MN	Dr. Gary Gardner Dr. Harold Pellett Dr. Alan Smith	Horticultural Science Landscape Plant Development Cer University of Minnesota \$10,000
Maximizing Irrigation Efficiency of Large Container-grown Trees	1997	VA	Dr. J. Roger Harris Dr. Alexander X. Niemiera Dr. Ronald Walden Dr. Robert D. Wright	Virginia Tech Virginia Polytechnic Inst & State U Hampton Roads AREC Virginia Tech (VPI&SU) \$3,000
Will Cyclic Irrigation and Vegetated Waterways Eliminate Pesticide Movement from Nursery Sites?	1997	SC	Dr. Ted Whitwell	Clemson University \$7,500
Development of Stress Tolerant Trees	1997	MN	Dr. Gary Gardner Dr. Harold Pellett	Horticultural Science Landscape Plant Development Cer \$5,000
Development of a screening procedure to identify the hardier plants in a seedling population	1997	MN	Dr. Gary Gardner Dr. Harold Pellett	Horticultural Science Landscape Plant Development Cer \$3,000

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Garden Center Service Quality Assessment	1997	AL	Dr. Bridget K. Behe Dr. W.A. Dozier, Jr Mr. Jay Hudson	Michigan State University Auburn University Auburn University	<i>\$10,000</i>
Investigation of non-target effects of imidacloprid applied to nursery and landscape plants	1997	CO	Dr. Whitney Cranshaw Dr. Thomas Holtzer	Colorado State University Colorado State University	<i>\$3,000</i>
Dehydrin Expression as a Predictive Marker of Cold Hardiness in Rhododendrons	1997	WV	Mr. Bradford C. Bearce Attn: HRI Contact	West Virginia University West Virginia Univ Foundation	<i>\$4,000</i>
Evaluation of Cold Tolerance of Marginally Hardy Cultivars of Hydrangea macrophylla	1997	WV	Attn: HRI Contact	West Virginia Univ Foundation	<i>\$5,000</i>
Stress Responses of Flowering Trees Installed in Urban Landscapes	1997	MD	Attn: HRI Contact Dr.. Chris Walsh	NERA University of Maryland	<i>\$4,000</i>
Establishing Mineral Nutrient Diagnostic Criteria for Herbaceous Perennials	1997	NJ	Dr. Raul I Cabrera Mr. Tom Orton Dr. James Willmott	Texas A&M University Rutgers University Rutgers University/Cook College	<i>\$4,000</i>
Minimizing fertilizer and irrigation input during production of containerized woody ornamentals	1997	CA	Attn: HRI Contact	Iowa State University	<i>\$7,500</i>
Improvement of Containerized Plant Quality and Stress Tolerance with Reduced Phosphorus Fertilizer	1997	PA	Dr. Jonathan Lynch	Pennsylvania State University	<i>\$5,000</i>
Consumer Attitudes Towards Product Assortments, Displays, and Personnel in Retail Garden Centers	1997	NE	Attn: HRI Contact Dr. Raymond Marquardt	University of Nebraska-Lincoln University of Nebraska	<i>\$8,000</i>

Project title	Year	State	Researchers	Funding	
Non-Chemical Weed Control Alternatives for Container Grown Crops	1997	AL	Dr. W.A. Dozier, Jr Dr. Joe Eakes Dr. J.H. Edwards Dr. Charles H. Gilliam Dr. Gary J. Keever	Auburn University Auburn University Auburn University Auburn University Auburn University	\$3,000
Remediation of Herbicide Contaminated Nursery Run-off Water	1997	AL	Dr. W.A. Dozier, Jr Dr. Charles H. Gilliam Dr. T. Grey Dr. Gary J. Keever Dr. Glenn R. Wehtjie	Auburn University Auburn University Auburn University Auburn University Auburn University	\$4,500
Natural Product Ant Repellents for Containerized Nursery Stock	1997	AL	Dr. David Oi	Department of Entomology	\$3,000
Development of Cold Hardiness in Hydrangea	1997	TN	Dr. Thomas Army Dr. Sandra Reed	USDA-ARS-MSA Tennessee State University	\$2,500
Markers of Nitrogen Fixation Potential of Trees: Genes for Sustainable Nursery Production and Landscape Survival	1997	IA	Dr. Michael Chaplin Dr. William R. Graves	Iowa State University Iowa State University	\$4,000
Applications of Soybean Oil to Manage Insect Populations on Nursery Stock	1997	TN	Dr. Fred Allen Dr. Dennis Deyton Dr. Carl Sams	University of Tennessee Agricultural Institute University of T Agricultural Institutes University of	\$10,000
Use of genetically-engineered ectomycorrhizae for insect control and for improving plant health and vigor	1997	OH	Dr. Shiv Hiremath Dr. James Slavicek	USDA Forest Service USDA Forest Service	\$10,000
Ash Rootstock Selection for Tolerance of Phytoplasmal Disease	1997	NY	Dr. Wayne A. Sinclair Dr. Steven Slack Dr. Thomas Whitlow	Cornell University Cornell University Cornell University	\$4,000

Project title	Year	State	Researchers	Funding
Development of Endomycorrhizal Fungi that Tolerate Nursery Production Systems and Enhance Survival and Establishment of Landscape Plants	1997	TX	Mr. Samuel D. Cotner Dr. Fred T. Davies, Jr	Texas A&M University Texas A&M University <i>\$3,000</i>
Genetic Enhancement of Pest Resistance in Rosaceous Trees	1997	NC	Dr. Thomas J. Monaco Dr. Thomas G. Ranney	North Carolina State University North Carolina State University <i>\$5,000</i>
Manipulating Resistance to Leafminer Pests in White-barked Ornamental Birches	1997	WI	Dr. Brent H. McCown	University of Wisconsin <i>\$9,000</i>
Managing Irrigation by Electrical Conductivity	1997	NC	Dr. Ted E. Bilderback Dr. Thomas J. Monaco Dr. Stuart L. Warren	North Carolina State University North Carolina State University N C State University <i>\$4,000</i>
Stability of Fire Blight-Resistant Variants and Mutants of Malus	1997	IL	Dr. Schuyler S. Korban	University of Illinois <i>\$4,500</i>
Introducing Virus Resistance in Nursery Plants Using Genetic Engineering	1997	IL	Dr. Schuyler S. Korban	University of Illinois <i>\$10,000</i>
Economic Benefits Valuation of Landscaping in Small Business Districts	1997	WA	Dr. Clement Hamilton Dr. Kathleen Wolf	University of Washington University of Washington <i>\$10,000</i>
Study of the Relationship between Strategic Management Practices and Performance of Wholesale Growers, Retail Garden Centers, and Landscape Firms in the US Nursery/Landscape Industry	1997	MI	Dr. Larry Hamm Dr. Chris Peterson, Ph.D.	Michigan State University Michigan State University <i>\$10,000</i>
Evaluation of Biologically-based cultural practices to control Verticillium wilt in Nursery stock production	1997	MD	Dr. Ramon Jordan Dr. James Locke	USDA-ARS USNA FNPRU USDA-ARS <i>\$4,500</i>

Project title	Year	State	Researchers	Funding	
Economic Analysis of the Importance of the Greenhouse Nursery Industry to the US Economy	1997	NJ	Dr. Edmund Tavernier Dr. Daymon Thatch	Rutgers, The State University of Nj Rutgers The State University	\$5,000
Evaluating the Effectiveness and Costs of Using Different Techniques to Reduce White-tailed Deer Damage on Ornamental Plants	1998	RI			\$3,000
Herbivore Resistance of Natural Plant Compounds	1998	NY	Dr. Paul Curtis Dr. George L. Good	Cornell University Cornell University	\$5,000
Evaluation of Best Management Strategy for Minimizing White Grub Infestations in Field Production Nurseries	1998	OH	Dr. Richard K. Lindquist Dr. David G. Nielsen	Ohio State University OARDC Ohio Agr Research & Dev Center	\$15,000
New Technologies for Sprinkler Irrigation in Ornamental Container Production	1998	FL	Mr C. Direlle Baird Dr. Richard C. Beeson, Jr Dr. Charles A. Conover Dr. Dorota Haman Dr. Terril A. Nell Dr. Thomas Yeager	IFAS University of Florida University of Florida IFAS University of Florida University of Florida University of Florida	\$20,000
Anti-feedants for Deer and Rabbits Derived from Plant Species	1998	MI	Dr. Wayne Loescher Dr. Stanley Ries	Michigan State University Michigan State University	\$15,000
Building a Strong Foundation for Your Financial Information System	1998	IL	Mr. Frank Ross	Ross-Payne & Associates Inc	\$4,500
Marketing Nursery Crops to Rewholesalers	1998	GA	Mr. Gary Couvillon Dr. Mel Garber	University of Georgia University of Georgia	\$5,000
Improved Pesticide Application With Reduced Drift and Use	1998	OH	Dr. Ross D. Brazee Dr. Charles Krause	USDA-ARS Appl Tech Research U USDA-ARS Appl Tech Research U	\$7,000

Project title	Year	State	Researchers	Funding
Evaluation of Application Techniques to Enhance Root Weevil Control with Entomopathogenic Nematodes	1998	OR	Mr. Ralph E. Berry Mr. Paul Jepson	Oregon State University Oregon State University <i>\$9,000</i>
Research on Display: Developing BMPs for Urban Landscape Management	1998	GA	Mr. Gary Couvillon Dr. Joyce G. Latimer	University of Georgia University of Georgia <i>\$10,000</i>
Enhancing Disease Resistance in Nursery Crops by Transferring Anti-Fungal Genes	1998	IL	Dr. Schuyler S. Korban	University of Illinois <i>\$10,000</i>
Development and Assessment of Voluntary Methods to Reduce Distribution of Invasive Plants	1998	WA	Mr. Donald W. Allen Dr. Sarah Reichard	University of Washington University of Washington <i>\$12,000</i>
Recycled Fiber Pot Additives to Lengthen Pot Life, Control Encircling Roots, and Reduce Landfill	1998	PA	Dr. David J. Beattie Mr. Robert Berghage	Pennsylvania State University Pennsylvania State University <i>\$4,000</i>
Applications of Soybean Oil to Manage Insect Populations on Nursery Stock	1998	TN	Dr. Fred Allen Dr. Dennis Deyton Dr. Carl Sams	University of Tennessee Agricultural Institute University of T Agricultural Institutes University of <i>\$10,000</i>
Consumer Perceptions of Landscape Value Using Several Different Designs, Types of Plant Material, and Landscape Ages	1998	AL	Dr. Susan S. Barton Dr. Bridget K. Behe Dr. W.A. Dozier, Jr	University of Delaware Michigan State University Auburn University <i>\$20,000</i>
Development of Stress Tolerant Tree Cultivars	1998	MN	Dr. Rita L. Hummel Dr. Harold Pellett	Washington State University Landscape Plant Development Cer <i>\$10,000</i>
Development of Sterile Cultivars of Woody Plant Species	1998	MN	Dr. Gary Gardner Dr. Harold Pellett Dr. Alan Smith	Horticultural Science Landscape Plant Development Cer University of Minnesota <i>\$8,000</i>
Development of Complete Buffered Fertilizer for Woody Ornamental Plants	1998	PA	Dr. E. Jay Holcomb Dr. Jonathan Lynch	Pennsylvania State University Pennsylvania State University <i>\$9,000</i>

