

SOIL and WATER

May 1985

SPECIAL SUMMARY ISSUE INDEX OF SOILS AND WATER NEWSLETTER ARTICLES

TABLE OF CONTENTS

<u>SUBJECT</u>	<u>PAGE</u>
Climate	1
Drainage	1-2
Evapotranspiration	2
Fertilizer	2-7
Ground Water	7
Infiltration Studies	7-8
Irrigation	8-12
Methods of Analysis	12-13
Real People	13-14
Reclamation	14
Remote Sensing and Photography	14-15
Salinity	15-16
Soil Amendments	16-18
Soil Compaction and Management	18-20
Soil Surveys and Land Use	20
Toxic Elements	20-21
Wastewater	21
Water Conservation	22-23
Water Law	23
Water Quality	23-25
Water Supply	25
Wells and Pumps	25-26
208 Planning	26
Miscellaneous	26-28

This issue updates, through issue #61, the index published in 1982. It has been mailed to everyone who received the newsletter before subscription fees were changed beginning with issue #59. If you wish to subscribe, complete the order and send it to ANR Publications, University of California, 6701 San Pablo Avenue, Oakland, CA 94608-1239 along with a check or money order for \$5.

Reprints: A limited number of issues from #51 to #61 are available for \$1.25 for those needing a reprint of a specific article. Send your requests to J. D. Oster, Department of Soils & Env. Sci., University of California, Riverside, CA 92521. Make check payable to The Regents of the University of California.

For specific articles prior to #51, we suggest you contact the author or order through your local interlibrary loan request system.

The new editors are: Drs. R. Snyder and S. Gratten at LAWR, University of California, Davis, CA 95616.

Contributing Specialists:

David Goldhamer, Area Soils and
Water Specialist-San Joaquin
Valley
Stephen R. Gratten, Plant-Water
Relations Specialist
Robert Hagan, Water Specialist
Blaine Hanson, Drainage and
Groundwater Specialist
Jewell Meyer, Irrigation and Soils
Specialist
Roland Meyer, Soils Specialist-
Fertility and Fertilizers
Jim Oster, Soils and Water
Specialist
Stuart Pettygrove, Soils Specialist-
Fertility and Waste Management
Steven Post, Area Irrigation and
Soils Specialist
Terry Prichard, Area Soils and Water
Specialist-Stockton
James Quick, Technologist, Davis,
Soil, Water and Plant Analysis
Herbert Schulbach, Area Soils and
Water Specialist-Colusa
Richard Snyder, Bioclimatologist
William Wildman, Soils, Specialist
Management, Remote Sensing,
Land Use

SOIL AND WATER is the quarterly
newsletter of UC Cooperative Extension
Specialists in Soils, Water, and
Biometeorology. The subscription cost
for four issues per year is \$5.00.
Checks should be made payable to THE
REGENTS OF THE UNIVERSITY OF
CALIFORNIA. Mail to: Agricultural
Sciences Publications, 6701 San Pablo
Ave., Oakland, CA 94608.

Editor
J. D. Oster

<u>SUBJECT</u>	<u>TITLE AND AUTHOR</u>	<u>ISSUE</u>
Climate	Soil Temperature Study, by R. J. Arkley	Spring 1970 No. 9
"	Weather and Climate, by J. L. Meyer	Fall 1978 No. 38
"	Communication Gaps Between the National Weather Service and Agricultural Users, by Rick Snyder	Fall 1980 No. 45
"	NOAA Weather Radio, by Rick Snyder	Winter 1980 No. 46
"	Recent Climate Data for California, by Rick Snyder	Summer 1981 No. 48
"	Air Pollution Reports: What Do They Mean? by Rick Snyder	Winter 1982 No. 50
"	Simplified Humidity Calculation, by R.L. Snyder ERRATA ERRATA	Fall 1982 No. 52
"	How Accurate Was This Winter's Forecast? by R.L. Snyder ERRATA	Spring 1983 No. 54
"	A New Report on Acid Rain, by R. L. Snyder	Fall 1984 No. 60
Drainage	Drainage Experiment, by A.W. Marsh	Spring 1968 No. 1
"	Reference Books on Irrigation and Drainage, by L.J. Booher	Fall 1969 No. 7
"	Thermal Contraction or Expansion of Pipelines, by L.J. Booher	Summer 1970 No. 10
"	Machines Influence Tile Drain Costs, by R.B. Duffin, and J.N. Luthin	Spring 1971 No. 12
"	More Plastics in Subsurface Drainage Systems, by R.B. Duffin	Winter 1972 No. 16

<u>SUBJECT</u>	<u>TITLE AND AUTHOR</u>	<u>ISSUE</u>
Drainage	Some Recommendations of San Joaquin Valley Interagency Drainage Program by B. R. Hanson	Winter 1979 No. 39
"	Trenchless Drainage, by B.R. Hanson	Spring 1979 No. 40
"	Plastic Drain Tubing, by B.R. Hanson	Summer 1979 No. 41
"	Envelopes for Subsurface Drainage Systems, by B.R. Hanson	Summer 1980 No. 44
"	San Luis Drain--Schedule of Upcoming Events, by J.D. Oster	Spring 1984 No. 58
"	On-Farm Disposal of Agricultural Drainage, by Keith C. Knapp	Summer 1984 No. 59
Evapotranspiration	A New Method of Reporting ET Data, by R. L. Snyder	Fall 1982 No. 52
"	Variability in Wheat Evapo-transpiration, by D.J. Munier	Winter 1984 No. 57
Fertilizer	Beware of the Fertility Quack, from Crops & Soils 1968 American Society of Agronomy	Spring 1968 No. 1
"	High Analysis Fertilizers--They are Just Beginning, by W.J. Sharrat	Spring 1968 No. 1
"	Sulfur Deficiency in Corn--First Time in California, by B.A. Krantz	Spring 1968 No. 1
"	Foliar Application of Phosphorus, by B.A. Krantz	Summer 1968 No. 2
"	More Sulfur Deficiency in Corn, by B.A. Krantz	Summer 1968 No. 2
"	New Liquid Approach--Suspensions, by W.J. Sharratt	Summer 1968 No. 2
"	More on Fall Fertilization With Nitrogen, by B.A. Krantz	Fall 1968 No. 3

