

Harlan II: An International Symposium



Biodiversity in Agriculture: Domestication, Evolution, & Sustainability

14–18 September 2008 • University of California, Davis

Anticipated Attendance

- ◆ Scientists engaged in research on genetics, ecology, anthropology, and archaeology of crop domestication and evolution.
- ◆ Representatives of organizations responsible for increasing crop and livestock productivity, including governments, universities, IARCs, and NGOs.
- ◆ Agricultural producers.
- ◆ Educators and public information specialists.

Venue

The Symposium will be held on the campus of the University of California, Davis. The city of Davis is in the Central Valley of California, 12 miles (19 km) west of Sacramento,

the capital city, and 75 miles (121 km) east of San Francisco. Davis is served by the Sacramento International Airport (22 miles/35 km) and rail and bus service, see website for details (<http://HarlanII.ucdavis.edu>).

Organized by the

Departments of Anthropology, Animal Science, Human and Community Development, and Plant Sciences of the UC Davis College of Agricultural and Environmental Sciences and the UC Genetic Resources Conservation Program, Division of Agriculture and Natural Resources
with guidance from an International Advisory Committee

Program

Presentations are organized around three themes and the third theme has a special focus with a review of the plant and animal breeding contributions of UC Davis (and the California Agricultural Experiment Station) to California agriculture.

Day 1 Sunday (14 September)

Reception and keynote speaker – **Jared Diamond** (USA)

Day 2 Monday (15 September)

Plant and Animal Domestication Processes

Patterns and genetics of farm animal domestications – **Leif Andersson** (Sweden)

Companion animal domestication – **Robert Wayne** (USA)

New archaeological methods involving microremains – **Dolores Piperno** (USA)

New archaeological information – **Dorian Fuller** (UK)

Molecular basis of domestication – **John Burke** (USA)

Ecological approaches to the study of crop domestication – **Doyle McKey** (France)

Gene flow in crop evolution – **Susan McCouch** (USA)

Day 3 Tuesday (16 September)

Processes of Agricultural Evolution

Introductory overview – **David Harris** (UK)

Drivers of agricultural evolution –

Plant: **George Willcox** (France);

Animal: **Melinda Zeder** (USA);

Anthropological: **Ofer Bar-Yosef** (USA)

Diffusion of agriculture – **Peter Bellwood** (Australia)

Agricultural intensification and institutions – **Bill Turner** (USA)

Knowledge systems and ethnobotany – **Jan Salick** (USA)

Nutrition, health, and dietary needs – **Loren Cordain** (USA)

Evening Gala: California Cornucopia strolling dinner with keynote speaker – **Gary Nabhan** (USA)

Day 4 Wednesday (17 September)

Global Implications of Agricultural Biodiversity and Sustainability of California Agriculture

Early Californians – **M. Kat Anderson** (USA)

Global genetic resources and California perspectives – **Calvin Qualset** (USA)

Genetic resources for aquaculture – **Graham Young** (UK)

Genetic resources of farm animals – **Juan Medraño** (USA)

Biodiversity of pollinators and pollination – **Robbin Thorp** (USA)

Genetic resources of yeast and other micro-organisms – **Charles Bamforth** (USA)

History of wine industry, emphasis on human and biological diversity – **James Lapsley** (USA)

New crops for California (food, fuel, fiber, feed) – **Stephen Kaffka** (USA)

Agrobiodiversity and ecosystem services – **Louise Jackson** (USA)

Dynamic California cuisines – **Karen Caplan** (USA)

Day 5 Thursday (18 September)

Post-Symposium Tours

1. Birds of the Cosumnes River Preserve – Riparian Forests and Managed Wetlands
2. Napa County Wine Country
3. Petaluma Poultry History and Sonoma Tour
4. Fish Farms of the Sacramento Valley
5. Germplasm Facilities of UC Davis and Environs
6. Native Biodiversity and Plant/Pollinator interactions in Agricultural Systems

