

UCDAVIS



Agricultural
Sustainability
Institute

Summer 2009

Fundraising case for support

The University of California, Davis,

with its **100-year land-grant history** of conducting critical agricultural, environmental, and social science research, founded the Agricultural Sustainability Institute (ASI) in 2006 to address agriculture and food-system sustainability challenges in California and beyond as an example and partner for the world.

The ASI brings together **renowned agricultural teaching and research**; top-ranked environmental sciences programs; and a **statewide network of expertise** to deliver solutions. More than 150 faculty, and as many students, are directly committed to sustainable agriculture programs at UC Davis.

Building on the strength of UC Davis and with the support of our partners, the Agricultural Sustainability Institute will be a:

- **Convenor:** bringing diverse perspectives together
- **Clearinghouse:** synthesizing, translating and communicating useful information
- **Pioneer:** taking early action on major issues
- **Catalyst:** being the thought leader for interdisciplinary research and linking science with action for sustainable solutions
- **Incubator:** nurturing the next generation of agricultural leaders

The priorities and programs outlined in this document will allow us to be all of these things and to achieve the mission of the ASI:

The mission of the ASI is to ensure access to healthy food and to promote the vitality of agriculture today and for future generations.

Investing in children's health



Thirty years ago, UC Davis students interested in exploring and practicing alternative and organic agriculture created the Student Farm. Today, the Farm provides **hands-on visits** for more than a thousand elementary school children each spring. Children look for worms and make salad from the produce they pick—a real life lesson in ecology and nutrition.

Through the Creating and Sustaining Your School Garden program, teachers can learn more about garden-based education to implement programs at their own schools. The UC Davis Student Farm also serves as a regional training center for the statewide school garden program. With your help, we can be an even stronger **resource for K-12 educators** in California and model a new kind of education that engages children in learning about food, nutrition and the environment.

Philanthropic priorities to support children's health include:

Funding for a field based educator and horticulturist to create garden-based curriculum for the children and further develop the Ecological Garden and other programs. Staff positions cost \$75,000 per year and funding can be endowed for \$1.7 million.

An outdoor teaching space for visitors and an associated kitchen facility to allow students to explore how to prepare produce for eating. The kitchen can be built with a gift of \$100,000 and the teaching space will cost \$50,000.

It's great to see the kids get so excited about learning through hands-on experience [at the Student Farm].

- UC Davis Intern

Educating future leaders



As California's rural population shrinks, we must educate more students, including those from urban backgrounds, for careers in agriculture. These professionals will sustain our farms, ranches and agricultural communities but they will also face complex challenges that won't fit neatly into a single area of expertise. When it comes to cross disciplinary research and education, UC Davis has always been on the cutting edge with graduate groups. Now, we have a chance to bring this approach to undergraduate education.

A **new major in Sustainable Agriculture and Food Systems** is on the horizon. Spanning seven academic departments and involving an innovative curriculum and experiential learning, the major will be a model of interdisciplinary education. Graduates will have the skills and knowledge to become **leaders in addressing the complex questions** associated with the global need for more sustainable agriculture and food systems. They will be our future farmers, educators and policy makers filling critical roles in the future of agriculture. Scholarships, internship opportunities and program funding are all critical to the success of this new program.

Philanthropic priorities to support education include:

Scholarships for undergraduate students: a \$3,500 gift covers one quarter's fees for an in-state undergraduate and \$10,000 covers an out-of-state or international student. \$75,000 endows in perpetuity a scholarship for an in-state student.

Permanent funding for a staff member to coordinate and supervise internships and field activities for courses and to support the new major. The position will cost \$75,000 per year and can be endowed for \$1.7 million.

Student input has been incorporated into this major so it's particularly exciting to me to see it come to fruition.

*-Maggie Lickter,
UC Davis Student*

Taking the long view



Using tomato samples from the Russell Ranch's **100 year Long Term Research** in Agricultural Systems (LTRAS) field study, UC Davis food scientists compared the phytonutrients in organic and conventional tomatoes and found significantly more beneficial phytonutrients in the organic samples. The Russell Ranch is also a demonstration site where farmers can **test alternative equipment** for reduced impact tillage, fertilizing and other farming operations. The vision for the future of the Ranch involves integrating animal agriculture and perennial cropping systems.

It is impossible to see what other research outcomes will be built on the data collected at Russell Ranch or what else might be learned from this unique research facility. Support for the facility and associated research will ensure that it continues and evolves for the next 82 years as it has for the past 18.

Philanthropic priorities to support innovative, place-based research include:

Equipment to ensure safe, efficient and environmentally responsible management of the Russell Ranch. Gifts ranging from \$12,000 to \$150,000 can help purchase equipment such as: a grain combine, a tomato vine trainer and a tractor GPS system.

Post-doctoral fellowships for researchers interested in working at the Russell Ranch. \$60,000 per year can fully fund a post doctoral scholar.

Solutions for farmers



Farmers are seeing input costs rising while environmental regulations tighten. Solutions developed at UC Davis are helping to address both issues. UC Davis Professor Thomas Harter pioneered and introduced a cost effective way to optimize the use of manure to fertilize forage crops. Producers reported consistent yields and **average savings of \$55/acre** using the new system. At the same time, shallow groundwater **nitrate concentrations were reduced 25%** over four years.

Looking ahead, **water, energy and climate change** are pressing issues that the ASI researchers will address with the goal of finding win-win solutions. Consistent, flexible research funding is critical to allow researchers to set a forward looking agenda that examines these cross cutting issues. The ASI is structured to coordinate this type of work to solve tomorrow's problems today.

