

CURRICULUM VITAE

NAME

Hughes, Harrison G

ADDRESS

Horticulture and Landscape Architecture
College of Agricultural Sciences

Shepardson
Shepardson

PHONE

(970) 491-7050

EDUCATION

1974 Ph D, PURDUE UNIV

1969 BS, E ILLINOIS UNIV

ACADEMIC POSITIONS

August 1969 - August 1973 Graduate Research Assistant, Purdue University.

SABBATICALS

(1984) Dept of Pomology, Univ of California, I worked with Dr. Dan Parfitt in the dept of Pomology and the USDA Germplasm Lab in UC-Davis in cryopreservation and tissue culture of fruit crops.

(1992) Dr. Freddi Hammerschlaug, USDA, Plant tissue culture and gene gun activities.

(1999) Dr. Leigh Towill, USDA, National Center for Germplasm Preservation, Tissue culture and cryostorage of fruit crop species.

OTHER POSITIONS

1977 - Present Teaching/Research Faculty, Colorado State University.

July 1, 1998 - December 31, 1998 Sabbatical Leave Research, USDA National Seed Storage Laboratory.

January 15, 1992 - July 15, 1992 Sabbatical Leave Research, USDA Plant Molecular Biology Laboratory.

June 11, 1984 - December 31, 1984 Sabbatical Leave Research, University of California- Davis.

September 1, 1976 - August 1, 1977 Teaching Faculty, University of Rhode Island.

September 1, 1974 - September 1, 1976 Teaching Faculty, SUNY - Cobleskill.

June 1, 1975 - August 15, 1975 Visiting Professor, University of Kentucky.

September 1, 1973 - June 1, 1974 Instructor, Purdue University.

PUBLISHED WORKS

Books

- (2002). *Glossary of biotechnology and genetic engineering*. FAO Research & Technology Paper 9 Rome pp 305 Published both paper & CD in 7 languages.
- (1999). *Glossary of biotechnology and genetic engineering*. FAO Research & Technology Paper 7 Rome pp 250 Published in 4 languages.

Refereed Journal Articles

- (2011). "An efficient in vitro propagation protocol of Cocoyam [*Xanthosoma sagittifolium* (L) Schott. *The Scientific World Journal*.
- (2008). Saltgrass clones' spike production affected by sampling time, nitrogen fertilization, and burning. *Horttechnology*, 18, 379-383.
- (2007). Freezing tolerance of 27 saltgrass ecotypes from three cold hardiness zones. *Hortscience*, 42, 157-160.
- (2003). Cold hardiness of saltgrass accessions. *Crop Sci*, 43, 2142-2147.
- (2003). Relationships of soluble carbohydrates and freeze tolerance in saltgrass. *Crop Sci*, 43, 2148-2153.
- (2001). Merged department experience at Colorado State University. *Horttechnology*, 11, 399-401.
- (1998). Studies on stomatal function, epicuticular wax and stem-root transition region of polyethylene glycol-treated and nontreated in vitro grape plantlets. *In Vitro Cell Dev-Pl*, 34, 7-Jan.
- (1996). Effects of PEG-induced water stress on in vitro hardening of 'Valiant' grape. *Plant Cell Tiss Org*, 47, 97-101.
- (1996). Liquid medium overlays enhance growth and multiplication of in vitro grapes and apples. *Fruit Varieties J*, 50, 86-87.
- (1995). A comparison of stomatal function and frequency of in vitro, in vitro polyethylene glycol treated, and greenhouse-grown plants of date palm, *Phoenix dactylifera* L. *Tropical Agriculture (Trinidad)*.
- (1995). In vitro acclimatization of date palm (*Phoenix dactylifera* L) plantlets: a quantitative comparison of epicuticular leaf wax as a function of polyethylene glycol treatment. *Plant Cell Reports*, 15, 111-115.
- (1995). Leaf anatomy and water loss of in vitro PEG-treated 'Valiant' grape. *Plant Cell, Tissue and Organ Culture*, 42, 179-184.
- (1995). Water loss and polyethylene glycol-medicated acclimatization of in vitro-grown seedlings of 5 cultivars of date palm (*Phoenix dactylifera* L) plantlets. *Plant Cell Reports*, 14, 385-388.
- (1993). Chromosome studies in *Alstroemeria pelegrina* L *Int'l. J of Plant Sci*, 154, 535-539.
- (1993). Hydroponic screening of strawberry for salt tolerance: correlation with in vitro evaluations. *Acta Hort*, 348, 384-388.
- (1992). Bramble dried leaf volatiles. *Developments in Food Science 29: Food Science Nutrition Charalambous, G, ed Elsevier, Amsterdam*, 145-148.

