

# EXHIBIT D

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9 SUPERIOR COURT OF THE STATE OF CALIFORNIA  
 10 FOR THE COUNTY OF LOS ANGELES

11 ANTELOPE VALLEY  
 12 GROUNDWATER CASES

13 This Pleading Relates to Included Action:  
 14 REBECCA LEE WILLIS, on behalf of herself  
 and all others similarly situated,

15 Plaintiff,

16 vs.

17 LOS ANGELES COUNTY WATERWORKS  
 18 DISTRICT NO. 40; CITY OF LANCASTER;  
 CITY OF LOS ANGELES; CITY OF  
 19 PALMDALE; PALMDALE WATER  
 DISTRICT; LITTLE ROCK CREEK  
 20 IRRIGATION DISTRICT; PALM RANCH  
 IRRIGATION DISTRICT; QUARTZ HILL  
 21 WATER DISTRICT; ANTELOPE VALLEY  
 WATER CO.; ROSAMOND COMMUNITY  
 22 SERVICE DISTRICT; MOJAVE PUBLIC  
 UTILITY DISTRICT; and DOES 1 through  
 23 1,000;

24 Defendants.

) RELATED CASE TO JUDICIAL  
 ) COUNCIL COORDINATION  
 ) PROCEEDING NO. 4408  
 )  
 ) The Honorable Jack Komar  
 ) Coordination Trial Judge  
 )  
 ) DECLARATION OF STEPHEN  
 ) GRATTAN IN SUPPORT OF MOTION  
 ) FOR EXPERT WITNESS FEES  
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 ) Date: TBD  
 ) Time: TBD  
 ) Dept: LASC-1  
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1 I, Stephen Grattan, declare:

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1. I am a Plant Relations Specialist at UC Davis. Attached to my declaration is a true and correct copy of my curriculum vitae. I make this declaration in support of a motion to be appointed as an expert witness in this case. I have personal knowledge of the facts contained in this declaration and am willing to testify to the facts herein.

2. I have agreed to provide the law firm of Krause, Kalfayan, Benink & Slavens (KKBS) with expert work related to crop-water requirements and reasonable and beneficial uses of groundwater for irrigated agriculture in connection with the Antelope Valley groundwater adjudication. The work shall primarily include review, analysis, and opinion regarding the work of other experts retained by various parties in this litigation.

3. The gross budget for the work, fees and costs, is estimated to be approximately \$60,000. I shall bill for professional services plus actual expenses only after the court approves the scope of work and the budget. The 2009 billing rates for staff are as follow:

- Stephen Grattan Research.....\$300/hour
- Stephen Grattan Testimony.....\$500/hour
- Research Associates.....\$60/hour to \$150/hour

I declare under penalty of perjury under the laws of California and the United States that the foregoing is true and correct. Executed on 28 day of February, 2009, in Loomis, California.

  
Stephen Grattan

# CURRICULUM VITAE

**S. R. GRATTAN**

Hydrology Section  
Department of Land, Air & Water Resources  
University of California, Davis

## **Current Position:**

Specialist in CE: Plant-Water Relations Specialist (1984-present)  
Department of Land, Air and Water Resources, Hydrologic Science Division

## **Education:**

B.S. Soil and Water Science	University of California, Davis	1977
M.S. Soil Science	University of California, Riverside	1980
Ph.D. Soil Science	University of California, Riverside	1984

## **Professional Societies/Honors/Awards:**

American Society of Agronomy/ Soil Science Society of America (1982-present)

Sigma Xi -- Riverside Chapter 1984-present

Alumni Award of Merit . 1997. Presented by Gamma Sigma Delta (Honor Society of Agriculture) for the recipient's major contribution to agriculture in research, teaching, extension and/or other distinguished service. University of California, Riverside

Gamma Sigma Delta - Riverside Chapter; Davis Chapter 2000-present

Outstanding Teamwork Distinguished Service Award. 2006. University of California, Agriculture and Natural Resources.: Farm Water Quality Project

Fulbright Senior Specialist Scholarship in Agriculture: Punjab Agricultural University; December, 2007

Indian Soil Science Society: Special Honorary Award: December 2007. . Punjab Agricultural University, Ludihana, India

Western Extension Directors' Awards of Excellence. 2008. Farm Water Quality Planning Project. (UC ANR Water Quality Workgroup joint teamwork award)

### **Teaching and Extension Education:**

HYD 110: Irrigation Principles and Practices

Workshops and lectures on agricultural water quality, salinity and irrigation management

### **Research Areas:**

Irrigation management with saline water; Crop response in saline environments; Uptake of nutrients, ions and trace elements by plants in saline environments; Crop water use

### **International Consulting Work:**

Jan-Feb. 1990 Consultant for World Bank. Traveled to the United Arab Emirates (UAE) to plan International Conference on High Salinity Tolerant Plants and to discuss the creation of a International Centre for Agricultural Research.