Project title	Year	State	Researchers	Funding	
Internship Preparation for Employment: How Well Are We Doing?	1998	FL	Dr. Bridget K. Behe Attn: HRI Contact Dr. W.A. Dozier, Jr Dr. Thomas J. Monaco Dr. Mack Thetford Dr. Stuart L. Warren	Michigan State University UF IFAS WFREC Auburn University North Carolina State University University of Florida N C State University	\$3,500
Using Field Chlorophyll Measurements to Improve Nitrogen Management in Nursery Crops	1998	IL	Dr. John Swiader	University of Illinois	\$4,500
Picture This: A Media Marketing Plan for the Landscape and Nursery Industries Through the Measurable Benefits of Lndscp Amenities	1998	FL	Dr. Joy Dorst Dr. Hudson Nwakanma	Florida A & M University Florida Agricultural & Mech U	\$10,000
Biological Control of Mollusc Pests	1998	NJ	Dr. Randy Gaugler	Rutgers University	\$10,000
The Demand for Better Landscaping - A Hedonic Approach	1998	SC	Dr. Mark S. Henry	Clemson University	\$5,000
Evaluation of Predatory Mites and Dormant Oil for Suppressing Spider Mite Infestations in Production Nurseries	1998	NJ	Dr. Donald Caccamise Dr. Paula Shrewbury	Rutgers University Rutgers University	\$4,000
Estimating the Economic and Non-Economic Benefits of Trade Show Attendance for the US Nursery Products Companies	1998	TN	Dr. Enefiok Ekanem	Tennessee State University	\$6,000
Verticillium Disease Risk Thresholds for Nursery Crops	1998	OR	Attn: HRI Contact Dr. Richard P. Regan	The Ohio State University Oregon State University	\$4,500
Biology and Integrated Pest Management of the Asian Ambrosia Beetle	1998	TX	Dr. Bastiaan M. Drees Dr. WP Morrison	Texas A&M University Texas Agricultural Ext Service	\$16,000

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Liverwort and Broadleaf Weed Management in Perennial Plant Nurseries	1998	NY	Dr. William Sanok Dr. Andrew F. Senesac	Cornell Cooperative Extension Cornell University	<i>\$4,000</i>
Acoustic Detector for Monitoring Grub Infestation	1998	NY	Dr. Daniel O Gilrein Dr. William Sanok	Cornell Cooperative Extension Cornell Cooperative Extension	<i>\$5,000</i>
Installation of Amended Radial Trenches to Improve Tree Growth in Compacted Soils	1998	NY	Dr. Nina Bassuk	Cornell University	<i>\$2,500</i>
Development of a Genetically-Engineered Rhododendron for Phytophthora Disease Resistance	1998	CT	Dr. Carol Auer Dr Gerald Berkowitz Dr. Mark H. Brand	University of Connecticut University of Connecticut University of Connecticut	<i>\$10,000</i>
Innovative Methods of Controlling Deer Browse in Nurseries and Landscapes	1998	RI	Dr. Brian Maynard	University of Rhode Island	<i>\$15,000</i>
Development of Stress-resistant Nursery Crops by Altering Glutathione Expression	1998	IA	Dr. Michael Chaplin Dr. William R. Graves	Iowa State University Iowa State University	<i>\$4,500</i>
Identification of Feeding Stimulants for Use in Control of Japanese Beetle Adults and Larvae	1998	RI	Dr. Steven Alm Dr. Richard J. Hull	University of Rhode Island University of Rhode Island	<i>\$9,000</i>
1997 Gallup Landscape, Lawn and Tree Care Survey	1998	VT	Mr. Bruce Butterfield	National Gardening Association	<i>\$3,000</i>
An Econometric Analysis of Consumer Expenditures for Gardening, Landscape Maintenance and Tree Care	1998	CA	Attn: ANLA Contact Dr David Zilberman	University of California at Berkeley University of California at Berkeley	<i>\$12,000</i>
1998 Gallup Landscape, Lawn and Tree Care Survey	2000	VT	Mr. Bruce Butterfield	National Gardening Association	<i>\$3,000</i>
Predicting Herbicide Dissipation in Container Nursery Crop Production - A Method for Improving Herbicide Performance and Reducing Hand Weeding	1999	NC	Dr. Thomas J. Monaco Dr. Joseph C. Neal	North Carolina State University North Carolina State University	<i>\$15,000</i>

Project title	Year	State	Researchers	Funding
Conservation and Classical Biological Control of the Cherry Bark Tortrix in the Pacific Northwest	1999	WA	Dr. John J. Brown Dr. Lynell K. Tanigoshi	Washington State University WSU-Mount Vernon NWREC <i>\$15,000</i>
Enhancing Disease Resistance in Nursery Plants to a Broad-Spectrum of Plant Pathogens	1999	NC	Ms. Judy L. Jakobek Mr. Peter B. Lindgren	North Carolina State University North Carolina State University <i>\$10,000</i>
Biology and Biocontrol Potential of Nematode Parasites of Slugs	1999	OH	Dr. Parwinder Grewal Dr. Richard K. Lindquist	Ohio State University OARDC Ohio State University OARDC <i>\$15,000</i>
Impact of Warm and Cool Season Wetland Plants on Removal of Nitrates from Container Nursery Runoff	1999	TX	Dr. Michael A. Arnold Mr. Samuel D. Cotner	Texas A&M University Texas A&M University <i>\$15,000</i>
Reducing Mortality of <i>Cornus florida</i> in Midwest Landscapes	1999	MO	Mr. George Michael Chippen Dr. Christopher J. Starbuck	University of Missouri-Columbia University of Missouri <i>\$5,000</i>
Effectiveness of Recycled Newspaper in Reduction of Nitrogen Leaching from Container Nursery Production	1999	AL	Dr. W.A. Dozier, Jr Dr. J.H. Edwards Dr. Charles H. Gilliam Ms. Janna Sichivitsa	Auburn University Auburn University Auburn University Auburn University <i>\$10,000</i>
Identifying Phomopsis Resistance in Chinese Juniper Associated with Shoot Epicuticular Waxes. A Promising Target for Genetic Improvement of Woody Landscape Plants.	1999	IN	Mr. Matthew A. Jenks Mr. Stanley P. Myers	Purdue University Arkansas State University <i>\$5,000</i>
Development of Sterile and Dwarf Cultivars of Woody Plants by Gene Transformation	1999	MN	Dr. Gary Gardner Dr. Harold Pellett Dr. Alan Smith	Horticultural Science Landscape Plant Development Cer University of Minnesota <i>\$3,000</i>
Enhancing Disease Resistance in Nursery Crops by Transferring Anti-fungal Genes	1999	IL	Dr. Schuyler S. Korban Dr. Gary Rolfe	University of Illinois University of Illinois <i>\$17,500</i>

Project title	Year	State	Researchers	Funding	
Limnanthes Seed Meal: A Potential Bio-Rational Agent for Commercial Nursery Production	1999	OR	Attn: HRI Contact Dr. Sven E. Svenson	The Ohio State University Southeast Missouri State University	\$5,000
Optimization of Fertilization Practices under Tensiometer-Based Irrigation of Nursery Crops	1999	CA	Mr. David W. Burger Attn: HRI Contact	University of California University of California	\$15,000
Evaluation of Natural Products as Soil Drench Biopesticides to Control Soilborne Pathogens in Ornamental Production Systems	1999	MD	Dr. Ramon Jordan Dr. James Locke	USDA-ARS USNA FNPRU USDA-ARS	\$3,500
Evaluation of Unusual Birch and Alder Species for Use on Marginal Soils of Managed Landscapes	1999	IA	Dr. Michael Chaplin Attn: HRI Contact Dr. William R. Graves Dr. Jeffrey K. Iles Dr. Mark P. Widrechner	Iowa State University Iowa State University Iowa State University Iowa State University Iowa State University	\$4,500
Development of Dwarf Lilacs With Low Winter Chill Requirement	1999	CA	Dr. E.M. Lord Dr. J. Giles Wainess	University of California University of California	\$4,500
The Development of New Abelia R. Br. Cultivars Through Interspecific Hybridization	1999	GA	Dr. Michael A. Dirr Dr. Darrell Sparks	University of Georgia University of Georgia	\$5,000
Urea Formaldehyde Foam (UFF) as a Container Substrate Amendment to Reduce Irrigation Frequency and Fertilizer Application	1999	VA	Mr. Michel Beck Mr. Lee Daniels Dr. Alexander X. Niemiera	Virginia Tech Virginia Tech Virginia Polytechnic Inst & State U	\$4,500
Use of Modified Light Quality to Improve Adventitious Rooting of Quercus	1999	NY	Dr. Nina Bassuk Dr Tom Weiler	Cornell University Cornell University	\$3,000
Assessing Intra- and Inter-Regional Variation in Phenological Indicators for Predicting Insect Pest Activity	1999	OH	Dr. Daniel A. Herms Dr. Richard K. Lindquist	Ohio State University OARDC Ohio State University OARDC	\$8,000

Project title	Year	State	Researchers		Funding
Improvement in Quality and Drought Tolerance of Woody Ornamental Plants Grown in Buffered Fertilizer	1999	PA	Dr. Jonathan Lynch	Pennsylvania State University	\$7,000
Identification of "Cold Hardiness Genes" in Landscape Plants	1999	IN	Dr. Edward N. Ashworth Dr. W. Randy Woodson	Purdue University Purdue University	\$5,000
New England Nursery and Landscape Statistical Survey	1999	VT	Ms. Lorraine P. Berkett Dr. Leonard L. Perry	University of Vermont University of Vermont	\$10,500
Biorational Compounds and Host Resistance for Powdery Mildew Disease Management in Dogwood	1999	TN	Dr. Nick Gawel Dr. Margaret T. Mmbaga	Tennessee State University Tennessee State University	\$10,000
Applications of Soybean Oil to Manage Insect Populations on Nursery Stock	1999	TN	Dr. Fred Allen Dr. Dennis Deyton Dr. Carl Sams	University of Tennessee Agricultural Institute University of T Agricultural Institutes University of	\$12,000
Deer and Rabbit Repellent Derived From Plant Species	1999	MI	Dr. Wayne Loescher Dr. Stanley Ries	Michigan State University Michigan State University	\$31,000
Increasing the Efficacy and Utilization of Bacillus popilliae for White Grub Control	1999	CA	Attn: HRI Contact	University of California	\$5,000
Development of Foliar-Applied Green Lacewing Eggs as a Biological Control Method on Landscape and Nursery Plants	1999	CO	Dr. Whitney Cranshaw	Colorado State University	\$4,500
Improving Landscape Establishment of Bare-Root Perennials with Auxin Applications	1999	GA	Dr. Darrell Sparks Dr. Marc van Iersel	University of Georgia University of Georgia	\$4,000
Determining Certification-Quality Residual Control of Black Vine Weevil and White Grubs Using Bifenthrin in Potting Media	1999	CT	Dr. Richard S. Cowles Dr. Louis Magnarelli	Connecticut Agricultural Experimer Connecticut Agriculture Experimen	\$9,000

