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**Department of Environmental Studies**  
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**Education**

Ph.D.	University of Cambridge, U.K.	1982	Botany
	Thesis: Physiological basis of salinity tolerance in <i>Aster tripolium</i> .		
B.A.	University of Cambridge, U.K.	1977	Natural Sciences - First Class Honors specialization – Botany

**Professional Experience**

1997- present	Professor, Environmental Studies, & Director of Center for Agroecology & Sustainable Food Systems, University of California, Santa Cruz
1992-1997	Associate Professor, Department of Vegetable Crops, University of California, Davis
1985-1992	Assistant Professor, Department of Vegetable Crops University of California, Davis
1982-84	Research Associate, University of Sydney, Australia

**RESEARCH INTERESTS**

Interdisciplinary studies of agro-ecosystems, including watershed, on-farm, experimental, social science and participatory research approaches. Topics include: nutrient cycling and interactions between cropland management and surface water, ground water and wetland ecosystems, biodiversity conservation on farmland, understanding farmer decision making, farmer and consumer attitudes, opportunities to enhance farm viability and sustainability through market, policy and educational approaches, international agriculture development, resource management in resource-poor systems, and gender issues.

**CENTER FOR AGROECOLOGY AND SUSTAINABLE FOOD SYSTEMS**

As Director I oversee Center activities which include research and extension in the ecology and management of cropping systems, watershed management, organic crop production and the social and political economy of food systems. In addition, the Center maintains a 25ac organic farm and garden, and offers training programs in organic farming and gardening, as well as numerous public education and outreach programs.

**International experience:** Supervised graduate student agricultural projects in Niger, Malawi, Costa Rica, Senegal, Ethiopia, and Sierra Leone, worked in Australia, developing project in Inner Mongolia, and worked with visiting scholars on project design from Ethiopia, Eritrea and Uganda.

**TEACHING EXPERIENCE:**

*Graduate classes*

Agroecology & Sustainable Agriculture  
Participatory Research  
Applied Crop Physiology  
Farming Systems Research/Extension  
Gender and Environment  
Key words and concepts in Environmental Studies

*Upper division undergraduate*

Cropping Systems of the World  
Ecology and Society  
Intro to Agroecology  
Agroecology laboratory  
Agroecology Practicum  
Agroecosystems and watershed management

*Lower division undergraduate*

Intro. to Agricultural Ecosystems

**Selected Recent Publications**

Shennan, C. (In Press) Biotic Interactions, Ecological Knowledge and Agriculture. Philosophical Transactions of the Royal Society, UK.

Ruehl CR, Fisher AT, Huertos ML, et al. 2007 Nitrate dynamics within the Pajaro River, a nutrient-rich, losing stream J. N. Am Benthological Society 26: 191-206