- (1992). Kent' and 'Honeoye' out-performed previously best-adapted strawberry cultivars in Colorado trial. *Fruit Var J*, 46, 58-61.
- (1992). Propagation of Phytolacca-Dodecandra (Endod) by Stem Cuttings and Seed. *Trop Agr*, 69, 301-303.
- (1991). Asexual propagation of Sheperdia canadensis and S rotundifolia. *J Of Env Hort*, 9, 218-220.
- (1991). Chromosome Analysis of Alstroemeria-Ligtu Hybrids. *Hortscience*, 26, 902-904.
- (1991). Germination and Storage of Pollen of Phytolacca-Dodecandra L (Endod). *Ann Bot-London*, 68, 13-15.
- (1991). In vitro selection of strawberry (Fragaria sp) for salt (NaCl) tolerance. *3rd North American Strawberry Conference Ch 18*, 118-120.
- (1991). Low-Temperature Preservation of Clianthus-Formosus Pollen. *Hortscience*, 26, 1411-1412.
- (1990). Medium overlays for improved hardening of micropropagated potatoes. *HortScience*, 25(7), 794-795.
- (1990). Micropropagation of Phytolacca-Dodecandra through Shoot-Tip and Nodal Cultures. *Plant Cell Rep*, 9, 390-392.
- (1990). Pruning Effects on Cold Hardiness and Water-Content during Deacclimation of Merlot Bud and Cane Tissues. *Am J Enol Viticult*, 41, 251-260.
- (1989). Combined High-Temperature and Ultraviolet-Radiation Injury of Red Raspberry Fruit. *Hortscience*, 24, 597-599.
- (1987). Chromosome studies in the genus Alstroemeria I Chromosome numbers in some cultivated varieties. *Bot Gaz*, 148, 519-524.
- (1987). Fruit Yield and Solar Injury Comparison of 2 Primocane Fruiting Red Raspberries. *Fruit Varieties J*, 41, 133-136.
- (1987). Solar Injury of Raspberry Fruit. *Hortscience*, 22, 396-397.
- (1986). Suppression of Raspberry Crown Borer, Pennisetia-Marginata (Harris) (Lepidoptera, Sesiidae) with Soil Applications of Steinernema-Feltiae (Rhabditida, Steinernematidae). *J Invertebr Pathol*, 48, 257-258.
- (1974). Production of tetrahaploids in the cultivated strawberry. *HortScience*, 9, 442-444.
- (1973). In vitro culture of Salpiglossis sinuata L. *HortScience*, 8, 335-336.
- (1971). Callus formation from strawberry anthers. *Hort Res*, 11, 116-117.

Non-Refereed Journal Articles

- (2012). An Efficient In Vitro Propagation Protocol of Cocoyam [Xanthosoma sagittifolium (L) Schott]. *The Scientific World Journal*, doi: 10.1100/2012/346595.
- (2008). Variation in Saltgrass Growth and Time of Fall Dormancy Related to Geographical and Climatic Factors. *J Amer Soc Hort Sci*, 133, 127-132.
- (2006). Cold hardiness of inland saltgrass. *USGA Turfgrass and Environ Res*, 5(1), 9-Jan.
- (1992). Influence of variety and location of growth on resulting bramble dried leaf volatiles. *Developments in*

(2012). *Glacium sp Germination at Different Salinity Levels as Influenced by Growth Regulators* (9th ed., vol. 47, pp. S379). HortScience.

PAPERS PRESENTED/SYMPOSIA/INVITED LECTURES/PROFESSIONAL MEETINGS/WORKSHOPS

2011, "Triploidy as a Means of Producing Sterility in HOrned Poppy".

2010, "CSU Updates: Flowers and Small Fruit at ProGreen".

2010, "Small Fruit for Colorado Presentation for Computer Group Longmont, CO".