Project title	Year	State	Researchers	Funding	
Evaluation of American Elms and their Hybrids for Preference and Suitability for the Adult Elm Leaf Beetle and Adult Japanese Beetle	1999	IL	Attn: HRI Contact Dr. Fredric D. Miller, Jr	The Morton Arboretum Dr Fredric D Miller	\$3,000
Development of Nursery Industry-Oriented Modules for a Prototype Distance Learning Course Called "A Hands On Approach to Learning the Skills, Principles and Applications of Plant Propagation"	1999	NY	Mr. William J. Head Dr. Kenneth Mudge	SUNY Morrisville Cornell University	\$8,000
Hot Topics: Internships in the Horticulture Industry	1999	FL	Dr. Mack Thetford	University of Florida	\$7,000
Octopus: Automated Plant Container Handling and Transportation System	1999	PA	Dr. Hagen Schempf	Carnegie Mellon University	\$100,000
Non-Contact Measurement and Inventory of Nursery Trees	1999	PA	Dr. Sanjiv Singh	Carnegie Mellon University	\$10,000
Applications of Soybean Oil to Manage Insect Populations on Nursery Stock	2000	TN	Dr. Dennis Deyton Dr. Carl Sams	Agricultural Institute University of T Agricultural Institutes University of	\$15,000
Fate of Nitrogen Captured by Recycled Paper Pellets in the Bottom of Containers	2000	AL	Dr. W.A. Dozier, Jr Dr. J.H. Edwards Dr. Charles H. Gilliam Dr. Patricia R. Knight Ms. Janna Sichivitsa Mr. C. David Veal	Auburn University Auburn University Auburn University Mississippi State University Auburn University Mississippi State University	\$10,000
Herbivore Resistance of Natural Plant Compounds	2000	NY	Dr. Paul Curtis	Cornell University	\$15,000
Development of Powdery Mildew Resistant Cultivars of Flowering Dogwood	2000	TN	Dr. E E Burgess Dr. Robert N. Trigiano Dr. Mark T. Windham Dr. Willard Witte	University of Tennessee University of Tennessee University of Tennessee University of Tennessee	\$10,000

Project title	Year	State	Researchers	Funding
Viburnum Leaf Beetle: Control with Environmentally Friendly Insecticides and Susceptibility of Viburnum Accessions	2000	NY	Dr. Donald A. Rutz Dr. Paul A. Weston	Cornell University Cornell University <i>\$10,000</i>
Comparative Innovative Weed Control Methods in Container Culture	2000	OR	Attn: HRI Contact Dr. Hannah Mathers	The Ohio State University The Ohio State University <i>\$5,000</i>
Development of an Acoustic System for Detection of Black Vine Weevil in Commercial Ornamental Nurseries	2000	OR	Mr. Richard Mankin	USDA-ARS <i>\$5,000</i>
Characterizing the Host Range Specificity of Asian Longhorn Beetle to Popular Landscape Trees	2000	PA	Mr. Lawrence Hanks Dr. Kelli Hoover Dr. James C. Sellmer Mr. Michael T. Smith	U of IL at Urbana-Champaign The Penn State University Pennsylvania State University USDA-ARS <i>\$20,000</i>
The Relationship of Fungicide Spray Coverage to Efficacy in the Control of Crabapple Scab	2000	OH	Dr. Ross D. Brazee Mr. Richard C. Derksen Mr. Robert D. Fox Dr. Charles Krause	USDA-ARS Appl Tech Research U Cornell University USDA-ARS Appl Tech Research U USDA-ARS Appl Tech Research U <i>\$10,000</i>
Using Foliar Fertilization to Minimize Nutrient Loss to Runoff	2000	FL	Dr. Terril A. Nell Dr. Thomas Yeager	University of Florida University of Florida <i>\$7,500</i>
Introduction of an Exotic Molluscidal Nematode for the Biological Control of Slugs	2000	NJ	Mr. Ian Brown Dr. Randy Gaugler	Rutgers University Rutgers University <i>\$12,000</i>
Postemergence Broadleaf Weed Control in Container-grown Crops	2000	AL	Dr. James Altland Dr. W.A. Dozier, Jr Dr. Charles H. Gilliam Mr. John W. Olive	USDA-ARS Application Tech Rese Auburn University Auburn University Auburn University Ornamental Hort <i>\$5,000</i>

Project title	Year	State	Researchers	Funding
Non-Contact Measurement of Trees for Nursery Operations	2000	PA	Dr. Sanjiv Singh Dr. William "Red" Whittaker	Carnegie Mellon University Carnegie Mellon University <i>\$15,000</i>
Interior Landscape Marketing Initiative	2000	VA	Mr. Alan Hornell Mr. Dick Ott	Krome Communications Professional Landcare Network <i>\$19,000</i>
Plant Pathogen Management in Recycling Irrigation Systems	2000	OK	Dr. Sharon L. von Broembsen Dr. Russell Wright	Oklahoma State University Oklahoma State University <i>\$12,000</i>
Controlled Delivery of Herbicides in Container Grown Ornamentals	2000	AL	Dr. W.A. Dozier, Jr Dr. J.H. Edwards Dr. Charles H. Gilliam Dr. T. Grey Dr. A. Smith, Jr. Dr. Glenn R. Wehtjie	Auburn University Auburn University Auburn University Auburn University Auburn University Auburn University <i>\$15,000</i>
Biology and Control of Foliar Nematodes Attacking Hosta and Other Landscape Plants	2000	OH	Dr. Parwinder Grewal Dr. Richard K. Lindquist	Ohio State University OARDC Ohio State University OARDC <i>\$5,000</i>
Development of Sterile and Dwarf Cultivars of Woody Plants by Gene Transformation	2000	MN	Dr. Gary Gardner Dr. Harold Pellett Dr. Alan Smith	Horticultural Science Landscape Plant Development Cer University of Minnesota <i>\$18,000</i>
Customer Perceptions of Professional Landscape Company Service Quality	2000	MI	Dr. Bridget K. Behe Dr. Wayne Loesch	Michigan State University Michigan State University <i>\$15,000</i>
Identification of Redbud Cercis Species, Provenances, or Individuals Amenable to Propagation From Cuttings	2000	DC	Ms. Ruth L. Dix Dr. Donna Fare Dr. Ramon Jordan Dr. Margaret Pooler	US National Arboretum US National Arboretum USDA-AR USDA-ARS USNA FNPRU US National Arboretum <i>\$5,000</i>
Repellents for Deer and Rabbits Derived From Plant Species	2000	MI	Dr. Wayne Loesch Dr. Stanley Ries	Michigan State University Michigan State University <i>\$15,000</i>

Project title	Year	State	Researchers	Funding	
Integrated Disease Management of Rhizoctonia in Rooting-Mist Beds	2000	WA	Dr. Warren Copes Dr. Jack Rogers	Washington State University Washington State University	<i>\$12,000</i>
Application of End-of-Day Far Red Light to Promote Adventitious Rooting in Quercus	2000	NY	Dr. Nina Bassuk Dr Tom Weiler	Cornell University Cornell University	<i>\$4,000</i>
Research and Development of Har-Pper--An Automated Shrub Harvester and Burlap Wrapper for the Nursery Industry	2000	IL	Attn: HRI Contact Dr. Abbas Shirazi	The Morton Arboretum The Morton Arboretum	<i>\$5,000</i>
Trident: Automated Plant-container Handling and Transportation System	2000	PA	Dr. Hagen Schempf Dr. Roy E. Young	Carnegie Mellon University Penn State Univ	<i>\$125,000</i>
Conservation and Classical Biological Control of the Cherry Bark Tortrix in the Pacific Northwest	2000	WA	Dr. John J. Brown Dr. Lynell K. Tanigoshi	Washington State University WSU-Mount Vernon NWREC	<i>\$13,000</i>
HDC Operating Cost Study	2000	DC	Mr. James Wilbert	PriceWaterhouseCoopers	<i>\$15,000</i>
Formulation of Container Media Inducing Systemic Resistance to Disease in Woody Plants	2001	OH	Dr. Harry A. J. Hoitink Dr. Randell Rowe	Ohio State University Development Center	<i>\$10,000</i>
Automated Plant-Container Handling and Transportation System	2001	PA	Dr. Hagen Schempf Dr. Roy E. Young	Carnegie Mellon University Penn State Univ	<i>\$125,000</i>
Improving Postharvest Performance with 1-MCP, an Ethylene Action Inhibitor.	2001	WV	Dr. Barton Baker Dr. Sven Verlinden	West Virginia University West Virginia University	<i>\$4,500</i>
Development of Thornless Barberry Cultivars	2001	MN	Dr. Harold Pellett Dr. Robert E. Schutzki	Landscape Plant Development Cer Michigan State University	<i>\$3,000</i>
Development of Ornamental Trees for all Regions of North America	2001	MN	Dr. Harold Pellett Dr. Robert E. Schutzki	Landscape Plant Development Cer Michigan State University	<i>\$15,000</i>

Project title	Year	State	Researchers	Funding
Efficacy of Fall Applied Entomopathogenic Nematodes Against Root Weevil Larvae in Container Grown Ornamentals	2001	OR	Mr. Ralph E. Berry Dr. Peter Gothro	Oregon State University Oregon State University <i>\$18,000</i>
Controlled Screening for Fire Blight Resistance in Flowering Pears and Crabapples	2001	NC	Dr. Thomas J. Monaco Dr. Thomas G. Ranney	North Carolina State University North Carolina State University <i>\$5,000</i>
Predicting Herbicide Dissipation in Container Nursery Crop Production - A method for improving herbicide performance and reducing hand weeding	2001	NC	Dr. Thomas J. Monaco Dr. Joseph C. Neal	North Carolina State University North Carolina State University <i>\$15,000</i>
Development of Sterile and Dwarf Cultivars of Woody Plants by Gene Transformation	2001	MN	Dr. Gary Gardner Dr. Harold Pellett Dr. Alan Smith	Horticultural Science Landscape Plant Development Cer University of Minnesota <i>\$18,000</i>
Breeding Thornless Rose Grouncovers	2001	TX	Mr. David H. Byrne Mr. Samuel D. Cotner	Texas A&M University Texas A&M University <i>\$5,000</i>
2000 Gallup Landscape, Lawn and Tree Care Survey	2001	VT	Mr. Bruce Butterfield	National Gardening Association <i>\$3,000</i>
Applications of Soybean Oil to Manage Insect Populations on Nursery Stock	2001	TN	Dr. Fred Allen Dr. Dennis Deyton Dr. Carl Sams	University of Tennessee Agricultural Institute University of T Agricultural Institutes University of <i>\$10,000</i>
Invasive Plant Identification and Evaluation Project	2001	CT	Dr. Gregory J. Anderson Dr. Leslie J. Mehrhoff	University of Connecticut University of Connecticut <i>\$15,000</i>

Project title	Year	State	Researchers	Funding	
Controlled Delivery of Herbicides in Container Grown Ornamentals	2001	AL	Dr. J.H. Edwards Mr. G. Fain Dr. Charles H. Gilliam Dr. T. Grey Dr. Kenneth M. Tilt Dr. Glenn R. Wehtjie	Auburn University Auburn University Auburn University Auburn University Auburn University Auburn University	<i>\$11,500</i>
Plant Pathogen Management in Recycling Irrigation Systems	2001	OK	Dr. Sharon L. von Broembsen Dr. Russell Wright	Oklahoma State University Oklahoma State University	<i>\$12,000</i>
Herbicide Treated Mulches for Container Weed Control	2001	OH	Attn: HRI Contact Dr. Hannah Mathers	The Ohio State University The Ohio State University	<i>\$10,000</i>
Effects of Fertility and Drainage on Development of Resistance to Phytophthora Root Rot	2001	OH	Attn: HRI Contact Dr. Hannah Mathers	The Ohio State University The Ohio State University	<i>\$10,000</i>
Evaluation and Utilization of Weed Suppressive Traits in Ornamental Groundcovers	2001	NY	Dr. Andrew F. Senesac Dr. Leslie A. Weston	Cornell University Cornell University	<i>\$9,000</i>
On-The-Fly Inventory for Nursery Trees	2001	PA	Dr. Takeo Kanade Dr. Sanjiv Singh	Carnegie Mellon University Carnegie Mellon University	<i>\$10,000</i>
Conservation and Classical Biological Control of the Cherry Bark Tortrix in the Pacific Northwest	2001	WA	Dr. John J. Brown Dr. Lynell K. Tanigoshi	Washington State University WSU-Mount Vernon NWREC	<i>\$14,000</i>
The Effects of Sprayer Configuration on Efficacy in the Control of Scab on Crabapple: Phase 2	2001	OH	Dr. Ross D. Brazee Dr. Charles Krause	USDA-ARS Appl Tech Research U USDA-ARS Appl Tech Research U	<i>\$10,000</i>
Marketing Exploration of the Consumer of Professional Landscaping Services	2001	GA	Mr. William Kennedy	PK Data Inc	<i>\$45,000</i>
Fundamental Technologies for Automated Micro-Propagation	2001	PA	Dr. Takeo Kanade Dr. Sanjiv Singh	Carnegie Mellon University Carnegie Mellon University	<i>\$5,000</i>

