

UC DAVIS

AGRICULTURAL SUSTAINABILITY INSTITUTE

College of Agricultural and Environmental Sciences



**UNIVERSITY OF CALIFORNIA DAVIS
AGRICULTURAL SUSTAINABILITY INSTITUTE
(ASI)**

STRATEGIC SNAPSHOT AT NOVEMBER 2012

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OUR INSTITUTE AT A GLANCE

Update: November 2012

Our mission is to ensure access to healthy food and to promote the vitality of agriculture today and for future generations. We do this through integrative research, education, communication and early action on big, emerging issues.

Our vision for the Agricultural Sustainability Institute. ASI will be a:

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

Thematic areas

Agriculture, Resources, & the Environment: integration of agricultural systems at the farm/ranch and landscape levels.

Food & Society: integration of the food system, linking production, distribution and consumption.

Education & Leadership: integrated programs for sustainability education and leadership - kindergarten through post-graduate, including a **new undergraduate major in Sustainable Agriculture and Food Systems** and support for the **PhD in Agroecology** at UC Davis.

Sustainability Benchmarks: a crosscutting activity to produce scientifically-validated metrics and indicators to benchmark trends in sustainability of agriculture and the food system.

Farmworker and Rural Community Wellbeing: a crosscutting activity to address salient issues affecting wellbeing of farmworkers, food system workers, and rural communities through research, education and extension.

Programs and facilities

UC ANR statewide Sustainable Agriculture Research & Education Program (UC SAREP)

Russell Ranch Sustainable Agriculture Facility at UC Davis

Student Farm at UC Davis

Inter-institutional Network for Food, Agriculture & Sustainability (INFAS), national network hosted by ASI

Team and associates

- ◆ Director Tom Tomich started January 2007
- ◆ Deputy Director Kate Scow started January 2008
- ◆ 24 other full and part-time staff of various programs and projects, including 3 postdoctoral fellows
- ◆ 13 graduate student researchers and 13 undergraduate student assistants
- ◆ 9 ASI-affiliated professorships in agroecology, sustainability science, sustainability and society, economics of sustainability, plant disease management/soil microbiology, soil science, pollination ecology, invertebrate community ecology, and sustainable animal systems.
- ◆ 10 ASI fellows, including faculty from the College of Engineering and the School of Education, as well as the College of Agricultural and Environmental Sciences at UC Davis.
- ◆ A further 150 UC Davis faculty self-identified as strongly interested in sustainable agriculture.
- ◆ A distinguished advisory board of 26 leaders, representing diverse stakeholder interests.
- ◆ UC Davis CA&ES Dean's Office support in fundraising, events, administration, IT.
- ◆ An expanding network of partners, including UC Davis Students for Sustainable Agriculture, UC Cooperative Extension specialists and farm advisors, and other partners in various sectors.

Current annual budget: over \$3.75 million; campaign underway to increase to \$6 million.

DIRECTOR'S MESSAGE

To: ASI External Advisory Board members, ASI staff, and affiliated faculty
From: Tom Tomich, Director, ASI & SAREP
Date: 13 November 2012
Re: **Going to the next level**

We have a full schedule planned for our annual External Advisory Board meeting next Tuesday, 20 November. This is our first Board meeting away from the UC Davis campus. I particularly look forward to the opportunity to explore ways we can strengthen our collaborations with our county- based UC Cooperative Extension colleagues. I am very grateful to San Joaquin County Director Brent Holtz for his collaboration in hosting our visit. We will start the day by identifying some big issues to be explored in greater depth as we travel together by bus to nearby project sites. In addition to providing enlightening field experiences, our journey is intended to create opportunities for you to engage in creative, free-ranging, substantive discussions that will produce fresh insights and practical strategies to take ASI to the next level of performance in pursuit of our mission.

To prepare for our meeting, I would ask that you please do the following three things:

- 1) **Consider the “New and Noteworthy” items** on pages 5-6 of this year’s Strategic Snapshot, which chronicle ASI’s most outstanding accomplishments of the past year. (Particularly if you are new to the ASI Board, you also may wish to skim the balance of this year’s “Strategic Snapshot”, the annual update of our strategic plan. New sections beyond page 8 are highlighted in *blue* or *green* italics.)
- 2) **Review and reflect on ASI staff members’ perceptions of ASI’s current strengths, weaknesses, opportunities and threats** on pages 7-8.
- 3) **Please bring your own short list of top issues to contribute to the discussion.** As a starting point for your consideration, here are some of the things on my mind this year:

- **So that each of our Board members can be a champion for ASI**, what are the most effective means to **provide our Board with sufficient information** on our complex activities and many achievements?
- How can we work together to **accelerate growth of ASI's endowments**, which are crucial to integrity and independence of our programs and which enable us to shape the agenda for sustainable agriculture and food systems?
- How can ASI and SAREP collaborate with other colleagues in the UC Division of Agriculture and Natural Resources to **provide better support and more useful information to UCCE farm advisors and other county-based colleagues**?
What are the particular challenges and opportunities facing younger UCCE colleagues early in their careers, who often will be working across multiple counties? How can we help them as they develop their own programs?
- What will be the **implications for ASI of the transition in leadership of the College of Agricultural and Environmental Sciences** at UC Davis? How can our Board members, other friends of ASI, affiliated faculty and staff contribute in the recruitment of the next CA&ES Dean?
- What are the **implications of the proposed World Food Center for ASI's strategies and, in particular, our fundraising prospects**? How can we avoid duplication and seek synergy with what seems poised to be a major new initiative for UC Davis? (The attached **two-page World Food Center concept note** was provided for distribution to you by our Chancellor, who appreciates our need for this discussion and looks forward to our input.)

Of course, **issues like these are exactly why our superb Board is such an important source of strength for ASI**. We greatly appreciate the service of everyone on the Board. Please join me in expressing our gratitude for the service of departing Board members **Meredith Niles, Jennifer Ryder Fox** and **Neal Van Alfen** and in welcoming this year's new Board members **Mary Delany, Katharina Ullmann, Nita Vail** and **David Wehner**.

“New and Noteworthy”

(November 2011 through October 2012)

- ✓ **ASI’s budget is on its way to exceed \$3.75 million for 2012/13, an increase of more than 20% over last year.**
- ✓ **A \$200,000 leadership gift from the TomKat Charitable Trust** launched a drive to raise \$1 million by December 2014 to create an **Endowed Professorship in Agroecology**.
- ✓ **Del Monte Foods adopted the first acre in the limited-time opportunity to “Adopt-an-Acre” of the Century Experiment, which will build an endowment for the Russell Ranch Sustainable Agriculture Facility.** Other \$10,000 commitments, including naming opportunities, are in discussion.
- ✓ **The Sustainable Agriculture and Food Systems Endowment is within striking distance of the \$25,000 threshold** to endow this fund to support all aspects of the ASI program in perpetuity.
- ✓ **ASI will announce its first yearend fundraising appeal** in the coming weeks.
- ✓ In appreciation to faculty members who have aided in ASI’s rapid growth and development over the past six years, **the institute established a new faculty affiliation and named the first ten “Fellows of the Agricultural Sustainability Institute”** in January 2012; they are: Heidi Ballard, Howard Ferris, Shermain Hardesty, Thomas Harter, Richard Howitt, Alissa Kendall, Frank Loge, Mark Lubell, Kate Scow and Sheri Zidenberg-Cherr.
- ✓ The final report on **SAREP’s Farmworker Initiative** is nearing completion. And a new **\$100,000 grant from the Department of Pesticide Regulation** will fund a study of farmworker activity patterns to use in updating DPR pesticide exposure data. This grant will allow SAREP’s work on farmworker wellbeing to continue for at least an additional 18 months.
- ✓ **SAREP’s entrepreneurial/educational strategy to help small-scale, ethnic and minority farmers enter values-based supply channels** through wholesale distributor tours was showcased on the California Department of Food and Agriculture website.
- ✓ **Regional procurement is increasing in four California school districts in which SAREP is active** in farm-to-school research and education.
- ✓ The **Sustainable Sourcing of Global Agricultural Raw Materials** project systematically developed conceptual frameworks and rigorously identified global sustainability issues and over 1,984 indicators pertaining to agriculture and supply chains.
- ✓ **Mars, Incorporated, announced additional gifts of \$475,000 to support ASI’s Sustainable Sourcing of Global Agricultural Raw Materials project** for 2012/13.