TEACHING:

<u>Year</u>	<u>Semester</u>	<u>Course No./Title</u>	<u>Cr. Hrs.</u>	<u>Enrollment</u>
2016	Spring	HORT487 - Internship	18	6
2016	Spring	HORT260 - Plant Propagation	4	43
2016	Spring	HORT260 - Plant Propagation - Lab	0	18
2016	Spring	HORT260 - Plant Propagation - Lab	0	25
2015	Fall	HORT799 - Dissertation	18	3
2015	Fall	HORT100 - Horticultural Science	4	223
2015	Fall	HORT100 - Horticultural Science - Lab	0	22
2015	Fall	HORT100 - Horticultural Science - Lab	0	24
2015	Fall	HORT100 - Horticultural Science - Lab	0	21
2015	Fall	HORT100 - Horticultural Science - Lab	0	23
2015	Fall	HORT100 - Horticultural Science - Lab	0	20
2015	Fall	HORT100 - Horticultural Science -Lab	0	21
2015	Fall	HORT100 - Horticultural Science -Lab	0	24
2015	Fall	HORT100 - Horticultural Science -Lab	0	25
2015	Fall	HORT100 - Horticultural Science -Lab	0	22
2015	Fall	HORT100 - Horticultural Science -Lab	0	21
2015	Fall	HORT487 - Internship	18	25
2015	Fall	HORT784 - Supervised College Teaching	18	5
2015	Summer	HORT487 - Internship	18	24
2015	Spring	HORT799 - Dissertation	18	3
2015	Spring	HORT496 - Group Study	18	4
2015	Spring	HORT495 - Independent Study	18	7
2015	Spring	HORT487 - Internship	18	4
2015	Spring	HORT260 - Plant Propagation	4	49
2015	Spring	HORT260 - Plant Propagation - Lab	0	24
2015	Spring	HORT260 - Plant Propagation - Lab	0	25
2015	Spring	HORT698 - Research	18	13
2015	Spring	HORT784 - Supervised College Teaching	18	4
2014	Fall	HORT496 - Group Study	18	2
2014	Fall	HORT100 - Horticultural Science	4	211
2014	Fall	HORT100 - Horticultural Science - Lab	0	21
2014	Fall	HORT100 - Horticultural Science - Lab	0	23
2014	Fall	HORT100 - Horticultural Science - Lab	0	24
2014	Fall	HORT100 - Horticultural Science - Lab	0	23

2014	Fall	HORT100 - Horticultural Science - Lab	0	6
2014	Fall	HORT100 - Horticultural Science -Lab	0	21
2014	Fall	HORT100 - Horticultural Science -Lab	0	25
2014	Fall	HORT100 - Horticultural Science -Lab	0	20
2014	Fall	HORT100 - Horticultural Science -Lab	0	24
2014	Fall	HORT100 - Horticultural Science -Lab	0	24
2014	Fall	HORT487 - Internship	18	30
2014	Fall	HORT784 - Supervised College Teaching	18	5
2014	Fall	HORT452 - Viticulture-Grape Production	1	22
2014	Summer	HORT487 - Internship	18	30
2014	Spring	HORT799 - Dissertation	18	3
2014	Spring	HORT496 - Group Study	18	4
2014	Spring	HORT495 - Independent Study	18	8
2014	Spring	HORT260 - Plant Propagation	4	46
2014	Spring	HORT260 - Plant Propagation - Lab	0	23
2014	Spring	HORT260 - Plant Propagation - Lab	0	23
2014	Spring	HORT698 - Research	18	10
2013	Fall	HORT799 - Dissertation	18	3
2013	Fall	HORT496 - Group Study	18	4
2013	Fall	HORT100 - Horticultural Science	4	217
2013	Fall	HORT100 - Horticultural Science - Lab	0	25
2013	Fall	HORT100 - Horticultural Science - Lab	0	25
2013	Fall	HORT100 - Horticultural Science - Lab	0	24
2013	Fall	HORT100 - Horticultural Science - Lab	0	23
2013	Fall	HORT100 - Horticultural Science -Lab	0	25
2013	Fall	HORT100 - Horticultural Science -Lab	0	22
2013	Fall	HORT100 - Horticultural Science -Lab	0	25
2013	Fall	HORT100 - Horticultural Science -Lab	0	23
2013	Fall	HORT100 - Horticultural Science -Lab	0	25
2013	Fall	HORT487 - Internship	18	36
2013	Fall	HORT698 - Research	18	10
2013	Fall	HORT784 - Supervised College Teaching	18	4
2013	Fall	HORT699 - Thesis	18	4
2013	Summer	HORT100 - Horticultural Science	4	8
2013	Summer	HORT100 - Horticultural Science - Lab	0	2
2013	Summer	HORT100 - Horticultural Science - Lab	0	6
2013	Summer	HORT487 - Internship	18	35
2013	Summer	HORT784 - Supervised College Teaching	18	1
2013	Spring	HORT799 - Dissertation	18	2
2013	Spring	HORT454 - Horticulture Crop Production and Management	2	35
2013	Spring	HORT495 - Independent Study	18	1
2013	Spring	HORT487 - Internship	18	2
2013	Spring	HORT260 - Plant Propagation	4	48
2013	Spring	HORT260 - Plant Propagation - Lab	0	24
2013	Spring	HORT260 - Plant Propagation - Lab	0	24
2013	Spring	HORT698 - Research	18	13
2013	Spring	HORT784 - Supervised College Teaching	18	5
2013	Spring	HORT699 - Thesis	18	4
2012	Fall	HORT799 - Dissertation	18	3
2012	Fall	HORT100 - Horticultural Science	4	196
2012	Fall	HORT100 - Horticultural Science - Lab	0	21
2012	Fall	HORT100 - Horticultural Science - Lab	0	23
2012	Fall	HORT100 - Horticultural Science - Lab	0	20
2012	Fall	HORT100 - Horticultural Science - Lab	0	19
2012	Fall	HORT100 - Horticultural Science -Lab	0	22