- Pasakdee, S.J., G. Bañuelos, **C. Shennan**<sup>3</sup> and W. Cheng. (In Press) Organic N fertilizers and irrigation influence organic Broccoli production in two regions of California. *Journal of Vegetable Science*
- Ruehl C., Fisher, A.T., Hatch, C., Los Huertos, M., Stemler, G. and **C. Shennan**. (2006) Differential gauging and tracer tests resolve seepage fluxes in a strongly-losing stream. *J. Hydrology* 30 : 235-248
- Los Huertos, M. and **C. Shennan**. (In press) Regulations and Grower Responses to Reduce Nitrogen Losses in California. *Pedosphere*.
- Nieto, D.J., **C. Shennan**, W.H. Settle, R. O'Malley, S. Bros, and J. Y. Honda. 2006 How Natural Enemies and Aphid Population Dynamics Affect Organic Broccoli Harvest. *Environmental Entomology* 35: 94-101
- Bull, C. T., Muramoto, J., Koike, S. T., Leap, J., **Shennan, C.**, and Goldman, P. 2005. Strawberry cultivars and mycorrhizal inoculants evaluated in California organic production fields. Online. *Crop Management* doi:10.1094/CM-2005-0527-02-RS.
- Shennan, C.**, T. Pisani Gareau, J.R. Serrine. 2004. Agroecological Approaches to Pest Management in the US. In "The Pesticide Detox: Solutions for Safe Agriculture". Ed. J. Pretty. Earthscan Publications Ltd. London.
- Los Huertos, M. and **C. Shennan**. 2002. The Soil Resource of Elkhorn Slough. In changes in a California Estuary: A Profile of Elkhorn Slough, J.Caffrey, M. Brown, and B. Tyler, eds
- Shennan, C.** and C. A. Bode. Integrating Wetland Habitat with Agriculture. 2002. In "The Farm as a Natural Habitat". Eds. Laura L. Jackson and Dana Jackson. Island Press.
- Los Huertos, M., L.E. Gentry and **C. Shennan**. 2001. Land Use and Stream Nitrogen Concentrations in Agricultural Watersheds Along the Central Coast of California. In: *Optimizing Nitrogen Management in Food and Energy Production and Environmental Protection*. Proc. 2nd International Nitrogen Conference on Science and Policy. *TheScientificWorld* 1: 615–622
- Shennan, C.**, C.L. Cecchetti, G.B. Goldman, F.G. Zalom, 2001. Profiles of California farmers by degree of IPM use as indicated by self -descriptions in a phone survey. *Agriculture, Ecosystems and Environment* 84:267-275
- Mitchell, J.P\*., **C. Shennan**., M.J. Singer, D. Peter, R.O. Miller, T. Prichard, S.R. Grattan, J.D. Rhoades, D.M. May and D.S. Munk. 2000. Impacts of gypsum and winter cover crops on soil physical properties and crop productivity when irrigated with saline water. *Agricultural Water Management* 45:55-71
- Clark, M.S., W.R. Horwarth, **C. Shennan**, K.M. Scow, W.T. Lanini and H. Ferris. 1999. Nitrogen, weeds and water as yield-limiting factors in conventional, low-input and organic tomato systems. *Agriculture, Ecosystems and Environment* 73:257-70
- Cavero, J., R.E. Plant, **C. Shennan**, D.B. Friedman, J.R. Williams, J.R. Kiniry, and V. W. Benson. 1999. Modeling Nitrogen Cycling in Tomato-Safflower and Tomato-Wheat Rotations. *Agricultural Systems* 60: 123-135
- Mitchell, J.P\*. D.W. Peters and **C. Shennan**. 1999. Changes in soil water storage in winter fallowed and cover cropped soils. *Journal of Sustainable Agriculture*. 15:19-31
- Shennan, C.**, and W. M. Jarrell. 1999. Assessing sustainability of a managed multi-use ecosystem: a case study of wetland and cropland management in the Tulelake National Wildlife Refuge, California. In Suteera Nagavajara (Ed.) "Agriculture and Ecological Resilience: Striking a balance in the Pacific Rim" First Asia-Pacific Conference on Sustainable Agriculture", Beijing, October 1998. AAAS.
- Clark, M.S., W.R. Horwarth, **C. Shennan**, K.M. Scow. 1998. Changes in soil chemical properties resulting from organic and low-input farming practices. *Agronomy Journal*. 90:662-671

*Selected Recent Honors, Awards, Grants*

2007-9	USDA NRI	Optimizing Anaerobic Soil Disinfestation as an Alternative to Methyl Bromide Fumigation. \$723,677
2006-7	USDA CREES	A consortium-based Research and Extension Program for Sustainable Agriculture \$475,974 (with 2 co-PIs)
2006	Christiensen Fund	An Agroecological Assessment of the Gamo Highlands in SW Ethiopia. \$40,000
2005-7	USDA NRI	Perennial habitat for conservation biological control in annual cropping systems. \$389,070
2005-6	USDA CREES	A consortium-based Research and Extension Program for Sustainable Agriculture \$480,588 (with 2 co-PIs)
2004	UCSC STEPS.	The Management of Nutrient Concentrations in Streams: Controls, Impacts, and Choices. (7 Co-Investigators) \$30,000

- 2004-5 USDA CSREES. A consortium-based research and extension program for sustainable agriculture. \$464,359 (with 2 co-PIs)
- 2004-7 USDA Integrated Organic Program Improving Fertility and Pest Management for Organic Crop Production and strengthening researcher/grower networks (\$571, 902) (one of 4 co-PDs)
- 2004-5 Kellogg Foundation Web-based Sustainable Agriculture Curriculum Project. \$ 12,516
- 2002-4 Regional Water Quality Control Bd. Water quality monitoring in the upper Pajaro River Watershed \$150,000