Project title	Year	State	Researchers	Funding
Modeling Tree Water Use in Landscapes During Production	2001	FL	Dr. Richard C. Beeson, Jr Dr. Donn G. Shilling	University of Florida University of Florida <i>\$20,000</i>
Propagation of Nursery Crops Under Photosensitive Greenhouse Films	2001	SC	Dr. Teresa Cerny Dr. Nihal Rajapakse	Clemson University Clemson University <i>\$7,000</i>
Information and Automation Technologies for Nurseries; Sensor Web	2001	PA	Dr. Sanjiv Singh	Carnegie Mellon University <i>\$10,000</i>
Research Priorities	2001	WI	Ms. Monica Dignam	Monalco Inc <i>\$25,000</i>
Foliar Application of Auxins for Rooting Cuttings	2002	AL	Dr. Eugene K. Blythe Dr. Charles H. Gilliam Dr. Jeff L. Sibley Mrs. Rachel Surls	Mississippi State University Auburn University Auburn University University of California <i>\$4,000</i>
A New Highly White Grub-Pathogenic Nematode: Efficacy and Pertaining Ecological Traits	2002	NJ	Dr. Albrecht M. Koppenhofer Mr. David Rumbo	Rutgers, The State University of Ne Rutgers, The State University of Ne <i>\$16,000</i>
The Effects of Temperature Stress on Water and Nutrient Use in Container Production Systems	2002	OH	Mr. Michael Knee Dr. Hannah Mathers Mr. Stephen Myers Dr. Daniel K. Struve	Ohio State University The Ohio State University Ohio State University Ohio State University <i>\$20,000</i>
Development and Evaluation of Techniques for Management of Sclerotium rolfsii Crown Rot of Hosta	2002	IA	Dr. Edward Braun Dr. Michael Chaplin Dr. Mark Gleason Dr. Jeffrey K. Iles	Iowa State University Iowa State University Iowa State University Iowa State University <i>\$10,000</i>
Symptomatology and Molecular Detection of the Sudden Oak Death/Rhododendron Phytophthora using PCR	2002	MD	Dr. Douglas G. Luster Dr. Paul W. Tooley	USDA-ARS USDA-ARS <i>\$15,000</i>

Project title	Year	State	Researchers	Funding	
Using Surfactants to Control Phytophthora cinnamomi Root Rot of Rhododendron	2002	AR	Dr. James Correll Dr. Michael Evans Dr. David L. Hensley Dr. Jeffrey K. Iles	University of Arkansas University of Arkansas University of Arkansas Iowa State University	<i>\$9,000</i>
Development of sterile and dwarf cultivars of woody landscape plants	2002	MN	Dr. Gary Gardner Dr. Harold Pellett Dr. Alan Smith	Horticultural Science Landscape Plant Development Cer University of Minnesota	<i>\$15,000</i>
Development of New Landscape Plants for All Regions of North America	2002	MN	Dr. Harold Pellett Dr. Robert E. Schutzki	Landscape Plant Development Cer Michigan State University	<i>\$20,000</i>
Rapid Detection Of Phytophthora Species in Recycled Nursery Irrigation Water	2002	VA	Dr. Chuan Hong Dr. Peter B. Schultz	Virginia Polytechnic Inst & State U Virginia Tech	<i>\$20,000</i>
Evaluation of the Effectiveness of Specialized Marketing Programs for Horticultural Sales	2002	MS	Dr. Patricia R. Knight Mr. Ben Posadas Dr. Forrest E. Steglin Mr. C. David Veal	Mississippi State University Mississippi State University University of Georgia Mississippi State University	<i>\$15,000</i>
Aerated Nitrification Bioreactor for Nursery Retention Ponds	2002	AL	Dr. Charles H. Gilliam Dr. Janna Glenn	Auburn University Auburn University	<i>\$13,000</i>
Repellents for Deer and Rabbits Derived from Plant Species	2002	MI	Mr. Ron Perry Dr. Stanley Ries	Michigan State University Michigan State University	<i>\$25,000</i>
Assessing the Effectivity of Commercial Mycorrhizal Inoculum	2002	CA	Dr. Edith B. Allen Dr. Michael F. Allen Mr. A. James Downer Dr. Donald Merhaut Dr. Eugene Nothnagel	University of California University of California University of California University of California University of California	<i>\$10,000</i>

Project title	Year	State	Researchers	Funding	
Mating Disruption of Oriental Beetle by Pheromones in Commercial Nurseries	2002	NJ	Dr. James Lashomb Dr. Sridhar Polarvarpu Mr. Dan Rossi	Blake Hall Cook College Blake Hall Cook College Rutgers University	<i>\$12,000</i>
Environmental Resource Management System for Nurseries	2002	SC	Mr. Steven Klaine Dr. Ted Whitwell Mr. Chris Wilson Dr. Thomas Yeager	Clemson University Clemson University Clemson University University of Florida	<i>\$22,500</i>
Phytophthora-resistant rhododendron 'PJM', 'Nova Zembla' and evergreen azalea	2002	CT	Dr Gerald Berkowitz Dr. Mark H. Brand Dr. Jane Knapp	University of Connecticut University of Connecticut University of Connecticut	<i>\$12,000</i>
Plant Pathogen Management in Recycling Irrigation Systems (Third year)	2002	OK	Dr. Sharon L. von Broembsen Dr. Robert D. Wright	Oklahoma State University Virginia Tech (VPI&SU)	<i>\$13,000</i>
Nitrogen Use Efficiency of Container-grown Woody Ornamental Plants Exhibiting Various Growth Habits	2002	OR	Ms. Anita N. Azarenko Mr. Charles Boyer Attn: HRI Contact	Oregon State University Oregon State University Oregon State University	<i>\$10,000</i>
Assessing Potential of Molluscicidal Nematodes for Slug Control	2002	OH	Dr. Parwinder Grewal Dr. Richard K. Lindquist	Ohio State University OARDC Ohio State University OARDC	<i>\$18,000</i>
Conservation and Classical Biological Control of the Cherry Bark Tortix in the Pacific Northwest	2002	WA	Dr. John J. Brown Dr. Lynell K. Tanigoshi	Washington State University WSU-Mount Vernon NWREC	<i>\$13,000</i>
Mechanization	2002	PA			<i>\$25,000</i>
New England Environmental Horticulture Industry Survey	2003	VT	Dr. Leonard L. Perry Dr. Lois Berg Stack	University of Vermont University of Maine	<i>\$9,500</i>

Project title	Year	State	Researchers	Funding
Evaluation of Asiatic Oaks, Elms, Poplars, and Maples for Feeding Preference and Suitability by the Japanese Beetle and Gypsy Moth	2003	IL	Attn: HRI Contact Dr. Fredric D. Miller, Jr	The Morton Arboretum Dr Fredric D Miller <i>\$4,000</i>
Can Lower Doses of Herbicides, Applied More Frequently, Prevent Weed Break-through in Container Nursery Crops	2003	NC	Dr. Joseph C. Neal	North Carolina State University <i>\$2,000</i>
A New Highly White Grub-pathogenic Nematode: Evaluation of Field Efficacy	2003	NJ	Dr. Albrecht M. Koppenhofer Ms Maryellen O'Brien	Rutgers, The State University of Ne Rutgers, The State University of Ne <i>\$16,000</i>
Development of New Landscape Plants for All Regions of North America	2003	MN	Dr. Nina Bassuk Ms Mary Hirshfeld Dr. Rita L. Hummel Dr. Harold Pellett Dr. Robert E. Schutzki	Cornell University Cornell Plantations Washington State University Landscape Plant Development Cer Michigan State University <i>\$28,000</i>
Amending Container Substrate With Clay	2003	NC	Dr. Ted E. Bilderback Dr. Stuart L. Warren	North Carolina State University N C State University <i>\$7,500</i>
Disruption of Oriental Beetle Mating by Pheromones in Commercial Nurseries	2003	NJ	Dr. James Lashomb Dr. Sridhar Polarvarpu	Blake Hall Cook College Blake Hall Cook College <i>\$14,000</i>
Postemergence Oxalis Control in Container-grown Nursery Crops	2003	AL	Dr. James Altland Dr. Charles H. Gilliam Ms Carey Simpson	USDA-ARS Application Tech Rese Auburn University Auburn University <i>\$15,000</i>
Developing Sterile Forms of Potentially Invasive Nursery Crops	2003	NC	Dr. Thomas J. Monaco Dr. Thomas G. Ranney	North Carolina State University North Carolina State University <i>\$12,500</i>

Project title	Year	State	Researchers	Funding	
Species of Flatheaded Borer Impacting the Ornamental Industry and a Method to Survey for Borer Activity Within Field Nurseries	2003	TN	Dr. James Altland Dr. Donna Fare Dr. William Klingeman Dr. Jason B. Oliver	USDA-ARS Application Tech Rese US National Arboretum USDA-AR University of Tennessee Tennessee State University	<i>\$16,000</i>
Auxin Application to Cuttings by Incorporation Into a Stabilized Organic Rooting Medium	2003	AL	Dr. Eugene K. Blythe Dr. Charles H. Gilliam Dr. Jeff L. Sibley	Mississippi State University Auburn University Auburn University	<i>\$8,000</i>
Development of Degree-Day Models for Predicting Weed Germination and Weed Seed Development in Field Nurseries	2003	OR	Dr. James Altland Mr. Rick Gustafson Mr. J. Eric Smith	USDA-ARS Application Tech Rese The Oregon Garden Foundation J Frank Schmidt & Son Co	<i>\$5,000</i>
Water and Nutrient Use-Efficiency in Container-Nursery Production Systems	2003	MD	Dr. John Lea-Cox Mr. David S. Ross	University of Maryland University of Maryland	<i>\$20,000</i>
Nutrient Removal from Nursery Runoff Water Using a Novel Bioremediation System	2003	FL	Dr. Joseph P. Albano Mr. P. Chris Wilson Dr. Thomas Yeager	USDA-ARS-USHRL University of Florida/IRREC University of Florida	<i>\$12,000</i>
Plant Pathogen Management in Recycling Irrigation Systems (Final year)	2003	OK	Dr. Sharon L. von Broembsen Dr. Russell Wright	Oklahoma State University Oklahoma State University	<i>\$13,000</i>
The Community Value of Landscapes	2003	CO	Ms. Sharon R. Harris Dr. James E. Klett Ms Genevieve Wozniak	Colorado Nursery & Greenhouse A Colorado State University Headwaters Consulting LLC	<i>\$11,000</i>
Usrey Family Scholarship	2003	CA			<i>\$1,000</i>
Timothy S. and Palmer W. "Bill" Bigelow, Jr. Scholarships	2003	.			<i>\$2,500</i>

