

# VITA

## DAVID WILLIAM REED

Professor of Horticulture

and

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### EDUCATION

**PRIMARY:** Krotz Springs Elementary School  
Krotz Springs, LA

**SECONDARY:** Melville High School  
Melville, LA

**UNDERGRADUATE:** Bachelor of Science, May 1974  
With Highest Distinction  
University of Southwestern Louisiana, Lafayette, LA  
Major: Horticulture  
Minors: Botany, Soils and Chemistry  
Class Rank: 15th out of 1573 (top 0.1%)  
Grade Point Average (4.0 scale): overall 3.94, major 4.0

**GRADUATE:** Master of Science, January 1977  
Cornell University, Ithaca, NY  
Major: Floriculture and Ornamental Horticulture  
Minors: Plant Anatomy and Morphology  
Grade Point Average (4.0 scale): overall 3.9

Doctor of Philosophy, January 1979  
Cornell University, Ithaca, NY  
Major: Floriculture and Ornamental Horticulture  
Minors: Plant Anatomy and Morphology, Plant Physiology  
Grade Point Average (4.0 scale): overall 4.0

### WORK EXPERIENCE

Summer 1965-70 Farm laborer on relative's farm / ranch.  
Summer 1973 Student intern, Hodges Gardens, Many, LA  
Summer 1974 Assistant Horticulturist, Hodges Gardens, Many, LA  
1973-74 Reed's Landscaping Service, Owner/Operator  
1974-78 Graduate Research Assistant, Cornell University

1978-83	Assistant Professor, Dept. Horticultural Sciences, Texas A&M University, College Station, TX
1983-90	Associate Professor, Dept. Horticultural Sciences, Texas A&M University, College Station, TX
1990-present	Professor, Dept. Horticultural Sciences, Texas A&M University, College Station, TX
2008-present	Associate Dean for Graduate Programs and Faculty Development, College of Agriculture and Life Sciences, Texas A&M University, College Station, TX

### **ADMINISTRATIVE EXPERIENCE**

Interim Head, Dept. Horticultural Sciences, Texas A&M University, Oct. 1989 - Aug. 1990.  
 Interim Head, Dept. Horticultural Sciences, Texas A&M University, Sept. 1994-May 1995.  
 Interim Head, Dept. Horticultural Sciences, Texas A&M University, Sept. 2001 – Jan. 2003  
 Interim Head, Dept. Agriculture Leadership, Education & Communications, Jan. 2008 - present  
 Chair, Graduate Program Council, College of Agriculture and Life Scie., Member 88-91, Chair 1992-present.  
 Chair, Graduate Council, Texas A&M University, Member 1992-2007, Chair 2007-present  
 Graduate Coordinator, Dept. Horticultural Sciences, Texas A&M University, 1984-1995  
 Associate Head for Graduate Studies, Dept. of Horticultural Sciences, Texas A&M University, 1995-2002  
 Associate Dean for Graduate Programs and Faculty Development, College of Agriculture and Life Sciences,  
 Sept. 2008-present

### **CIVIC ACTIVITIES**

College Station Girl's Softball Association, President 1983, 1984  
 Little League, Coach 1986, Manager 1987-1992, 1994-1995, All Star Manager 1992, 1995; Sandy Kofax,  
 Manager 1993.  
 Knights of Columbus, 1st Degree 1982, 2nd & 3rd Degree 1983, 4th Degree 1985; Deputy Grand Knight 1987-  
 88, 1988-89; Grand Knight 1989-90, Trustee 1990-93  
 President, Board of Directors, Nantucket Preservation Association, the Nantucket Subdivision Homeowners  
 Association, June 2001-February 2003

### **TEACHING AWARDS, SCHOLARSHIPS AND HONOR SOCIETIES:**

#### Special Honors

Keynote Speaker "Become the Best You Can Be", 2004 Freshman Convocation, Texas A&M University,  
College and University Teaching Awards and Honors  
 Distinguished Achievement Award for Teaching, College Level, 1990, Association of Former Students, Texas  
 A&M University  
 Vice Chancellor's Award in Excellence for Undergraduate Teaching, 1995, College Level, The Agriculture  
 Program, Texas A&M University  
 Distinguished Achievement Award for Teaching, University Level, 1999, Association of Former Students,  
 Texas A&M University  
 Council of Master Teachers, College of Agriculture and Life Sciences, Texas A&M University, member 2004  
Student Originated Teaching Awards and Honors  
 Professor of the Year in Agriculture, 1995, Delta Delta Delta Sorority, Texas A&M Chapter  
 Outstanding Contributions as a Professor, 1998, Pi Beta Phi, Texas A&M Chapter  
 Faculty Award, Horticulture Graduate Council, 2002, Texas A&M University  
 Fish Camp Namesake, Camp Reed, the Sea Surfin' Canaries, August 1993, Texas A&M University  
 T Camp Namesake, Camp Reed, the Red Hot Reggae Rainmakers, August 1996, Texas A&M University  
 T Camp Namesake, Camp Reed, the Rockin' Red Hot Crawdaddy Pinchers, August 2002, Texas A&M Univ.  
Professional Scientific Society Teaching Awards

L.M. Ware Distinguished Teaching Award, 1989, Regional Level, Southern Region of the American Society for Horticultural Sciences

Outstanding Undergraduate Educator Award, 2002, National Award, American Society for Horticultural Sciences

Professional Society Honors

President-Elect 2003, Southern Region of the American Society for Horticultural Sciences

Scholarships

Ira Nelson Memorial Scholarship, 1973

Ira Nelson Memorial Scholarship, 1974

Honor Societies

Alpha Zeta, Member 1972, Third Advisor 1988-89

Phi Kappa Phi, Member 1973

Phi Alpha Xi, Member 1976, Advisor 1982-86

Sigma Xi, Member 1979

Gamma Sigma Delta, Member 1984, Graduate Elections Committee 1985-89

**COURSES TAUGHT**

UNDERGRADUATE:

HORT 201 - General Horticulture (fall, spring 1979-present)

HORT 202 - General Horticulture Laboratory (fall, spring 1979-present)

HORT 225 – Horticulture Learning Community (spring 2004, every fall 2004-present)

HORT 320 - Exotic Plants (fall 1984-87)

GRADUATE:

HORT 602 - Environmental Relations of Horticultural Crops (alt. fall 1980-84)

HORT 604 - Applied Physiology of Horticultural Crops (alt. spring 1985-present)

FLOR 616 - Asexual Plant Propagation (alt. spring 1979-83)

PPHY 620 – Exp. Tech. in Plant Physiology; lab on Use of Liquid Scintillation Counting (spr. 1983-87)

INVITED INTERNATIONAL UNDERGRADUATE:

Plant Propagation, Soilless Growing Media and Simple Soil and Water Testing. July 2007 University of Veracruz at Xalapa, Xalapa, Mexico. An invited condensed 2 -day undergraduate lecture and laboratory demonstration course. Equivalent to a 1 credit course.

INVITED INTERNATIONAL GRADUATE:

Applied Physiology of Horticultural Crops, Fall 1985, University of Peradeniya, Peradeniya, Sri Lanka

Applied Physiology of Horticultural Crops, July 2007, Colegio de Postgraduados, Campus Montecillo, Montecillo, Mexican. An invited condensed 5-day graduate lecture course sponsored by the Mexican Academy of Sciences in cooperation with the Colegio de Postgraduados.

**TEACHING RELATED ACTIVITIES/COMMITTEES**

DEPARTMENT OF HORTICULTURAL SCIENCES

Scholarship Committee, member 1980-1990, Chair 1991-present.

Tenure and Promotion Committee, Chair 2003-present

Floriculture and Ornamental Horticulture Club, Advisor 1981-1992.

Alpha Zeta, 3rd Advisor 1988-89.

Phi Alpha Xi, Advisor 1982-86.

Department Improvement Committee, member 1980-82.

Graduate Instruction Committee, member 1980-82.

Undergraduate Instruction Committee, member 1980-82.

Graduate Recruitment Committee, Chair 1981.

Building Committee, member 1982-85.

Advisory Committee, member 1983-84.

Student Relations Committee, member 1986-1989.

Graduate Coordinator, 1984-1995.

Associate Head for Graduate Studies, 1995-2002

COLLEGE OF AGRICULTURE AND LIFE SCIENCES

College of Agriculture Scholarship/Senior Merit Committee, member 1987-88.

Graduate Program Council, member 1988-1991, Chair 1992-present.

Faculty Development Leave Screening Committee, Chair 1992, 1993.

Willie Mae Harris Fellowship Selection Committee, Chair 1992-1994.

COALS Council of Master Teachers Panel, 2004-present

Ag Program Tenure and Promotion Committee, 1) member early 1990s, b) Chair, 2 years in late 1990s, c) Chair, 2005-2006

INTER-COLLEGIATE FACULTY OF PLANT PHYSIOLOGY AND PLANT BIOTECHNOLOGY

Executive Committee, Member 1985-86

Graduate Admissions Committee, Member 1985-1989

Graduate Curriculum Re-Organization Committee, Member 1986

TEXAS A&M UNIVERSITY

Merit Fellowship Committee, Chair, 1998, 1999

Minority Merit Fellowship Selection Committee, member 1987, 1995.