- ✓ New USDA funding was received to develop a **SAREP Solution Center focused on nutrient and water management and climate change**. This is a direct outcome of the **California Nitrogen Assessment**, which is nearing completion of its scientific review process.
- ✓ The **Russell Ranch Sustainable Agriculture Facility completed its ten-year soil sampling survey of Century Experiment plots**, collecting over 3,000 samples in 8 depth increments to 3 meters deep. **UC DANR is providing \$55,000** to support this effort.
- ✓ Russell Ranch scientists and collaborating farmers also launched a **soil biology research initiative**, an outgrowth of the **new science plan for the Century Experiment**.
- ✓ In its **first foray with perennials**, Russell Ranch integrated alfalfa into an annual farming system to investigate impacts of reducing tillage and increasing carbon inputs.
- ✓ The number of **students involved in field-based learning experiences at the Student Farm increased by more than 50%** and these students are developing and meeting clearer and more ambitious learning objectives.
- ✓ **More than 40 students already are majoring in our Sustainable Agriculture and Food Systems (SA&FS) major**, which was launched just last year.
- ✓ **And two students are set to receive the SA&FS Bachelor of Science in 2012; both already are employed** in their chosen field and using their knowledge and skills acquired at UC Davis.
- ✓ The first round of **Van Vlierden Scholarships** was awarded in 2012. SA&FS majors have priority for these scholarships.
- ✓ The **Columbia Foundation provided an additional \$75,000 in its continuing support of the SA&FS major**.
- ✓ **True North Foundation deepened its support of mentoring activities at the Student Farm** with a new gift of \$43,000.
- ✓ A **MacArthur Foundation-funded digital media learning grant** will support development of digital portfolios for SA&FS students, including **“badges” they can display on LinkedIn, Facebook and to future employers**.
- ✓ ASI projects and programs increasingly feature in UC publications. For example, the **UC TV “Future of Farming” YouTube video series highlights ASI-affiliated programs and people**.

OUR STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS:
Summary of perceptions based on a staff discussion on 30 October 2012
with emphasis added in green or red by the ASI director

Strengths

- **High visibility of ASI at UC Davis and positive view of ASI by UC leaders**
- **Renowned, active and engaged External Advisory Board**
- **Growing network of strong partners locally, statewide and nationally**
- **Committed, talented and passionate staff driven by a common mission and vision, shared values, shared motivations, and a diversity of communication styles**
- **Affiliated faculty are getting promoted and growing in number**
- **Ability to draw on talents, passions and perspectives of students; new, strong, and growing undergraduate degree program (SA&FS); SA&FS grads are getting jobs; strong focus on students and their learning experiences**
- Diverse funding; hope for stabilization in UC core funding (UC DANR and CA&ES); ample opportunities for extramural funding
- SAREP statewide mandate and track record of impact spanning decades
- Clear focus, targeting key issues, capabilities to affect society on many levels
- Creative entrepreneurial spirit, embracing failures as well as successes.
- Adapted to shoe-string budgets; can-do attitude to tackle huge workload
- Diversity of talents, expertise, and personalities
- Units work well together: increasingly seamless connections between Student Farm, SA&FS major, Russell Ranch and SAREP; breadth and depth from strength of our units

Weaknesses

- **Weak/inadequate/superficial communication and engagement with ASI board regarding exciting detail of ASI initiatives and fundraising opportunities**
- **Weak interaction between SAREP and UC farm advisors; challenge of supplying practical solutions for farm- and ranch-level problems and opportunities**
- **ASI endowments are not growing fast enough**
- **Core budget for Russell Ranch is insufficient for its scientific goals (and potential)**
- **Insufficient and unreliable funding for SAREP grants program**
- **Work load imbalance, overstretched staff, and risk of staff burnout**
- UC bureaucracy (external to ASI) impedes fast action on new things
- Team weaknesses (internal to ASI) in embracing conflict and mutual accountability
- Insufficient engagement of faculty in leading ASI research projects
- Staff demographics do not match California demographics
- In our excitement to address emerging issues and take on new challenges, we risk not completing other projects we started, both small and large
- Dispersed locations add to challenges of collaboration and internal communication
- External communication: outreach activities are under-staffed
- Slow/patchy implementation of ASI/SAREP communication strategy
- No succinct/cohesive way to describe ASI clearly to external audiences

Opportunities

- **Possible coordination of strategy and fundraising with proposed UC Davis World Food Center**
- **Growing awareness of ASI and recognition of UC Davis as premiere institution for sustainable food systems; unique opportunity to lead national network to frame research and education agendas on food, agriculture and sustainability**
- **ANR strategic initiatives have created new opportunities for SAREP**
- **Opportunity for input to recruit new CA&ES dean who will champion ASI**
- **Opportunities for positive change through new hires in AES and UCCE**
- **More foundations are funding food, nutrition, agriculture, and environment; new opportunities in Bay Area, Silicon Valley, and nationally through AGree.**
- **High level of public interest in food, farming, sustainability; virtually all the issues that ASI encompasses; growing consumer and corporate interest in agriculture and food system sustainability**
- **Growing awareness and openness to sustainability issues and ASI by California farmers and ranchers**
- **Student enthusiasm; growing student interest in food and agriculture**
- Expanding networks locally, statewide, nationally; potential to connect with Mediterranean ecosystems around sustainability and climate change
- ASI is working on big emerging issues
- Proximity to California State Legislature
- Collocate ASI and SAREP staff in core area of UC Davis campus
- Engagement with federal programs about long-term research

Threats

- **Possible strategic duplication, fundraising competition with proposed UC Davis World Food Center**
- **Scarce public funding: challenge of remaining focused on science in the public interest**
- **Poaching of affiliated ASI-affiliated faculty by other institutions**
- **Massive retirement of AES faculty, UCCE specialists and farm advisors**
- **CA&ES leadership changes could erode financial and programmatic support for ASI: will a new CA&ES dean champion ASI?**
- External perception of ASI : “sustainability” is perceived negatively by some audiences
- External (including DANR) misperception of SAREP: a “fringe” program
- External misperception of UCD Davis: only serves “big ag”, only serves “little organic”, climate change “hoax”, “ivory silo” that does not translate science into practice, etc.
- Extreme anti-government, anti-academic, anti-science sentiments among some stakeholder groups.
- Proliferation of sustainable agriculture and food systems programs (Berkeley, Stanford, Cal Poly SLO, etc.) means ASI/SAREP no longer occupies unique niche in California higher education.

I – STRATEGIC FRAMEWORK

What distinguishes ASI?

The units of ASI are held together and distinguished by a shared mission, vision, values and operational principles and a passion for excellence in sustainability science that can transform California agriculture and fully realize California’s potential for global leadership in research, education, and action for agricultural sustainability. These strategic elements were developed collaboratively by ASI staff with input from advisory board members and other stakeholders. We welcome additional comments and suggestions at any time.