2012	Fall	HORT100 - Horticultural Science -Lab	0	23
2012	Fall	HORT100 - Horticultural Science -Lab	0	24
2012	Fall	HORT100 - Horticultural Science -Lab	0	20
2012	Fall	HORT100 - Horticultural Science -Lab	0	24
2012	Fall	HORT495 - Independent Study	18	5
2012	Fall	HORT487 - Internship	18	44
2012	Fall	HORT698 - Research	18	15
2012	Fall	HORT784 - Supervised College Teaching	18	4
2012	Fall	HORT452 - Viticulture-Grape Production	1	29
2012	Summer	HORT100 - Horticultural Science	4	14
2012	Summer	HORT100 - Horticultural Science - Lab	0	9
2012	Summer	HORT100 - Horticultural Science - Lab	0	5
2012	Summer	HORT487 - Internship	18	42
2012	Spring	HORT799 - Dissertation	18	4
2012	Spring	HORT496 - Group Study	18	0
2012	Spring	HORT454 - Horticulture Crop Production and Management	2	32
2012	Spring	HORT795 - Independent Study	18	1
2012	Spring	HORT260 - Plant Propagation	4	41
2012	Spring	HORT260 - Plant Propagation - Lab	0	17
2012	Spring	HORT260 - Plant Propagation - Lab	0	24
2012	Spring	HORT698 - Research	18	14
2012	Spring	HORT784 - Supervised College Teaching	18	2
2011	Fall	HORT799 - Dissertation	18	5
2011	Fall	HORT100 - Horticultural Science	4	218
2011	Fall	HORT100 - Horticultural Science - Lab	0	25
2011	Fall	HORT100 - Horticultural Science - Lab	0	24
2011	Fall	HORT100 - Horticultural Science - Lab	0	25
2011	Fall	HORT100 - Horticultural Science - Lab	0	23
2011	Fall	HORT100 - Horticultural Science -Lab	0	24
2011	Fall	HORT100 - Horticultural Science -Lab	0	28
2011	Fall	HORT100 - Horticultural Science -Lab	0	24
2011	Fall	HORT100 - Horticultural Science -Lab	0	23
2011	Fall	HORT100 - Horticultural Science -Lab	0	22
2011	Fall	HORT450C - Horticulture Food Crops-Small Fruit Production	1	43
2011	Fall	HORT450D - Horticulture Food Crops-Tree Fruit Production	1	45
2011	Fall	HORT495 - Independent Study	18	7
2011	Fall	HORT487 - Internship	18	60
2011	Fall	HORT698 - Research	18	15
2011	Fall	HORT784 - Supervised College Teaching	18	3
2011	Summer	HORT799 - Dissertation	18	1
2011	Summer	HORT487 - Internship	18	57
2011	Summer	HORT698 - Research	18	2
2011	Spring	HORT799 - Dissertation	18	6
2011	Spring	HORT454 - Horticulture Crop Production and Management	2	19
2011	Spring	HORT495 - Independent Study	18	2
2011	Spring	HORT795 - Independent Study	18	2
2011	Spring	HORT260 - Plant Propagation	4	46
2011	Spring	HORT260 - Plant Propagation - Lab	0	24
2011	Spring	HORT260 - Plant Propagation - Lab	0	22
2011	Spring	HORT698 - Research	18	9
2011	Spring	HORT784 - Supervised College Teaching	18	3
2010	Fall	HORT100 - Horticultural Science	4	173
2010	Fall	HORT100 - Horticultural Science - Lab	0	26

