

Anamosa, Inc.  
**Vineyard Soil**  
*Technologies*

Phone/Fax: (707) 255-3176  
Mobile: (707) 225-2898

3379 Solano Ave. #505  
Napa, CA 94558  
e-mail: PaulAnamosa@VineyardSoil.com

**PAUL R. ANAMOSA, Ph.D.**  
Soil Fertility Management / Viticulture

**EDUCATION**

M.S. Viticulture, University of California, Davis, June 1997.

Ph.D. Soil Fertility Management with a minor in Food and Resource Economics (Farming Systems Methodology), University of Florida, Gainesville, August 1989.

M.S. Soil Chemistry, University of Wisconsin, Madison, May 1984.

B.S. Biology, B.S. Agricultural Biology, B.S. Agricultural Pest Management, and B.A. Chemistry, New Mexico State University, Las Cruces, May 1978, with Honors.

**LANGUAGES**

English: native fluent

French: US Foreign Service Institute rating: 3+ (professionally proficient speaking, reading, writing)

**PROFESSIONAL EXPERIENCE**

**Owner: Anamosa, Inc. - Vineyard Soil Technologies**  
**Napa, CA**

**2004 to present**

Conduct soil analyses for the suitability of land for winegrape production and vineyard design. Identify soil chemical and physical characteristics that affect vineyard establishment and long-term economic production. Provide advice on soil, irrigation, water quality, plant nutrition, rootstock selection, and their management practices to meet production objectives. Diagnose and recommend treatment regimes for winegrape problems (plant nutrition, pests, diseases, etc.). Conduct GIS analyses across slope, aspect, and soil property themes to determine land suitability according to client imposed criteria and local government regulations. California Pest Control Advisors (PCA) License: Plant Pathology, Insects, Mites and Nematodes.

**Vice President**

**2000 to 2004**

**Senior Soil Scientist: Soils and Viticulture**

**1997 to 2004**

**Crop Care Associates (CCA), Inc., Yountville, CA**

Conducted soil analyses on the suitability of sites for winegrape production. Identified soil chemical and physical characteristics that affect vineyard establishment and long-term economic production. Provided advice on soil, irrigation, water quality, plant nutrition, rootstock selection, and their management practices to meet production objectives. Diagnosed and recommend treatment regimes for winegrape problems (plant nutrition, pests, diseases, etc.). Developed and managed a geographic information system (GIS) as a service offering for CCA to create slope, aspect/exposure, soil chemistry, and remote sensing maps. Conducted GIS analyses across these themes to determine land suitability according to client imposed criteria and local government regulations. Developed and managed Normalized Difference Vegetative Index (NDVI) remote sensing imagery service offering. California Pest Control Advisors (PCA) License: Plant Pathology, Insects and Mites, Nematodes.

**Researcher, Department of Viticulture and Enology**

**1997**

3379 Solano Ave. #505, Napa, CA 94558  
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**University of California, Davis, CA**

Identified the series and taxonomic names of soils on which a multi-site statewide experiment was being conducted to support the analysis of comparative performance characteristics of Chardonnay, Cabernet Sauvignon, and Zinfandel scions on 8 to 14 selected rootstocks.

**Natural Resource Planner, Senegalese Institute of Agricultural Research (ISRA): 1992 to 1996  
Development Alternatives Inc. (DAI), Bethesda, MD**

Technical Advisor on the USAID/Senegal-sponsored Natural Resource Based Agricultural Research Project. Programmed project resources in collaboration with ISRA administrators and scientists to elaborate and implement a Natural Resource Management Research Strategy which includes: (1) a multidisciplinary and farmer-participatory approach to research planning, execution, and analysis; (2) the development of a geographic information system to help target research activities and assess potential impacts from research activities based on agro-ecological, bio-physical and socio-economic information; (3) a technology validation process based on analysis of pre-established bio-physical and socio-economic criteria; and (4) the development of multi-media training materials to package validated technologies into training modules for distribution to extension personnel (governmental and non-governmental) and farmers. Wrote ISRA's management protocols for two competitive research grant programs (10-30K US\$ /year /grant) that required proposals be collaboratively written by ISRA researchers and non-governmental organizations. Assisted ISRA with proposal evaluation and provided technical oversight for execution of 31 research grant projects.