*Status: Changes and additions appear in **blue italics** below. The vision for ASI developed at the inaugural external advisory board meeting now reflects four years of refinements. This year’s snapshot includes greater detail on milestones attained in the past year and workplans for the coming year in Part IV, “Themes, Milestones, Initiatives, and Current Workplans.”*

1. **Our mission** is to ensure access to healthy food and to promote the vitality of agriculture today and for future generations. We do this through integrative research, education, communication and early action on big, emerging issues.

2. **Our vision for food and agriculture:**

- ◆ A food and agricultural system that is innovative, adaptive and profitable;
- ◆ promotes prosperity and equity for people working in agriculture and the food system and for their communities;
- ◆ provides healthy food for everyone;
- ◆ improves the environment and human health;
- ◆ builds awareness and understanding of the food system; and
- ◆ engages public participation in policy decisions affecting food and agriculture.

3. **Our vision for ASI:**

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

4. Geographic scope of ASI:

- ◆ **California:** our primary mandate is to serve our home state, which is recognized widely as one of the largest and most dynamic agricultural sectors on the planet. The UC SAREP statewide program is an important mechanism for statewide impact through partnerships with UC Cooperative Extension specialists and county-based farm advisors, among others.
- ◆ **United States:** to realize ASI's potential for national impact, we host the Inter-institutional Network for Food & Agricultural Sustainability (INFAS), which was launched in 2010.
- ◆ **International:** we envision a gradual increase in international activities as appropriate opportunities arise, emphasizing academic exchange and scientific networking. In addition to international exchanges and global networks, our two regional priorities are linkages with programs in the Mediterranean, arid, and semi-arid agro-climatic zones (e.g., Australia, Chile, Egypt, Italy, South Africa, Spain, and the International Centre for Agricultural Research in Dry Areas) and with sub-Saharan Africa. (At this time, we do not anticipate creating capacity for international project implementation; instead ASI will collaborate with the CA&ES International Agricultural Programs Office at UC Davis.)

5. **Our core values:** creativity, inclusiveness, integrity, partnership

6. Our operational principles

Practicing sustainability: we strive to enact sustainability principles and practices in our own activities.

- ◆ **“Walking the talk”:** we work to use sustainable practices in our own operations and actively strive to embody our core values: creativity, inclusiveness, integrity, partnership.
- ◆ **Community:** we embrace and enact the UC Davis Principles of Community in our daily work.
- ◆ **Respect for all:** we affirm the inherent dignity in all people and endeavor to relate to all with respect, fairness and justice.

Legitimacy: we set our priorities and design our programs in response to concerns and aspirations of stakeholders representing the diversity of California

- ◆ **Spanning boundaries:** we serve the entire state, and all segments of agriculture and the food system.
- ◆ **Science in the public interest:** we are committed to transparency in governance and priority setting; to open access to results and information; and to accountability to stakeholders.
- ◆ **Historical awareness:** we recognize the University's historic, current, and potential future roles in shaping agricultural and food systems and their effects on

environment and society. We strive to make informed and responsible decisions regarding research, teaching and outreach based on this knowledge.

- ◆ **Seeking consensus, while respecting differences:** our activities employ a common set of ground rules, including respect for different viewpoints.

Usefulness: responsiveness to stakeholders' needs – the broad interests of society as well as needs of specific groups – is key to the relevance of our initiatives and provides the necessary focus on real issues and opportunities.

- ◆ **Communication for impact:** we ensure that input from stakeholders consistently is sought and used effectively and that our products are translated to reach key audiences in forms they can use.
- ◆ **Integration of knowledge:** we actively seek and recognize the value of knowledge embodied in experience on farms and ranches, in communities, in industry, and in policy arenas.
- ◆ **Commitment to experiential learning:** we recognize the value of learning-by-doing and actively seek to integrate practical opportunities in our educational programs, training, and outreach activities.
- ◆ **Creating and sustaining a learning organization:** feedback, monitoring, evaluation, and impact assessment will be embedded in overall design of our activities.

Credibility: we hold ourselves to the highest standards of professional integrity and scientific rigor.

- ◆ **Forward-looking agenda:** we will create and sustain mechanisms to identify and assess emerging opportunities and threats, based on scientific analyses and stakeholder input and informed by global trends.
- ◆ **Broad scope, with multidisciplinary balance:** we integrate economic, environmental, and social dimensions of sustainability.
- ◆ **Scientific integration and synthesis:** our activities span big, inter-linked issues and multiple scales – ranging from molecular to global; past, present, future.
- ◆ **Open inquiry:** we promote critical analysis to challenge 'conventional wisdom' and to expand our understanding of technical, institutional, and policy options using the best natural and social science methods available.

II - INSTITUTIONAL ASSETS

ASI's foundations

II.1. Land Grant Heritage

The College of Agricultural and Environmental Sciences (CA&ES) at UC Davis has a 100 year history of serving agriculture and addressing environmental concerns in California and around the world. In 2006, CA&ES established ASI to focus research, teaching and outreach on the challenges facing agriculture in the coming century. ASI provides a hub that links initiatives and education in sustainable agriculture and food systems across CA&ES departments and divisions, across the University of California, and with other partners across our state, nation, and planet. Issues facing the land grant system in the US include needs to (1) develop and expand research programs and academic curricula to reflect a contemporary view of agriculture and food systems, (2) remove barriers to interdisciplinary research, teaching, and extension, and (3) engage a wide variety of stakeholders to assess their needs and develop priorities to design useful programs and create effective means of communication. The Inter-institutional Network for Food and Agricultural Sustainability (INFAS), which is hosted by ASI and was endowed by the W.K. Kellogg Foundation in 2010, is designed to address a number of issues facing the land grant system and had its inaugural meeting at UC Davis on 11 November 2010.

II.2. Programs and Facilities

(See Appendix 1 for ASI organization chart and Appendix 2 for one-page descriptions of each unit or program.)

Sustainable Agriculture Research and Education Program (SAREP) – a statewide program of the University of California Division of Agriculture and Natural Resources with capabilities in grant administration, knowledge management, communication and outreach.

SAREP grants program was re-launched with an RFP issued in fall 2010. In 2011, 14 SAREP projects were funded totaling \$150,000. They include 1 research grant (farmworkers), 5 planning grants, 5 education and outreach grants and 3 graduate student awards.

The UC Division of Agriculture and Natural Resources (DANR) sponsored a 5-year external review for SAREP in 2009. Key documentation is included in Appendix 12. Major points from that review include:

- ♦ **Structure:** ANR endorsed the consolidated ASI/SAREP strategic plan and external advisory board, as long as “the distinct mission and objectives of SAREP are delineated” in ASI strategic plans and annual SAREP work plans.
- ♦ **Governance:** recommended expanding the external advisory board, in particular to include UCCE representatives. (This has been implemented.)
- ♦ **Scope:** recommended expanding SAREP’s geographic coverage,

- stakeholder engagement, and commodity coverage.
- ◆ **Collaborations:** Recommended expanding engagement with UC ANR programs, workgroups, AES scientists, UCCE specialists, and county-based advisors.
 - ◆ **Science-based approach and communications:** SAREP should be the premier source and statewide dissemination focus for ... unbiased, balanced, science-based information on sustainable agriculture.
 - ◆ **SAREP grants program:** ANR recognizes the importance of the grants program in “impacting a greater range of programs”, “leveraging additional funds,” and “stimulating thinking”; the grants program “must be accountable in terms of reporting and communications.”