Philanthropic priorities to develop forward looking solutions for farmers include:

Gifts of all sizes to the **Academic Venture Capital Endowment** will give ASI the flexibility to fund an innovative, forward looking research agenda.

With a target, annual budget of \$1 million, the Sustainable Agriculture Research and Education Program (**SAREP Grants**) program will provide competitive funding for activities in agricultural sustainability and food system research, education and information dissemination. At this target level, the grants program will attract top quality applicants and focus researchers' efforts on agricultural sustainability challenges and solutions.

The solid information I receive from UC Davis gives me the confidence to try new farming techniques that improve the soil, result in a healthy environment for my employees, are profitable, and reduce consumption of energy and water.
-Scott Park,
Park Farming

Supporting a healthier food system



Consumers are concerned about health and the current energy crisis. They wonder how and where their food is produced and if it is safe and sustainable. New models, pioneered at UC Davis, link regional agriculture with schools and institutions. Farm-to-school programs have been shown to increase school children's consumption of fresh fruits and vegetables and promote healthy food choices. They can also open new markets for small and mid-size growers. These regionally based systems may be the future.

But is local always better? A comprehensive life cycle assessment of certain foods is underway on campus to develop our **understanding of tradeoffs** in energy and greenhouse gas emissions from farm to fork. The outcomes of this innovative work will give decision makers in the food system rigorous **science-based information** needed to make more energy- and climate-conscious choices.

Philanthropic priorities for food system research include:

Life cycle assessment of specific commodities will help researchers fully understand the energy and greenhouse gas intensity of the commodity and the opportunities for impact. Assessment of a single commodity, such as tomato paste, rice or milk, costs less than \$250,000 in researcher time and supplies.

\$1.5 million endows a faculty position for the future. Endowed positions ensure continued focus on an area of study and allow UC Davis to attract and retain the most outstanding faculty. Already, there are several endowed faculty positions affiliated with the ASI.

Farm-to-school programs are a win-win situation—local produce helps improve health and schools have the potential to absorb the volumes small and mid-scale growers have to offer.

-Richard Rominger
Winters farmer

Informing Policy Decisions



Scientifically-validated indicators will allow us to **anticipate emerging sustainability challenges and opportunities.**

In addition to providing the scientific foundation for an operational definition of “sustainability” for California’s agriculture and food system, the sets of sustainability indicators could contribute to development of agricultural sustainability standards and a long-term strategic vision for the future of California’s food system. The evolving science-based consensus may also contribute to the formation of **new political coalitions** in support of the sustainability of California’s food and agriculture.

Already, a doctoral seminar on ecosystem assessment methods has been launched at UC Davis and will be offered annually to help tackle this challenge and create a cadre of graduate students with assessment expertise. Continuing work on developing a set of indicators, in consultation with stakeholders, is a key function of the ASI.

Philanthropic priorities to develop scientifically-validated indicators include:

Stakeholder meetings and distinguished speaker series will bring together the brightest minds to focus on agricultural sustainability. A gift of \$45,000 will fund the National Symposium on Food Systems and Sustainability for an additional year. Gifts of \$5,000-10,000 allow the ASI to host distinguished speakers.

Graduate student support is critical for this type of research and gifts of \$50,000 can fully support a graduate student for one year of study.

It is our mission to lead the way for an advanced 21st century food supply. UC Davis is a key asset and partner in our quest to address the challenges we face in diet-related diseases, hunger, energy, water and a changing climate.

*-A.G. Kawamura
California Secretary of Food and Agriculture*

Advancing social justice



Discussions of agricultural sustainability frequently focus on production practices or environmental concerns but too often overlook people. From farm workers to food service employees, people and communities are at the heart of the food system. Recent work done at UC Davis on ergonomics and health risks for agricultural workers has been effective, as far as it goes, but much more needs to be done. This is only part of the effort needed to identify and remedy critical barriers to achieving social justice for workers in agriculture and the food sector and sustainable communities for all.

If we are to truly achieve our mission, social sustainability must be integral to all the work done by the ASI. We recognize the university historically has underinvested in these issues, but donor support can help ensure appropriate focus on equity, opportunity, and prosperity for farm workers, other food system workers, and their communities.

Philanthropic priorities to promote social sustainability include:

Endowed chair in social justice.

Universities use endowed faculty positions to attract top scholars and ensure continued focus on a particular subject matter. A \$1 million chair focused on the people in agriculture will ensure continued focus.

Support students from underserved communities.

Higher education has always been an equalizing opportunity. Sustained financial commitment in the form of scholarships, outreach and mentoring programs is crucial to help students from underserved communities prepare to join a new, more diverse generation of leaders in California agriculture.

Realizing the vision

The W.K. Kellogg Foundation understands that UC Davis will play a major role in the future of agriculture and in 2006 gave \$1.5 million to endow a chair in food systems that allowed the campus to recruit a world class leader for the ASI. Likewise, the J.G. Boswell Foundation and the Sesnon Family have also endowed chairs affiliated with the ASI. Other donors ranging from food companies to individuals to estate trustees and philanthropic foundations have all supported the work of the Agricultural Sustainability Institute.

We invite you to make a philanthropic investment in the sustainability of agriculture for future generations.

Investment in the ASI leverages the incredible knowledge base and resources of the University of California to make a real difference in the future of agriculture. Philanthropic funds go to programs and people and make possible the programs outlined in this document. To further discuss any of these opportunities or more information about the ASI, please contact:

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