Graduate Council, Office of Graduate Studies, member 1992-present, Chair 2007.

Committee on Academic Freedom, Responsibility and Tenure, elected member 1997-2000; alternate 2000-2001, elected member 2007-2009.

Instructional Technology Committee, 2001-present

TEACHING PRESENTATIONS

Presented the following invited talks on subject matter and methods of teaching.

“Methods of Teaching Introductory Horticulture”, 1981, Texas Assoc. Jr. Colleges, Tarleton Univ., Stephenville, TX.

“Proposal for Development of a Standardized Laboratory Manual for General Horticulture”, 1982, Annual Meeting American Society for Horticultural Sciences, Ames, IA

“Teaching Introductory Horticulture”, J. Caldwell and D. Reed, 1994, Annual Meeting American Society for Horticultural Sciences, Corvallis, OR

“Exemplary college teaching and the student learning process – Local testimonial “What Works for Me”. Jan. 11, 2000. 2000 Agriculture Program Conference, College Station, TX.

“Using Active Participation in Teaching General Horticulture.” Feb. 11, 2000. Sponsored by Center for Teaching Excellence Wokonse Afternoon, Texas A&M University, College Station, TX.

“The Science of Horticulture Comes Alive”, August 2, 2000. 2000 Professional Development Conference for Agricultural Science and Technology Teachers, Lubbock, TX. Sponsored by the Texas Education Agency, State of Texas.

“Web-Assisted Teaching General Horticulture – Where’s the “Steak” in all the “Sizzle”, Jan. 2001. 61th Annual Meeting of the Southern Region Meeting of the American Society for Horticultural Sciences, Fort Worth, TX

“Managing Soil-less Growing Media-Soil Testing methods”, July 24, 2002. 2002 Professional Development Conference for Agricultural Science and Technology Teachers, Corpus Christi, TX. Sponsored by the Texas Education Agency, State of Texas.

“Fertilizers and Fertility-Where do all the nutrients come from”, July 24, 2002. 2002 Professional Development Conference for Agricultural Science and Technology Teachers, Corpus Christi, TX. Sponsored by the Texas Education Agency, State of Texas.

Reed, D.W. 2003. Use of animated GIFs fro teaching horticulture techniques. Abstract, Southern Regional Meetings, American Society for Horticultural Sciences, Mobile, AL.

- “[Clash of Expectations of Baby Boomers/Generation X and Millennials](#)”, January 14, 2005 Sponsored by College of Agriculture and Life Sciences Master Teacher Panel, 2005 Agriculture Program Conference, Texas A&M University
- “Teaching the Millennial Student” February 4, 2006. David Wm. Reed, Abstract, Southern Regional Meetings, American Society for Horticultural Sciences, Mobile, AL
- Also, see Invited Courses Taught

## **PROFESSIONAL SOCIETY ACTIVITIES**

- American Society for Horticultural Sciences - member 1976- present.
- Floriculture Working Group, member 1979-present.
  - Nutrition Working Group, member 1979-present.
  - Education Working Group, member 1982-present.
  - Outstanding Senior Awards Committee, member 1981-82, Chair 1983.
  - Graduate Activities Committee, Chair 1983, Member, 1997-98.
  - Outstanding Graduate Educator Award Selection Committee, 2002
  - Collegiate Branch Activities Committee, member 1983, Chair 1984.
  - Nominations, Elections and Appointments Committee, member 1985-87, 1991-93.
  - Association of Collegiate Branch, Advisor 1984-85, 1988-89.
  - Cross-Commodity Paper Awards Committee, 1992.
- Southern Region American Society for Horticultural Sciences, member 1979-present.
- President, 2005
  - Secretary-Treasurer, 2006-present
- American Society of Plant Physiology, member 1981-89.

## **THESES, PROFESSIONAL PAPERS AND DISSERTATIONS:**

### PERSONAL:

1. Reed, D.W. 1977. Factors affecting foliar absorption of phosphorus and rubidium compounds by chrysanthemum. M.S. Thesis, Cornell University, Ithaca, NY
2. Reed, D.W. 1979. Ultrastructural studies on plant cuticles: Environmental effects, permeability, electron microscopy preparation and specific staining. Ph.D. Dissertation, Cornell University, Ithaca, NY

### GRADUATE STUDENTS:

1. Blessington, T. 2002. Potassium nutrition of New Guinea Impatiens in subirrigation. M.S. Thesis, Texas A&M University, College Station, TX
2. Cartmill, Andrew. 2004 (started). Studies on phosphorus nutrition of ornamental crops, Ph.D. Candidate, Texas A&M University, College Station, TX
3. Campos Nunez, R. 1990. The influence of irrigation water salinity on optimal nitrogen, phosphorus and potassium liquid fertilizer rates. M.S. Thesis, Texas A&M University, College Station, TX
4. Davis, Emily. 2006(started). Master of Agriculture student, in progress
5. Lang, H.J. 1986. The iron nutrition of tropical foliage plants. M.S. Thesis, Texas A&M University, College Station, TX
6. Lee, L.W. 1989. Leaf burn due to foliar fertilizer salts. Ph.D. Dissertation, Texas A&M University, College Station, TX
7. McDonald, G.V. 1990. The iron reductase activity of selected rose rootstocks. M.S. Thesis, Texas A&M University, College Station, TX
8. Neary, B.C. 1986. The feasibility of a nursery operation at Due Process Stables. M.Ag. Professional Paper, Texas A&M University, College Station, TX
9. Rajapakse, N. 1986. Modeling transpiration and water use of ornamental plants during shipping and storage. Ph.D. Dissertation, Texas A&M University, College Station, TX

10. Richards, D. 1999 The growth of New Guinea impatiens with controlled release fertilizer in recirculating subirrigation systems, M.S., 1999.
11. Shafer, W.E. 1984. Foliar absorption of potassium and cuticular penetration characteristics of potassium and selected organic compounds, Ph.D. Dissertation, Texas A&M University, College Station, TX
12. Spurlin, Q. 1986. An instructional unit on plant propagation for use in secondary horticulture and science courses. M.Ag. Professional Paper, Texas A&M University, College Station, TX
13. Stevens, A.B. 1990. Cost of production analysis for greenhouse grown foliage plants in the Rio Grande Valley of Texas. Ph.D. Dissertation, Texas A&M University, College Station, TX
14. Todd, N. 1996. The response of New Guinea impatiens to varying salinity levels in a subirrigation system, M.S. Thesis, Texas A&M University.
15. Turner, M.A. 1984. The effects of light quality, fertility and ethylene on performance of foliage plants in low light environments. Ph.D. Dissertation, Texas A&M University, College Station, TX
16. Valdez-Aquilar, L. 2004. Identify levels of carbonate tolerance of ornamental crops. Ph.D. Dissertation, Texas A&M University, College Station, TX
17. Vollmar, C.. 1998 (started). Greenhouse production/management. M.Agr., Texas A&M University, College Station, TX

#### **REFEREED PUBLICATIONS:**

1. Blessington Haley, T. and D.W. Reed. 2004. Optimum potassium concentrations in recirculating subirrigation for selected greenhouse crops. *HortScience* 39(6):1441-1444.
2. Campos, R. and D.W. Reed. 1993. Determination of constant-feed liquid fertilization rates for *Spathiphyllum* 'Petite' and *Dieffenbachia* 'Camille'. *J. Environ. Hort.* 11(1):22-24.
3. Campos, R. and D.W. Reed. 1994. Influence of irrigation water salinity on optimal nitrogen, phosphorus and potassium liquid fertilization rates for *Spathiphyllum* 'Petite'. *J. Environ. Hort.* 12(2):104-107.
4. Cinelli, F., R. Vin, D.H. Byrne, and D.W. Reed. 1995. Physiological characterization of two peach seedling rootstocks in bicarbonate nutrient solution. I. Root iron reduction and iron uptake. In *Iron Nutrition in Soils and Plants*, J. Abadia (ed.), pp. 323-328, Kluwer Academic Publishers, Netherlands.
5. Egilla, J.N., D.H. Byrne and D. W. Reed. 1994. Iron stress response of three peach rootstocks cultivars: Ferric iron reduction capacity. *J. Plant Nutr.* 17(12):2079-2103.
6. Kent, M.W. and Reed. 1996. Nitrogen nutrition of New Guinea Impatiens 'Barbados' and *Spathiphyllum* 'Petite' in a subirrigation system. *J. Amer. Soc. Hort. Sci.* 121(5):816-819.
7. Krafka, B.D., C.R. Shumway and D.W. Reed. 1989. Space allocation in foliage production greenhouses. *J. Environ. Hort.* 7(3):95-98.
8. Lang, H.J. and D.W. Reed. 1987. Comparison of HCl extraction versus total iron analysis for iron tissue analysis. *J. Plant Nutr.* 10(7):795-804.
9. Lang, H.J. and D.W. Reed. 1987. Differential response of foliage plants to iron deficiency. *J. Plant Nutr.* 10(8):951-959.
10. Lang, H.J., C.L. Rosenfield and D.W. Reed. 1990. Response of *Ficus benjamina* and *Dracaena marginata* to iron stress. *J. Amer. Soc. Hort. Sci.* 115(4):589-592.
11. Lee, L.W. and D.W. Reed. 1989. A comparison of methods for measuring phytotoxicity from foliar sprays of ammonium nitrate. *J. Plant Nutr.* 12(6):733-742.
12. Lee, L.W. and D.W. Reed. 1990. Effects of calcium on phytotoxicity of foliar - applied nitrogen salts. *J. Plant Nutr.* 13(2):187-200.
13. Nolte, B.A., D. A. Lineberger, D.W. Reed and M.E. Rumpho. 2001. Rapid Micro-Assay of Camptothecin in *Camptotheca acuminata*. *Planta Med.* 66:376-378.
14. Rajapakse, N.C., D.W. Reed and J.W. Kelly. 1989. Effect of pre-treatments on transpiration of *Chrysanthemum morifolium* during the dark. *J. Amer. Soc. Hort. Sci.* 24(6):998-1000.
15. Rajapakse, N.C., D.W. Reed and J.W. Kelly. 1990. Use of antitranspirants under low light environments to control transpiration of *Epipremnum aureum* leaves. *Scientia Hort.* 43:307-312.