Project title	Year	State	Researchers	Funding
Adaptation of a Unique System for Efficient and Rapid Detection of Infestations of Black Vine Weevils in Container Nurseries	2004	OR	Dr. James Fisher	USDA-ARS <i>\$17,000</i>
A Better Auxin for Propagating Trees and Shrubs	2004	IA	Dr. Daniel W. Armstrong Dr. William R. Graves Dr. Jyotsna Sharma	Iowa State University Iowa State University University of Florida <i>\$5,000</i>
Development of Novel Smaller Cultivars of Ornamental Landscape Plants	2004	MN	Dr. Carl Rosen Dr. Alan Smith	University of Minnesota University of Minnesota <i>\$8,500</i>
Developing the Landscape Potential of Native Plant Species	2004	MN	Dr. Harold Pellett Dr. Robert E. Schutzki	Landscape Plant Development Cer Michigan State University <i>\$3,000</i>
The Effect of Nursery Production Practices on Tree Root Architecture and Planting Depth in the Landscape	2004	IL	Dr. Gary W. Watson	The Morton Arboretum <i>\$5,000</i>
An Integrated Pest Management Program for Control of Viburnum Leaf Beetle in the Nursery and Landscape	2004	ME	Dr. Reeser Manley	University of Maine <i>\$4,000</i>
Phytoremediation of Nursery Runoff Water Using Ornamental Plants	2004	MI	Dr. Bert Cregg Dr. Tom Fernandez Dr. D. Bradley Rowe	Michigan State University Michigan State University Michigan State University <i>\$12,000</i>
Finding the Balance: Calcined Clay Rate Effects in Pine Bark Substrates	2004	NC	Dr. Ted E. Bilderback Dr. Stuart L. Warren	North Carolina State University N C State University <i>\$10,000</i>
Development of IPM Thresholds for Arthropod Pests of Woody Plants	2004	NY	Dr. Paul A. Weston	Cornell University <i>\$10,500</i>

Project title	Year	State	Researchers	Funding
Liverwort (<i>Marchantia polymorpha</i>) Control In Container Crops	2004	OR	Dr. James Altland Dr. Charles H. Gilliam	USDA-ARS Application Tech Rese Auburn University <i>\$14,500</i>
Root Hardiness and Influence of DNA Herbicides in Overwintered Containers	2004	OH	Dr. Hannah Mathers Mr. Stephen Myers	The Ohio State University Ohio State University <i>\$10,000</i>
Tree Liners Affected by Bareroot Production Practices	2004	TN	Dr. James Altland Dr. Donna Fare	USDA-ARS Application Tech Rese US National Arboretum USDA-AR <i>\$25,000</i>
Developing Improved, Non-invasive Nursery Crops	2004	NC	Dr. Harold Pellett Dr. Margaret Pooler Dr. Thomas G. Ranney	Landscape Plant Development Cer US National Arboretum North Carolina State University <i>\$15,500</i>
Evaluation of Resistance and Susceptibility of Ash Species to Emerald Ash Borer	2004	OH	Dr. Pierluigi Bonello Dr. Daniel A. Herms Dr. Deborah McCullough Dr. David Smitley	Ohio State University Ohio State University Michigan State University Michigan State University <i>\$16,000</i>
ANLA's Landscape Distribution Group Operating Cost Study	2004	CO	Mr John R. Mackay	Mackay Research Group <i>\$3,000</i>
Akhurst Scholarshjp	2004	MD		<i>\$1,000</i>
Structural Changes in the U.S. Nursery Industry: An Assessment of Production and Marketing Trends	2004	TN	Dr. John R. Brooker Dr. Charles R. Hall	University of Tennessee Texas A&M University <i>\$15,000</i>
Development of New Landscape Plants for all Regions of North America	2004	MN	Ms. Sarah Doane Dr. Rita L. Hummel Dr. Harold Pellett Mr. Peter Podaras	Landscape Plant Development Cer Washington State University Landscape Plant Development Cer Cornell University <i>\$25,000</i>
Usrey Family Scholarship	2004	CA		<i>\$1,000</i>

Project title	Year	State	Researchers		Funding
Bigelow Scholarship	2004	MA			\$2,500
Dale and Elizabeth Deppe Scholarship	2004	MI			\$1,500
Development of a Reliable and Rapid Diagnostic Detection Method for Phytophthora in Nurseries	2005	CA	Dr. Michael Coffey Mr. Nanor Makarian	University of California University of California	\$12,000
Impacts of Recycled Wastewater Irrigation on Landscape Plants	2005	CO	Dr. James E. Klett Dr. Steven E. Newman Dr. Yaling Qian	Colorado State University Colorado State University Colorado State University	\$15,000
Evaluation of Bioplastic Nursery Containers in Three Climates	2005	FL	Dr. William R. Graves Mr. Jay-lin Jane Dr. Heidi A. Kratsch Mr. Perminus Mungara Dr. Jyotsna Sharma	Iowa State University Iowa State University Utah State University Iowa State University University of Florida	\$14,000
Ozone (O ₃) Efficacy in the Treatment of Recycled Nursery Irrigation Water	2005	TX	Dr. Michael A. Arnold Ms. Garry McDonald	Texas A&M University Texas A&M University	\$11,000
Reducing water and nutrient inputs to clay amended substrates: How low can we go?	2005	NC	Dr. Ted E. Bilderback Dr. Stuart L. Warren	North Carolina State University N C State University	\$12,000
Developing Improved Woody Ornamentals through Wide Hybridization	2005	TN	Dr. Chris Cheatham Dr. Sandra Reed	USDA, ARS Tennessee State University	\$8,000
Cost-effective long-term control of white grubs in nurseries through the establishment of entomopathogenic nematode populations	2005	OH	Dr. Parwinder Grewal Dr. Daniel A. Herms Mr. Kevin Power	Ohio State University OARDC Ohio State University OARDC Ohio State University OARDC	\$19,000
DNA fingerprinting of <i>Berberis thunbergii</i> and <i>Euonymus alatus</i> to Determine the Origin of Invasive Populations	2005	CT	Dr. Mark H. Brand Mr. Jonathan M. Lehrer Ms. Jessica Loavenbruck	University of Connecticut University of Connecticut University of Connecticut	\$20,000

Project title	Year	State	Researchers	Funding
Selecting A Drought Tolerant Sugar Maple Rootstock	2005	KS	Dr. Jason Griffin	Kansas State University \$4,000
(Declined Award for 2005) Improving Access To Herbicide Safety and Efficacy Data	2005	NC	Dr. David Monks Dr. Joseph C. Neal	North Carolina State University North Carolina State University \$2,000
Real-time Irrigation Scheduling for Ornamental Plant Production Using Echo Moisture Sensors	2005	FL	Dr. Dorota Haman Dr. Thomas Yeager	University of Florida University of Florida \$10,000
Development of New Landscape Plants for all Regions of North America	2005	MN	Ms. Sarah Doane Dr. Rita L. Hummel Dr. Harold Pellett Mr. Peter Podaras	Landscape Plant Development Center Washington State University Landscape Plant Development Center Cornell University \$15,000
Developing the Landscape Potential of Native Plant Species	2005	MN	Dr. Harold Pellett Mr. Peter Podaras Dr. Robert E. Schutzki	Landscape Plant Development Center Cornell University Michigan State University \$3,000
Multi-state Survey of Nursery Laborer Level Employees: OH, MI, DE, TN, FL, IN, AZ	2005	OH	Dr. Susan S. Barton Dr. Bridget K. Behe Dr. John R. Brooker Ms Jennifer H Dennis Dr. Charles R. Hall Dr. John J. Haydu Dr. Alan Hodges Dr. Hannah Mathers Dr. Ursula Schuch	University of Delaware Michigan State University University of Tennessee Michigan State University Texas A&M University University of Florida IFAS University of Florida The Ohio State University University of Arizona \$21,000
Mineral Nutrition and Nutrient Use Efficiency of Container-Grown Trees	2005	FL	Dr. Bonnie Lee Appleton Mr. Scott Clark Ms. Janet C. Cole Dr. Daniel K. Struve	Virginia Polytechnic Institute & State University Cornell Cooperative Extension Oklahoma State University Ohio State University \$11,000

Project title	Year	State	Researchers	Funding
Development of a PCR-based Detection Assay for Foliar Nematodes in Ornamental Host Plant Tissues	2005	NC	Dr. Eric L. Davis Dr. Colleen Y Warfield	North Carolina State University North Carolina State University <i>\$11,000</i>
Liverwort (<i>Marchantia polymorpha</i>) control in propagation and container systems	2005	OR	Dr. James Altland Dr. Charles H. Gilliam	USDA-ARS Application Tech Rese Auburn University <i>\$12,000</i>
Determining relative invasiveness of <i>Buddleja davidii</i> cultivars and developing management strategies to prevent their spread	2005	OR	Dr. James Altland Dr. Stan Hokanson	USDA-ARS Application Tech Rese University of Minnesota <i>\$14,000</i>
Carville M. Akehurst Memorial Scholarship	2005	MD		<i>\$1,000</i>
Spring Meadow Nursery Scholarship	2005	MI		<i>\$1,500</i>
The Usrey Family Scholarship	2005	CA		<i>\$1,000</i>
Timothy Bigelow and Palmer W. Bigelow, Jr. Scholarship	2005	MA		<i>\$2,500</i>
Development of a New Container Substrate Derived from Ground Pine Wood Chips	2006	VA	Dr. Charles H. Gilliam Dr. Jeff L. Sibley Dr. Amy N. Wright Dr. Robert D. Wright	Auburn University Auburn University Auburn University Virginia Tech (VPI&SU) <i>\$15,000</i>
Susceptibility of Imported Fire Ants, <i>Solenopsis</i> spp., to Insecticides Applied to Nursery Root Balls Through a Drip Irrigation System	2006	TN	Dr. Jason B. Oliver Dr. J. Patrick Parkman Dr. Tahir Rashid Dr. Karen Vail	Tennessee State University University of Tennessee TSU Nursery Crop Research Stn University of Tennessee <i>\$14,000</i>
Controlling New Weeds in Nurseries and Landscapes	2006	NC	Dr. Jeffrey F. Derr Dr. Joseph C. Neal	Virginia Polytechnic Inst & State U North Carolina State University <i>\$5,000</i>

Project title	Year	State	Researchers	Funding
Development of a PCR-based Detection Assay for Foliar Nematodes in Ornamental Host Plant Tissues	2006	NC	Dr. Eric L. Davis Dr. Colleen Y Warfield	North Carolina State University North Carolina State University <i>\$13,000</i>
Cover Cropping and Conservation Tillage Systems for Field Grown Ornamental Production	2006	OR	Dr. James Altland Mr. Sam Doane Mr. Tom Gohlke Dr. John Luna	USDA-ARS Application Tech Rese J Frank Schmidt & Son Co Natural Resources Conservation S Oregon State University <i>\$27,000</i>
Development of Sterile Non-invasive Cultivars of Euonymus Alatus and Buddleja Davidii	2006	MN	Dr. Neil O. Anderson Dr. Thomas Michaels Dr. Alan Smith	University of Minnesota University of Minnesota University of Minnesota <i>\$7,000</i>
Finding the Minimum for Maximum Growth: Can Phosphorus and Potassium Inputs be Eliminated?	2006	NC	Dr. Ted E. Bilderback Dr. Stuart L. Warren	North Carolina State University N C State University <i>\$11,000</i>
Impacts of Recycled Wastewater Irrigation on Landscape Soils and Plants	2006	CO	Dr. James E. Klett Dr. Yaling Qian	Colorado State University Colorado State University <i>\$16,000</i>
Breeding New Nursery Crops	2006	NC	Dr. Thomas G. Ranney	North Carolina State University <i>\$8,000</i>
Development of a New Biological Product for Slug Control	2006	OH	Dr. Parwinder Grewal	Ohio State University OARDC <i>\$20,000</i>
Development of a New Technique for Evaluating Resistance to Powdery Mildew in Dogwood	2006	TN	Dr. Warren Copes Dr. Donna Fare Dr. Yonghao Li Mr. James Spiers Dr. Robert N. Trigiano Dr. Mark T. Windham	Washington State University US National Arboretum USDA-AR University of Tennessee USDA-ARS University of Tennessee University of Tennessee <i>\$4,000</i>
Carville M. Akehurst Memorial Scholarship	2006	MD		<i>\$2,000</i>