Oct. 1990 Consultant for USDA/OICD. Traveled to Egypt to meet with Egyptian and Israeli scientists and write a Trinational (Egypt-Israel-USA) Arid Lands Intensive Agriculture Research and Development proposal that was submitted to USA.I.D.

Nov. 1991 Consultant for USDA/OICD. Traveled to Israel and Egypt as a member of a scientific evaluation team to evaluate a tri-national USAID project.

Mar-Aug.1998 Salinity and Irrigation Consultant for USAID. MWI-DAI FORWARD Project. Traveled to Jordan several times to join team of experts on assessing the impacts of water quality variations on agricultural production in the Jordan Valley.

Oct. 2000 & May 2001 Reuse expert Consultant for USAID. MWI-ARD Water Resource Policy Support-Wastewater Reuse project. Traveled to Jordan on two separate trips to provide expertise on crop and soil impacts from reuse of wastewater on crops and soils.

### **Invited Presentations at International Conferences, International Workshops and Professional Societies:**

Grattan, S.R. Management strategies to reduce solubility, uptake, and movement of toxic inorganic compounds in irrigated agricultural ecosystems. Emerging Technologies in Hazardous Waste Management. American Chemical Society, I&EC division. Atlanta, GA Sept. 17-20, 1995

Grattan, S.R., M.C. Shannon, C.M. Grieve, J.D. Rhoades, D. Suarez, L. Francois, R. Sachs, and J. Oster. Crop production functions for the design of saline drainage water reuse systems. 7th International Conference on Water and Irrigation. Agritech '96 14 May, 1996. Tel Aviv, Israel. Travel supported by the Jewish National Fund

Grattan, S.R. and J.D. Rhoades. Long-range consequences of recycling drainage water. Managing Irrigation for Near-Zero Discharge. North American Water and Environmental Congress 1996. Anaheim, CA On-farm Irrigation Committee, WRE Division, ASCE

Grattan, S.R., M.C. Shannon, C.M. Grieve, J.A. Poss, D. Suarez and L Francois. Interactive effects of salinity and boron on the performance and water use of eucalyptus. 2nd International Symposium on irrigation of Horticultural Crops. Sept. 8-13, 1996. Chania, Crete. Greece

Grattan, S.R. and C.M. Grieve. Potential suitability of specialty crops for saline drainage water reuse systems. 1997 California Plant and Soil Conference. California Chapter of the ASA. 15 January, 1997. Visalia, CA

Grattan, S.R. Reflections on proposed water conservation strategies for California. California Chapter of Soil and Water Conservation. Sacramento, CA 11 March, 1997.

Grattan, S.R. Irrigation with Saline Water: Strategies, Interactions and Long-term Consequences. Seminar presented as recipient of UC Riverside Alumni Award. Award presented by Gamma Sigma Delta (The Honor Society for Agriculture) May 28, 1997.

Grattan, S.R. Do tensiometers and gypsum blocks have a role in vineyard production? Am. Soc Viticulture and Enology. 2 July, 1997. San Diego, CA.

Grattan, S.R. Limitations and Consequences of Recycling Saline Drainage water over the Long-term. The 27th IAHR Congress. ASCE . Aug. 10-15, 1997 San Francisco, CA

Grattan, S.R. Potential suitability of the halophyte *Salicornia bigelovii* as the final crop in a drainage water reuse sequence. Presented at the 17th International Congress on Irrigation and Drainage. 11-19 Sept., 1999 Granada, Spain

Grattan, S.R. Salinity: The Future of Crop Management. Presented at the ASA/CSSA/SSSA Annual meeting. Special Symposium: "Salinity: Threat to Sustainability of Irrigated Agriculture" SSSA Div 6. Nov. 1, 1999. Salt Lake City, Utah

Grattan, S.R. Reuse of saline-sodic drainage water for irrigation. Presented at the ASCE: Watershed 2000 conference. Fort Collins, Colorado. June 21-24, 2000