16. Rajapakse, N.C., D.W. Reed and J.W. Kelly. 1991. Storage temperature and duration affect quality and post-storage recovery of vegetative *Dendranthema Xgrandiflora*. *J. Amer. Soc. Hort. Sci.* 116(1):73-76.
17. Rajapakse, N.C., J.W. Kelly and D.W. Reed. 1988. Transpiration and water use of floricultural plants under low light conditions. *J. Amer. Soc. Hort. Sci.* 113(6):910-914.
18. Reed, D.W. 1982. Wax alteration and extraction during electron microscopy preparation of leaf cuticles. *The Plant Cuticle*. eds. D.F. Cutler, K.L. Alvin and C.E. Price, Academic Press, NY
19. Reed, D.W. 1983 Triton X-100 as a complete liquid scintillation cocktail for counting aqueous solutions and ionic nutrient salts. *Internat. J. Appl. Rad. Isotopes* 35(5):367-370
20. Reed, D.W. 1983. Methods to assay absorption of foliar applied nutrients and removal of unabsorbed residue. *J. Plant Nutrition* 6(8):667-677
21. Reed, D.W. 1988. Effect of urea, ammonium and nitrate on foliar absorption of ferric citrate. *J. Plant Nutr.* 11:1429-1437
22. Reed, D.W. and A.E. Nightingale. 1983. Height control in chrysanthemum as affected by foliar spray solution pH of several growth retardants. *HortScience* 18(6):881-882
23. Reed, D.W. and H.B. Tukey, Jr. 1978. Effect of pH on foliar absorption of phosphorus compounds by chrysanthemum. *J. Amer. Soc. Hort. Sci.* 103(3):337-340
24. Reed, D.W. and H.B. Tukey, Jr. 1978. Effect of pH on foliar absorption of rubidium compounds by chrysanthemum. *J. Amer. Soc. Hort. Sci.* 103(6):815-817
25. Reed, D.W. and H.B. Tukey, Jr. 1982. Cuticular permeability of Brussels sprouts and carnation from leaves developed in different temperatures and light intensities. *The Plant Cuticle*, eds. D.F. Cutler, K.L. Alvin and C.E. Price, Academic Press, NY
26. Reed, D.W. and H.B. Tukey, Jr. 1982. Ultrastructural localization of polysaccharides in *Malus sylvestris* leaf cuticles. *J. Amer. Soc. Hort. Sci.* 107(5):775-778.
27. Reed, D.W. and H.B. Tukey, Jr. 1987. Factors affecting foliar absorption of nutrients by various landscape and herbaceous plants. *J. Environ. Hort.* 5(2):72-76.
28. Reed, D.W., C.G. Lyons and G.R. McEachern. 1988. Field evaluation of inorganic and chelated iron fertilizers as foliar sprays and soil application. *J. Plant Nutr.* 11:1369-1378
29. Reed, D.W. and H.B. Tukey, Jr. 1982. Light intensity and temperature effects on epicuticular wax morphology and internal cuticle ultrastructure of carnation and Brussels sprouts. *J. Amer. Soc. Hort. Sci.* 107(3):417-420
30. Richards, D.L. and D.W. Reed. 2004. New Guinea impatiens growth response and nutrient release from controlled release fertilizer in a recirculating subirrigation and top-watering system. *HortScience* 39(2):280-286
31. Rosenfield, C-L., D.W. Reed and M.W. Kent. 1991. Dependency of iron reduction on development of a unique root morphology in *Ficus benjamina* L. *Plant Physiology* 95:1120-1124.
32. Shafer, W.E. and D.W. Reed. 1986. The foliar absorption of potassium from organic and inorganic potassium carriers. *J. Plant Nutrition* 9(2):143-157.
33. Shi, Y., D.H. Byrne, D.W. Reed and R.H. Loeppert. 1993. Influence of bicarbonate level on iron-chlorosis development and nutrient uptake of the peach rootstock Montclar. *J. Plant Nutr.* 16(9):1675-1689.
34. Shi, Y., D.H. Byrne, D.W. Reed and R.H. Loeppert. 1993. Iron chlorosis development and growth of peach rootstocks to bicarbonate. *J. Plant Nutr.* 16(6):1039-1046
35. Todd, N and D.W. Reed. 1998. Characterizing Salinity Limits of New Guinea Impatiens in Recirculating Subirrigation. *J. Amer. Soc. Hort. Sci.* 123(1):156-160.
36. Turner, M.A., D.L. Morgan and D.W. Reed. 1987. The effect of light quality and fertility on long term maintenance of selected foliage plants. *J. Environ. Hort.* 5(2):76-79.
37. Turner, M.A., D.W. Reed and D.L. Morgan. 1987. A comparison of light acclimatization methods for reduction of leaf drop in *Ficus* spp. *J. Environ. Hort.* 5(3):102-104.
38. Turner, M.A., D.W. Reed and D.L. Morgan. 1988. Ethylene induced defoliation in *Ficus* sp. and ethylene depletion by soil bacteria in peat-amended media and *in vitro*. *J. Amer. Soc. Hort. Sci.* 113(5):794-796.

39. Valdez-Aguilar, L. and D.W. Reed. 2007. Response of selected greenhouse ornamental crops to alkalinity in irrigation water. *J. Plant Nutrition* 30(3):441-452
40. Valdez-Aguilar, L. and D.W. Reed. 2006. Comparison of growth and alkalinity-induced responses in two cultivars of hibiscus (*Hibiscus rosa-sinensis* L.). *HortScience* 41(7):1704-1708
41. Valdez-Aguilar, L. and D.W. Reed. 2008. Influence of Potassium Substitution by Rubidium and Sodium on Growth, Ion Accumulation, and Ion Partitioning in Bean (*Phaseolus vulgaris* L.) under High Alkalinity, *J. Plant Nutrition* (accepted)
42. Valdez-Aguilar, L., J. Cornell and D.W. Reed. 2008. Quantitative Separation of the Bicarbonate from the Counter-cation Effect in Bean Plants. *J. Amer. Soc. Hort. Sci.* (accepted)
43. Witcher, C. and D.W. Reed. 2005. Phosphorus concentration affects New Guinea impatiens and vinca in recirculating subirrigation. *HortScience* 40(7):2047-2051
44. Juarez-Lopez, P., R.C. Castro-Bindis, T. Colinas-Leon, P. Ramirez-Vallejo, M. Sandoval. Villa, D.W. Reed, L. Cisneros-Zevallos and S. King. 2009. Evaluation of quality in fruits of seven native genotypes of tomato (*Lycopersicon esculentum* var. Cerasiforme) Revista Chapingo Sene Horticultura 15(2): 5-9. (in Spanish)
45. Valdez, L. A. and D.W. Reed. 2010. Growth and nutrition of young bean plants under high alkalinity as affected by mixtures of ammonium, potassium and sodium. *J. Plant Nutr.* 33:1472-1499.