**Country Programs Director: 1992****South-East Consortium for International Development (SECID), Washington, D.C.**

Identified USAID project opportunities in the areas of agriculture and natural resource management, coordinated university participation, and managed the proposal preparation and submission process for a consortium of 29 universities and research institutes in the southeastern United States.

**Assistant Professor of Plant and Soil Science: 1991 to 1992  
Southern University, Baton Rouge, Louisiana**

Soil Management Specialist on the **USAID Zaire** Applied Agricultural Research Project long-term technical assistance team to oversee the development of the National Plant and Soil Testing Laboratory and the National Soils Program research agenda.

**Science and Diplomacy Fellow, 1989 to 1991  
American Assoc. for the Advancement of Science - Africa Bureau, USAID, Washington, D.C.**

Advised the Agricultural and Natural Resource Division (ANR/USAID) on agricultural research and natural resource management policy and programming issues. Revised policy papers concerning support for agricultural research and faculties of agriculture to better reflect A.I.D.'s goal to obtain long-term market-based, sustainable, economic growth. Developed monitoring and evaluation plans of USAID-funded Agricultural Research Networks in Africa to improve their information management systems' capacity to measure the impact of their activities.

**Assistant Professor of Soil Science: 1985 to 1986**  
**University Center of Dschang, Cameroon; Univ. of Florida Cameroon Project**

Faculty member of USAID-sponsored project assisting in the development of curriculum, research, and extension programs at the National Advanced School of Agriculture. Developed syllabus and taught courses in Soil Conservation, Soil Chemistry, and Quantitative Analytical Chemistry. Proposed and performed research project evaluating fertilizer movement and management on soils with shallow subsurface gravel horizons. Validated results with mechanistic solute transport model. Published extension bulletin explaining the long-term detrimental effects of ammonium sulfate fertilizers on acid soils and recommended available alternatives and regions of recommended use.

**Graduate Research Assistant: 1982 to 1983**  
**University of Wisconsin-Madison, Dept. of Soil Science**

Proposed and performed research for M.S. degree thesis comparing the complexed and free cation concentrations of cadmium and zinc in extracts of soil applied with sewage sludge to those concentrations predicted by the chemical equilibria model GEOCHEM.

**Agricultural Extension Agent: 1979 to 1981**  
**U. S. Peace Corps Volunteer, Jamaica, West Indies**

Collaborated with small hillside farmers on soil conservation/watershed management project to organize and document personalized long-term farm plans through evaluation of farmers' goals and land use assessments. Encouraged, advised, instructed, and aided farmers with the implementation of small-farm soil conservation interventions including bench terraces, hillside ditches, grass contour strips, fast waterways, steep slope reforestation, and gully reclamation in citrus and coffee based production systems.

Administered agricultural component of a family-oriented vegetable production project aimed at decreasing malnutrition through nutrition education and household vegetable gardening. Supervised and provided horticultural guidance to staff of six encouraging participants and monitoring the progress of household gardens. Provided technical assistance for solution of crop, pest, and soil management problems. Taught horticultural methods to participants at neighborhood workshops.

## **SHORT-TERM INTERNATIONAL CONSULTING**

**Confidential Client, Mendoza, Argentina: 2000, 2 weeks**

Conducted analysis of soil physical and chemical properties to determine land suitability for the development of vineyards.

**Natural Resource Management Specialist, Virginia Polytechnic Institute: 1992, 8 weeks**

Conducted technical assessment of the **USAID Senegal** Reforestation Project and developed a strategy and implementation plan for the project's transition period leading into the follow-on Community Based Natural Resource Management Project. Recommendations accepted and the project was granted an \$800,000 14-month extension.

**Team Leader / Soil Management Specialist, Southern University: 1991, 10 weeks**

Led a \$5 million Natural Resource Management Amendment to the **USAID Zaire** Applied Agricultural Research Project. Provided advance work establishing interview and logistical agenda and technical input as Soil Management Specialist to multi-disciplinary team that developed rationale, implementation plan, and budget to better incorporate natural resource management into Zaire's national agricultural technology development process.

**Natural Resource Management Specialist, USAID Zaire: 1990, 1 week**

Advised **USAID Zaire** Mission and wrote scope of work for Natural Resource Management Amendment to the Agricultural Research Project to better integrate natural resource management and sustainable agriculture into the technology development process.