2010	Fall	HORT100 - Horticultural Science - Lab	0	24
2010	Fall	HORT100 - Horticultural Science - Lab	0	26
2010	Fall	HORT100 - Horticultural Science -Lab	0	22
2010	Fall	HORT100 - Horticultural Science -Lab	0	28
2010	Fall	HORT100 - Horticultural Science -Lab	0	24
2010	Fall	HORT100 - Horticultural Science -Lab	0	23
2010	Fall	HORT495 - Independent Study	18	2
2010	Fall	HORT487 - Internship	18	40
2010	Fall	HORT698 - Research	18	10
2010	Fall	HORT784 - Supervised College Teaching	18	2
2010	Fall	HORT452 - Viticulture-Grape Production	1	26
2010	Summer	HORT495 - Independent Study	18	1
2010	Summer	HORT487 - Internship	18	42
2010	Summer	HORT698 - Research	18	4
2010	Summer	HORT588 - Supervised Extension Practices	18	1
2010	Spring	HORT496 - Group Study	18	0
2010	Spring	HORT454 - Horticulture Crop Production and Management	2	23
2010	Spring	HORT495 - Independent Study	18	2
2010	Spring	HORT487 - Internship	18	3
2010	Spring	HORT260 - Plant Propagation	4	49
2010	Spring	HORT260 - Plant Propagation - Lab	0	24
2010	Spring	HORT260 - Plant Propagation - Lab	0	25
2010	Spring	HORT698 - Research	18	10
2010	Spring	HORT384 - Supervised College Teaching	5	5
2010	Spring	HORT784 - Supervised College Teaching	18	3
2009	Fall	HORT100 - Horticultural Science	4	174
2009	Fall	HORT100 - Horticultural Science - Lab	0	21
2009	Fall	HORT100 - Horticultural Science - Lab	0	25
2009	Fall	HORT100 - Horticultural Science - Lab	0	26
2009	Fall	HORT100 - Horticultural Science -Lab	0	25
2009	Fall	HORT100 - Horticultural Science -Lab	0	24
2009	Fall	HORT100 - Horticultural Science -Lab	0	26
2009	Fall	HORT100 - Horticultural Science -Lab	0	27
2009	Fall	HORT450C - Horticulture Food Crops-Small Fruit Production	1	35
2009	Fall	HORT450D - Horticulture Food Crops-Tree Fruit Production	1	37
2009	Fall	HORT495 - Independent Study	18	9
2009	Fall	HORT487 - Internship	18	34
2009	Fall	HORT698 - Research	18	12
2009	Fall	HORT384 - Supervised College Teaching	5	6
2009	Fall	HORT784 - Supervised College Teaching	18	4
2009	Fall	HORT699 - Thesis	18	4
2009	Summer	HORT487 - Internship	18	29
2009	Summer	HORT698 - Research	18	2
2009	Spring	HORT496 - Group Study	18	0
2009	Spring	HORT454 - Horticulture Crop Production and Management	2	18
2009	Spring	HORT487 - Internship	18	4
2009	Spring	HORT260 - Plant Propagation	4	39
2009	Spring	HORT260 - Plant Propagation - Lab	0	15
2009	Spring	HORT260 - Plant Propagation - Lab	0	24
2009	Spring	HORT698 - Research	18	8
2009	Spring	HORT384 - Supervised College Teaching	5	6
2008	Fall	HORT799 - Dissertation	18	1
2008	Fall	HORT100 - Horticultural Science	4	196