#### ABSTRACTS

1. Alarcon, A., F.T. Davies, D.W. Reed, R.L. Autherith and D.A. Zuberer. 2004. *Glomus intraradices* Enhances Growth and Gas Exchange of *Lolium perenne* Seedlings in Petroleum-contaminated Soil. *HortScience* 39(4):770.
2. Alarcon, A., F.T. Davies, R.L. Autherith, D.W. Reed and D.A. Zuberer. 2006. Phytoremediation of petroleum hydrocarbons with a *Lolium multiflorum* x *Glomus intraradices* inorganic fertilization system: Influence on plant growth, antioxidant activity, microbial respiration, and hydrocarbon degradation. *HortScience* 41(4):941
3. Alarcon, A., F.T. Davies, R.L. Autherith, D.W. Reed and D.A. Zuberer. 2006. Phytoremediation of benzo[a]pyrene utilizing *Glomus intraradices* and hydrocarbonoclastic microorganisms. *HortScience* 42(4):994.
4. Armstrong, T, M.W. Kent and D.W. Reed. 1996. Response of New Guinea impatiens to various water qualities in subirrigation, *HortScience* 31(4):70.
5. Blessington-Haley, T. and D.W. Reed. 2001. Identification of optimum potassium nutrition in greenhouse plants grown in subirrigation. 61th Annual Meeting of the Southern Region Meeting of the American Society for Horticultural Sciences, Fort Worth, TX
6. Brown, J.A., A.E. Nightingale, D.W. Reed and R.E. Pettit. 1984. Biological control of damping-off in bedding plant production. *HortScience* 19(3):211.
7. Caldwell, J.D. and D.W. Reed. 1994. Teaching Introductory Horticulture. *HortScience* 29(5):436.
8. Campos-Nunez, R. and D.W. Reed. 1989. Influence of salinity on optimal N-P-K liquid fertilizer rates with *Spathiphyllum* and *Dieffenbachia*. *HortScience* 1989 ASHS Annual Meetings / Program and Abstracts.
9. Campos, R. and D.W. Reed. 1992. Influence of irrigation water salinity on optimal nitrogen, phosphorus and potassium fertilizer rates on *Spathiphyllum* 'Petite'. *HortScience* 27(6):636.
10. Andrew Cartmill and David Wm. Reed. 2007. Effect of Phosphorus Concentration on *Catharanthus roseus* (L.) G. Don cv. Pacifica Red in a Recirculating and Top Watering System. 2007 Southern Region ASHS Annual Meetings



11. Denny, G.C., M.A. Arnold, L.A. Valdez-Aguilar and D.W. Reed. 2004. A comparison of factorial and mixture experimental designs applied to container crop production. Abstract, Southern Regional Meetings, American Society for Horticultural Sciences, Tulsa, OK.
12. Egilla, J.N., D.H. Byrne and D.W. Reed. 1989. Determination of iron intake mechanisms in prunus rootstocks. *HortScience* 1989 ASHS Annual Meetings / Program and Abstracts.
13. Grauke, L.J., J.B. Storey, E.R. Emino and D.W. Reed. 1979. Foliar absorption of zinc by *Zea mays*. *HortScience* 14(3):453.
14. Grauke, L.J., J.B. Storey, E.R. Emino and D.W. Reed. 1981. Removal of unabsorbed Zn residue and foliar absorption by *Zea mays*. *HortScience* 16(3):415.
15. Grauke, L.J., J.B. Storey, E.R. Emino and D.W. Reed. 1982. The influence of leaf surface, leaf age, and humidity on the foliar absorption of zinc from two zinc sources by pecan. *HortScience* 17(3):474.
16. Janssen, A.H., E.L. McWilliams and D.W. Reed. 1981. The detrimental effects of salinity on rooting of coleus cuttings and their alleviation with gypsum. *HortScience* 16(3):449.
17. Kent, M.W. and D.W. Reed. 1995. Nitrogen nutrition of New Guinea Impatiens and Spathiphyllum in a subirrigation system. *HortScience* 30(4):724.
18. Lang, H.J. and D.W. Reed. 1984. Differential iron chlorosis of foliage plants. *HortScience* 19(3):569.
19. Lang, H.J. and D.W. Reed. 1986. Iron utilization and mechanism of uptake by a Fe-efficient and Fe-inefficient foliage plant. *HortScience* 21(3):763.
20. Lee, L.W. and D.W. Reed. 1983. Effect of growth regulators on rooting of *Ficus benjamina* L. air layers. *HortScience* 18(4):573.
21. Lee, L.W. and D.W. Reed. 1984. Leakage of UV absorbing constituents as a method of measuring leaf phytotoxicity from foliar sprays. *HortScience* 19(3):521.
22. Lee, L.W. and D.W. Reed. 1985. A comparison of methods for measuring leaf burn from foliar fertilizer salts. *HortScience* 20(4):596 and 22(5):1094.
23. Lee, L.W. and D.W. Reed. 1987. Calcium effects on foliar fertilizer damage. *HortScience* 22(5):1094.
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25. Lee, L.W. and D.W. Reed. 1989. Foliar absorption of N at phytotoxic concentration using <sup>15</sup>N labelling. *HortScience* 1989 ASHS Annual Meetings / Programs and Abstracts.
26. McDonald, G.V. and D.W. Reed. 1989. Iron reduction ability of various rose rootstocks. *HortScience* 1989 ASHS Annual Meetings / Programs and Abstracts.
27. McDonald, G.V. and D.W. Reed. 1991. The iron reductase activity of selected Rosa rootstocks. Vth International Iron Symposium, July 14-19, 1991, Logan, UT.
28. Mahamane, S.; W. A. Payne, R. H. Loeppert, J. C. Miller, and D. W. Reed. 2006. Screening of Cowpea for Phosphorus Use Efficiency from Rock Phosphate. Abstract, 18th World Congress of Soil Science, July 9-15, 2006 - Philadelphia, Pennsylvania
29. Mahamane, S.; W. A. Payne, R. H. Loeppert, J. C. Miller, and D. W. Reed. 2007. Organic acid exudation as a phosphate-deficiency stress adaptation by selected cowpea genotypes. 19th World Congress of Soil Science
30. Nolte, B., L. Griffing, D.W. Reed, D. Lineberger and M. Rumpho. 1998. Production and subcellular localization of the anticancer alkaloid camptothecin. Annual Meetings American Society of Plant Physiology.
31. Rajapakse, N.C., J.W. Kelly and D.W. Reed. 1985. Chemical control of transpiration in *Epipremnum aureum* Bunt. *HortScience* 16(3):416.
32. Reed, D.W. 1980. Liquid scintillation counting of radioactive ions in pure Triton X-100. *HortScience* 15(3):412.
33. Reed, D.W. 1981. Comparison of methods to assay foliar absorption and removal of unabsorbed radioactive nutrients from leaf surfaces. *HortScience* 16(3):416.
34. Reed, D.W.. 1982. Proposal for Development of a Standardized Laboratory Manual for General Horticulture. 79<sup>th</sup> Annual Conference of the American Society for Horticultural Sciences, Ames, IA

35. Reed, D.W. 1983. Foliar absorption of P and Rb from ortho-, pyro-, and tripoly- phosphates. *HortScience* 18(4):619.
36. Reed, D.W. 1984. Foliar absorption of inorganic sulfur compounds. *HortScience* 19(3):569.
37. Reed, D.W. 1986. Screening inorganic, organic and chelated iron compounds for alleviation of iron chlorosis. *HortScience* 21(3):791.
38. Reed, D.W. 1988. Geotropic and thigmotropic effects on *Epipremnum aureum* leaf size. *HortScience* 23(5):819.
39. Reed, D.W. 1997. Plant selection versus fertilizer selection strategies to combat iron nutrition problems in ornamental plants. 94<sup>th</sup> Annual Conference of the American Society for Horticultural Sciences, Salt Lake City, UT.
40. Reed, D.W. 2001. Web-assisted teaching general horticulture – Where’s the “steak” in all that “sizzle”. 61th Annual Meeting of the Southern Region Meeting of the American Society for Horticultural Sciences, Fort Worth, TX
41. Reed, D.W. 2003. Use of animated GIFs fro teaching horticulture techniques. Abstract, Southern Regional Meetings, American Society for Horticultural Sciences, Mobile, AL.
42. Reed, D.W. 2004. Active classroom participation and demonstrations to excite non-science majors about the science of horticulture. Abstract, Southern Regional Meetings, American Society for Horticultural Sciences, Tulsa, OK.
43. Reed, D.W. 2004. [Managing water quality in growing media](#), Workshop: Getting Down and Dirt-less with Container Substrates. *HortScience* 39(4):696.
44. Reed, D.W., P. Sullivan and M. Kazemzadeh. 1986. Inhibition of adventitious rooting of *Chrysanthemum morifolium* by fungicides. *HortScience* 21(4):935.
45. Reed, D.W. and H.B. Tukey. 1976. Effect of pH on foliar absorption of phosphorus and rubidium compounds by *Chrysanthemum morifolium* Ramat. *HortScience* 11(3):317.
46. Reed, D.W. and H.B. Tukey. 1978. Effect of environment on epicuticular wax morphology, internal cuticle ultrastructure and subsequent cuticular penetration. *HortScience* 13(3):370.
47. Reed, D.W. and H.B. Tukey. 1978. Preparation of leaf cuticles for electron microscopy - Cuticular wax extraction and morphological alterations. *HortScience* 13(3):383.
48. Reed, D.W. and H.B. Tukey. 1979. Electron microscopy staining of polysaccharides in apple leaf cuticles. *HortScience* 14(3):460.
49. Reed, D.W. and H.B. Tukey. 1979. Permeability characteristics of leaf cuticles isolated from plants grown under different environmental regimes. *HortScience* 14(3):468.
50. Reed, D.W. and H.B. Tukey. 1980. Factors allowing maximum foliar absorption of rubidium phosphate by ornamental plants. *HortScience* 15(3):274.
51. Reed, D.W., Y-T Wang and B.H. Pemberton. 1992. Field screening of *Rosa* rootstocks for tolerance to alkaline soil. *HortScience* 27(6):635.
52. Richards, D. and D.W. Reed. 1998. The growth of New Guinea impatiens with controlled-release fertilizer in a recirculating subirrigation system. *HortScience* 33(3):556.
53. Rosenfield, C.L., D.W. Reed and M.W. Kent. 1990. Dependency of iron reduction on development of a unique root morphology in *Ficus benjamina*. International Symposium on Iron Transport, Storage and Metabolism II. July 20-22, 1990. Austin, TX.
54. Shafer, W.E. and D.W. Reed. 1983. Foliar absorption of potassium from organic and inorganic potassium compounds. *HortScience* 18(4):619.
55. Sistrunk, L.A. and D.W. Reed. 1985. Use of condensed phosphorus as phosphate fertilizers. *HortScience* 20(4):554.
56. Sistrunk, L.A. and D.W. Reed. 1988. Hydrolysis and absorption of condensed phosphates from nutrient solution measured by solution depletion. *HortScience* 23(3):816.
57. Stevens, A. and D.W. Reed. 1989. Cost of production analysis: Greenhouse production of foliage plants. *HortScience* 1989 ASHS Annual Meetings / Programs and Abstracts.