**Agricultural Research Policy Analyst, USAID Washington: 1990, 12 weeks**

Served as USAID representative to the World Bank on the 1990/91 SPAAR (Special Program for African Agricultural Research) initiative to develop and refine regional agricultural research strategies among the CILSS (Sahelian) and SADCC (Southern Africa) member countries.

**Agricultural Research Specialist, USAID Washington: 1990, 6 weeks**

Conducted site visits to agricultural research network projects to collaboratively develop monitoring and evaluation plans with project implementers to improve project definition and reporting procedures: **Nigeria, Togo, Cote d'Ivoire, Burkina Faso, Mali, Kenya, Rwanda, and Malawi.**

**Agricultural Research Specialist, USAID Washington: 1989, 3 weeks**

Conducted assessment of the **USAID Cameroon** Agricultural Research Project to identify project management and output activities that were intermediate indicators of eventual research and extension project impact.

**Natural Resource Management Specialist, USAID Zaire: 1989, 4 weeks**

Wrote Natural Resource Management section of the **USAID Zaire** 1990 Agricultural Sector Strategy Statement in conjunction with Mission and contractor staff.

**PERSONAL DATA**

American; married to Frances Adele Anamosa, former U.S. Peace Corps Jamaica volunteer; one daughter.

**HONORS AND PROFESSIONAL SOCIETY MEMBERSHIPS**

Letterman, Sandia High School Cross-Country Team, Albuquerque, New Mexico, 1972

Recipient of the J. Gordon Watts Scholarship for academic achievement, 1977

Charter President and starting hooker, New Mexico State Univ. Rugby Club, 1977

Beta Beta Beta Biology Honorary, Vice President, 1977

Graduated with Honors, 1978, New Mexico State University

Sigma Xi Scientific Research Honor Society

Gamma Sigma Delta Agricultural Honor Society

Phi Kappa Phi Academic Honor Society

American Society of Agronomy

Soil Science Society of America

American Association for the Advancement of Science, Science Diplomacy Fellowship. 1989-91

American Society for Enology and Viticulture

**PUBLICATIONS**

- Anamosa, P.R. and P.A. Helmke. 1983. Comparison of measured and calculated free cation concentrations in saturated soil extracts. *Agronomy Abstracts* 75:145.
- Anamosa, P.R. 1984. Comparison of calculated and measured free cation activities of Cd and Zn in synthetic solutions and soil extracts. M.S. Thesis, University of Wisconsin, Madison.
- Anamosa, P.R. 1986. Ammonium sulfate fertilizers: Effects on soil properties and recommended regions of use. University Center of Dschang, Agricultural Extension Information Sheet, Number 5. University Center of Dschang, Cameroon.
- Anamosa, P.R., J.B. Sartain, and W.G. Blue. 1987. Effects of split fertilizer applications on corn yield components in a gravelly soil from Cameroon. Presented to Soil and Crop Science Society of Florida, October, 1987.
- Anamosa, P.R., P. Nkedi-Kizza, W.G. Blue, and J.B. Sartain. 1988. Water movement through undisturbed columns of an aggregated, gravelly Oxisol from Cameroon. *Agronomy Abstracts* 80:178.
- Anamosa, P.R. 1989. Water and nutrient movement through an aggregated, gravelly Oxisol from Cameroon. Ph.D. Dissertation, University of Florida, Gainesville.
- Anamosa, P.R., P. Nkedi-Kizza, W.G. Blue, and J.B. Sartain. 1990. Water movement through undisturbed columns of an aggregated, gravelly Oxisol from Cameroon. *Geoderma* 46:263-81.
- McClellan, D., L. Busch, J. Yohe, T. Schilling, A. Morton, and P. Anamosa. 1990. Agricultural Research Impact Indicators Matrix. Management Systems International. USAID Washington.
- Anamosa, P.R., J. Lichte, and M.E. Swisher. 1991. Applied Agricultural Research Project: Natural Resource Management Project Paper Amendment. USAID Zaire.
- Harris, T.S., M.S. Alam, P.R. Anamosa, M. Burns, U. Hatch, and A.M. Thro. 1992. The legacy of USAID support to agricultural research in Zaire. South-East Consortium for International Development under Contract 660-0124-C-00-719. USAID Washington.
- Anamosa, P.R. 1992. Assessment and strategy for the transition phase between the Senegal Reforestation Project and the Community Based Natural Resource Management Project. USAID Senegal.
- Anamosa, P.R., H. Mbengue, M. Ndiaye, and Modou Sène. 1995. Natural Resource Management Research Strategy for the Direction for Rain-fed Cropping Systems Research. Senegalese Institute of Agricultural Research (ISRA).
- Anamosa, P.R., W. Wilson-Fall, Louis Ndong, Pape Kane, and Jamil Simon. 1995. Compost: An extension booklet of photographs and an audio cassette (in Wolof) to teach farmers how to make, manage, and use compost technology. Rodale International and the Senegalese Institute of Agricultural Research (ISRA).
- Badaine, A.N., I. Dia, S.T. Fall, A. Gaye, M. Kebe, A. Ndiaye, and P.R. Anamosa. 1995. Practices for the utilization of renewable natural resources in Senegal. Senegalese Institute of Agricultural Research (ISRA).
- Anamosa, P.R. 2005. Management of high magnesium soils for viticultural production. In: Proceedings of the Soil Environment and Vine Mineral Nutrition Symposium. Am. Soc. Enology & Viticulture. Davis, CA.