<u>SUBJECT</u>	<u>TITLE AND AUTHOR</u>	<u>ISSUE</u>
Fertilizer	Suspension, by W.J. Sharratt	Fall 1968 No. 3
"	Use of Nitrogenous Fertilizers on California Rangeland, by W.E. Martin and L.J. Berry	Fall 1968 No. 3
"	Nitrates in Water, by B.A. Krantz and R.S. Ayers	Winter 1969 No. 4
"	Ultra High-Analysis Fertilizer, by W.J. Sharratt	Spring 1969 No. 5
"	Fertilizer Supply and Demand, by S.H. Bierly	Summer 1969 No. 6
"	More on Fall Fertilization with Nitrogen, by B.A. Krantz	Summer 1969 No. 6
"	Ultra High-Analysis Organic Compounds, by W.J. Sharratt	Summer 1969 No. 6
"	Control Release Fertilizer, submitted by W.J. Sharratt	Winter 1970 No. 8
"	Nitrogen Removal Studies, from DWR News, submitted by R.S. Ayers	Winter 1970 No. 8
"	Manganese Toxicity in Mustard Plants induced by Use of Physio- logically Acid Fertilizers, by D.E. Williams and J. Vlamis	Winter 1971 No. 11
"	Sulfur Burner Tested at Imperial Valley Field Station, by R.S. Ayers	Winter 1971 No. 11
"	Imposition of Restrictions on Fertilizer Use--Voluntary or Involuntary?, by S.R. Aldrich Submitted by R.S. Rauschkolb	Summer 1972 No. 14
"	New Book- "Mineral Nutrition of Plants: Principles and Perspectives" by Emanuel Epstein, submitted by R.S. Rauschkolb	Summer 1972 No. 14

<u>SUBJECT</u>	<u>TITLE AND AUTHOR</u>	<u>ISSUE</u>
Fertilizer	Nitrogen Reactions, by R.S. Rauschkolb	Spring 1973 No. 17
"	The Phosphate Pinch, by R.S. Rauschkolb	Spring 1973 No. 17
"	Fertilizer Demand and Supply, by W.J. Sharratt	Summer 1973 No. 18
"	Increased Fertilizer Output, this news item courtesy of a T.V.A. Newsletter is taken from Chemical Marketing Reporter 203 (17), 3 (April 23, 1973)	Fall 1973 No. 19
"	Misapplications of Nitrogen Fertilizer, by R.S. Rauschkolb	Fall 1973 No. 19
"	Predicting Nitrogen Fertilizer Needs, by R.S. Rauschkolb and S.W. Kite	Fall 1973 No. 19
"	A Look at Nitrogen Losses, by R.D. Meyer	Winter 1973 No. 20
"	Ammonia From Coal in the Late 1970's by W.J. Sharratt	Winter 1973 No. 20
"	Storage of Liquid Fertilizers, by W. J. Sharratt	Winter 1973 No. 20
"	The RANN Project at Davis, by C.F. Krauter	Winter 1973 No. 20
"	An Appraisal of the Energy Require- ments for Fertilizers in Cali- fornia, by R.S. Rauschkolb	Spring 1974 No. 21
"	Fertilizer Injection with Differential Pressure Systems, by H. Schulbach	Spring 1975 No. 25
"	Nitrogen Fertilizer Manufacture During Times of Feedstock Shortage	Spring 1976 No. 28
"	Information Source for Fertilizer Materials, by J.M. Ribble	Fall 1976 No. 30

<u>SUBJECT</u>	<u>TITLE AND AUTHOR</u>	<u>ISSUE</u>
Fertilizer	Nitrogen Recovery by Crop, by R.S. Ayers	Fall 1976 No. 30
"	Foliar Fertilization of Bean Crops, by R.D. Meyer, J.L. Hatfield, W.E. Bendixen, W.D. McClellan, T. Prichard, D. Ririe, and J.D. Smith	Winter 1977 No. 31
"	Correction from Winter 1977-No. 31 Issue. Article titled "Foliar Fertilization of Bean Crops", by R.D. Meyer	Spring 1977 No. 32.
"	Fertilizer Substitutes, by R.S. Rauschkolb	Summer 1977 No. 33
"	Nitrogen Fertilizers: Raw Materials Scarce--Supply Abundant, by W.J. Sharratt	Fall 1978 No. 38
"	Nitrogen and Sulfur Deficiencies in Spring Cereal Grains, by R.D. Meyer and R.L. Sailsbery	Winter 1979 No. 39
"	Rate and Timing of Nitrogen Fertiliza- tion as it Influences Yield and Quality of Wheat, by R.D. Meyer and R. L. Sailsbery	Winter 1979 No. 39
"	N-Serve Update, by G.S. Pettygrove	Spring 1979 No. 40
"	Barley Response to Starter Fertilizer, by R.D. Meyer, K.G. Baghott and G.S. Pettygrove	Fall 1979 No. 42
"	Determining Economic Minimum & Optimum Fertilizer Rates--Adapta- tion to Rangeland Situation, by R.D. Meyer	Fall 1979 No. 42
"	Fertilizer Prices, by G.S. Pettygrove	Fall 1979 No. 42
"	The Current Outlook for Sulfur, Phosphates, and Potash, by Warren Sharratt, TVA	Winter/Spring 79-80 No. 43