Grattan, S.R. Reuse of saline-sodic water for Irrigation in California's San Joaquin Valley. Presented at IUSS. Riverside, CA June 25-27, 2001

Grattan, S.R. Salinity problems in the Western US. Salinity Conference. Soil and Water Conservation Society. Colorado Springs, CO Oct. 4-5, 2001

Grattan, SR. Seven separate lectures on salinity effects on crops. CIHEAM. Zaragoza, Spain; March 19-21, 062002

Grattan, S.R. Feasibility of reusing saline-sodic drainage water for irrigation. Presented at the International Salinity Forum. Riverside, CA 25 April, 2005 (Keynote Speaker)

Grattan, SR. Ten separate lectures on salinity effects on crops. CIHEAM. Zaragoza, Spain; Nov.21-25, 2005

Grattan, S.R. Can Broccoli tolerate higher concentrations of boron in the presence of salinity?. Presented at the International. World Congress of Soil Sci. Philadelphia, Penn 7/13/06

Grattan, S.R. Potential reuse and management of agricultural drainage water for irrigation. ASA/SSSA/CSSA. Indianapolis, IN 11/13/06

Grattan, S.R. Reuse of saline drainage water for irrigation. Am. Chemical Soc. Chicago, IL 3/28/07

Grattan, S.R. Can Broccoli tolerate higher concentrations of boron in the presence of salinity?. Multinational Agricultural and Research Development (MARD) Conference. Dead Sea, Jordan. 6/27/07

Grattan, S.R. Potential role of the halophyte *Salicornia bigelovii* in reducing volumes of hypersaline drainage waters. ASA/CSSA/SSSA. New Orleans, LA 11/16/07

Grattan, S.R. Reuse of agricultural drainage water in California's San Joaquin Valley. Indian Soc, Soil Sci. Punjab Agricultural University, Ludhiana, India

#### **REFEREED PUBLICATIONS:**

1. Grattan, S.R., E.V. Maas, and G. Ogata. 1981. Foliar uptake and injury from saline aerosol. J. Environ. Qual. 10:406-409.
2. Maas, E.V., S.R. Grattan, and G. Ogata. 1982. Foliar salt accumulation and injury in crops sprinkled with saline water. Irrig. Sci. 3:157-168.
3. Grieve, C.M. and S.R. Grattan. 1983. Rapid assay for the determination of water soluble quaternary ammonium compounds. Plant and Soil: 70:303-307.
4. Grattan, S.R. and E.V. Maas. 1984. Interactive effects of salinity and substrate phosphate on soybean. Agron. J. 76:668-676.
5. Grattan, S.R, and C.M. Grieve. 1985. Betaine status in wheat in relation to nitrogen stress and transient salinity stress. Plant and Soil 85:3-9

6. Grattan, S.R. and E.V. Maas. 1985. Root control of leaf phosphorus and chlorine accumulation in soybean under salinity stress. *Agron. J.* 77: 890-895.
7. Grattan, S.R., C. Shennan, D.M. May, J.P. Mitchell, and R.G. Burau. 1987. Use of drainage water for irrigation of melons and tomatoes. *Calif. Agric.*, 41(9&10):27-28.
8. Grattan, S.R., R.L. Snyder, and F.E. Robinson. 1988. Yield threshold soil water depletion. In D.A. Goldhamer and R.L. Snyder, (eds) *Irrigation Scheduling: A guide for efficient on-farm water management*. UC Publication 21454.
9. Oster, J.D. and S.R. Grattan. 1988. Salt effects on plants and soils. In D.A. Goldhamer and R.L. Snyder, (eds). *Irrigation Scheduling: A guide for efficient on-farm water management*. UC Publication 21454.
10. Grattan, S.R., J.L. Meyer and D.A. Goldhamer. 1988. Tensiometers. In D.A. Goldhamer and R.L. Snyder, (eds). *Irrigation Scheduling: A guide for efficient on-farm water management*. UC Publication 21454.
11. Grattan, S.R. and E.V. Maas. 1988. Effect of salinity on leaf P accumulation and injury in soybean. I. Influence of varying CaCl<sub>2</sub>/NaCl. *Plant and Soil.* 105:25-32.
12. Grattan, S.R. and E.V. Maas. 1988. Effect of salinity on leaf P accumulation and injury in soybean. II. Role of Cl and Na. *Plant and Soil.* 109:65-71.
13. Grattan, S.R., L.J. Schwankl, and W.T. Lanini. 1988. Weed control by subsurface drip irrigation. *Calif. Agric.* 42(3):22-24.
14. Grattan, S.R., C. Shennan, D. May, and R. Burau. 1988. Effects of saline drainage water reuse on yield and accumulation of selenium in melon and tomato. Univ. of Calif. Drainage and Toxics Task Force. Univ. of Calif. Special Publication No. 3330.
15. Burau, R.G., A. McDonald, A. Jacobson, D. May, S. Grattan, C. Shennan, B. Swanton, D. Scherer, M. Abrams, E. Epstein, and V. Rendig. 1988. Selenium in tissues of crops sampled from the westside of the San Joaquin Valley, California. Univ. of Calif. Drainage and Toxic Task Force. Univ. of Calif. Special Publication No. 3330.
16. Gulick, S.H., K.G. Cassman, and S.R. Grattan. 1989. Exploitation of soil potassium in layered profiles by root systems of cotton and barley. *Soil Sci. Soc. of Am. J.* 53:146-153.
17. Grattan, S.R. and J.D. Rhoades. 1990. Irrigation with saline ground water and drainage water. (In K.K. Tanji, Editor) *Agricultural Salinity Assessment and Management Manual*. ASCE. pp 432-449