Based on its external review of SAREP, DANR renewed commitment to SAREP. Taken together, these DANR recommendations are in accord with our own strategic planning and programming objectives for SAREP as a key unit of ASI.

Subsequent to the SAREP external review, DANR has gone through its own strategic review and reorganization and has launched five new strategic initiatives. SAREP and ASI have deepened involvement with two of these DANR strategic initiatives: “Sustainable Food Systems” and “Healthy Families and Communities”.

Legacy of SAREP’s Biologically Integrated Farming Systems (BIFS) program--

BIFS projects typically included on-farm demonstrations, a collaborative model of outreach and extension to share technical information, and an organized program of monitoring key biological and economic variables to inform on-farm decision making. Between 1995 and 2002, SAREP funded ten multi-year projects in nine different farming systems--apple, citrus, dairy, prune (dried plum), rice, strawberry, tomato & cotton, walnut and winegrape -- through a competitive grants process. These projects were part of a larger set of initiatives including Biologically Integrated Orchard Systems (BIOS) projects coordinated by the Community Alliance with Family Farmers (CAFF) and the California Department of Pesticide Regulation’s Pest Management Alliance grants. Between 2002 and 2009, SAREP partnered with key UCCE advisors and specialists to acquire funding for two additional BIFS projects addressing fresh grape and lettuce farming systems. SAREP also led a workgroup to strengthen networking between UC researchers and extension staff with stakeholders beyond the UC system working on projects to encourage adoption of integrated farming systems.

BIFS projects demonstrated that when participating growers had evidence that yields and profits could be maintained with more environmentally-sound farming practices, they often adopted these practices on most of their acreage. Many non-participating growers were exposed to innovative practices through project outreach activities. There were many encouraging outcomes that emerged as a result of our BIFS projects. A few examples include:

- The West Side BIFS project (tomato & cotton) was instrumental in initiating a growing interest in conservation tillage among California growers.

- The Lodi-Woodbridge Winegrape project supported a regional sustainable winegrape growing program that eventually led to a certified eco-label for wines.
- Collaborations initiated by the Rice BIFS project led to a grower advisory group to guide much-needed research on alternative weed management systems.
- The publication of Agroecology in Action: Extending Alternative Agriculture through Social Networks by Keith D. Warner in 2007 used several BIFS projects as case studies to illustrate the value of learning sustainable farming practices through collaborative sharing of knowledge.

SAREP Solution Centers: Looking ahead to the next generation of BIFS. SAREP's leadership and collaboration in BIFS projects showed that growers can be willing partners in developing a more sustainable food and agriculture system. As ASI and SAREP agendas shift in response to stakeholder priorities and other developments, such as newer emphases on research and outreach at landscape level issues (in our Agriculture, Resources and Environment theme) and the community level (in our Food and Society theme) our work nevertheless must remain linked with (and grounded in) practical "grass-roots" experience exemplified by BIFS. Thus, SAREP's legacy of experience with collaborative innovation processes through BIFS that are designed, led and implemented by groups of farmers is an important component of ASI's institutional repertoire that compliments researcher-designed and implemented experiments at the Russell Ranch Sustainable Agriculture Facility and student-led initiatives at the Student Farm at UC Davis. *Status: the first SAREP Solution Center for nutrient management will be launched in early 2013 with a portion of funding from a USDA NIFA AFRI grant received by ASI affiliated faculty member Will Horwath.*

Russell Ranch Sustainable Agriculture Facility – Russell Ranch Sustainable Agriculture Facility – a 300-acre facility that houses the Long-term Research on Agricultural Systems (LTRAS) and Sustainable Agriculture and Farming Systems (SAFS) projects (our "Century Experiment"); the only long-term research facility for research on sustainability in irrigated agriculture in a Mediterranean climatic zone and one of the few facilities of its kind anywhere. Funding has been below sustainable levels for years. ASI Deputy Director Kate Scow has successfully led development of a new scientific plan for the Century Experiment, which focuses on the question: "Can we increase sustainability as we increase food production?" Key priorities in Russell Ranch planning include:

Integrative research at Russell Ranch:

- Diversify farming systems at Russell Ranch (i.e. perennials, market vegetables, mixed crop-animal systems, biofuels)
- Introduce more flexibility into the design of the systems to stay relevant and realistic
- Enhance capacity and promote research projects to address California's pressing concerns: competition for water, water use efficiency, climate change, habitat preservation, energy efficiency, air and water pollution
- Create a network connecting university research to landscape scale on-farm research (possibly building on SAREP's Biologically Integrated Farming Systems experience).

- Increase data collection from research projects at Russell Ranch; increase real time wireless data collection; make all data publically available and interactive.
- Facilitate and increase linkages with international interests in Mediterranean agriculture and sustainable development in general (Russell International)

Education at Russell Ranch:

- Create a “living laboratory” around Russell Ranch with facilities to support in-field teaching and student research
- Strengthen connections to other ASI programs and local community (i.e. Student Farm and SAREP)
- Encourage experiential education through class field trips, undergraduate internships and grants for graduate student research

Russell Ranch communication as a two-way flow:

- Create two-way channels of communication both to deliver and listen to science from users and practitioners, policy makers, extension specialists, NGOs
- Engage public on climate change and role of agriculture, resource conservation, food safety and security by hosting field days and hands-on workshops.

Student Farm – provides undergraduate and graduate students with experiential learning including sustainable production practices, applied research and outreach; includes Children’s Garden Program for K-12 students and teachers. The Student Farm continues to thrive, but additional funding is needed to realize significant upside potential.

In response to increasing student participation in Student Farm activities and higher levels of knowledge, skills and interests on the part of many of these students, the Student Farm launched a program planning and development project in early 2011. Student Farm staff have begun to implement changes in response to this input. These changes focus on: improving communication within the SF programs and activities; clarifying student roles, opportunities and requirements; and, strengthening the student community, particularly the ties between different Student Farm programs. Within the Student Farm’s program planning and development process, emphasis has been placed on developing and refining several student leadership positions and pathways.

More broadly, ASI-affiliated faculty and staff also are collaborating with interested students, faculty, staff and administrators to develop academic programs for a campus ‘sustainable living and learning community’ in the Student Farm neighborhood. ASI-affiliated faculty and Student Farm staff helped develop the program vision for the campus Sustainable Living and Learning Community and develop on- and off-campus partnerships to support the creation of a renewed residential learning community adjacent to, and collaborating with, the Student Farm.

Other collaborations with diverse campus partners:

- Partnerships with campus Dining Services have been strengthened through joint educational efforts linking all phases of the campus food system and increased sales and marketing of Student Farm and Russell Ranch products.
- The Student Farm is collaborating with the innovative D-Lab at UC Davis on project-based learning opportunities where sustainable agriculture meets appropriate technology.

Collaborations with primary and secondary schools and regional food producers:

- Student Farm staff are leading a project with on- and off-campus partners that provides diverse learning experiences for traditionally underrepresented high school students that increases their awareness of, and interest in, college studies and careers in sustainable agriculture and related areas.
- Student Farm's School Gardening Program staff are collaborating with statewide partners on a new CDFA Specialty Crops program-funded project focused on training both educators and trainers of educators involved in developing and using school garden programs. These staff also are part of statewide team that provides training and support for school food service, nutrition, teachers, garden educators and farmers on using and promoting fresh fruit and vegetable consumption in schools.
- School Gardening Program staff continue to lead a collaborative Farm-to-School project focused on increasing procurement of regional produce, professional development, and assessing program effectiveness in three distinct northern California school districts.
- The Student Farm is contributing to the Center for Land Based Learning's beginning farmer program, helping identify needs and develop the curriculum.