<u>SUBJECT</u>	<u>TITLE AND AUTHOR</u>	<u>ISSUE</u>
Fertilizer	Alfalfa Response to Rate and Source of Sulfur, by R.D. Meyer and D. Marcum	Winter/Spring 79-80, No. 43
"	Guidelines for Water-Run Ammonia, by S. Pettygrove	Summer 1980 No. 44
"	Nitrogen Fertilization of Peaches, by R.D. Meyer, N.W. Ross, J.A. Beutel, J.L. Meyer and W. Asai	Fall 1980 No. 45
"	Wood Ashes as a Soil Additive, by R. L. Branson	Fall 1980 No. 45
"	Regional Patterns in Sales of Fertilizer Materials, by S. Pettygrove and R. Pelton	Fall 1980 No. 45
"	Nitrate Tissue Test for Hard Red Spring Wheats in California, by S. Pettygrove, John Williams, and R. Pelton	Winter 1980 No. 46
"	New State Law Covering Fertilizer Materials, by R.D. Meyer	Spring 1981 No. 47
"	Determining the Fertilizer Rate Giving Maximum Yield and the Economic Minimum and Optimum Fertilizer Rates by R.D. Meyer	Spring 1981 No. 47
"	Ammonia Toxicity From Starter Fertilizer, by S. Pettygrove, D. Marcum, R. Meyer L. Jackson, and H. Carlson	Summer 1981 No. 48
"	A New Fertilizer: Urea-Sulfuric Acid, by D. Goldhamer	Summer 1981 No. 48
"	Urea Update, by S. Pettygrove	Winter 1982 No. 50
"	"Fertilizer Materials" Law Changes as of January 1, 1982, by R. Meyer	Fall 1982 No. 52
"	Does Air Pollution Supply Significant Sulfur to Crops? by G.S. Pettygrove	Winter 1983 No. 53
"	Rates of Nitrogen at Two Drip Irrigation Levels on Almonds, by R. Meyer	Summer 1983 No. 55
"	Fertilizer As A Water Pollutant, by E.F. Bullock and R.D. Meyer	Winter 1984 No. 57

<u>SUBJECT</u>	<u>TITLE AND AUTHOR</u>	<u>ISSUE</u>
Fertilizer	Phosphate Fertilizer Requirements on Recently Drained Land, by G.S. Pettygrove, R.N. Sah, D.S. Mikkelsen	Winter 1984 No. 57
"	Synthetic Nitrogen, by Stuart Pettygrove	Spring 1984 No. 58
"	Urea-Ammonium Nitrate Fertilizer Solutions, by G.S. Pettygrove	Summer 1984 No. 59
Ground Water	Entrapped Air in an Unconfined Aquifer, by B.R. Hanson	Spring 1977 No. 32
"	Changes in Aquifer Storage Properties Due to Gound Water Depletion, by B.R. Hanson	Spring 1978 No. 36
Infiltration Studies	Water Penetration: Where is the Restricting Layer?, by W.E. Wildman	Fall 1969 No. 7
"	Effect of Soil Physical Properties on Water Infiltration and Movement, by A.W. Marsh	Summer 1970 No. 10
"	Effect of Some Soil Modification on Water Penetration, by F.K. Aljibury	Summer 1970 No. 10
"	Measurement of Water Infiltration Into Soils, by L.J. Booher	Summer 1970 No. 10
"	Slow Infiltration Rate of Sandy Soils, by J.L. Meyer	Summer 1970 No. 10
"	Water Infiltration Problems and Their Study in Fresno County Vine- yards, by L.P. Christensen	Summer 1970 No. 10
"	Water Infiltration Into Soils, by W.E. Wildman	Summer 1970 No. 10
"	Available Water Content Values, by H. Schulbach	Winter 1971 No. 11

<u>SUBJECT</u>	<u>AUTHOR AND TITLE</u>	<u>ISSUE</u>
Infiltration Studies	Water Penetrants and Electrolytes Tested, by R.S. Rauschkolb	Winter 1971 No. 11
"	Manure Increased Water Infiltration by B.D. Meek and J.D. Oster	Winter 1983 No. 53
"	Effects of Gypsum on a Nonsodic Clay Soil, by Janet Caprile, Gary W. Hickman, Terry Pritchard	Fall 1984 No. 60
"	Overcoming Slow Infiltration Rates With Drip Irrigation, by W. Krueger, R. Buchner, D. Shaw, H. Schulbach	Winter 1984 No. 61
Irrigation	White Oak Irrigation in Turf, by A.W. Marsh	Summer 1968 No. 2
"	Results of Turfgrass Irrigation Experiment, by A.W. Marsh, F.K. Aljibury, and V.B. Youngner	Spring 1969 No. 5
"	Turfgrass Irrigation Research at the University of California, by A.W. Marsh	Winter 1970 No. 8
"	Water for Frost Protection, by L.J. Booher and J.L. Meyer	Winter 1970 No. 8
"	A New Pivot-Type Irrigation System, by A.W. Marsh	Spring 1970 No. 9
"	Some Thoughts on Water Use, by R.S. Ayers	Spring 1970 No. 9
"	A "Good" Water for Irrigation of Turfgrass if Managed Right, by R.L. Branson	Winter 1971 No. 11
"	Irrigation with Sewage Effluent, by R.S. Ayers	Spring 1971 No. 12
"	Streptomycin Through Overhead Sprinklers, by B.E. Bearden	Spring 1971 No. 12
"	Water Movement, by A. W. Marsh	Summer 1972 No. 14

<u>SUBJECT</u>	<u>TITLE AND AUTHOR</u>	<u>ISSUE</u>
Irrigation	Disposal of Sewage Water for Irrigation, by R.S. Ayers and L.J. Booher	Fall 1972 No. 15
"	Irrigation Management Survey-A Progress Report, by I. Stewart	Winter 1973 No. 20
"	Evaluating Uniformity of Drip Irrigation, by A.W. Marsh	Winter 1974 No. 24
"	Evaluating Uniformity of Drip Irrigation, by A.W. Marsh, R.A. Strohman, and R.A. Brendler	Spring 1975 No. 25
"	Center Pivot Irrigation in California, by A.W. Marsh	Fall 1975 No. 26
"	Drip Irrigation Library, by S. Davis	Fall 1975 No. 26
"	Furrow Irrigation for Row Crops, by R. Brendler, submitted by A.W. Marsh	Winter 1977 No. 31
"	Update on Center Pivot Irrigation Systems, by A.W. Marsh and J.L. Meyer	Winter 1977 No. 31
"	Drip Irrigation of Young Orchards, by E. Fereres	Summer 1977 No. 33
"	Potassium Efficiency Increased by Application Through Drip Irrigation System, by R.L. Branson	Summer 1977 No. 33
"	Additional Uses of Sprinkler Irrigation Systems, by T.M. Aldrich	Fall 1977 No. 34
"	Energy Considerations in Selecting Irrigation Systems, by E.B. Roberts and R.M. Hagan	Fall 1977 No. 34
"	Evaluation of Center Pivot Irrigation, by E. Fereres and H. Schulbach	Fall 1977 No. 34
"	Irrigation Costs, by E. Fereres	Spring 1978 No. 36