18. Hanson, B.R. and S.R. Grattan. 1990. Field sampling of soil, water and plants. (In K.K. Tanji, Editor) *Agricultural Salinity Assessment and Management* ASCE. pp 186-200
19. Grattan, S.R., L.J. Schwankl, and W.T. Lanini. 1990. Distribution of annual weeds in relation to irrigation method. *Proceedings of the Third National Irrigation Symposium*, Phoenix, Arizona. ASAE, pp.148-153.
20. Schwankl, L.J., S.R. Grattan, and E.M. Miyao. 1990. Drip irrigation burial depth and seed planting depth effects on tomato germination. *Proceedings of the Third National Irrigation Symposium*, Phoenix, Arizona. ASAE, pp.682-687.
21. Grattan, S.R. and C.M. Grieve. 1990. Effect of salinity on the mineral nutrition of plants. *International Conference on High Salinity-Tolerant Plants in Arid Regions*. United Arab Emirates University, Al Ain (Dec. 8-15, 1990).
22. Mitchell, J.P., C. Shennan, S.R. Grattan and D.M. May. 1991. Tomato fruit yields and quality under water deficits and salinity. *J. Amer. Soc. Hort Sci.* 116:(2):215-221.
23. Lanini, W.T., S.B. Orloff, R.N. Vargas, J.P. Orr, V.L. Marble, and S.R. Grattan. 1991. Effect of oat companion crop seeding rate on alfalfa establishment, yields, and weed control. *Agron. J.* 83:330-333.
24. Hanson, B.R., W. Bowers, S.R. Grattan, D.W. Grimes and K.K. Tanji. 1991. Trace elements limit potential for blending San Joaquin drainwater with canal water. *Calif. Agric.* 45(2):17-19.
25. Mitchell, J.P., C. Shennan and S.R. Grattan. 1991. Developmental changes in tomato fruit composition in response to water deficit and salinity. *Physiol. Plant* 83:177-185.
26. Schwankl, L., S.R. Grattan, and G.M. Miyao. 1991. Drip system design, management promote seed emergence. *Calif Agric* 45(6):21-23.
27. Dong, A., S.R. Grattan, J.J. Carroll, and C.R.K. Prashar. 1992. Estimation of net radiation over well-watered grass. *J. Irrigation and Drainage*. ASCE, 118 (3):466-479.
28. Grattan, S.R. and C.M. Grieve. 1992. Mineral element acquisition and growth response of plants grown in saline environments. *Agric., Ecosys. and Environ.* 38:275-300.
29. Hopmans, Jan W., Lawrence J. Schwankl, Stephen R. Grattan, and Josh Gravenmier. 1992. Water conditioners fail to improve infiltration or prevent clogging. *Calif. Agric.* 46(6):22-25.