Bachelor's degree in Sustainable Agriculture and Food Systems – ASI hosts a new interdisciplinary undergraduate major, bringing liberal arts and experiential education principles into undergraduate agricultural sustainability education; core courses are offered by ASI-affiliates; governed by a committee of department chairs. The Sustainable Agriculture and Food Systems (SA&FS) undergraduate bachelor of science degree received final approval in June 2011, accompanied by great interest from students, the media, and the general public. The major is governed by a council of nine CA&ES department chairs, who meet at least once per year. It is hosted by ASI, which also hosts the internship program that is integral to the major. The Community Development Unit of the Department of Human Ecology provides the administrative home and the academic advisor. The master advisor and faculty advisors for each of three tracks are ASI-affiliated faculty. With a grant from USDA, we are collaborating with several partners to recruit diverse students to the major.

PhD in Agroecology and other graduate courses – ASI will support rejuvenation of this established area of emphasis within the top-ranked Ecology Graduate Group. Efforts also are underway to design a new graduate seminar on food systems to be offered through the Community Development Graduate Group. Enrollments currently are low in the agroecology area of emphasis. There has been great growth in interest in food systems among Community Development masters students. Funding for graduate student fellowships can attract new, high-caliber students, who will contribute to ASI research and education activities. Preliminary inquiry in 2009 found that “agroecology” is studied in a range of graduate groups at UC Davis and is not confined to the Agroecology Area of Emphasis. Needs of the broader group include Web presence and activities (intellectual and social) to convene students and faculty, both of these needs can be addressed by ASI. This also suggests that the process to identify recipients for the annual Shapiro Family Award for Best Agroecology Dissertation also needs to reach out to students (and their advisors) beyond the Ecology Graduate Group. The inaugural Shapiro Family Award for best dissertation in agroecology (or a related field) was awarded in 2010.

UC Davis Students for Sustainable Agriculture (SSA) – a campus student group working to promote agricultural and food system sustainability in academic programs and campus operations; includes about 10 leading members and 320 members of the community through listserv. Although not officially part of ASI, SSA’s activities include working closely with the ASI director, the director of our Student Farm and other staff to provide input from student perspectives and to facilitate liaison with other students at UC Davis.

II.3. People (See Appendix 3 for ASI personnel list)

Twenty-four staff (full- and part-time), including a five-person core support team serving ASI, SAREP and all affiliated facilities and programs. ASI typically employs 2-3 postdoctoral scholars, 6-12 graduate student researchers and 5-15 undergraduate assistants. *Status: As shown in Appendix 4, our staffing levels remained steady over the last year.*

Nine ASI-affiliated professorships, including Kellogg Chair in Sustainable Food Systems (T Tomich), Boswell Chair in Sustainable Management of Soil Resources (W Horwath), and Sesnon Chair in Sustainable Animal Systems (E Kebreab, starting December 2009) and other affiliated faculty in agroecology (J Six), sustainability and society (R Galt), economics of sustainability (P Merel), plant disease management/soil microbiology (J Leveau), invertebrate community ecology (L Yang), and pollination ecology (N Williams).

Fellows of the Agricultural Sustainability Institute. *In addition to ASI-affiliated professorships, the designation “Fellow of the Agricultural Sustainability Institute” recognizes faculty who are significantly engaged in ASI activities and are chosen by the ASI Director based on suggestions from ASI staff. In appreciation to faculty members who have aided in ASI’s rapid growth and development over the past six years, the institute named ten “Fellows of the Agricultural Sustainability Institute” in January 2012: Heidi Ballard, Howard Ferris, Shermain Hardesty, Thomas Harter, Richard Howitt, Alissa Kendall, Frank Loge, Mark Lubell, Kate Scow and Sheri Zidenberg-Cherr. Fellows were identified based on service to ASI and contributions to ASI research, education and outreach. All new fellows made distinguished contributions in two or more of these categories. ASI anticipates announcing two new ASI fellows each year.*

II.4. Annual funding:

We estimate that the total core funding from CA&ES and ANR for the current fiscal year (2012/13) will be \$781,849, a small increase over last year. Note: Because of the CA&ES Dean’s decision to allocate funds from the Bixby Endowment to the base budget for our Student Farm (see Section III.5 for further information), the level of CA&ES support is comparable with the previous years.

We project total annual funding for ASI will exceed \$3.75 million for 2012/13. This is more than a 20% increase over 2011/12, which itself was the first time ASI’s budget exceeded \$3 million. ASI’s budget includes core funding from CA&ES and DANR, endowment income, current use gifts, earned income from operations at the Student Farm and the Russell Ranch Sustainable Agriculture Facility, indirect overhead returns from CA&ES, and expenditures from grants. These budget figures do not include salaries of ASI affiliated faculty. Please see Section III.5 below and Appendix 5 for additional financial information.

III – STRATEGIES FOR ACTION

How ASI works

III.1. Priority Setting and Accountability

ASI is building institutional capacities to look ahead a decade or more to anticipate big issues and to develop and revise a dynamic agenda for sustainability science research, education, and action. By design, ASI's mission and vision for change are too broad to work on all elements at once. Thus, a strategic, proactive approach to priority setting is necessary to create themes and activities that are appropriately focused, that are feasible to pursue with available human, institutional and financial resources, that remain true to ASI values and operational principles, and that result in a cumulative process that enhances science-based understanding and action for sustainable agriculture and food systems. Mechanisms for accountability to ASI's stakeholders are fundamental to ensuring the legitimacy of ASI's evolving agenda and the usefulness of our products. ASI is working to establish and maintain a range of communication channels that will create meaningful roles for stakeholders in identifying sustainability challenges, shaping priorities, collaborating to find practical solutions, and providing feedback on our results.

Engagement with stakeholders

- **External Advisory Board.** The main purposes of our external advisory board are to advise the ASI director on strategic directions and priorities for action and to assist in identifying resources to accomplish our mission (see Appendix 9). The board also is expected to help ASI maintain and enhance communication channels with diverse stakeholder groups to ensure that ASI programs are directly addressing the needs of specific groups and society as a whole regarding sustainability of agriculture and food systems. To this end, ASI's external advisory board is structured to reflect a wide range of differing perspectives and is drawn from leaders in their respective fields, including farmers and ranchers; agricultural, environmental, and community organizations; food manufacturers and retailers; educators; policymakers; and the media. Student input is represented on this board as well as on internal advisory committees through "Students for Sustainable Agriculture," a campus based organization. This board also serves the functions of SAREP's Program Advisory Committee. Additional board members can be designated as needs and opportunities arise. Board meetings will be convened at least once a year, with other means (e.g., email, conference calls) used as needed to seek advice and input between meetings. A three-person subcommittee of the advisory board, including the board chair, has been established as an executive committee to provide more frequent strategic advice to the director, as needed. In line with suggestions at the inaugural Board meeting in 2008 and with a recommendation of the SAREP external review that year, two new advisory board members were recruited to better represent perspectives from UC Cooperative Extension.

Roles of board members. Roles of board members were outlined (Appendix 9) and finalized during the inaugural advisory board meeting in 2008. Ideas regarding the strategic roles of board members that were discussed include: (a) providing feedback, ideas and advice; (b) connecting ASI to new constituencies and resources; (c) staying aware of the difference between their roles as external advisory board members and, in several cases, their roles as ASI partners; and (d) bringing multiple perspectives. A gradual process of transitions began in 2011, with some new members joining and some founding external advisory board members completing their service each year. Departing board members will be designated “board emeriti” and we look forward to their continuing involvement with ASI.