<u>SUBJECT</u>	<u>TITLE AND AUTHOR</u>	<u>ISSUE</u>
Irrigation	Linear Pivots Under Test in Kern County, by F.K. Aljibury	Summer 1978 No. 37
"	Irrigation Costs, by E. Fereres	Fall 1978 No. 38
"	Notes on Low Pressure, by J.L. Meyer	Winter 1979 No. 39
"	Interpretation of Sand Media Used in Drip Irrigation Filters, by H. Schulbach and E. Fereres	Summer 1979 No. 41
"	Low Sprinkler-Application Rate May Cause Leaf Burn on Alfalfa, by R.L. Branson	Summer 1979 No. 41
"	New Techniques for Scheduling Irrigations, by E. Fereres, L.K. Stromberg and B.L. Weir	Summer 1979 No. 41
"	Cleaning Drip Irrigation Systems, by J.M. Rible and J.L. Meyer	Fall 1979 No. 42
"	Surface vs. Sprinkler Irrigation, by W.F. Richardson	Fall 1979 No. 42
"	What is New in Drip? by J.L. Meyer and V. Gibeault	Winter/Spring 79-80, No. 43
"	Celery, Peppers, and Cauliflower: Drip! by B.J. Hall	Winter/Spring 79-80, No. 43
"	Computerized Irrigation Scheduling, by E. Fereres and R. Snyder	Fall 1980 No. 45
"	California Irrigation Management Information System, by E. Fereres	Fall 1980 No. 45
"	How Many Gallons/Tree/Day? by J. Meyer	Winter 1980 No. 46
"	Low Pressure Sprinkler Heads, by J.L. Meyer, R. Strohman, P.D. Smith	Winter 1980 No. 46
"	More Information on Low Pressure Sprinkler Heads, J.L. Meyer, R. Strohman and P. Dean Smith	Spring 1981 No. 47

<u>SUBJECT</u>	<u>TITLE AND AUTHOR</u>	<u>ISSUE</u>
Irrigation	Turning Sprinkler Systems on or off for Protection Against Freeze Damage, by R. Snyder	Spring 1981 No. 47
"	Evaluating Drip Hoses, by J. Ribble	Summer 1981 No. 48
"	Scheduling Irrigation With an Infrared Thermometer, by R. Snyder E. Fereres and D. Goldhamer	Fall 1981 No. 49
"	Evaluation of Sprinkler Systems in El Dorado County Orchards, by E. Fereres	Fall 1981 No. 49
"	Fertilization Through Drip Systems, by J.M. Ribble, J.L. Meyer, and W.M. Jarrell	Fall 1979 No. 42
"	Evaporation Spray Losses From Low Volume Sprinklers, by D.A. Goldhamer and R. Cantrell	Winter 1982 No. 50
"	Avoiding Water-Run Ammonia Losses, by S. Pettygrove	Summer 1982 No. 51
"	Cleaning Drip Irrigation Systems, by J.M. Ribble and J.L. Meyer	Summer 1982 No. 51
"	Low-Pressure Sprinkler Systems, by B.R. Hanson	Summer 1982 No. 51
"	Plant Water Uptake: Or How Do Plants Integrate? by J.D. Oster	Fall 1982 No. 52
"	Update on CIMIS, by R.L. Snyder	Fall 1982 No. 52
"	Irrigation Efficiencies, by B.R. Hanson and W.W. Wallender	Winter 1984 No. 57
"	Comparison of Irrigation Scheduling Methods for Cotton: Leaf Water Potential Versus Traditional Appearance, by D.A. Goldhamer	Winter 1984 No. 57
"	Techniques to Measure Water Outflow From Fields, by R. Buchner H. Schulbach, D. Shaw	Winter 1984 No. 57

<u>SUBJECT</u>	<u>TITLE AND AUTHOR</u>	<u>ISSUE</u>
Irrigation	Low-Pressure Sprinklers for Vegetables Crops, by J.L. Meyer	Summer 1984 No. 59
"	Assessing Soil Water Depletion--Terms and Their Usage, by D.A. Goldhamer	Summer 1984 No. 59
"	Improving Low Volume Sprinkler Performance by Acid Injection, by Roger Kjelgren and David Goldhamer	Fall 1984 No. 60
"	Imperial Valley: Irrigation, Drainage and Runoff, by J.D. Oster, J.L. Meyer L. Hermsmeier, M. Kaddah	Fall 1984 No. 60
"	Managing Irrigation and Drainage Water in the San Joaquin Valley, by B.R. Hanson	Winter 1984 No. 61
Methods of Analysis	Conversion Factors for Soil Analyses, by R.S. Rauschkolb	Fall 1971 No. 13
"	Special Supplement Index of Soil Surveys of California 1973, compiled by W.E. Wildman	Supplement Index
"	Standardization of Soil and Plant Testing. Information was extracted from the USDA Extension publication, Agronomy and Soil Conservation News and Notes, Washington, D.C., submitted by R.S. Rauschkolb	Summer 1973 No. 18
"	Soil and Tissue Testing, by R.S. Rauschkolb	Fall 1974 No. 23
"	Analysis of Variance Program, by W.E. Wildman	Winter 1976 No. 27
"	Converting Meq/100 g in Soil and Meq/Liter in Water to ppm, by S. Pettygrove	Spring 1981 No. 47
"	Geostatistics--Geo What? by S. Post and B. Hanson	Spring 1983 No. 54

<u>SUBJECT</u>	<u>TITLE AND AUTHOR</u>	<u>ISSUE</u>
Methods of Analysis	Fractile Diagrams and Transformations of Data, by S. Post and B. Hanson	Summer 1983 No. 55
"	Estimating Soil Water Contents with the Neutron Probe--How Important is a Tight-Fitting Access Tube? by D. Goldhamer and R. Kjelgren	Summer 1983 No. 55
"	Autocorrelation, by B. Hanson and S. Post	Fall 1983 No. 56
"	Soil Sampling Equipment, by H. Schulbach and S. Scardaci	Fall 1982 No. 57
"	Possible Replacement for Bray Power: Nitrate Test Strips, by S. Pettygrove	Fall 1982 No. 57
Real People	Visiting Extension Agronomist Pushes Geographic Data Bases, by W. Wildman	Spring 1981 No. 47
"	REAL PEOPLE: M. Reisenauer, J. Slater, V. Scott, W. Bricker, D. Munns, J. Hohenberg	Summer 1981 No. 48
"	REAL PEOPLE: W.M. Jarrel, R. Beverly, F. Bingham, F. Peryea, R. Shaw	Fall 1981 No. 49
"	REAL PEOPLE: G. Huntington, P. Pratt B. Lippert, B. Frankenberger, Cynthia Levesque	Winter 1982 No. 50
"	REAL PEOPLE: D. Henderson, G. Elliot A. Lauchli, E. Begg by S. Pettygrove	Summer 1982 No. 51
"	REAL EDITOR: Stuart Pettygrove by Ilsa McLandress	Summer 1982 No. 51
"	REAL PEOPLE: Dennis Rolston, Olatunji Folorunso, by S. Pettygrove	Fall 1982 No. 52