Project title	Year	State	Researchers		Funding
Timothy Bigelow and Palmer W. Bigelow, Jr. Scholarship	2006	MA			\$2,500
Spring Meadow Nursery Scholarship	2006	MI			\$2,000
The Usrey Family Scholarship	2006	CA			\$2,000
Water Management Research Investigations: Focused Research Investigations on Priority Water Issues	2006	na			\$50,000
Research Consortium: Identifying Nursery Industry Priority Water Issues	2006	DC			\$15,000
Sodium Cellulose Glycolate as an Adjuvant for Liquid Rooting Hormones in Cutting Propagation	2006	AL	Dr. Eugene K. Blythe Dr. Charles H. Gilliam Dr. Jeff L. Sibley	Mississippi State University Auburn University Auburn University	\$3,000
Root Hardiness of Woody Plants Suitable for Container Growing in Nursery and Urban Environments	2006	NY	Dr. Nina Bassuk Mr. Brent Markus	Cornell University Cornell University	\$15,000
Evaluation and Asexual Propagation of Oak Hybrids for Environmental Stress Tolerance	2006	NY	Dr. Naalamle Amissah Dr. Nina Bassuk	Cornell University Cornell University	\$15,000
Developing the Landscape Potential of Native Plants	2006	MN	Dr. Rita L. Hummel Dr. Harold Pellett Mr. Peter Podaras Dr. Robert E. Schutzki	Washington State University Landscape Plant Development Cer Cornell University Michigan State University	\$3,000

Project title	Year	State	Researchers	Funding	
Development of New Landscape Plants for all Regions of North America	2006	MN	Ms. Sarah Doane Dr. Rita L. Hummel Dr. Harold Pellett Mr. Peter Podaras	Landscape Plant Development Cer Washington State University Landscape Plant Development Cer Cornell University	\$28,000
A Better Auxin for Propagating Trees and Shrubs	2006	IA	Dr. William R. Graves Dr. Jyotsna Sharma	Iowa State University University of Florida	\$17,500
Granular Sex Pheromone Formulations For Oriental Beetle Mating Disruption	2006	NJ	Dr. Albrecht M. Koppenhofer	Rutgers, The State University of N	\$16,000
The Influence of DNA Herbicides on Root and Shoot Hardiness During Nursery Filed Overwintering	2006	OH	Mr. Luke Case Dr. Hannah Mathers	The Ohio State University The Ohio State University	\$14,000
Nickel Nutrition for River Birch and other Ornamentals	2006	GA	Dr. John M. Ruter	University of Georgia	\$10,000
Granular Sex Pheromone Formulations For Oriental Beetle Mating Disruption	2007	NJ	Dr. Albrecht M. Koppenhofer	Rutgers, The State University of N	\$16,000
Development of New Landscape Plants for all Regions of North America	2007	MN	Dr. Rita L. Hummel Dr. Harold Pellett Mr. Peter Podaras	Washington State University Landscape Plant Development Cer Cornell University	\$30,000
Developing the Landscape Potential of Native Plants	2007	MN	Dr. Rita L. Hummel Dr. Harold Pellett Mr. Peter Podaras Dr. Robert E. Schutzki	Washington State University Landscape Plant Development Cer Cornell University Michigan State University	\$3,000
Use of Controlled-Release Aluminum Sulfate in Container Substrate for Controlling Flower Color of Bigleaf Hydrangea	2007	TN	Dr. Donna Fare Dr. Sandra Reed	US National Arboretum USDA-AR Tennessee State University	\$6,500

Project title	Year	State	Researchers	Funding
Continued Development of Bioplastics for the Green Industry	2007	IA	Dr. William R. Graves Mr. David Grewell	Iowa State University Iowa State University <i>\$14,000</i>
Category Management for Garden Centers	2007	MO	Mr. Joe Weston	Gerke & Associates Inc <i>\$19,000</i>
Molecular Biology of Ash Resistance to the Emerald Ash Borer	2007	OH	Dr. Pierluigi Bonello Dr. Daniel A. Herms	Ohio State University Ohio State University <i>\$25,000</i>
A Systematic Approach to Solve Nursery and Landscape Water Management	2007	SC	Dr. William L. Bauerle	Colorado State University <i>\$25,000</i>
Challenging and evaluating hemlock species susceptibility to Hemlock Woolly Adelgid (HWA) and Elongate Hemlock Scale (EHS).	2007	PA	Mr. Rick Bates Dr. Greg Hoover Dr. James C. Sellmer	Pennsylvania State University Pennsylvania State University Pennsylvania State University <i>\$5,000</i>
Development of Acoustic Technology for Early, Rapid and Effective Detection of Asian Longhorned Beetle Larvae within Landscape Trees	2007	FL	Mr. Richard Mankin Mr. Michael T. Smith	USDA-ARS USDA-ARS <i>\$10,000</i>
Nutrient Management of Ground Pine Chips as a Container Substrate.	2007	VA	Dr. Robert D. Wright	Virginia Tech (VPI&SU) <i>\$15,000</i>
Garbage IN : Substrate OUT Solving the bark media shortage	2007	NC	Dr. Ted E. Bilderback Dr. Stuart L. Warren	North Carolina State University N C State University <i>\$13,000</i>
Pyrethroid band treatments to Certify Field Nursery Stock Against Imported Fire Ant	2007	TN	Dr. Ann-Marie Callcott Mr. Mark A. Halcomb Dr. Sam Ochieng Dr. Jason B. Oliver Dr. Karen Vail	USDA-APHIS-PPQ Cooperative Extension Service Tennessee State University Tennessee State University University of Tennessee <i>\$20,000</i>
Development of New Technologies for the Detection of Phytophthora in Ornamental Nurseries	2007	CA	Dr. Michael Coffey	University of California <i>\$20,000</i>

Project title	Year	State	Researchers	Funding
Controlling New Weeds in Nurseries	2007	NC	Dr. Jeffrey F. Derr Dr. Joseph C. Neal	Virginia Polytechnic Inst & State U North Carolina State University <i>\$5,000</i>
Using Vapor Pressure Deficit to Control Intermittent Mist Application During Vegetative Propagation of Ornamental Species	2007	NC	Mr. P. Michael Jett Dr. Anthony LeBude	Eccentric Solutions North Carolina State University <i>\$5,000</i>
Breeding New Nursery Crops	2007	NC	Dr. Thomas G. Ranney	North Carolina State University <i>\$10,000</i>
Short Range pheromone of Asian longhorned beetle	2007	PA	Dr. Thomas Baker Dr. Kelli Hoover Mr. Victor Mastro Dr. Aijun Zhang	Pennsylvania State University The Penn State University USDA/APHIS USDA ARS <i>\$15,000</i>
Evaluation of Postemergent Herbicides, Tree Guards and Fertility in Bark Cracking in Nursery Trees	2007	OH	Dr. Janna L. Beckerman Mr. Luke Case Dr. Hannah Mathers	Purdue University The Ohio State University The Ohio State University <i>\$17,000</i>
Evaluation of a Forestry In-Field Harvesting By-Product as an Alternative Substrate in Containerized Nursery Crop Production	2007	AL	Dr. Glenn Fain Dr. Thomas Gallagher Dr. Charles H. Gilliam Dr. Jeff L. Sibley Dr. Allen Torbert	Auburn University Auburn University Auburn University Auburn University USDA/ARS <i>\$18,500</i>
Development and Performance of RFID Containers for the Nursery Industry	2007	CA	Dr. Tali Freed Dr. Shaun F. Kelly	California Polytechnic State Univer California Polytechnic State Unive <i>\$14,000</i>
Identification of Christmas trees with superior needle retention	2007	WA	Mr. Rick Bates Mr. Gary Chastagner Mr. Chal Landgren Ms. Jill O'Donnell	Pennsylvania State University Washington State Univ-Puyallup C Oregon State University Jill O'Donnell <i>\$10,000</i>

Project title	Year	State	Researchers	Funding
Interactive Impacts of Salts and Surfactants in Recycled Wastewater on Landscape Plants	2007	CO	Dr. James E. Klett Dr. Yaling Qian	Colorado State University Colorado State University <i>\$16,000</i>
Establishing Perennial Grass Cover Crops Within Tree Rows of Field Nurseries	2007	OR	Dr. James Altland Dr. John Luna	USDA-ARS Application Tech Rese Oregon State University <i>\$10,000</i>
Carville M. Akehurst Scholarship	2007	MD		<i>\$2,000</i>
Timothy Bigelow Scholarship	2007	MA		<i>\$2,500</i>
Spring Meadow Nursery Scholarship	2007	MI		<i>\$2,000</i>
The Usrey Family Scholarship	2007	CA		<i>\$1,500</i>
Evaluation and Commercialization of Bioplastic Pots	2008	IA, FL, TX,	Dr. William R. Graves	Iowa State University <i>\$24,000</i>
Developing the Landscape Potential of Native Plants	2008	MN, MI, NY	Dr. Rita L. Hummel Dr. Harold Pellett Mr. Peter Podaras Dr. Robert E. Schutzki	Washington State University Landscape Plant Development Cer Cornell University Michigan State University <i>\$5,000</i>
Development of New Landscape Plants for all Regions of North America	2008	MN, MI, NY	Mr. Sam Doane Dr. Rita L. Hummel Dr. Harold Pellett Mr. Peter Podaras	J Frank Schmidt & Son Co Washington State University Landscape Plant Development Cer Cornell University <i>\$33,000</i>
Development and Testing of Non-Invasive Euonymus Alatus and Buddleia Davidii	2008	MI	Dr. Alan Smith	University of Minnesota <i>\$15,000</i>
Reducing Over-wintering Costs of Containerized Plant Production: Maximizing Root Hardiness, Media Selection and Insulation in the Nursery	2008	NY	Dr. Nina Bassuk Mr. Brent Markus	Cornell University Cornell University <i>\$18,000</i>

Project title	Year	State	Researchers	Funding
Sustainable Sites Initiative	2008	TX	Ms. Heather Venhaus Dr. Steve Windhager	Lady Bird Johnson Wildflower Cent Lady Bird Johnson Wildflower Cent \$20,000
Web-based Decision Support Model for Container Production	2008	FL	Dr. Joseph P. Albano Dr. Terril A. Nell Dr. Thomas Yeager	USDA-ARS-USHRL University of Florida University of Florida \$25,000
Deployment of Wireless Sensor Networks for Real-Time Water and Nutrient Management	2008	MD, PA	Dr. Joshua Anhalt Dr. George Kantor Dr. John Lea-Cox Dr. Andrew Ristvey Mr. David S. Ross	Carnegie-Mellon University Carnegie-Mellon University University of Maryland Cooperative Extension Service University of Maryland \$24,000
Identification of Christmas trees with superior needle retention	2008	MI, PA, WA	Mr. Rick Bates Mr. Gary Chastagner Mr. Chal Landgren Ms. Jill O'Donnell	Pennsylvania State University Washington State Univ-Puyallup C Oregon State University Jill O'Donnell \$10,000
Interactive Impacts of Salts and Surfactants in Recycled Wastewater on Landscape Plants	2008	CO	Dr. Yaling Qian	Colorado State University \$16,000
Breeding New Nursery Crops	2008	NC	Dr. Thomas G. Ranney	North Carolina State University \$10,000
Implementation of RFID System Using Containers and Tags to Improve Nursery Production Efficiency	2008	CA	Dr. Tali Freed Dr. Shaun F. Kelly	California Polytechnic State Univer California Polytechnic State Unive \$23,500
Controlled release fertilizer winter release effect on plant uptake and the environment	2008	OR	Attn: HRI Contact	University of Rhode Island \$11,000
Evaluation of the Invasive and Noxious Weed Species Propagule-Bank in Ohio Nurseries, Landscapes and Natural Areas.	2008	OH	Dr. John Cardina Dr. Hannah Mathers Dr. Carolyn Scagel	Ohio State University, OARDC-Wo The Ohio State University USDA-ARS \$15,000