- **Online surveys.** ASI used a Web-based survey initiative to provide for large-scale stakeholder input and to create a first-cut for identification of priority issues for sustainable agriculture and food systems in CA. Results of the 2008 online survey (Appendix 14) have informed development of our portfolio of initiatives.
- **Consultation.** Our communication strategy will enable us to take a more systematic approach to our ongoing process of consultation and engagement with stakeholders.

Scientific input to priority setting processes

- **Scientific assessment for priority setting.** Scientifically-validated indicators will be developed for use by many stakeholders to benchmark trends in sustainability in California’s agriculture and food system. These indicators will reveal where there has been progress toward sustainability and where there are problems; whether there are tradeoffs across sustainability objectives; which strategies and responses can be most effective in addressing problems and balancing tradeoffs; and where knowledge gaps matter most. Creation of the set of indicators also will create capacity to monitor changes, assess risks, and 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 will inform ASI priority setting and could contribute to development of agricultural sustainability standards and a long-term strategic vision for the future of California’s food system.
- **Monitoring, evaluation, and impact assessment.** To establish an adaptive, learning organization that can effectively incorporate lessons from experience, ASI needs to develop, implement, and institutionalize processes that monitor and evaluate the quantity and quality of our outputs and that assesses outcomes and impacts on our goals. Some relevant mechanisms are in place in SAREP, but much more needs to be done over the years ahead to create a learning organization. (Also see Section V below, Indicators of Success.)
- **International board of science advisors.** To ensure that ASI’s agenda is on the cutting edge of sustainability science, experts in this field have suggested that ASI

institutionalize periodic input to the director from a network of international scientific leaders. Thanks to the Packard Foundation, input of this type was obtained in development of the California Nitrogen Assessment; that experience proved very valuable. Using a somewhat different approach, *we created a technical advisory committee for the project on Sustainable Sourcing of Agricultural Raw Materials.*

III.2. Interdisciplinary, integrative activities

ASI will lead and manage interdisciplinary, integrative activities that cannot be undertaken effectively within academic departments. ASI will focus and integrate research, education, communication and engagement activities across its evolving agenda and update and adapt these activities as understanding develops in all dimensions of sustainability of agriculture and the food system—plant and animal science, environmental and natural resource stewardship, social and economic issues.

- **Research.** ASI assembles and coordinates interdisciplinary teams to design, seek funding, and implement major sustainability science projects, hosted and managed by ASI. These research projects have the primary goal of identifying scientific principles and practices that enhance sustainability of agriculture and the food system. Priorities include (a) identification of emerging, scientifically-valid innovations and help move them from the margins to the mainstream, (b) coordination and support for long-term research, and (c) knowledge management to ensure that research methods, protocols, and results are archived, synthesized and made available for use by other researchers. For details, see sections IV.1, IV.2, IV.4.
- **Education.** ASI supports programs to educate students of any age, professionals, and the public regarding science-based sustainability principles and practices, exposing them to a variety of ideas, practical experiences, and divergent viewpoints on questions that remain controversial. For details, see section IV.3.
- **Grantmaking.** SAREP grants are a top program responsibility and a key ingredient in building support for sustainable agriculture and food systems activities. SAREP will refocus its activities on grants for agricultural sustainability and food system research and education and on information dissemination. These grants may take a variety of forms, including (but not limited to) both competitive grants and targeted “academic venture capital” grants for new initiatives. For several years, lack of funds has precluded an effective grant program. As a result, current problems include both lack of sufficient size to attract attention and unreliability from year to year, which also affects the number and quality of potential grantees.

Fourteen SAREP projects were funded totaling \$150,000 in 2011. They include 1 research grant (farmworkers), 5 planning grants, 5 education and outreach grants and 3 graduate student awards. *Status: final reports have been submitted for each grant.*

- **Communication, translation and dissemination.** ASI will produce and disseminate science-based information that responds to stakeholders' needs and will improve sustainability of agriculture and the food system through uptake and use by a diverse clientele, including all segments of agriculture across a diversity of scales and systems, agricultural labor and rural communities, and bridging the rural-urban interface. Fenton Associates submitted their recommendations for ASI's communication strategy in February 2009. A new ASI/SAREP communication coordinator was recruited in 2011.
- **Distinguished speakers and seminar series.** Graduate students and faculty have expressed interest in a regular series sponsored by ASI, which could serve as a means to bring colleagues together for stimulating, rewarding, and enjoyable exchanges of ideas at the forefront of sustainability science. The series was inaugurated with a seminar by Professor Jules Pretty of the University of Essex, speaking on "Sustainability and the State of the World Food System" on 3 November 2010.
- **Meetings, conferences, symposia and other events.** ASI hosts a variety of scientific and social events, providing forums for stakeholder consultations, formation of collaborative partnerships, and implementation of research education and outreach activities. ASI events will provide a "safe space" to convene people with differing (even conflicting) views, unveil controversy, deepen understanding, and to build consensus for action or support public discussion where no consensus yet exists. ASI has institutionalized "working agreements" to ensure interactions are based on mutual respect.

III.3. Leadership, collaboration, and coordination

Internal accountability and coordination

Strategic planning, budgeting, and implementation of activities of ASI, SAREP and other ASI units are coordinated within an overall vision, mission, and strategies in order to enhance effectiveness of current programs and of new initiatives. Principles that guide these processes include subsidiarity (delegation to the level of most effective management and decision-making); transparency; and mutual accountability. Now that key recruitments are completed and our team is in place, we are planning training to create a "high performance team," including enhanced abilities to work effectively in distributed, multi-disciplinary, culturally-diverse teams; to build and maintain internal capacity to facilitate such teams; to leverage team members' creativity and problem solving capability; to relate effectively with diverse external partners; and to value the diverse contributions from various team members, units and partners.

- **Accountability to UC Davis College of Agriculture and Environmental Sciences (CA&ES) and UC Division of Agriculture and Natural Resources (ANR).** The ASI director also serves as SAREP director and reports to the Dean of CA&ES and the Vice President of ANR. A memorandum of understanding between CA&ES and ANR (see Appendix 11) delegates management and administrative support of SAREP to CA&ES.
- **ASI/SAREP core support team.** All core support team positions serve ASI as a whole in order to achieve synergies in strategic planning, priority setting, stakeholder engagement and accountability; budgeting and financial controls; fundraising and proposal preparation, and grant management; communication and public awareness; and monitoring and evaluation.
- **Internal steering committee.** This group includes ASI unit heads and academic coordinators, members of the core support team, affiliated faculty, and student representatives. The committee exists to facilitate synergistic communication, cooperation and collaboration among ASI programs and projects. It focuses on the day-to-day operation and management of ASI and affiliated units. Meetings are open to all staff and agendas typically are distributed in advance. The committee meets as needed, typically about once every six weeks.

Collaboration and coordination with students, faculty and cooperative extension

ASI seeks to bring people together across all divisions of the College of Agricultural and Environmental Sciences at UC Davis, from other UC campuses, UC Cooperative Extension (UCCE), and with other partners across the State of California. These talented people do not need more meetings for meetings sake. As with any of our partners, we strive to respect their time and believe that people respond favorably to collaborative opportunities with clear purposes, real chances for useful results, and that are stimulating, rewarding, and enjoyable.