58. Todd, N. and D.W. Reed. 1995. Response of New Guinea Impatiens to various levels of salinity in a subirrigation system. *HortScience* 30(4):703.
59. Tukey, Jr., H.B., D.W. Reed, E.T. Paparozzi and G.J. Keever. 1978. Application of nutrients to ornamental plants through the foliage. *XXII Internat. Hort Congress*, Sidney, Australia.
60. Turner, M.A., D.W. Reed and D.L. Morgan. 1983. Light quality and fertilizer effects on long term maintenance of four foliage plants in simulated interior environments. *HortScience* 18(4):573.
61. Turner, M.A., D.W. Reed and D.L. Morgan. 1983. Interaction of ethylene and leaf abscission in two *Ficus* spp. *HortScience* 18(4):614.
62. Valdez-Aguilar, L.A. and D.W. Reed. 2001. Effect of bicarbonate irrigation water on selected greenhouse crops. 61th Annual Meeting of the Southern Region Meeting of the American Society for Horticultural Sciences, Fort Worth, TX
63. Valdez-Aguilar, L.A. and D.W. Reed. 2004. [Determination of the Alkalinity Toxicity Limits of Selected Greenhouse Ornamental Plants](#). *HortScience* 39(4):878.
64. Valdez-Aguilar, L.A. and D.W. Reed. 2004. [Use of Mixture Experiments to Determine the Effect of Counter-ions of Bicarbonate on Bean \(\*Phaseolus vulgaris\* L.\) 'Poncho' in Hydroponics](#). *HortScience* 39(4):872.

#### **INVITED PAPERS AT SCIENTIFIC SYMPOSIA AND ACADEMIC INSTITUTIONS**

1. Reed, D.W. 1980. Absorption of foliar-applied compounds. *First Annual Foliar Fertilizer Conference* sponsored by Allied Chemical Corp., Morristown, NJ, Sept. 1980.
2. Reed, D.W. 1981. Foliar absorption of sulfur compounds. *Second Annual Foliar Fertilizer Conference* sponsored by Allied Chemical Corp., Morristown, NJ, Sept. 2-3, 1981.
3. Reed, D.W. 1982. Wax alteration and extraction during electron microscopy preparation of leaf cuticles. *The Plant Cuticle*, eds. D.F. Cutler, K.L. Alvin and C.E. Price, Academic Press, NY. Presented at "The Plant Cuticle - An International Symposium" sponsored by the Linnean Society, London, England, Sept. 8-11, 1980.
4. Reed, D.W. and H.B. Tukey, Jr. 1982. Cuticular permeability of Brussels sprouts and carnation from leaves developed in different temperatures and light intensities. *The Plant Cuticle*, eds. D.F. Cutler, K.L. Alvin and C.E. Price, Academic Press, NY. Presented at "The Plant Cuticle - An International Symposium" sponsored by the Linnean Society, London, England, Sept. 8-11, 1980.
5. Reed, D.W. 1997. Plant selection versus fertilizer selection strategies to combat iron nutrition problems in ornamental plants. 94<sup>th</sup> Annual Conference of the American Society for Horticultural Sciences, Salt Lake City, UT.
6. Reed, D.W. 2004. Managing water quality in growing media, Workshop: Getting Down and Dirt-less with Container Substrates. *HortScience* 39(4):696, 2004 Annual Conference of the American Society for Horticultural Sciences, Austin, TX.
7. Fertilizer selection versus plant selection strategies to combat iron nutrition problems. July 2007, Colegio Postgraduados, Campus Montecillo, sponsored by the Mexican Academy of Sciences.

#### **BOOKS AND MANUALS**

1. Reed, D.W. 1982, 1985, 1993 2nd Ed.. *General Horticulture Laboratory Manual*, Burgess Publishing, Edina., MN. 167 pp.
2. Reed, D.W. (Editor and Author). 1996. *Water, Nutrition and Media for Greenhouse Crops*, Ball Publishing, Batavia, IL.
3. Reed, D.W. *Horticulture – Science and Practices*. 1999. Burgess Publishing, Edina, MN, 100 pp.
4. Also see papers in *The Plant Cuticle* under REFEREED PUBLICATIONS.

#### **POPULAR ARTICLES**

1. Kasper, M.J. and D.W. Reed. 1982. Enhanced rooting of *Xylosma congestum* by wounding and auxin application. *The Texas Nurserymen* 13(6):41.
2. Kelly, J.W. and D.W. Reed. 1986. Floriculture is a growing business in Sri Lanka. *Greenhouse Grower* 4(4):32-33.
3. Krafka, B.D., C.R. Shumway and D.W. Reed. 1990. Winterizing Greenhouses. *The Texas Nurseryman*, July/August, 1990.
4. Krafka, B.D., C.R. Shumway and D.W. Reed. 1990. Foliage Stock - Is it profitable to maintain your own stock area in greenhouses. *The Texas Nurseryman*, September, 1990.
5. Reed, D.W. 1973. *Sansevieria* of the University of Southwestern Louisiana Horticulture Center (Identification and Culture). *J. Louisiana Soc. Hort. Research* 14(2):30-77.
6. Reed, D.W. and H.B. Tukey, Jr. 1978. Factors affecting foliar absorption of phosphorus and rubidium compounds. *October News Rel. Hort. Res. Inst.*
7. Reed, D.W. and H.B. Tukey, Jr. 1978. Foliar absorption factors of phosphorus and rubidium. *Weeds, Trees & Turf*, December, p. 32.
8. Reed, D.W. and H.B. Tukey, Jr. 1980. Factors affecting foliar absorption of phosphorus and potassium fertilizers. *The Texas Nurserymen* 13(6):46-48.
9. Stevens, A., K. Litzenberg and D.W. Reed. 1991. Management information systems - A requirement for growing efficiently. *Greenhouse Manager*, January 1991.
10. Reed, D.W. 1992. A water quality primer. *GrowerTalks* 56(7):47-53.
11. Reed, D.W. 1997. In-house water analysis. *Greenhouse Grower*, 15(8):26, July issue.
12. Lang, H.J. and D.W. Reed. 1997. Greenhouse fertilization and the environment - Can they go hand in hand?, *Greenhouse Management and Production* 17(9):58-61.
13. Armstrong, T., M. Kent. And D.W. Reed. 1997. Can poor quality water be used for subirrigation. *GrowerTalks* 61(6):76.

### **SHORT COURSE AND INDUSTRY PRESENTATIONS**

1. Factors affecting foliar absorption of nutrients. Sept., 1976. New York State Nurserymen Association Short Course, Cornell Univ., Ithaca, NY.
2. Foliar absorption: Theory, advantages, disadvantages and uses. Jan., 1977. New York State Home and Garden Agents Refresher School, Cornell Univ., Ithaca, NY.
3. Recognition and correction of nutrient deficiencies. Nov., 1978. Organic Gardening Group, Bryan, TX.
4. Nursery crop nutrition. June 3-5, 1980. 1980 Annual Quality Assurance Workshop, Heins Nursery/Weyerhaeuser Co., Dana Point, CA.
5. Treating iron deficiency in container nursery stock. May 18-19, 1981. Texas Nurserymen Field and Container Grower's Conference, Houston, TX.
6. Foliar application of nutrients to greenhouse crops. June 10-12, 1981. Valley Nursery Grower's 3rd Annual Short Course, South Padre Island, TX.
7. Quality of irrigation water and interpretation of analysis. June 10-12, 1981. Valley Nursery Grower's 3rd Annual Short Course, South Padre Island, TX.
8. Leaf tissue analysis - Sample collection, preparation and interpretation of analysis. Valley Nursery Grower's 3rd Annual Short Course, South Padre Island, TX.
9. Nutrition of greenhouse ornamental crops. May 13-14, 1983. 13th Annual Louisiana Greenhouse Grower's Short Course, Lafayette, LA.
10. Pointers on bedding plant production. May 13-14, 1983. 13th Annual Louisiana Greenhouse Grower's Short Course, Lafayette, LA.
11. Combating salinity problems. Nov. 1-2, 1983. Texas Greenhouse Grower's Conference, College Station, TX.
12. Salinity/Nutrition. Jan. 17, 1984. 38th Rio Grande Valley Horticulture Society, Weslaco, TX.