**Invited Presentations**

Interpreting Soil Data for Growing Quality Winegrapes. January 21, 2011. Mendocino Winegrape and Wine Commission. Hopland, California, USA.

A Primer on the Soil-Water interface in the irrigated vineyard". January 13, 2011. Sonoma County Viticultural Technical Group. Santa Rosa, California, USA.

"A Primer on the Soil-Water interface in the irrigated vineyard". June 29, 2010. Sustainability Workshop on Irrigation Strategies. Napa Valley Grapegrowers Association. Napa, California, USA

"The Nuts and Bolts of Normalized Distribution Vegetative Index (NDVI) Images". February 22, 2010. Presented as part of a panel on Vineyard Technologies: Beyond the Basics. Oregon Winegrowers Symposium. Eugene, Oregon, USA.

"Organic Fertilizers: Improving their effectiveness by understanding their chemistry." February 22, 2010. Presented as part of a panel on N-P-K's Path from Soil to Vine to Fruit Quality. Oregon Winegrowers Symposium. Eugene, Oregon, USA.

"Assessing Soil Quality for Growing Winegrapes." January 26, 2010. Presented as part of a panel on Long-Term Plant and Soil Health at the American Society of Enology and Viticulture Unified Grape Symposium, Sacramento, California, USA.

"Organic Fertilizers: Improving their effectiveness by understanding their chemistry." January 19, 2010. Sonoma County Viticultural Technical Group, Santa Rosa, California, USA.

"Organic Fertilizers: Improving their effectiveness by understanding their chemistry." November 13, 2009. Mendocino College 12th Annual IPM Seminar. Ukiah, California, USA.

"The Management of High Magnesium Soils for Viticulture." July 22, 2009. 11th International Symposium on Soil and Plant Analysis, Santa Rosa, California, USA.

"Optimizing your Soil Resource: Letting Soil Analysis Drive Vineyard Design." July 17, 2009. Presented to the Lake County Grape Growers Association.

"Some historical changes on the influence of vineyard site characteristics on rootstock selection." June 23, 2009. Presented as part of a panel on Rootstock Characteristics and Implications for Selection. American Society of Enology and Viticulture annual meetings. Napa, California, USA.

"Living in the Gray Zone: Managing winegrowing soils with more than sufficient, but less than extremely excessive amounts of magnesium". Sonoma County Viticultural Technical Group, Santa Rosa, California, USA January 13, 2009.

"The Nuts and Bolts of Assessing Soil for Growing High Quality Winegrapes". July 21-22, 2007. Workshop sponsored by the Pennsylvania State University Cooperative Extension. Lancaster, Pennsylvania, USA.

"The Nuts and Bolts of Normalized Distribution Vegetative Index (NDVI) Images" Amador County Wine Grape Growers. February 21, 2007. Plymouth, California, USA.

"The Chemistry of Organic Fertilizers" June 16, 2006. Presented to the Napa County Winegrape Growers Organic Farming Conference. Rutherford, California, USA.