Project title	Year	State	Researchers		Funding
Management of Diaprepes Root Weevil in Ornamental Nurseries	2008	FL, CA	Dr. Jim Bethke Dr. John Kabashima Dr. Edwin E. Lewis Dr. Catharine Mannion	University of California Univ of CA Cooperative Extension University of California Tennessee State University	\$15,000
Development of New Technologies for the Detection of Phytophthora in Ornamental Nurseries	2008	CA	Dr. Michael Coffey	University of California	\$25,000
Timothy Bigelow and Palmer W. Bigelow, Jr. Scholarship	2008				\$3,500
Carville M. Akehurst Memorial Scholarship	2008				\$4,000
Spring Meadow Nursery Scholarship	2008				\$2,500
The Usrey Family Scholarship	2008				\$1,500
The Muggets Scholarship	2008				\$1,500
Block Grant: Development of Alternative Container Substrates (see project apps: 57, 31, 58, 59)	2008		Dr. Charles H. Gilliam	Auburn University	\$75,000
Block Grant: Biodegradable Container Business Plan	2008				\$25,000
SNA Research Conference	2008		Mr. Steve Newton	Southern Nursery Association	\$10,000
Online Access for the Journal of Environmental Horticulture	2008	ALL	Dr. John Lea-Cox	University of Maryland	\$12,500
Influence of Nitrogen Application Rate on the Development of Powdery Mildew and Leaf Spot Diseases and Growth of Crapemyrtle, Hydrangea, and Rose	2009	AL	Dr. Kira Bowen Dr. Austin Hagan	Department of Entomology Auburn University	\$6,000

Project title	Year	State	Researchers	Funding
Reducing Pesticide Consumption Through Targeted Application in Nurseries	2009	OH	Dr. Erdal Ozkan	Ohio State University <i>\$17,500</i>
Your Trees on Crack - The Role of Glyphosate in Nursery/ Landscape Bark Cracking	2009	OH, IN, OR	Dr. Janna L. Beckerman Dr. Hannah Mathers Dr. Michael V. Mickelbart Dr. Carolyn Scagel	Purdue University The Ohio State University Purdue University USDA-ARS <i>\$20,000</i>
Structural Changes in the U.S. Nursery Industry: An Assessment of Production and Marketing Trends	2009	TX, FL,	Dr. Charles R. Hall Dr. John J. Haydu Dr. Alan Hodges Dr. Marco Palma	Texas A&M University University of Florida IFAS University of Florida Texas A&M University <i>\$20,000</i>
Development of New Landscape Plants for all Regions of North America	2009	NY, MN, O	Dr. David Dai Ms. Sarah Doane Dr. Rita L. Hummel Dr. Harold Pellett	North Dakota State University Landscape Plant Development Cer Washington State University Landscape Plant Development Cer <i>\$30,000</i>
A Systematic Approach to Solve Nursery and Landscape Water Management: Initial Industry Application	2009	CO, OH	Dr. William L. Bauerle	Colorado State University <i>\$25,000</i>
Development of Alternative Container Substrates a Block Grant	2009	Won	Dr. Cheryl Boyer Dr. Glenn Fain Dr. Charles H. Gilliam Dr. Jeff L. Sibley	Kansas State University Auburn University Auburn University Auburn University <i>\$50,000</i>
Biodegradable Plant Container Block Grant	2009		Attn: HRI Contact	HRI Endowment Fund <i>\$20,000</i>
Timothy Bigelow and Palmer W. Bigelow, Jr. Scholarship	2009			<i>\$1,750</i>
Carville M. Akehurst Memorial Scholarship	2009			<i>\$2,000</i>

Project title	Year	State	Researchers		Funding
Spring Meadow Nursery Scholarship	2009				\$1,250
The Usrey Family Scholarship	2009				\$750
The Muggets Scholarship	2009				\$750
Sustainable Sites Initiative	2009	TX	Ms. Heather Venhaus Dr. Steve Windhager	Lady Bird Johnson Wildflower Cent Lady Bird Johnson Wildflower Cent	\$5,000
Effects of Root Form in the Nursery on Tree Stability Following Planting from Containers	2010	FL, NC, OK	Dr. Bert Cregg Dr. Edward F. Gilman Dr. D. Bradley Rowe	Michigan State University University of Florida Michigan State University	\$20,000
Quantifying Carbon Sequestration in Woody and Herbaceous Plants	2010	MI	Dr. Bert Cregg Dr. D. Bradley Rowe Dr. Robert E. Schutzki	Michigan State University Michigan State University Michigan State University	\$22,500
Floating Plant Treatment Systems for Nutrient Remediation of Nursery and Greenhouse Runoff	2010	SC, FL	Dr. Sarah White	Clemson University	\$12,000
Development of Stress Tolerant Landscape Plants for all Regions of North America	2010	MN, OR, W	Dr. David Dai Ms. Sarah Doane Dr. Rita L. Hummel Dr. Harold Pellett	North Dakota State University Landscape Plant Development Cer Washington State University Landscape Plant Development Cer	\$35,000
A Multi-solution Approach to Irrigation Scheduling for Containerized Nursery Crops	2010	NC, PA, OR	Dr. Ted E. Bilderback Dr. George Kantor Dr James Owen Dr. John Selker Ms. Heather Stoven	North Carolina State University Carnegie-Mellon University N Willamette Res & Extension Cen Oregon State University N Willamette Res & Extension Cen	\$22,500

Project title	Year	State	Researchers		Funding
On-Site Demonstration of Alternative Substrates at Nurseries Across the Southeast U.S.	2010	AL, MS, KS	Dr. Cheryl Boyer Dr. Glenn Fain Dr. Thomas Gallagher Dr. Charles H. Gilliam Dr. Allen Torbert	Kansas State University Auburn University Auburn University Auburn University USDA/ARS	\$25,500
Sustainable Sites Initiative	2010	TX	Dr. Steve Windhager	Lady Bird Johnson Wildflower Center	\$5,000
Biodegradable Nursery Containers from Keratin-Business Plan and Marketing Development	2010	ALL			\$60,000
SNA Research Conference	2010	All Southern			\$1,000
Carville M. Akehurst Memorial Scholarship	2010				\$2,000
The Muggets Scholarship	2010				\$1,000
Spring Meadow Nursery Scholarship	2010				\$1,500
Timothy Bigelow and Palmer W. Bigelow, Jr. Scholarship	2010				\$2,000
Quantifying Carbon Sequestration in Woody and Herbaceous Nursery Production Systems	2011	MI, OH	Dr. D. Bradley Rowe Dr. Robert E. Schutzki	Michigan State University Michigan State University	\$17,500
Best Management Practices for Ganulate Ambrosia Beetle to Reduce Pesticide Use and Secondary Mite Outbreaks in Nursery Crops	2011	IN, NC, MD	Dr. Steven Frank	North Carolina State University	\$25,000

Project title	Year	State	Researchers	Funding	
Evaluation of the Factors Affecting the Development of a Sustainable Substrate Operation	2011	AL	Dr. Glenn Fain Dr. Thomas Gallagher Dr. Charles H. Gilliam Ms. Anna-Marie Murphy Dr. Jeff L. Sibley Dr. Allen Torbert	Auburn University Auburn University Auburn University Auburn University Auburn University USDA/ARS	\$35,000
Grower-led Development of PlantRight Invasive-Free Certification Program for Ornamental Plants	2011	CA	Dr. Christiana Conser Dr. Joseph DiTomaso Mr. Robert Dolezal Mr. Ron Ramsey Mr. Nicholas J. Staddon	Sustainable Conservation University of California California Association of Nurseries Village Nurseries Monrovia	\$20,000
Moving Towards a Sustainable and Efficient Phosphorus Fertilizer for Ornamental Production	2011	OR	Dr James Owen Ms. Heather Stoven Dr. Dan Sullivan Dr. Jim Zablocki	N Willamette Res & Extension Cen N Willamette Res & Extension Cen Oregon State University Ostara/Crystal Green	\$15,000
Development of Novel Traps and Pheromonal Lures for Cost-effective Monitoring and Control of Destructive Leaf Beetles in Ornamental Nurseries Strawberry Rootworm <i>Paria fragariae</i>	2011	AL, TN	Dr. Charles P. Hesselein Dr. Sam Ochieng Dr. Blair Sampson Dr Christopher Werle	Auburn University Tennessee State University USDA, ARS USDA, ARS	\$15,000
Development of Industry Standard Web Based Training for the Garden Center Industry	2011		Mr. Sean Lacey	South Mountain Learning	\$25,000
Spring Meadow Nursery Scholarship	2011				\$1,500
Biodegradable Nursery Container from Poultry Feathers- Continued Research & Development of Bioresins and the Creation of an Alternative Petroleum Based Nursery Container	2011		Dr. Masud Huda Dr. Walter Schmidt	USDA ARS USDA ARS	\$60,000

Project title	Year	State	Researchers	Funding
How Green Are Trees? A Life Cycle Inventory and Analysis of Nursery Production Methods, Distribution Processes, and Tree Care Practices	2012	IL, MN, WI,	Dr. Andrew Koeser Dr. J. Ryan Stewart	University of Illinois at Champaign- University of Illinois at Champaign- <i>\$10,000</i>
Production of Aromatic, Ornamental Plants for Screening of Essential Oils as Potential Biopesticides	2012	MS	Dr. Eugene K. Blythe	Mississippi State University <i>\$16,000</i>
Carbon Sequestration and Greenhouse Gas Emission Reduction in Nursery and Landscape Production Practices	2012	AL	Dr. Glenn Fain Dr. Charles H. Gilliam Dr. Stephen Prior Dr. Brett Runion Dr. Jeff L. Sibley Dr. Allen Torbert	Auburn University Auburn University USDA-ARS USDA-ARS Auburn University USDA/ARS <i>\$35,000</i>
Algal Mulch and Composted Algae to Improve Water and Nutrient Holding Capacity and as a Container Nursery Substrate Component	2012	OH, FL	Dr. Joseph P. Albano Dr. James Altland Dr. Calvin E. Arnold Dr. Terence Evens Dr. David Hall Dr. Charles Krause	USDA-ARS-USHRL USDA-ARS Application Tech Rese University of Florida IFAS USDA-ARS-USHRL USDA-ARS-USHRL USDA-ARS Appl Tech Research U <i>\$22,000</i>
Asian Longhorned Beetle Monitoring System for Arboreta and the Green Industry	2012	CT, MA, PA	Dr. Kelli Hoover Dr. Melody Keena	The Penn State University USDA Forest Service Northern Re: <i>\$28,000</i>
The Color of Marketing	2012	MI, TX	Dr. Bridget K. Behe Dr. R.T. Fernandez Dr. Charles R. Hall Dr. Marco Palma	Michigan State University Michigan State University Texas A&M University Texas A&M University <i>\$30,000</i>
Reducing the Economic Impact of Ambrosia Beetles in Nursery Production	2012	OH, NC, VA	Dr. Steven Frank Mr. Christopher Ranger Dr. Peter B. Schultz	North Carolina State University OARDC Virginia Tech <i>\$30,000</i>