13. Nutrition, salinity and cultural practices for foliage plants. Jan. 31 - Feb. 3, 1984. 6th Annual Valley Nursery Grower's Short Course, Brownsville, TX.
14. Pointers on foliage plant production. June 22, 1984. 14th Annual Louisiana Greenhouse Grower's Short Course, Lafayette, LA.
15. Monitoring nutrition, soluble salts and pH in growing media and irrigation water. Nov. 1-3, 1984. 1984 Texas Greenhouse Grower's Conference, College Station, TX.
16. Nutrition and foliage plant production. Nov. 1-3, 1984. 1984 Texas Greenhouse Grower's Conference, College Station, TX.
17. Measurement of soluble salts and pH in fertilizer solutions, irrigation water and media. June, 1985. 15th Annual Louisiana Greenhouse Grower's Short Course, Lafayette, LA.
18. Monitoring pH and soluble salts of growing media and irrigation water. June 5, 1985. East Texas Bedding Plant Seminar, Jacksonville, TX.
19. Determining chemical and physical properties of irrigation water, fertilizer solutions and growing media. July 28 - Aug. 2, 1986. TAN/TAEX Master Nursery Certification Program, College Station, TX.
20. Nursery stock maintenance. July 28 - Aug. 2, 1986. TAN/TAEX Master Nursery Certification Program, College Station, TX.
21. Correction of iron deficiency by foliar and soil treatments. Oct. 6-8, 1986. 34th Annual Conference Texas Fruit Grower's Association, Tyler, TX.
22. New plant introductions from abroad. Nov. 11-13, 1986. Texas Greenhouse Grower's and Interiorscaper's Conference, College Station, TX.
23. Light and water quality workshop. Nov. 11-13, 1986. Texas Greenhouse Grower's and Interiorscaper's Conference, College Station, TX.
24. Determining chemical and physical properties of irrigation water, fertilizer solutions and growing media. July 27-31, 1987. TAN/TAEX Master Nursery Certification Program, College Station, TX.
25. Nursery stock maintenance. July 27-31, 1987. TAN/TAEX Master Nursery Certification Program, College Station, TX.
26. Nutrition of foliage plants: Emphasis on slow-release fertilizers. Sept. 29 - Oct. 2, 1987. 9th Annual Valley Nursery Grower's Short Course, McAllen, TX.
27. Interior plant selection - Availability and key considerations. Oct. 29, 1987. Presented at The Outside "In" of Interior Landscaping: A Comprehensive Approach to the Environmental Design Process, Interior Plantscape Division of Associated Landscape Contractors of American, Washington, DC
28. Monitoring media, fertility and water quality. Nov. 11-12, 1987. Texas Greenhouse Grower's and Interiorscaper's Conference, College Station, TX.
29. Nutrition and water management. Jan. 21-23, 1988. 51st Annual Convention of Texas Association of Nurserymen, Fort Worth, TX.
30. Managing stress from the bottom up. Jan. 15-16, 1988. 1988 Interiorscape Seminar and Workshop of Foliage World Trade Show, Orlando, FL.
31. Monitoring the environment. Feb. 6, 1988. 1987/88 Education Seminar, Associated Landscape Contractors of America, Kansas City, MO.
32. Interior plant management from the ground up. June 18, 1988. 1987/88 Education Seminar, Associated Landscape Contractors of America, Beltsville, MD.
33. Interior plant selection - Availability and key considerations. June 30, 1988. Presented at The Outside "In" of Interior Landscaping: a Comprehensive Approach to the Environmental Design Process, Interior Plantscape Division of Associated Landscape Contractors of American, Los Angeles, CA.
34. Determining chemical and physical properties of irrigation water, fertilizer solutions and growing media. July 25-30, 1988. TAN/TAEX Master Nursery Certification Program, College Station, TX.
35. Interior plant management from the ground up. Aug. 13, 1988. 1987/88 Education Seminar, Associated Landscape Contractors of America, Boston, MA.
36. Measuring pH and soluble salts of media, water and fertilizers. Oct. 11, 1988. Texas Association of Nurseryman Region II Seminar, Houston, TX.

37. Interior plant selection - Availability and key considerations. Nov. 4, 1988. Presented at The Outside "In" of Interior Plantscaping: a Comprehensive Approach to the Environmental Design Process, Interior Plantscape Division of Associated Landscape Contractors of American, Seattle, WA.
38. Foliage plant nutrition. Nov. 15-17, 1988. Texas Greenhouse Grower's and Interiorscaper's Conference, College Station, TX.
39. Managing stress from the bottom up. Nov. 15-17, 1988. Texas Greenhouse Grower's and Interiorscaper's Conference, College Station, TX.
40. Monitoring the interior environment - Media, water, fertility and light. Feb. 13-16, 1989. 44th Annual Pennsylvania Nurserymen and Allied Industries Conference, Hershey, PA.
41. Quality control of media, water, salinity and light in the interiorscape, Feb. 28 - Mar 2, 1989. Illinois Landscape Contractors Association Winter Seminar, St. Charles, IL.
42. Interior Plant Management. June 13, 1989. North Carolina Landscape Contractors Association and Associated Landscape Contractors of America, Greensboro, NC.
43. Determining chemical and physical properties of irrigation water, fertilizer solutions and growing media. July 1989. TAN/TAEX Master Nursery Certification Program, College Station, TX.
44. Water and Media Management. Nov. 14, 1989. Metropolitan Interiorscape Symposium, Brooklyn Botanical Garden, Brooklyn, NY.
45. Fine tuning the micronutrients. Nov. 14-16, 1989. Texas Greenhouse Growers and Interiorscapers Conference. College Station, TX.
46. Horticulture overview and what to expect in the 90's. Feb. 21, 1990. 4th Annual East Texas Vegetable Conference. Tyler, TX.
47. Impact your plants with a greater understanding of soil properties. Feb. 26-28, 1990. Illinois Landscape Contractors Association Winter Seminar '90. Lincolnshire, IL.
48. Monitoring the interior environment - media, water, fertility and light. June 24-26, 1990. 2nd Annual Pennsylvania Floral Industry Expo. Lancaster, PA.
49. How to measure media and irrigation water pH and soluble salts. June 28, 1990. East Texas Bedding Plant Seminar. New Summerfield, TX.
50. Determining chemical and physical properties of irrigation water, fertilizer solutions and growing media. July 1990. TAN/TAEX Master Nursery Certification Program, College Station, TX.
51. Balancing salts and nutrition. Nov. 13-15, 1990. Texas Greenhouse Growers Conference, College Station, TX.
52. Good soil and bad soil: Do you know the difference? Your plants do! Feb. 26-28, 1991. Illinois Landscape Contractors Association Winter Seminar, Rosemont, Ill.
53. Soil Analysis. April 19, 1991. California Landscape Contractors Association GreenTECH/91 Seminars. Long Beach, CA.
54. Growing media and water. July 13, 1991. International Floriculture Industry Short Course and Trade Show, Ohio Florist's Association, Cincinnati, OH.
55. Greenhouse media and fertilizers. July 10, 1991. 1st Annual Seminar - Basic Growers School, Kansas State University and Kansas Greenhouse Growers Association, Manhattan, KS.
56. Determining chemical and physical properties of irrigation water, fertilizer solutions and growing media. July 23, 1991. TAN/TAEX Master Nursery Certification Program, College Station, TX.
57. Growing media and water. July 13, 1991. 1991 International Floriculture Industry Short Course, Cincinnati, OH.
58. High pH tolerance of rose rootstocks. Oct. 9, 1991. 10th Annual East Texas Rose Producer and Marketing Seminar, Overton, TX.
59. The basics of acid injection for pH control of irrigation water. Nov. 19, 1991. Texas Greenhouse Growers Conference, College Station, TX.
60. Determining chemical and physical properties of irrigation water, fertilizer solutions and growing media. July 28, 1992. TAN/TAEX Master Nursery Certification Program, College Station, TX.