30. Dong, A. K. Tanji, S. Grattan, F. Karajeh, and M. Parlange. 1992. Water quality effects on eucalyptus E.T. Proceedings of the Irrig. and Drainage sessions at Water Forum '92. ASCE Baltimore, Maryland.
31. Grattan, S.R. and C.M. Grieve. 1993. Mineral nutrient acquisition and response by plants grown in saline environments . In (M. Pessarakli, editor). Handbook of Plant and Crop Stress. Marcel Dekker, New York, Basel, Hong Kong pp. 203-226.
32. Grattan, S.R. 1994. Irrigation with saline water. In- Advances in Agricultural Management and Economics: Management of Water Use in Agriculture (K.K. Tanji and B. Yaron, eds.) Springer-Verlag, Berlin pp 179-198.
33. Grattan, S.R., A. Royo, and R. Aragüés. 1994. Chloride accumulation and partitioning in barley as affected by differential root and foliar salt absorption under saline sprinkling irrigation. Irrig. Sci. 14(3):147-155.
34. Aragüés, R., A. Royo, and S.R. Grattan. 1994. Foliar uptake of sodium and chloride in barley cultivars sprinkler irrigated with saline water as affected by pre-irrigation with fresh water. Eur. J. Agron. 3(1):9-16.
35. Benes, S.E., R. Aragüés, and S.R. Grattan. 1994. Salt absorption through corn leaves in sprinkler-irrigated systems: Effects on leaf ion concentrations. In: M. Borin and M. Sattin (eds.) Proceedings of Third Congress of European Society for Agronomy, Abano-Padova, Italy. ESA, Colmar Cedex, France. pp. 64-65.
36. Grattan, S.R., C. Shennan, D. May, and B. Roberts. 1994. Utilizing saline drainage water to supplement irrigation water requirements of tomato in a rotation with cotton. In: M. Borin and M. Sattin (eds.) Proceedings of Third Congress of European Society for Agronomy, Abano-Padova, Italy. ESA, Colmar Cedex, France. pp. 802-803.
37. Shennan, C., S.R. Grattan, D. M. May, C. J. Hillhouse, D. P. Schactman, M. Wander, B. Roberts, S. Tafoya, R. G. Burau, and L. Zelinski. 1995. Feasibility of cyclic reuse of saline drainage in a tomato-cotton rotation. J. Environ. Qual. 24 (3):476-486.
38. Benes, S.E., R. Aragüés, S.R. Grattan and R.B. Austin. 1996. Foliar and root absorption of Na<sup>+</sup> and Cl<sup>-</sup> in maize and barley: Implications for salt tolerance screening and the use of saline sprinkler water. Plant and Soil 180:75-86
39. Benes, S.E., R. Aragüés, R.B. Austin and S.R. Grattan. 1996. Brief pre- and post-irrigation sprinkling with freshwater reduces foliar salt uptake in maize and barley sprinkler irrigated with saline water. Plant and Soil 180:87-95
40. Grattan, S. R., M. C Shannon, C. M. Grieve, J. A. Poss, D. L. Suarez, and L. E. Francois. 1996. Interactive effects of salinity and boron on the performance and water use of eucalyptus. Acta Hort. 449:607-613.

41. Grattan, S.R. 1997. Limitations and consequences of recycling drainage water for irrigation over the long-term. 27th IAHR Congress Proceedings. San Francisco, CA August 10-15. pp. 279-284.
42. Maas, E. V. and S. R. Grattan. 1999. Crop yields as affected by salinity. In R. W. Skaggs and J. van Schilfgaarde (eds) *Agricultural Drainage*. Agron. Monograph 38. ASA, CSSA, SSA, Madison, WI pp. 55-108.
43. Cardon, G. E. and S. R. Grattan. 1998. Management of plants in saline environments. In: Dudley, L. M. and J. C. Guitijens (eds) *Agroecosystems and the Environment: Sources, Control, and Remediation of Potentially Toxic, Trace Element Oxyanions*. Am. Assoc. Adv. Sci., Pacific Division pp 95-112.
44. Grattan, S.R, W. Bowers, A. Dong, R.L. Snyder, and J.J. Carroll and W. George. 1998. New crop coefficients estimate water use of vegetable, row crops. *Calif. Agric.* 52: 16-21.
45. Pettygrove, G.S., S.R. Grattan, B.R. Hanson, T.K. Hartz, L.E. Jackson, T.R. Lockhart, K.F. Schulbach and R. Smith. 1998. *Production Guide: Nitrogen and Water Management for Coastal Cool-Season Vegetables*. Division of Agriculture and Natural Resources. DANR Publication 21581. University of California, Oakland, CA. 65 pp.
46. Poss, J.A., S.R. Grattan, and C. M. Grieve and M.C. Shannon. 1998. Characterization of leaf boron injury in salt-stressed Eucalyptus by Image Analysis. *Plant and Soil*: 206: 237-245.
47. Grattan, S.R. and C.M. Grieve. 1999. Salinity - Mineral nutrient relations in horticultural crops. *Sci. Hort.* 78:127-157.
48. Grattan, S.R., S.E. Benes, D.W. Peters and J.P. Mitchell. 1999. Potential suitability of the halophyte *Salicornia bigelovii* as the final crop in a drainage water reuse sequence. *Proceeding of 17th International Congress on Irrigation and Drainage*. 11-19 Sept., Granada, Spain. Special Session R-8 pp 107-120.
49. Oster, J.D., S.R. Kaffka, M.C. Shannon and S.R. Grattan. 1999. Saline-sodic drainage water: A resource for forage production? *Proceeding of 17th International Congress on Irrigation and Drainage*. 11-19 Sept., Granada, Spain *Trans vol 1F* pp 67-79.
50. Hanson, Blaine, Stephen R. Grattan and Allan Fulton. 1999. *Agricultural Salinity and Drainage*. University of California Division of Agriculture and Natural Resources Publication # 3375 160 pp (revised 1999).
51. Grattan, S.R. and C.M. Grieve. 1999. Mineral nutrient acquisition and response by plants grown in saline environments . In (M. Pessaraki, editor). *Handbook of Plant and Crop Stress*. Marcel Dekker, New York, Second Edition Ch 9, pp 203-230.