- **Recognition and awards for leadership and excellence in interdisciplinary, integrative science.** Professional recognition and rewards for interdisciplinary, integrative research, education, and engagement with stakeholders are inadequate in comparison to more conventional academic pursuits. ASI can help redress this imbalance by creating appropriate incentives (awards, prizes, other forms of recognition) for students, faculty, and UCCE colleagues who demonstrate particular leadership or promise of excellence. Mentoring of junior colleagues is another important area for greater attention. Currently, ASI administers two awards: the Eric Bradford-Charlie Rominger Sustainability Award for uncommon leadership in the field of sustainability and the Shapiro Family Award for Best Agroecology Dissertation, in recognition of research excellence.

- **Student Advisors.** The Students for Sustainable Agriculture (SSA) group, an informal group on the UC Davis campus, provides input to the director regarding undergraduate and graduate student concerns and ideas related to ASI and the environmental, economic and social relevance in sustainability education programs. In addition to SSA, there are college-based student groups throughout California and it is hoped that SSA can assist in engaging with other campuses. Opportunities for student engagement include student representation on ASI board and the internal steering committee, participation in search committees, and co-sponsoring of social events and speakers with Students for Sustainable Agriculture (SSA).
- **Faculty.** In a survey conducted a few years ago, approximately 150 UC Davis faculty members identified themselves as strongly interested in sustainable agriculture. This likely understates interest on the Davis campus and does not include faculty on campuses elsewhere in California, including other UC campuses (especially UC Agricultural Experiment Station faculty at UC Berkeley and UC Riverside and also our colleagues at UC Santa Cruz); California State Universities, community colleges, and other institutions where collegial relationships exist, such as Stanford and Santa Clara. We have been experimenting with different approaches tied to specific opportunities (e.g., requests for proposals) and need to continue to develop our repertoire for engagement and follow up with colleagues on the UC Davis campus. The director hosts dinners for ASI-affiliated faculty two-three times per year and these have been well received by participants. The deputy director for ASI is a CA&ES faculty member and advises the director on CA&ES linkages and issues, including involvement with the other ASI-affiliated faculty positions designated in CA&ES. The director is in frequent contact with counterparts at UCSC and has participated in events at UCB and UCR, but much more time will be required to develop full potential for faculty engagement to tap into talent across California.
- **Collaboration with UC DANR strategic initiatives, other statewide programs, and centers.** ASI has established relationships with faculty and UC statewide programs working on complementary issues (e.g., the DANR strategic initiatives on sustainable food systems, healthy families and healthy communities, and water as well as the Agricultural Issues Center, the Small Farms Program, and the Statewide Integrated Pest Management Program).
- **UC Cooperative Extension specialists and farm advisors.** SAREP has built working relationships with a number of UCCE specialists and county-based farm advisors (who in total comprise over 400 UC professionals across the state) through support for collaboration among county, regional and campus-based researchers. Competitive grants are one means to build collaborative links across organizational boundaries, but working groups, communities of practice, collaborative proposals and symposia are other means to that end. Through active participation in various ANR initiatives, workgroups, programs and events, we seek to broaden and strengthen relationships between ASI/SAREP and UCCE. Adding two UCCE professionals to the external advisory board also was a step toward greater statewide collaboration. In due course, it is anticipated that a new category of Agricultural Experiment Station

Affiliates of ASI will be created, with the CA&ES Dean's Office, and linked to the SAREP Solution Centers, recognizing UCCE specialists and advisors who contribute significantly to project design, development of science-based materials, and service as technical interpreters, resource people, and network facilitators.

- **Mechanisms for consultation and collaboration linking faculty, students and UCCE staff.** Regular interaction with numerous interested faculty and UCCE staff would be valuable to ASI as a means to communicate about activities, assess needs, collaborate in development of new initiatives, and reflect on results; such contact is essential to fulfill SAREP's responsibilities. Particularly through with leadership from our two SAREP academic coordinators, we have been effective in bringing together faculty and UCCE staff for specific purposes (e.g., responding to funding opportunities). On the other hand, plans for a "Faculty and UCCE Advisory Committee" were considered as a general means of communication and coordination, but seemed to be unworkable (too many meetings, no pressing purpose).

III.4. Communication and engagement

- **Statewide communication and engagement.** Other partners in California (e.g., Roots of Change and many of the types of organizations represented on the ASI external advisory board) play complementary roles with UCCE in our efforts to assist California's policymakers and communities (both urban and rural) in understanding and implementing sustainable food and agricultural systems and sustainable resource management. Selecting, building and sustaining key relationships with this complex set of implementation partners and potential end users (see graphic in Appendix 6) require a thoughtful and well-targeted strategy for communication and engagement. A new ASI/SAREP communication coordinator was recruited in 2011. She is working to implement selected recommendations in the Fenton Associates report.
- **National and international leadership, networking and collaboration.** California's reputation for innovation and leadership in agriculture and the environment is recognized nationally and internationally. The State's reputation in these areas is linked with the University of California. Thus, ASI is positioned to build on this recognition over time for impact that extends beyond California.
- **Leadership of the new Inter-institutional Network for Food and Agricultural Sustainability (INFAS).** The INFAS network was endowed by the W.K. Kellogg Foundation with a \$1.5 million gift in 2010. ASI hosts and coordinates INFAS, which is a national network of more than 24 academic leaders in sustainable agriculture and food systems, including directors of counterpart centers and holders of endowed chairs at land grant universities and other academic institutions across the US. *Status: a national coordinator for INFAS was recruited in 2012 and is based with ASI.*

- **Global connections.** The ASI Director and other UC faculty have extensive professional relationships internationally that will provide the basis for an envisioned international network of leaders in sustainable agriculture and food systems. ASI launched its first global project in 2011 with \$875,000 from Mars Inc. to develop a framework for indicators of environmental, social, and economic sustainability of crops and raw materials being sourced by global food companies. This project engages representatives of multiple stakeholders in global supply chains of key crops and livestock products and will coordinate closely with Mars' evolving sustainability initiative.

III.5. Fundraising

Fundraising will be a major preoccupation for the entire ASI team. Director of Major Gifts from the CA&ES Dean's office, our Communication Coordinator, Proposal Coordinator, and Budget and Finance Officer each play indispensable roles in providing support to the ASI Director, Deputy Director, Program Manager, Academic Coordinators, and faculty affiliates in these efforts. In addition to the team effort, implementation of our fundraising strategy must be supported by a compelling, socially relevant vision and mission, a results-oriented plan of activities, and an exciting strategy for communication, public awareness and engagement. Success also will depend crucially on active involvement and support from our advisory board members, UC leadership, and other friends and partners of ASI.

In broad terms, ASI's needs include reliable sources of funding to revitalize SAREP grants at levels of \$750,000 to \$1.5 million per year, and to fully-fund essential activities of the Student Farm, the Russell Ranch Sustainable Agriculture Facility, the new undergraduate major in Sustainable Agriculture and Food Systems, the Agroecology PhD, the National Symposium on Food Systems and Sustainability, and to implement ASI's vision, mission and strategies, described above. ASI is included in the pop-up menu on the "gift button" on the UC Davis Website (<http://giving.ucdavis.edu/>), enabling donors to make electronic donations to ASI.

For the coming 7-10 years, we are planning a campaign to pursue three ambitious fundraising goals (listed below). *Status: Please see Appendix 5 for data on annual income since fiscal year 2007/08 and Appendix 33 for information on our grant proposal submissions. Public documentation of our multiple sources of funding is available on our ASI website at www.asi.ucdavis.edu/about/funding.*

Goal 1. \$50 million in ASI endowments and philanthropic gifts and to increase ASI's total budget to \$6 million per year. This would be more than a three-fold increase from under \$2 million in 2007/08. The total increase would comprise about \$2 million for research, \$1 million for education, \$750,000 for staffing and operations, and

\$250,000 for facilities and equipment. ASI benefits greatly from the income and prestige associated with several endowments, including the Boswell, Kellogg, and Sesnon Endowed Chairs, and program endowments such as those from the Campbell Soup Company and the Van Vlierden Estate. In the medium term, ASI needs to replace a significant source of income from the Rosenberg Endowment (committed by CA&ES for 6 more years, at \$75,000 annually). Endowments are critical resources for building ASI programs. The reliability and flexibility of these significant flows of income is essential if ASI is to be proactive in setting the agenda for sustainability science and action rather than merely reacting to agendas set by others.