Project title	Year	State	Researchers		Funding
Analyzing the Environmental Impact (Carbon Footprint) and Economic Costs of Field-Grown Flowering Tree Production System Components	2012	TX, KY	Dr. Charles R. Hall Dr. Dewayne L. Ingram	Texas A&M University University of Kentucky	\$20,000
Keratin Based Bioresins Continuing Work Addressing Biodegradability, Applicability, and Production of Green Industry Products	2012	All	Dr. Masud Huda Dr. Walter Schmidt	USDA ARS USDA ARS	\$78,500
Timothy Bigelow and Palmer W. Bigelow, Jr. Scholarship	2012		Attn: HRI Contact	University of Minnesota	\$3,000
Carville M. Akehurst Memorial Scholarship	2012		Attn: HRI Contact	University of Minnesota	\$4,000
Spring Meadow Nursery Scholarship	2012		Attn: HRI Contact	University of Minnesota	\$2,000
The Muggets Scholarship	2012		Attn: HRI Contact	University of Minnesota	\$2,500
Management of a New Introduced Pathogen of Boxwood	2013	CT	Dr. James A. LaMondia	Connecticut Agricultural Experimer	\$7,500
Research Priorities Industry Survey	2013	All	Mr. Matt Orenstein	Standpoint Marketing Research	\$12,000
Salt Balance Equations to Grow Container Ornamentals with Reclaimed Waste Water	2013	FL	Dr. Kimberly Moore	University of Florida	\$14,000
Greenhouse Gas Emissions (Carbon Footprint) and Associated Costs of Field-grown, Deciduous Shrub Production System Components and the Subsequent Impact in the Landscape	2013	AL, GA, KY	Dr. Charles R. Hall Dr. Dewayne L. Ingram	Texas A&M University University of Kentucky	\$15,000
Extraction and Screening of Essential Oils from Ornamental Plants as Potential Biopesticides	2013	MS	Dr. Eugene K. Blythe	Mississippi State University	\$18,000

Project title	Year	State	Researchers	Funding
Root Attributes in the Nursery Root Ball: What Holds Trees Erect	2013	FL	Dr. Edward F. Gilman	University of Florida \$20,000
Best Plants and Filter Bed Substrates for Rain Gardens	2013	NC	Dr. Ted E. Bilderback Dr. William F. Hunt, III Dr. Helen T. Kraus	North Carolina State University North Carolina State University North Carolina State University \$24,500
Use of Biochar to Supply Phosphorus in Container Crops	2013	OH	Dr. James Altland Dr. James Locke	USDA-ARS Application Tech Rese USDA-ARS \$25,000
Reducing Tree Susceptibility to Ambrosia Beetle Attacks in Nurseries	2013	OH, NC	Dr. Steven Frank Mr. Christopher Ranger	North Carolina State University OARDC \$30,000
Evaluation of a Weed Risk Assessment Model for Screening Ornamental Plants Throughout the US	2013	MA, AL, MI	Dr. Christiana Conser Dr. Joseph DiTomaso Mr. Dave Fujino, Ph.D.	Sustainable Conservation University of California DWF LLC \$34,000
Biology and Management of Live Oak Rapid Decline in Florida Nurseries	2013	AL, AR, DC,	Ms. Eileen Buss Dr. Edward F. Gilman Dr. Jason Smith	University of Florida University of Florida University of Florida \$35,000
Testing and Development of Fungal Biocontrol Agents Against Asian Ambrosia Beetles and Their Symbiotic Fungi	2013	NY, TN	Ms. Louela Castrillo Dr. Jason B. Oliver Dr. John D. Vandenberg Dr. Nadeer Youssef	Cornell University Tennessee State University USDA Agricultural Research Servic Tennessee State University \$50,000
Timothy Bigelow and Palmer W. Bigelow, Jr. Scholarship	2013			\$3,000
Carville M. Akehurst Memorial Scholarship	2013			\$4,000
The Bryan A. Champion Memorial Scholarship	2013			\$1,000

Project title	Year	State	Researchers		Funding
Spring Meadow Nursery Scholarship	2013				<i>\$10,000</i>
The Muggets Scholarship	2013				<i>\$1,500</i>
Susie & Bruce Usrey Education Scholarship	2013				<i>\$500</i>
The Usrey Family Scholarship	2013				<i>\$1,000</i>
ANLA American Standard for Nursery Stock (ANSI Z60.1)	2013	DC			<i>\$27,000</i>
Market Demographics and Trends Affecting the Green Industry	2014	MI	Dr. Bridget K. Behe	Michigan State University	<i>\$50,000</i>
Biopesticide Nootkatone for Use against Mites on Ornamental Crops	2014	TN	Dr. Karla Adesso	Tennessee State University	<i>\$22,050</i>
Greenhouse Gas Emissions (Carbon Footprint) and Associated Costs of Tree Production Components in a Pot-in-Pot (PNP) System	2014	KY	Dr. Dewayne L. Ingram	University of Kentucky	<i>\$15,000</i>
A new technology for reducing irrigation application and controlling leaching for greenhouse and nursery production	2014	LA	Dr. Jeffrey Beasley	Louisiana State University	<i>\$17,350</i>
Evaluating Organic Fertilizers to Grow Horticultural Crops in Soilless Mixes	2014	OH	Dr. Claudio Carlos Pasion	Ohio State University	<i>\$7,650</i>
The Role of Plant Brands in Consumer Preferences for Plants and their Perceptions of Plant Quality	2014	MI	Dr. Bridget K. Behe	Michigan State University	<i>\$35,000</i>
Assessment of National and Regional Trends in Production and Marketing Practices in the US Nursery and Greenhouse Industry	2014	FL	Dr. Alan Hodges	University of Florida	<i>\$34,500</i>

Project title	Year	State	Researchers		Funding
Extending the Harvest Season for Field-Grown Trees by Digging Bare Root	2014	IL	Dr. Gary W. Watson	The Morton Arboretum	<i>\$16,700</i>
Could Proper Mulch Species and Depth Selection Reduce Hand Labor and Pre-Emergence Herbicide Cost?	2014	AL	Dr. Charles H. Gilliam	Auburn University	<i>\$14,988</i>
Optimizing Plant Growth and Water Use by Modifying Cyclic Irrigation Timing in Container Nursery Production	2014	KY	Dr. Robert L. Geneve	University of Kentucky	<i>\$16,962</i>
Evaluation of Composting Temperature Regimes on the Survivability of <i>Cylindrocladium buxicola</i> , the Casual Agent of Boxwood Blight	2014	PA	Dr. John Pecchia	Pennsylvania State University	<i>\$9,000</i>
Urban Tree Selection in a Changing Climate	2014	MI	Dr. Bert Cregg	Michigan State University	<i>\$20,000</i>
Long-Term Impacts of Recycled Water and Graywater Irrigation on Landscape Plants and Soils	2014	CO	Dr. Yaling Qian	Colorado State University	<i>\$45,000</i>
The Effect of Multiple Stressors on Pest Damage to Common Nursery Trees	2014	NC	Dr. Steven Frank	North Carolina State University	<i>\$31,302</i>
Managing Water and Fertilizer: A Comprehensive Crop Production Tool for the Mobile Grower	2014	VA	Dr James Owen	N Willamette Res & Extension Cen	<i>\$14,498</i>
Biopesticidal Fungi for Control of Asian Ambrosia Beetles and Their Symbiotic Fungi	2014	NY	Dr. John D. Vandenberg	USDA Agricultural Research Serv	<i>\$50,000</i>
Fate of Substrate-Applied Neonicotinoids in Container Substrates for Commercial Nursery Crop Production	2015	MS	Dr. John Adamczyk	USDA-ARS Thad Cochran Souther	<i>\$35,100</i>

Project title	Year	State	Researchers		Funding
Advancement of Spray Applications in Nurseries with Intelligent Spray Technologies	2015	OH	Dr. Heping Zhu	Development Center	<i>\$50,000</i>
Evaluating the Impact of Root Rot Pathogens on Nursery Crop Health	2015	OR	Dr. Jerry Weiland	USDA-ARS Horticultural Crops Re:	<i>\$20,000</i>
Ornamental Crop Responses to Irrigation with Reclaimed Water	2015	TX	Ms. Genhua Niu	Texas A&M University, El Paso TA	<i>\$20,000</i>
Rethinking Phosphorous Fertility in Container Nursery Production: Identifying the Fate and Lowest Rate of Phosphorous	2015	OH	Dr James Owen	N Willamette Res & Extension Cen	<i>\$18,000</i>
RFID for Nursery and Greenhouse Cost of Production, Logistics, and Decision Support	2015	MI	Dr. Tom Fernandez	Michigan State University	<i>\$40,000</i>
Promoting Horticulture: A National Study and Action Plan	2015	VA	Dr. John Dole	North Carolina State University	<i>\$15,000</i>
Optimizing Plant Growth and Water Use by Modifying Cyclic Irrigation Timing in Container Nursery Production	2015	KY	Dr. Robert L. Geneve	University of Kentucky	<i>\$15,000</i>
Weed Control with Rice Hulls	2015	OH	Dr. James Altland	USDA-ARS Application Tech Rese	<i>\$15,000</i>
Manage Crepe Myrtle Bark Scale, an Exotic Pest	2015	TX	Dr. Mengmeng Gu	Mississippi State University	<i>\$25,000</i>
Leaching Fraction Used to Determine Irrigation Duration	2015	FL	Dr. Thomas Yeager	University of Florida	<i>\$30,000</i>
Use of Alternative Irrigation Water Sources for Urban Landscapes and Nursery Crops	2015	NJ	Dr. Raul I Cabrera	Texas A&M University	<i>\$20,000</i>

Project title	Year	State	Researchers		Funding
Alternatives to Invasive Plant Species for the Horticultural Industry in the Southeastern United States	2015	FL	Dr. Carrie Reinhardt Adams	University of Florida	\$24,000
Control of Ambrosia Beetles and their Symbiotic Fungi using Biopesticidal Fungi	2015	NY	Dr. John D. Vandenberg	USDA Agricultural Research Service	\$40,000
Evaluating Controlled Release Fertilizers for Production of Herbaceous Perennials	2015	NC	Dr. Helen T. Kraus	North Carolina State University	\$10,400
The Usrey Family Scholarship	2014				\$1,000
Susie & Bruce Usrey Education Scholarship	2014				\$500
The Muggets Scholarship	2014				\$1,500
Spring Meadow Nursery Scholarship	2014				\$10,000
The Bryan A. Champion Memorial Scholarship	2014				\$1,000
Carville M. Akehurst Memorial Scholarship	2014				\$4,000
Timothy Bigelow and Palmer Bigelow, Jr.	2014				\$3,000
The Usrey Family Scholarship	2015				\$1,000
Susie & Bruce Usrey Education Scholarship	2015				\$500
The Muggets Scholarship	2015				\$1,500
Spring Meadow Nursery Scholarships	2015				\$9,000
The Bryan A. Champion Memorial Scholarship	2015				\$1,000

Project title	Year	State	Researchers		Funding
Carville A. Akehurst Memorial Scholarship	2015				<i>\$4,000</i>
Timothy Bigelow and Palmer W. Bigelow, Jr. Scholarship	2015				<i>\$3,000</i>
Residues of and Rapid Assessment of Toxicity for Neonicotinoid Insecticides in Pollen and Nectar in Model Plant Systems	2015	CT	Dr. Richard S. Cowles	Connecticut Agricultural Experimer	<i>\$54,000</i>
Assessing Bee Attractiveness of Woody Landscape Plants and Mitigating Potential Bee Hazard from Neonicitinoid Insecticides	2015	KY	Dr. Daniel A. Potter	University of Kentucky	<i>\$26,000</i>
Understanding the Opportunities Present for Bees from Commercial Plant Material	2015	CA	Dr. Victoria Wojcik	Pollinator Partnership	<i>\$25,000</i>
Best Management Practices for Growing Bee-Friendly Plants in the Greenhouse and a Survey of Native Bee Species on Perennials in Michigan	2015	MI	Dr. David Smitley	Michigan State University	<i>\$20,000</i>