52. Mitchell, J.P., C. Shannon, M.J. Singer, D. Peters, R.O. Miller, T. Prichard, S.R. Grattan, J.D. Rhoades, D.M. May and D. Munk. 2000. Impacts of gypsum and winter cover crops on soil physical properties and crop productivity when irrigated with saline water. *Agric. Water Manag* 45(1):55-71.
53. Poss, J.A., S.R. Grattan, D.L. Suarez, C.M. Grieve and M.C. Shannon. 2000. Carbon isotope discrimination and transpiration efficiency in eucalyptus under salinity and boron stress. *Proceedings of the Third International Symposium on Irrigation of Horticultural Crops*. June 28- July 2. 1999 Lisbon, Portugal *Acta. Hort.* 537:215-222.
54. Poss, J.A., S.R. Grattan, D.L. Suarez and C.M. Grieve. 2000. Stable carbon isotope discrimination: An indicator of cumulative salinity and boron stress in *Eucalyptus camaldulensis*. *Tree Physiol.* 20: 1121-1127.
55. Ferguson, L., J.A. Poss, S.R. Grattan, C.M. Grieve, D. Wang, C. Wilson, T.J. Donovan and C.T. Chao. 2002. Pistachio rootstocks influence scion growth and ion relations under salinity and boron stress. *J. Am. Soc. Hort. Sci.* 127(2):194-199.
56. Grattan, S.R. 2002. Irrigation water salinity and crop production. Water quality fact sheet. Division of Agriculture and Natural Resources. University of California. UC DANR electronic publication # 8066.
57. Grattan, S., C. Grieve, J. Poss, P. Robinson, D. Suarez and S. Benes. 2002. Reuse of saline-sodic drainage water for irrigation in California: evaluation of potential forages. *Transactions of the 17th World Congress of Soil Science*. 14-21 August. Bangkok, Thailand.
58. Scardaci, S.C., M.C. Shannon, S.R. Grattan, A.U. Eke, S.R. Roberts, S. Goldman-Smith and J.E. Hill. 2002. Water management practices can affect salinity in rice fields. *Calif. Agric.* 56(6):184-188.
59. Grattan, S.R., L. Zeng, M.C. Shannon and S.R. Roberts. 2002. Rice is more sensitive to salinity than previously thought. *Calif. Agric.* 56(6):189-195.
60. Pettygrove, S.G., T. Hartz, R. Smith, T. Lockhart, B.R. Hanson, L.E. Jackson and S.R. Grattan. 2003. Nutrient management goals and recommended practices for cool-season vegetables. Division of Agriculture and Natural Resources. University of California. UC DANR electronic publication # 8097.
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63. McCormick, P.G., S.R. Grattan and A.E. Ilham. 2003. Water quality challenges to irrigated agriculture productivity in the Jordan Valley. In: A.J. Clemmens and S.S. Anderson (eds.), *Proceedings of 2nd International Conference on Irrigation and Drainage. Water for a Sustainable World - Limited Supplies and Expanding Demand*. Phoenix, Arizona. May 12-15, 2003. U.S. Committee on Irrigation and Drainage, Denver, CO 80202. pp 333-343.
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