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Symposium Concept

Our knowledge of the processes that affect agricultural biodiversity, in both plants and animals, has increased considerably in the recent years since an international symposium was held in Aleppo, Syria in May 1997 [*The Origins of Agriculture and the Domestication of Crop Plants in the Near East*], dedicated to Jack R. Harlan, 1917–1998, evolutionary biologist and plant explorer]:

- ♦ The origin of domestication and the inheritance of the domestication syndrome of crop plants and domestic animals are now being investigated with powerful genomic tools.
- ♦ Increasingly, domestication constitutes a model to study evolution in general and the molecular and genetic bases of adaptation.
- ♦ The discovery and characterization of micro-remains allow archaeologists to explore the origins of agriculture in a broader range of environments.
- ♦ The role of farmers in maintaining agricultural biodiversity has received increasing attention.
- ♦ The utilization of geographic information systems in the characterization of agricultural biodiversity has become commonplace.
- ♦ The parallel evolution of beneficial microorganisms and pathogens in both crop and animal domestication has provided an added dimension to the field.
- ♦ The study of agricultural biodiversity is becoming an increasingly multidisciplinary field, combining the approaches of a wide range of disciplines in the natural and social sciences.

The objectives of this new symposium, Harlan II, are to review this progress, assess the current status of agricultural biodiversity, and chart directions for its future.

Co-chairs of Symposium

Paul Gepts, Dept. of Plant Sciences, and
Tom Famula, Dept. of Animal Science
University of California, Davis

Local Organizing Committee

Charles Bamforth ♦ Bob Bettinger
Eric Bradford ♦ Francine Bradley
Steve Brush ♦ Adi Damania
Ellen Dean ♦ Serge Doroshov
Jan Dvorak ♦ Tom Famula
Paul Gepts ♦ Gurdev Khush
Mingcheng Luo ♦ Pat McGuire
Eric Mussen ♦ Angela Oates
Dan Potter ♦ Cal Qualset
Leanna Sweha ♦ Tom Tomich

International Advisory Committee

- ♦ Patricia C. Anderson, CÉPAM CNRS, France
- ♦ Ofer Bar-Yosef, Harvard University, USA
- ♦ Fredrick A. Bliss, Seminis Seeds, USA
- ♦ Michael T. Clegg, UC Irvine, USA
- ♦ E. Patrick Cunningham, Trinity College, Ireland
- ♦ Cary Fowler, Global Crop Diversity Trust, Italy
- ♦ Emile Frison, Bioversity International, Italy
- ♦ Arturo Gómez-Pompa, Univ. Veracruzana, Mexico
- ♦ David R. Harris, University College London, UK
- ♦ Roger Leakey, James Cook University, Australia
- ♦ Stephen J. O'Brien, National Cancer Institute, USA
- ♦ Ed Rege, ILRI, Kenya
- ♦ Jan Salick, Missouri Botanical Garden, USA
- ♦ Barbara Schaal, Washington University, USA
- ♦ Stephen Smith, Pioneer Hi-Bred Intl., Inc., USA

Funding

Participants will be charged a registration fee and it is expected that this income will cover approximately one-third of the Symposium expenses. Core financial support provided by the Departments of Anthropology, Animal Science, Human and Community Development, and Plant Sciences of the UC Davis College of Agricultural and Environmental Sciences and the UC Genetic Resources Conservation Program, Division of Agriculture and Natural Resources will cover approximately one-sixth of the Symposium expenses.

Additional funding is needed to cover the remaining half of Symposium expenses. Contributions are being sought from proposals and solicitations to USA national public research funding organizations, international research organizations, corporate entities, California commodity boards, and California state government agencies.

Suggested levels for contributions:

Platinum—\$10,000 and up

Gold—\$5,000 to \$10,000

Silver—\$1,000 to \$5,000

Bronze—up to \$1,000

Products of the Symposium

Abstract booklet at time of the Symposium.

Book to be published after the Symposium.

For more information and registration, go to the Symposium website: <http://HarlanII.ucdavis.edu>

Conserving and utilizing agricultural biodiversity is an integral part of the sustainable management of agricultural and natural ecosystems.

Symposium Secretariat

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