2008	Fall	HORT100 - Horticultural Science - Lab	0	23
2008	Fall	HORT100 - Horticultural Science - Lab	0	26
2008	Fall	HORT100 - Horticultural Science - Lab	0	25
2008	Fall	HORT100 - Horticultural Science -Lab	0	24
2008	Fall	HORT100 - Horticultural Science -Lab	0	25
2008	Fall	HORT100 - Horticultural Science -Lab	0	25
2008	Fall	HORT100 - Horticultural Science -Lab	0	25
2008	Fall	HORT100 - Horticultural Science -Lab	0	23
2008	Fall	HORT450A - Horticulture Food Crops-Cool Season Vegetable Production	1	28
2008	Fall	HORT450B - Horticulture Food Crops-Warm Season Vegetable Production	1	27
2008	Fall	HORT495 - Independent Study	18	3
2008	Fall	HORT487 - Internship	18	35
2008	Fall	HORT486 - Practicum	6	0
2008	Fall	HORT698 - Research	18	12
2008	Fall	HORT452 - Viticulture-Grape Production	1	23
2008	Summer	HORT487 - Internship	18	35
2008	Spring	HORT454 - Horticulture Crop Production and Management	2	18
2008	Spring	HORT495 - Independent Study	18	3
2008	Spring	HORT795 - Independent Study	18	1
2008	Spring	HORT260 - Plant Propagation	4	32
2008	Spring	HORT260 - Plant Propagation-Lab	0	15
2008	Spring	HORT260 - Plant Propagation-Lab	0	17
2008	Spring	HORT486 - Practicum	6	6
2008	Spring	HORT486 - Practicum	6	1
2008	Spring	HORT698 - Research	18	12
2008	Spring	HORT384 - Supervised College Teaching	5	9
2007	Fall	HORT496 - Group Study	18	0
2007	Fall	HORT100 - Horticultural Science	4	175
2007	Fall	HORT100 - Horticultural Science-Lab	0	24
2007	Fall	HORT100 - Horticultural Science-Lab	0	24
2007	Fall	HORT100 - Horticultural Science-Lab	0	26
2007	Fall	HORT100 - Horticultural Science-Lab	0	26
2007	Fall	HORT100 - Horticultural Science-Lab	0	12
2007	Fall	HORT100 - Horticultural Science-Lab	0	25
2007	Fall	HORT100 - Horticultural Science-Lab	0	23
2007	Fall	HORT100 - Horticultural Science-Lab	0	15
2007	Fall	HORT450C - Horticulture Food Crops: Small Fruit Production	1	22
2007	Fall	HORT450D - Horticulture Food Crops: Tree Fruit Production	1	22
2007	Fall	HORT487 - Internship	18	48
2007	Fall	HORT486 - Practicum	6	2
2007	Fall	HORT698 - Research	18	7
2007	Fall	HORT784 - Supervised College Teaching	18	2

COMMITTEES

(2011).

(2010).

(2011).

(2010).

(2011).

(2010).

PROFESSIONAL AFFILIATIONS AND ACTIVITIES

International Horticultural Society. (January 1990 - Present).

Phi Alpha Xi. (January 1985 - Present).

American Society for Horticultural Science. (January 1970 - Present).

Beta Beta Beta. (January 1967 - Present).

Awards Ceremony for Kafhla Internatinal Date Palm Awards, Abu Dhabi, ZZ. (2012 - Present).

HortTechnology. (2012 - Present).

Member, HortTechnology. (2012 - Present).

International Date Palm Association--4th Meeting, Abu Dhabi, ZZ. (2012 - Present).

Extension Service--Boulder, Weld & Larimer Counties, Loveland, CO. (2011 - Present).

Khalifa International Date Palm Awards Comm. (2011 - Present).

ProGreen, Denver, CO. (2011 - Present).

Speciality Crop Awards Comm. (2011 - Present).

HortScience. (2010 - Present).

Member, Speciality Crops Grants. (2008 - Present).

Member, Seeds Scholarship Comm. (2005 - Present).

Member, Phi Alpha Xi. (1998 - Present).

Member, International Horticultural Society. (1990 - Present).

Key Adviser for Horticulture major. (1990 - Present).

Member, HLA Scholarship Comm. (1978 - Present).

Horticulture Club. (1978 - Present).

Member, American Society for Horticultural Science. (1970 - Present).

Khalifa International Date Palm Award. (2008 - 2018).

Front Range Community College - Horticulture Program Advisory Board. (2012 - 2014).

Committee Chair, Code Comm. for HLA--Ad Hoc. (2008 - 2010).

Committee Chair, Horticulture Resident Instruction Comm. (2000 - 2010).

OTHER ACTIVITIES/ACCOMPLISHMENTS – SERVICE/OUTREACH

For Profit Organization, CBDRx Inc., Longmont, CO, United States. (November 1, 2015 - November 1, 2020).

Academic, Khafali International Date Palm Awards, Abu Dhabi, Abu Dhabi, United Arab Emirates. (March 1, 2009 - September 15, 2016).

Committee Member, Khalifa International Date Palm Award, Abu Dhabi, Abu Dhabi. (October 2008 - 2018).

Committee Member, Front Range Community College - Horticulture Program Advisory Board, Fort Collins, Colorado. (2012 - 2014).

Poudre High School Soccer Team. (September 2010 - November 2013).