<u>SUBJECT</u>	<u>TITLE AND AUTHOR</u>	<u>ISSUE</u>
Real People	REAL PEOPLE: Welcome aboard Steve! by J.D. Oster	Winter 1983 No. 53
"	REAL PEOPLE by S. Pettygrove	Summer 1983 No. 55
Reclamation	Reclamation Experiment, by A.W. Marsh	Summer 1968 No. 2
"	Leaching Comparisons Between Sprinkler and Furrow Irrigation, by A.W. Marsh	Fall 1968 No. 3
"	San Joaquin Valley Soil Reclamation Experiment, by R.L. Branson	Summer 1969 No. 6
"	Gypsum Can Help--But!, by W.E. Wildman	Summer 1970 No. 10
"	Western Kern Reclamation Experiment, by L.D. Whittig, A.B. Carlton and W.E. Wildman	Winter 1971 No. 11
"	Improved Leaching Efficiency Reported, by R.S. Ayers	Fall 1971 No. 13
"	Sulfuric Acid Treatment May Speed Reclamation of High Boron Soils, by R.L. Branson	Spring 1978 No. 36
"	Rice Soil Reclamation Trial--1981, by S. Scardaci and H. Schulbach	Summer 1982 No. 51
Remote Sensing and Photography	Remote Sensing and Photo Interpreta- tion, by W.E. Wildman	Spring 1971 No. 12
"	Lab Exercise in Photo Interpreta- tion, by W.E. Wildman	Fall 1971 No. 13
"	Aerial Photos of Reservoirs Document California's Water, by W.E. Wildman	Spring 1977 No. 32

<u>SUBJECT</u>	<u>TITLE AND AUTHOR</u>	<u>ISSUE</u>
Remote Sensing and Photography	Reservoir Aerial Photos, by W.E. Wildman	Winter 1978 No. 35
"	Reservoir Aerial Photos, by W.E. Wildman	Summer 1978 No. 37
Salinity	How Tolerant are Turfgrasses and Flower Crops to Salinity, by R.L. Branson	Summer 1968 No. 2
"	Adapted Plants for Salty Areas, by R.S. Ayers	Winter 1969 No. 4
"	Kinds of Salts in Manures, by R.L. Branson	Winter 1969 No. 4
"	Use of Soil Surveys: Salinity and Alkali, by R.S. Ayers	Summer 1969 No. 6
"	Soil Salinity, by A.F. Van Maren, submitted by R.S. Ayers	Fall 1969 No. 7
"	Bo Plenty in Lost Hills, by W.E. Wildman	Winter 1970 No. 8
"	Soil Salinity, by A.F. Van Maren	Winter 1970 No. 8
"	Screening Ornamentals for Salt Tolerance, by R.L. Branson	Spring 1970 No. 9
"	Salinity Control on the Colorado River, data taken from "Salinity Control Needs in the Colorado River Basin" by Myron B. Holburt, Colorado River Board at National Conference.	Summer 1972 No. 14
"	The Influence of Nitrogen Source on the Salt Load of Soils, by R.S. Rauschkolb	Winter 1972 No. 16
"	Sulfur Deficiency in Wheat, by R.S. Rauschkolb	Winter 1974 No. 24
"	Speedy Results (analysis for water salinity and for nitrates in water or soil solutions in the field), by R.S. Ayers	Summer 1976 No. 29

<u>SUBJECT</u>	<u>TITLE AND AUTHOR</u>	<u>ISSUE</u>
Salinity	Seawater Irrigation Experiment, by E. Epstein and J.D. Norlyn	Fall 1976 No. 30
"	Salt Tolerance of Ornamental Trees Under Study, by R.L. Branson	Winter 1977 No. 31
"	Homeowners can Make Softened Water Suitable for Watering Plants, by R.L. Branson	Spring 1977 No. 32
"	Salt Management, by R.S. Ayers	Winter 1978 No. 35
"	Salt Management, by R.S. Ayers	Spring 1978 No. 36
"	25 Ornamentals Tested for Boron Tolerance, by R.L. Branson	Spring 1979 No. 40
"	Variation in Salt Concentrations in a Wheat Field, by R.A. Richards and C. Dennett	Summer 1980 No. 44
"	Monitoring Soil Salinity: New Methodology, by J.D. Oster	Winter 1982 No. 50
"	Salinity Research Projects	Summer 1983 No. 55
"	Irrigation with Saline Water, by J. D. Oster and J. D. Rhoades	Fall 1983 No. 56
Soil Amendments	Irrigation with Sewage Effluent, by R.L. Branson	Winter 1969 No. 4
"	Ultra high Analysis Organic Com- pounds, by W. J. Sharratt	Fall 1969 No. 7
"	Farm Builder, by R.S. Rauschkolb	Winter 1970 No. 8
"	Change of Soil Chemical Properties by Gypsum, by W.E. Wildman	Fall 1971 No. 13
"	Industrial by By-Products--Their Effects on Fertilizers and Fertrilizer Costs, by W. J. Sharratt	Fall 1971 No. 13