61. Water quality: What's in your water and what to do about it. November 5, 1992. 1992 International Plug Conference, Orlando, FL.
62. Making the most out of micronutrients. November 12, 1992. Texas and Southwest Greenhouse Growers Conference, College Station, TX.
63. Growing media and water quality. January 19, 1993. Sixth Annual Texas College and University Grounds Managers Conference, San Antonio, TX.
64. Growing media and water. July 11, 1993. 1993 International Floriculture Industry Short Course, Cincinnati, OH.
65. Determining chemical and physical properties of irrigation water, fertilizer solutions and growing media. July 29, 1993. TAN/TAEX Master Nursery Certification Program, College Station, TX.
66. Working with high pH/alkalinity. November 11, 1993. Texas and Southwest Greenhouse Growers Conference, College Station, TX.
67. Determining chemical and physical properties of irrigation water, fertilizer solutions and growing media. July 26, 1994. TAN/TAEX Master Nursery Certification Program, College Station, TX.
68. Matching water quality and fertility. Nov. 17, 1994. Texas and Southwest Greenhouse Growers Conference, College Station, TX.
69. To think like a plant: What you need to know. May 20, 1995. Texas Master Gardener Advanced Training Seminar, College Station, TX.
70. Determining chemical and physical properties of irrigation water, fertilizer solutions and growing media. July 1995. TAN/TAEX Master Nursery Certification Program, College Station, TX
71. Water quality as it relates to fertilizer selection in our area. Oct. 6, 1995. 1995 Annual bwi Merchandise Show and buyer's Market, Memphis, TN.
72. Overcoming alkalinity and pH problems. Nov. 16, 1995. Texas & Southwest Greenhouse Grower's Conference, College Station, TX.
73. Determining chemical and physical properties of irrigation water, fertilizer solutions and growing media. July 23, 1996. TAN/TAEX Master Nursery Certification Program, College Station, TX.
74. Water, media and fertilizer testing. Oct. 5, 1996. Kinney Bonded Warehouse Short Course, Monterrey, Mexico.
75. Managing water - Purification, salinity, pH and acidification. Jan 10, 1997. Grower Expo '97, St. Charles, IL.
76. Determining chemical and physical properties of irrigation water, fertilizer solutions and growing media. July 1997. TAN/TAEX Master Nursery Certification Program, College Station, TX
77. Managing water quality to improve greenhouse production. Sept. 5, 1997. GrowTech Americas 97 International Trade Exhibition and Conference, Miami, FL.
78. Subirrigation research update. Nov. 13, 1997. Texas & Southwest Greenhouse Grower's Conference, College Station, TX.
79. Earn your advanced degree in floriculture production – Water and water quality. January 8, 1998. Grower Expo'98, Chicago, IL.
80. Determining chemical and physical properties of irrigation water, fertilizer solutions and growing media. July 7, 1998. TAN/TAEX Master Nursery Certification Program, College Station, TX
81. Water quality for nursery/floral and landscape plants. August 20, 1998. 1998 TAN-MISSLARK/TALC Pre-Show Educational Seminar, Houston, TX.
82. Water quality survey of Texas greenhouse/nursery operations. November 12, 1998. Texas & Southwest Greenhouse Grower's Conference, College Station, TX.
83. Water and growing medium quality control for nursery, floral and landscape plants. October 27, 1999. Sun Gro Horticulture Field Day, Hubbard, OR.
84. Managing a Greenhouse Fertility Program. November 11, 1999. Texas & Southwest Greenhouse Grower's Conference, College Station, TX
85. Exemplary college teaching and the student learning process – Local testimonial “What Works for Me”. Jan. 11, 2000. 2000 Agriculture Program Conference, College Station, TX.

86. Monitoring growing media, water and fertility in greenhouse crop production. Feb. 2, 2000. Ellison's Greenhouse In-House Training Session, Brenham, TX.
87. Using Active Participation in Teaching General Horticulture. Feb. 11, 2000. Sponsored by Center for Teaching Excellence Wokonse Afternoon, Texas A&M University, College Station, TX.
88. The Science of Horticulture Comes Alive", August 2, 2000. 2000 Professional Development Conference for Agricultural Science and Technology Teachers, Lubbock, TX. Sponsored by the Texas Education Agency, State of Texas.
89. Water quality update. Aug. 17, 2000. TNLA Nursery/Landscape Expo Pre-Conference Educational Seminar, Houston, TX.
90. Developing a Fertility Strategy for Alkaline Conditions. March 12, 2001. San Antonio Rose Society, San Antonio Botanical Gardens, San Antonio, TX
91. Plant Anatomy and Physiology According to Dave. Oct1-2, 2001, Advanced Horticulture Food Crops Symposium, Texas A&M University.
92. Fertility Strategies and Testing Soils and Growing Media. Jan. 19, 2002. South Central District's Winter Rose Workshop and Consulting Rosarian School, Houston, TX.
93. Tree Growth and Development. Jan. 22, 2002. Texas Pecan Short Course, Texas A&M University, College Station, TX.
94. Managing Soil-less Growing Media-Soil Testing methods, July 24, 2002. 2002 Professional Development Conference for Agricultural Science and Technology Teachers, Corpus Christi, TX. Sponsored by the Texas Education Agency, State of Texas.
95. Fertilizers and Fertility-Where do all the nutrients come from, July 24, 2002. 2002 Professional Development Conference for Agricultural Science and Technology Teachers, Corpus Christi, TX. Sponsored by the Texas Education Agency, State of Texas.
96. Photosynthesis, October 1, 2002, 2002 Advanced Horticulture Food Crops Symposium, College Station, TX.
97. Respiration, October 1, 2002, 2002 Advanced Horticulture Food Crops Symposium, College Station, TX.
98. Pecan Tree Anatomy and Growth. January 27, 2003. 2003 Texas Pecan Orchard Management Short Course, College Station, TX.
99. [Beyond N-P-K: Chemistry of Soil and Water and how they affect our Fertilizing Practices](#), April 19, 2003. Consulting Rosarian Seminar, American Rose Society Rose Show and Convention, New Orleans, LA.
100. Hormones and Growth Regulators. September 30, 2003. 2003 Advanced Horticulture Food Crops Symposium, College Station, TX.
101. Plant Anatomy. January 23, 2004. 2004 Texas Pecan Orchard Management Short Course, College Station, TX.
102. [Clash of Expectations of Baby Boomers/Generation X and Millennials](#), January 14, 2005, Sponsored by College of Agriculture and Life Sciences Master Teacher Panel, 2005 Agriculture Program Conference, Texas A&M University
103. Beyond N-P-K, Chemistry of Soil and Water and how they affect our Fertilizing Practices, January 22, 2005. South Central District Consulting Rosarian Seminar, San Antonio, TX.
104. Plant Anatomy. January 24, 2005. 2005 Texas Pecan Orchard Management Short Course, College Station, TX.
105. Understanding water, soil-less media, and fertilizers. November 4, 2005. Northeast Texas Greenhouse Growers Conference, Jacksonville, TX.
106. Plant Anatomy. January 2006. 2006 Texas Pecan Orchard Management Short Course, College Station, TX
107. Soil composition and necessary amendments and understanding the role of fertilizer and water. March 11, 2006. Winter Workshop, Tulsa Rose Society, Tulsa, OK
108. Learn to think like a plant then you can talk to them. 2006 Texas State Master Gardner Conference, College Station, TX



109. Simple water and soil tests that you can do at home and combating alkaline soil/water. Oct. 13, 2006, Consulting Rosarian Workshop, Dallas Rose Society, Dallas, TX
110. Plant Anatomy. January 2007. 2007 Texas Pecan Orchard Management Short Course, College Station, TX.
111. Simple Water and Soil Tests That You Can Do On Site and Combating Alkaline Soil/Water. August 17, 2007. Texas Nursery and Landscape Association Gower Education Sessions, Dallas, TX.

## GRANTS AND CONTRACTS

### INTERNAL COMPETITIVE FUNDS

\$500	Chemical and ultrastructural studies on cuticles. Faculty/Staff Mini-Grant Texas A&M, Jan. 1979-1980.
\$2,000	Quantitative analysis of parameters of cuticular permeability. Organized Research Development Funds. Texas A&M, Oct. 1979-1980.
\$4,000	Foliar nutrition - factors affecting performance, Program Development Funds, Texas Agri. Exp. Station, 1982.
\$27,396	Improving production efficiency and utilization of greenhouse crops, Expanded Research Area, Texas Agri. Exp. Station, 1985-87.
\$30,000	Nutrition of ornamental crops, Expanded Research Area, Texas Agri. Exp. Station, 1987-89.
\$13,775	Nutrient analysis by ion exchange chromatography, Program Development Funds, Texas Agri. Exp. Station, 1989.
\$29,500	Selection of <i>Rosa</i> rootstocks for iron efficiency and adaptation to alkaline soil, Co-Principle Investigators Y. Wang and B. Pemberton. Expanded Research Area, Texas Agri. Exp. Station, 1989-1991
\$75,000	Minimizing nitrogen runoff from greenhouses and nurseries using recycled irrigation water and constructed wetlands. Co-Principle investigators H. Lang, E. McWilliams and D. Wilkerson. Research Enhancement Program, Texas Agricultural Experiment Station, 1993-95.
\$5,200	Development of a HORT 201 Home Page on the Internet, V.F. and Gertrude Neuhaus Teaching Grant, COALS, 1996-97.
\$50,000	Develop strategies to maximize accumulation of the anti-cancer compound camptothecin in <i>Camptotheca</i> – A new crop for Texas agriculture. Co-Pi M. Rumpho and d. Lineberger. TAES Faculty Research Development Program, 1997-98.
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\$237,371	Sub-Total

### EXTERNAL COMPETITIVE FUNDS

\$500	Cuticle and leaf surface characteristics related to the effectiveness of compounds applied to the foliage of ornamental plants. R.P. White Grant, Horticultural Research Inst. (HRI), Washington DC, June 1979-1980.
\$6,000	A study of cuticle and leaf surface properties to determine the effectiveness of compounds applied to the foliage of ornamental plants. The Fred Gloeckner Equipment Grant, Fred C. Gloeckner Foundation, June, 1979-1980.
\$4,000	Alleviation of nutrient deficiencies and maintenance of optimum nutrient levels, especially through foliar application, for maximum production efficiency. Weyerhaeuser Co., Dec., 1979-1980.
\$292,000	Foliar nutrition - Factors affecting performance. Co-Principle investigators: J.B. Storey and E.R. Emino. Allied Chemical Corp., June 1980-1983.
\$3,500	Studies on improved production efficiency of selected greenhouse crops. Co-Principal investigators: A.E. Nightingale, E. McWilliams, E.R. Emino and M. Kamp. Texas State Florist Association - Growers Division, July 1980-1981.
\$8,692	Effectiveness of iron foliar sprays. Allied Chemical Corp., June 1983-1984.
\$4,717	Effectiveness of iron fertilizers. Arcadian Corp., Aug., 1985-1986.
\$5,344	Foliar and root absorption of nitrogen carriers. Arcadian Corp., Nov., 1987-1988.
\$2,000	Growth response and release rates from slow release N-P-K fertilizers. Haifa Chemicals, Trans-Resources, Inc., April 1989-1990.
\$2,000	Sumagic on bedding plants. Valent USA Corp., April 1991-92.
\$2,000	Phytotoxicity of Select on Ornamentals. Valent Corp., March 1992-93.
\$2,000	Sumagic on bedding plants. Valent USA Corp., June 1992-93.