<u>SUBJECT</u>	<u>TITLE AND AUTHOR</u>	<u>ISSUE</u>
Soil Amendments	Soil Improving products?, by R.S. Rauschkolb	Spring 1973 No. 17
"	Land Disposal of Manures, by J.L. Meyer	Spring 1974 No. 21
"	Comparative Values of poultry Manure, by F.C. Price and J.L. Meyer	Winter 1974 No. 24
"	Results of Soil Activator Studies, by R.S. Rauschkolb	Spring 1975 No. 25
"	Land Application of Fruit and Vegetable Cannery By-Products. This is a summary of a paper presented by R.D. Bottel and R.S. Rauschkolb at the American Society of Agricultural Engineers annual meeting.	Fall 1975 No. 26
"	Agricultural Use of Sewage Effluent, by R.S. Ayers	Spring 1976 No. 28
"	The Use of Wastewater for Irrigation, submitted by R.S. Ayers from EPA report "Water Quality Criteria 1972" (EPA-R3-73-033, March 1973)	Summer 1976 No. 29
"	L.A. Sludge as N Source Studied, by R.L. Branson	Fall 1977 No. 34
"	Potting Mix Study, by J.M. Ribble	Summer 1978 No. 37
"	Sewage Effluent Quality Consideration, by R.L. Branson	Summer 1978 No. 37
"	Soil and Water Amendments In Irrigated Agriculture, by R.S. Ayers	Summer 1978 No. 37
"	Evaluating Soil Amendments Claims and Efficacy, by R.D. Meyer	Winter 1979 No. 39
"	California Sludges Studied, by R.L. Branson	Spring 1979 No. 40
"	Large Increase in Lime Applications on California Cropland, by S. Pettygrove	Winter 1980 No. 46

<u>SUBJECT</u>	<u>TITLE AND AUTHOR</u>	<u>ISSUE</u>
Soil Amendments	New Publication Non-Traditional Soil and Plant Amendments, by S. Pettygrove	Summer 1981 No. 48
"	Compost Question, by S. Pettygrove	Winter 1982 No. 50
"	Salinity Research Projects	Summer 1983 No. 55
"	Irrigation and Saline Water by J.D. Oster and J.D. Rhoades	Fall 1983 No. 56
Soil Compaction and Management	Deep Deep Tillage, by W.E. Wildman	Summer 1968 No. 2
"	Problems with Cuts and Fills, by W.E. Wildman	Fall 1968 No. 3
"	Diagnosing Orchard Problems, by L.J. Booher and W.E. Wildman	Summer 1969 No. 6
"	Root Profile Studies in Orchards, by N.W. Ross, D.E. Ramos and J.L. Meyer	Summer 1969 No. 6
"	Back Hoe, Slip Plow, Tree Preplant- ing, by J.L. Meyer	Fall 1969 No. 7
"	Veihmeyer Tube, a Good Teaching Tool, submitted by L.J. Booher	Spring 1970 No. 9
"	Land--Our Most Valuable Resource, by W.E. Wildman	Summer 1970 No. 10
"	Salt-Tolerant Trees, by K.E. Bradshaw	Summer 1979 No. 10
"	Soil and Water Management Problems with Citrus Culture, by J. Pehrson	Summer 1970 No. 10
"	Literature Cited on Soil Aeration	Winter 1971 No. 11
"	Soil Aeration--Summary, by F.K. Aljibury	Winter 1971 No. 11

<u>SUBJECT</u>	<u>TITLE AND AUTHOR</u>	<u>ISSUE</u>
Soil Compaction and Management	Deep Tillage Results, by D.W. Cudney	Spring 1971 No. 12
"	Soil Management and Modification, by J.L. Meyer	Spring 1971 No. 12
"	Preplant Deep Tillage for an Orchard on Claypan Soil, by J.H. Foott and W.E. Wildman	Fall 1971 No. 13
"	Influence of Soil Bulk Density on Plant Growth, by R.S. Rauschkolb	Spring 1973 No. 17
"	Controlled Traffic Boosts Cotton Yields, article from Ag Res. USDA, Nov. 1973, submitted by A.W. Marsh	Winter 1973 No. 20
"	New Bulletin on Soil Compaction, by W. Chancellor, submitted by W.E. Wildman	Summer 1974 No. 22
"	Pneumatic Track Outperforms Tire. This article is courtesy of Ag. Res., USDA	Fall 1974 No. 23
"	Draft Requirements and Soil Loosening by Slip Plows, by W.E. Wildman	Winter 1976 No. 27
"	Efficiency of Soil Loosening by Slip Plows and Subsoilers, by W.E. Wildman	Spring 1976 No. 28
"	Comparison of a Slip Plow and Subsoiler, by W.E. Wildman	Summer 1976 No. 29
"	Controlling Traffic, by W.E. Wildman	Winter 1977 No. 31
"	New Publication on Soil Compaction by W.E. Wildman	Winter 1977 No. 31
"	Taking the Sticky Out of Clay, by W.E. Wildman	Winter 1978 No. 35

<u>SUBJECT</u>	<u>TITLE AND AUTHOR</u>	<u>ISSUE</u>
Soil Compaction and Management	Managing Soils to Reduce Compaction by W.E. Wildman	Winter 1979 No. 39
"	Soil Texture vs. Air Filled Pores, by W.E. Wildman	Summer 1982 No. 51
Soil Surveys and Land Use	New Lands on the Westside of the San Joaquin Valley, by R.S. Ayers	Summer 1968 No. 2
"	Soils and Land Use Planning, submitted by W.E. Wildman	Fall 1969 No. 7
"	Soil Ecosystem Preserved, by R. Arkley	Fall 1969 No. 7
"	New Soil Survey of San Benito County, submitted by W.E. Wildman	Winter 1970 No. 8
"	Tomorrow's Soil Surveys, by W.E. Wildman	Winter 1970 No. 8
"	Soils & Land Use, by B.W. Lee	Spring 1970 No. 9
"	Land Use: Problems and Alternatives to Control, by F.P. Miller	Winter 1972 No. 16
	Soil Survey Index-Addendum	Spring 1976 No. 28
"	Computer Generated Interpretive Maps from Soil Surveys, by D.T. Cooper, T.W. Barney, C.J. Johannsen, W.D. McFarland and J. Pan	Spring 1981 No. 47
"	An Index to Soil Surveys in California	Winter 1983 No. 53
"	San Joaquin Valley Soils and Their Geologic Origin, by W.E. Wildman	Spring 1984 No. 58
Toxic Elements	New Federal Regulations on Disposal of Cadmium-Containing Wastes, by G.S. Pettygrove	Fall 1979 No. 42

<u>SUBJECT</u>	<u>TITLE AND AUTHOR</u>	<u>ISSUE</u>
Toxic Elements	Selenium in Plants and Livestock, by R.E. Pelton and R.D. Meyer	Spring 1981 No. 47
"	Factors Influencing the Selenium Concentrations in Plants, by R.E. Pelton and R.D. Meyer	Fall 1981 No. 49
"	Salinity, Selenium...What are we to do? by E.F. Bullock and R.D. Meyer	Spring 1984 No. 58
"	Selenium in the Soils of the West Side of the San Joaquin Valley, by Rodney J. Arkley	Spring 1984 No. 58
"	Environmental Chemistry of Selenium, by R.G. Burau	Winter 1984 No. 61
"	Kesterson Reservoir: The Clean Up and Abatement Order, by J. D. Oster and G.R. Smith	Winter 1984 No. 61
Wastewater	Water Reclamation, submitted by R.S. Ayers	Summer 1972 No. 14
"	Land Application of Food processing Water/Monitoring Techniques, by J.L. Meyer	Summer 1976 No. 29
"	Irrigating With Wastewater, by J.L. Meyer	Summer 1977 No. 33
"	Using Reclaimed Water, by J.M. Rible	Fall 1978 No. 38
"	Wastewater Reuse in Agriculture, by F.K. Aljibury	Winter 1979 No. 39
"	Wastewater Reclamation Project, by J.M. Rible	Winter 1979 No. 39
"	Using Reclaimed Water, by J.M. Rible	Spring 1979 No. 40
"	Suitability of Agricultural Waste Waters for Use on Ornamentals and Turfgrasses, by R. Branson	Winter/Spring 79-80, No. 43

<u>SUBJECT</u>	<u>TITLE AND AUTHOR</u>	<u>ISSUE</u>
Water Conservation	Barley Irrigation Studies--1968, by R.M. Hoover and H. Yamada	Winter 1969 No. 4
"	Irrigation for Alfalfa Seed Production, by D.W. Henderson, H. Yamada and R.M. Hoover	Spring 1969 No. 5
"	Soil Water Use by Non-Irrigated Corn Plants, J.I. Stewart	Winter 1971 No. 11
"	Antitranspirants, Plant Water Potential and Growth, by D.C. Davenport, K. Uriu and R.M. Hagan	Fall 1972 No. 15
"	Status Report on NPDES Irrigation Return Flow permits- from Central Valley Regional Water Quality Control Board, by R.S. Ayers	Winter 1976 No. 27
"	Proposed Agricultural Water Conservation Principles and Guidelines, by Dept. of Water Resources	Fall 1976 No. 30
"	Irrigation Under Limited Water Supply, by E. Fereres	Winter 1977 No. 31
"	Evapotranspiration in the Sacramento and San Joaquin Valleys, by E. Fereres	Spring 1977 No. 32
"	Irrigating Corn During the Vegetative Phase, by M.L. Campbell and E. Fereres	Fall 1978 No. 38
"	Water Requirements for Food Production, by H. Schulbach and T.M. Aldrich	Fall 1978 No. 38
"	Water Relations of Processing Tomato Varieties, by E. Fereres	Winter 1979 No. 39
"	Water Conservation in Irrigation, by E. Fereres	Spring 1979 No. 40
"	Assessing Potentials for Agricultural Water Conservation, by D. Davenport and R. Hagan	Summer 1980 No.44

<u>SUBJECT</u>	<u>TITLE AND AUTHOR</u>	<u>ISSUE</u>
Water Conservation	Long Term Normal Evaporation Demand Versus Current Conditions in the Southern San Joaquin Valley, by D. Goldhamer	Fall 1981 No. 49
"	Agricultural Mobile Laboratory J.L. Meyer	Fall 1982 No. 52
"	Agricultural Pollution Control: Attitudes Can Change! by E. G. Bullock and R.D. Meyer	Fall 1983 No. 56
"	Municipal Wastewater Sludge: Disposal on Cropped Land, by J. D. Oster	Spring 1983 No. 54
"	Hazards and Benefits of Municipal Sewage Sludge, by R. G. Burau	Fall 1983 No. 56
"	New Publications: Irrigation With Reclaimed Municipal Wastewater-- A Guidance Manual, by G. S. Pettygrove	Summer 1984 No. 59
Water Law	Water Laws, by R.B. Duffin	Fall 1973 No. 19
"	Water Rights--Ground Water Users, by R.S. Ayers	Winter 1977 No. 31
Water Quality	Analysis of West Side Canal Water, by R.L. Branson	Summer 1968 No. 2
"	Nitrate Pollution and Agriculture, by R.S. Ayers	Fall 1968 No. 3
"	New Program to Pinpoint Water Minerals Vital to Health, by B.A. Krantz	Spring 1969 No. 5
"	Nitrogen Sources in Groundwater Supplies, by R.S. Ayers	Spring 1969 No. 5
"	Who Causes Pollution?, by B.A. Krantz	Spring 1969 No. 5
"	Clean Water-Sacramento River, by R.S. Ayers	Summer 1969 No. 6

<u>SUBJECT</u>	<u>TITLE AND AUTHOR</u>	<u>ISSUE</u>
Water Quality	Copper Sulfate for Controlling Algae, W.B. McHenry, submitted by L.J. Booher	Fall 1969 No. 7
"	DDT in the Environment, by J.W. Biggar	Fall 1969 No. 7
"	How Much Fertilizer Nitrogen Reaches Groundwater?, by R.L. Branson	Fall 1969 No. 7
"	Solving Pollution Problems Before They Start, by R.S. Ayers	Spring 1970 No. 9
"	UC Research on Water Quality, by R.H. Coppock	Summer 1970 No. 10
"	Nitrate Profiles Under Crops, by R.S. Ayers and C.F. Krauter	Winter 1971 No. 11
"	Water Use by Nuclear Power Plants, by J. Corey and G. Simon	Summer 1972 No. 14
"	UC Receives \$1.2 million Grant for Research on Nitrate Problem--Research Now Underway!, prepared by F. Cress, submitted by R.S. Ayers	Fall 1972 No. 15
"	Voluntary Action or Legislative Action by R.S. Rauschkolb	Fall 1972 No. 15
"	Nitrogen Movement Below Crops, by R.S. Ayers	Summer 1973 No. 18
"	Irrigation and Water Quality Degradation-Problems of Compliance with Water Quality Control Regula- tions, by R.S. Ayers	Spring 1976 No. 28
"	Delta Water Quality Up-Date, by R.S. Ayers	Summer 1977 No. 33
"	Nitrates and Health, by J.M. Rible	Spring 1979 No. 40
"	Electrical Conductivity, by B.R. Hanson	Fall 1979 No. 42