\$3,500	Sumagic on bedding plants. Valent USA Corp., April 1993-94.
\$2,000	Minimizing nitrogen runoff from foliage production facilities using recycled irrigation water and constructed wetlands. National Foliage Foundation, Apopka, FL, Jan. 1994-95. Co-Principal investigators: E.L. McWilliams and H. Lang.
\$2,000	Evaluating irrigation water quality and predicting ornamental crop growth and quality response. Ornamental Enhancement Endowment, 1997-98.
\$4,000	Evaluating irrigation water quality and predicting ornamental crop growth and quality response. Ornamental Enhancement Endowment, 1999-01.
\$12,000	Reassessing water quality for greenhouse crop production. The Fred Gloeckner Foundation, Inc., June 2000-01.
\$12,000	Reassessing water quality for greenhouse crop production. The Fred Gloeckner Foundation, Inc., June 2001-02, extension.
\$5,000	Studies on water quality for ornamental crops. Texas Nursery and Landscape Association, 2002.
\$2,600	Testing electromagnetically treated water for enhancement of seed germination and plant growth, Roger Holland, 2002
\$5,000	Testing plant growth response to irrigation with recycled/reused water from nursery operations. Texas Nursery & Landscape Association Education & Research Foundation, 2006-2007

\$380,853 Sub-Total

\$618,224 TOTAL

Recent Grants Submitted in 2007 and Response Pending

\$17,000	Screening Ornamental Plants for Iron Efficiency and Resistance to Alkalinity Induced Iron Chlorosis. \$17,000. Submitted May 2007,, Horticultural Research Institute
\$5,000	Screening Ornamental Plants for Tolerance to Alkaline Water and Soil, Submitted September 2007, Texas Nursery and Landscape Association Education & Research Foundation
\$5,000	Screening Ornamental Plants for Tolerance to Alkaline Water and Soil, Submitted August 2007, Texas Ornamental Enhancement Endowment.

## **CAREER OBJECTIVES**

### TEACHING:

To capitalize on the good and bad experiences with each student in each course of each semester to improve my effectiveness in the next course taught or student relationship developed. To set the student at ease and become their friend while still maintaining a strong authority figure. To present the information in a clear, concise and organized manner such that it can be grasped, understood and learned by the student, while still maintaining very high expectations of the students so their true ability is tested and maximum potential is achieved. To help each student to become "thinkers". Ultimately, to become the kind of teacher like the precious few who truly inspire students past their own dreams and expectations, just as those selected few teachers have inspired me in my education and academic career.

### RESEARCH

To develop a coordinated program in both basic and applied research. The basic research should strive to answer those yet unsolved riddles concerning the structure, function and development of horticultural crops, and the host of chemical and environmental variables that affect these processes. My research primarily focuses on the nutrition and solute relations of ornamental crops. Areas of priority are studying the underlying mechanism of absorption, translocation and metabolic utilization of solutes by roots and leaves, and environment and plant induced variations in the process. It is only through this type of long term research that large strides and great advances will be made in the ability to effectively and efficiently produce horticultural crops and in agriculture in general. It is very important that the basic research should never lose sight of its ultimate goal of application. To achieve this goal, concurrent practically applied research projects will be conducted to test the products and output from the basic research program.

## **CURRENT POSITION DESCRIPTION**

POSITION TITLE: Professor

APPOINTMENT: 70% Teaching / 30% Research

### POSITION DESCRIPTION:

Twelve-month tenure track appointment including teaching principles of horticulture for both cross commodity courses and floriculture and ornamental horticulture courses, at both the undergraduate and graduate level. Advise graduate and undergraduate students. Communicate and cooperate with industry on industry related matters. Design and conduct experimentation on the physiology of ornamental plants, especially foliage and greenhouse crops, as related to improving their production and use. Coordinate Departmental graduate program.

## SUMMARY OF CAREER ACHIEVEMENTS

### TEACHING RELATED (70% Appointment)

#### Courses Taught - Texas A&M

- a) Developed and taught 4 undergraduate and 3 graduate courses.
- b) Developed General Horticulture enrollment from 30 to 340 per semester.

#### Courses Taught - International

- a) Taught graduate course Applied Physiology of Horticultural Crops, University of Peradeniya, Peradeniya, Sri Lanka, Fall 1985.

#### Teaching Awards:

##### College and University Teaching Awards and Honors

Distinguished Achievement Award for Teaching, College Level, 1990, Association of Former Students, Texas A&M University

Vice Chancellor's Award in Excellence for Undergraduate Teaching, 1995, College Level, The Agriculture Program, Texas A&M University

Distinguished Achievement Award for Teaching, University Level, 1999, Association of Former Students, Texas A&M University

Master Teachers Panel, College of Agriculture and Life Sciences, Texas A&M University, 2004

##### Student Originated Teaching Awards and Honors

Professor of the Year in Agriculture, 1995, Delta Delta Delta Sorority, Texas A&M Chapter

Outstanding Contributions as a Professor, 1998, Pi Beta Phi, Texas A&M Chapter

Faculty Award, Horticulture Graduate Council, 2002, Texas A&M University

Fish Camp Namesake, Camp Reed, the Sea Surfin' Canaries, August 1993, Texas A&M University

T Camp Namesake, Camp Reed, the Red Hot Reggae Rainmakers, August 1996, Texas A&M University

T Camp Namesake, Camp Reed, the Rockin' Red Hot Crawdaddy Pinchers, August 2002, Texas A&M Univ.

##### Professional Scientific Society Teaching Awards and Honors

L.M. Ware Distinguished Teaching Award, 1989, Regional Level, Southern Region of the American Society for Horticultural Sciences

Outstanding Undergraduate Educator Award, 2002, National Award, American Society for Horticultural Sciences

#### Books/Manuals/Internet:

- a) Reed, D.W. 1993 (revised 1982, 1985) *General Horticulture Laboratory Manual*, Burgess Publishing, Edina., MN, 175 pp.
- b) Reed, D.W. (Editor and Author). 1996. *Water, Media and Nutrition for Greenhouse Crops*, Ball Publishing, Batavia, IL, 314 pp.
- c) Reed, D.W. 1999. *Horticulture – Science and Practices*, Burgess Publishing, Edina, MN, 100 pp.
- d) Webmaster, General Horticulture Home Page, Lecture Supplement published in html format.

#### Graduate Students:

- a) Graduated 3 Master of Agriculture, 7 Master of Science and 8 Doctor of Philosophy students.

#### Club Advising:

- a) Texas A&M: Advisor, Floriculture and Ornamental Horticulture Club (1981-1992), Pi Alpha Xi (1982-86) and Alpha Zeta (1987-1988).
- b) American Society for Horticultural Sciences: Advisor, Association of Collegiate Branch (1984-85, 88-89).

**Administrative**

- a) Executive Committee, Inter-Departmental Faculty of Plant Physiology, 1985-86.
- b) Interim Head, Department of Horticultural Sciences, Oct. 1989 - Aug. 1990.
- c) Interim Head, Department of Horticultural Sciences, Sept. 1994-May 1995.
- d) Interim Head, Department of Horticultural Sciences, Sept. 2001-Jan. 2002.
- e) Chair, Graduate Program Council, College of Agriculture and Life Sciences, 1992-present.
- f) Graduate Coordinator, Department of Horticultural Sciences, 1984-1995.
- g) Associate Head for Graduate Studies, Department of Horticultural Sciences, 1995-2002.

**RESEARCH RELATED (30% Appointment)****Refereed Scientific Publications:**

- a) Authored or co-authored 45 scientific refereed publications.

**Invited Scientific Symposium:**

- a) Presented 4 papers at invited U.S. symposia.
- b) Presented 2 papers at invited International symposia.

**Scientific Abstracts:**

- a) Authored or co-authored 64 abstracts at scientific meetings.

**Grants and Contracts:**

- a) Awarded \$237, 372 in internal competitive funds.
- b) Awarded \$380,853 in external competitive grants and contracts.

**Professional Society Offices Held**

President, Southern Region of the American Society for Horticultural Sciences, 2005

Secretary-Treasurer, Southern Region of the American Society for Horticultural Sciences, 2006-present

**EXTENSION (INDUSTRY) RELATED (0% Appointment)****Texas:**

- a) Presented 69 invited talks at Texas industry seminars or conferences.

**National or International:**

- a) Presented 36 invited talks at other state or international industry seminars or conferences.

**SCIENTIFIC SOCIETY RECOGNITION**

Southern Region American Society for Horticultural Sciences, member 1979-present.

President, 2005

Secretary-Treasurer, 2006-present

See Teaching Awards