<u>SUBJECT</u>	<u>TITLE AND AUTHOR</u>	<u>ISSUE</u>
Water Quality	Drip Emitter Clogging vs. Water Quality, by J. Rible	Summer 1980 No. 44
Water Supply	Speaker Albert Calls on Americans to Pursue Water Development Goals, (this article has been excerpted from "Water Life" monthly newsletter, submitted by J.L. Booher)	Fall 1971 No. 13
	Summary of Central Valley Water Conditions, (this article is from "Water Conditions in Calif.", submitted by A.W. Marsh)	Spring 1974 No. 21
"	Summary of Central Valley Water Conditions, by R.S. Ayers	Spring 1977 No. 32
"	Summary of Reservoir Conditions, by R.S. Ayers	Spring 1977 No. 32
Wells and Pumps	Geothermal Wells, by A.W. Marsh	Winter 1969
"	Private Water Systems, submitted by L.J. Booher	Summer 1969 No. 6
"	Easy Evaluation of Problem Wells, by F.K. Aljibury	Summer 1976 No. 29
"	Pumping Efficiencies and Costs, by A.W. Marsh and Dean Halsey	Spring 1977 No. 32
"	Sand Separators, by F.K. Aljibury	Summer 1977 No. 33
"	Well and Pump References, by B.R. Hanson	Winter 1978 No. 35
"	Selection and Evaluation of Pumping Systems for Maximum Efficiency, by B.R. Hanson	Spring 1978 No. 36
"	Evaluation of Pump Performance, by B.R. Hanson	Fall 1978 No. 38
"	Well Efficiency, by Blaine Hanson	Fall 1980 No. 45

<u>SUBJECT</u>	<u>TITLE AND AUTHOR</u>	<u>ISSUE</u>
Wells and Pumps	Pumping Costs, by G. A. Krause	Summer 1982 No. 51
"	An Evaluation of Two Pumping Plants by D.B. Marcum, D.L. Lancaster, B.R. Hanson, G.L. Dickey	Fall 1982 No. 52
"	Follow-Up On Pump Evaluation by D. Marcum and B. Hanson	Spring 1983 No. 54
208 Planning	Up to Date With 208, by J.M. Rible and S.P. Carlson	Summer 1979 No. 41
"	Up to Date With 208, by J.M. Rible and S.P. Carlson	Fall 1979 No. 42
"	Update on 208, by S.P. Carlson and J.M. Rible	Winter/Spring 79-80, No. 43
"	Up to Date on 208", by S.P. Carlson and J.M. Rible	Summer 1980 No. 44
"	Up to Date on 208", by S.P. Carlson	Fall 1980 No. 45
"	Up to Date on 208", by S.P. Carlson	Winter 1980 No. 46
"	Up to Date on 208", by S.P. Carlson	Spring 1981 No. 47
"	Up to Date on 208, by S.P. Carlson	Summer 1981 No. 48
"	Up to Date on 208, by S.P. Carlson	Fall 1981 No. 49
"	Up to Date on 208, by S.P. Carlson	Winter 1982 No. 50
"	Up to Date on 208, by S. P. Carlson	Summer 1982 No. 51
Miscellaneous	Grass Tetany, by V.V Rendig	Winter 1969 No. 4

<u>SUBJECT</u>	<u>TITLE AND AUTHOR</u>	<u>ISSUE</u>
Miscellaneous	Substituting Farmer Experience for Research is Dangerous, by B.A. Krantz	Fall 1968 No. 3
"	Units vs. Pounds, by B.A. Krantz	Spring 1969 No. 5
"	What is an Acre-Inch of Water?, by L.J. Booher	Summer 1969 No. 6
"	Imperial Valley Project, by R.W. Rex, submitted by A.W. Marsh	Fall 1969 No. 7
"	Potassium and Stomata, by G.D. Humble, by R.A. Fischer and T. C. Hsiao	Fall 1969 No. 7
"	Modified Sod Culture, by D. Rough and W. Schreader, submitted by J.L. Meyer	Spring 1970 No. 9
"	Tree Trunk Measurement Methods, by T.M. Aldrich and H. Schulbach	Summer 1976 No. 29
"	Kearney Foundation Research Grants, by S. Pettygrove	Summer 1980 No. 44
"	Roy Branson Retires, by S. Pettygrove	Winter 1980 No. 46
"	J.R. Simplot Acquires Valley Nitrogen, R.D. Meyer and S. Pettygrove	Winter 1980 No. 46
"	Current Legal Status of Agricultural Burning Guidelines, by R. Snyder	Winter 1980 No. 46
"	UC Davis Initiates Soil Database Development Laboratory, by E. Begg and J. Wardlaw	Summer 1981 No. 48
"	California Fertilizer Association Meeting	Winter 1983 No. 53
"	Computer Terminology, by R. Snyder	Winter 1983 No. 53
"	Visiting Scientist At Riverside	Spring 1983 No. 54

SUBJECTTITLE AND AUTHORISSUE

Miscellaneous

Women and Minorities in Agriculture,
by Martha Conaway and J.D. OsterSpring 1984
No. 58

"

SI Metric Units, by J. D. Oster

Summer 1984
No. 59

"

Irrigation Symposium Announcement

Fall 1984
No. 60

"

Dennis H. Hall Memorial Fund

Winter 1984
No. 61

University of California
Cooperative Extension
Agriculture and Natural Resources
6701 San Pablo Avenue
Oakland, CA 94608

SUBSCRIPTION FOR SOIL AND WATER NEWSLETTER

The upper right-hand corner of the mailing label shows the expiration date of your subscription. Please renew immediately to avoid a break in service.

☐ Renew my subscription

☐ Start a new subscription

Enclosed is payment of \$5 for one-year subscription (four issues). Make check payable to The Regents of the University of California.

Name _____

Address _____ Apt _____

City _____ State _____ Zip _____

☐ The above is a change of address.

Mail this form and payment to:

ANR Publications
University of California
6701 San Pablo Avenue
Oakland, California 94608-1239