The ASI endowment campaign nests within the university wide Campaign for UC Davis. As with any ambitious fundraising campaign, success for ASI is contingent on at least one “mega” gift of \$10-20 million. In the near term, ASI needs to fundraise for endowments to replace the Provost’s initiative funds at about \$40,000 annually, which is approximately equivalent to income from a \$1 million endowment. (We received our final allocation of the Provost’s funds in 2010/2011.) Within the next five years, an additional \$1.7 million endowment will be needed to replace the Rosenberg endowment funding mentioned above. Appendix 32 shows the cumulative value of ASI’s endowment gifts.

The importance of endowed funds has been made even clearer through the Student Farm. As of the 2011/12 fiscal year, the Student Farm’s funding is coming from a portion of the annual payout of the Bixby Endowment. The Fred H. Bixby Estate established this endowment to support practical agriculture at UC Davis. Proceeds from the Bixby Endowment have been supporting UC Davis for many years. The annual payout of about \$198,000 allocated to the Student Farm roughly corresponds to \$4.4 million of the total endowment, which currently is valued at over \$10 million. Because of the stability of the endowed fund, the Student Farm was not subject to the budget cuts that affected other college programs and facilities. So, although this does not increase the level of Student Farm funding, the endowment allocation significantly reduces budgetary risk, increases predictability in program planning, and also signals an enduring commitment by CA&ES.

Plans, priorities and current status on ASI endowment efforts:

- *Develop a **new ASI case statement**, which will help build relationships with new and existing donors who care about agricultural sustainability and help donors make gifts to ASI that are meaningful to them. These may include current gifts to scholarships, ASI programs, awards, faculty, or research as well as endowment gifts, which are our highest priority.*
- *Conduct the first-ever **yearend appeal for ASI** in 2012.*
- *Grow the **Sustainable Agriculture and Food Systems Endowment** to support ASI in perpetuity. The Sustainable Agriculture and Food Systems Endowment is a general endowment fund to be used at the discretion of the ASI Director to support*

all aspects of the ASI program. Status as of November 2012: just over \$16,000. Immediate goal: exceed \$25,000 to endow the fund. Intermediate goal: identify and solicit several donors in the 5-6 figure range. Longer term goal: secure anchor gift of 8 figures.

- *Reach \$1 million goal for **Endowed Professorship of Agroecology**. Establishing an endowed professorship is one of the most valuable gifts one can give to higher education since an endowed professorship ensures continued academic excellence for generations to come. The prestige of an endowed professorship allows the university to attract and retain top faculty. The funds the endowment pays out in perpetuity provide the faculty holder independence in their research. Free from some of the constraints of funding agencies they would have more flexibility and freedom to pursue science in the public interest. The professorship holder would also have funding to train more students building the cadre of scientists working in agroecology. Status as of November 2012: \$200,000 secured from TomKat Charitable Trust. Other proposals pending. The fundraising deadline for this target is December 2014.*
- *Establish an **endowment for the Russell Ranch Sustainable Agriculture Facility**. To launch the Russell Ranch Endowment Campaign, we are offering a limited opportunity to adopt an acre at Russell Ranch. Donors are invited to adopt one, or more, of the 72 one-acre plots of the Century Experiment. For \$10,000, your name (or a name you designate) will be associated with an acre in perpetuity. Status as of November 2012: First acre adopted by Del Monte Foods. Verbal pledge for at least one additional acre. With three acres adopted we will exceed the threshold (\$25,000) to endow the fund and allow it to begin accruing interest. Immediate goal: exceed \$25,000 to endow the fund. Intermediate goal: solicit at least 10 individuals/companies for Adopt-an-Acre. Longer term goal: have all 72 acres adopted.*

Goal 2. Secure two or more large program grants each year, totaling \$1 million or more. Criteria for allocation of ASI resources to development of grant proposals include: (a) a “champion” steps forward to lead development and writing of the proposal, (b) proposed project is interdisciplinary and will allow ASI to draw in faculty across departments, (c) fit with ASI’s thematic areas, (d) intellectual merit and potential contribution to ASI’s research, education and outreach programs, (e) potential for connections across the University of California and with other institutions, (f) potential for outreach and collaboration with external stakeholders, (g) significant funding amount, (h) acceptable requirements for matching funds, (i) likelihood of success, and (j) time and resources available to prepare a high-quality proposal. (These criteria are not prioritized.) We have an active and effective team, orchestrated by a half-time proposal coordinator, to support efforts by faculty and other partners to produce high-quality proposals for competitive extramural grants. Our half-time proposal coordinator began working in January 2010 and subsequent numbers show the renewed increase in ASI grant activity: 13 of 18 project grants were awarded in 2010/11, totaling \$1.36 million.

Status: Of 19 proposals submitted in fiscal year 2011/12, 13 were successful and brought ASI almost \$ 1.7million in new funds. The six unsuccessful proposals last fiscal year were larger on average than our success proposals, including one unsuccessful Letter of Intent to the National Science Foundation for \$ 12 million submitted on behalf of INFAS. Four months into fiscal year 2012/13, ASI already has had 7 successful grant proposals totaling more than \$730,000, which is over twice the level at the same point last year and with many more opportunities in the months ahead. We will continue to prioritize pursuit of larger proposals (over \$ 1 million), which of course also tend to be more competitive. Please see Appendix 33 for additional detail on trends over time.

Goal 3. Sustain UC support above \$750,000 per year. Despite continued cuts and uncertainty in the overall budget situation, leadership from the CA&ES Dean's office and the UC DANR Vice President's office has helped ASI maintain core funding. Continuing support signals strong commitment by CA&ES and ANR to our agricultural sustainability initiatives and, as such, these are powerful assets in our fundraising efforts in addition to being the foundation for the viability of ASI. However, the crisis in California State funding since 2008 has meant it was not possible to sustain UC support (from CA&ES and ANR) above \$1 million per year. SAREP's base budget from UC DANR was cut 20% (approximately \$100,000) in fiscal year 2009/10 (proportional to the overall cut faced by DANR), but it is a pleasure to be able to report that ANR has been able to continue the same level of funding for SAREP in 2010/11 and there is reason for optimism that this funding may stabilize going forward. Although the Russell Ranch budget from CA&ES was cut 6% (about \$14,000) in the 2011/12 fiscal year (the same rate as all CA&ES departments), the Student Farm budget was spared these cuts because of the CA&ES Dean's commitment of about \$198,000 from the annual payout of the Bixby Endowment to funding the base budget of the Student Farm (discussed above under Goal 1). Because of this mix of changes, it seems appropriate to recast Goal 3 as "Sustain UC support above \$750,000 per year" (from the original goal of \$1 million).

Status: We anticipate steady funding from CA&ES. UC DANR informed us that there will be a slight increase in SAREP funding this fiscal year. Looking forward, there is some reason for optimism regarding state funding. Particularly with the passage of Proposition 30 on 6 November, it is possible to hope that worst UC budget cuts are behind us.

IV – THEMES, MILESTONES, INITIATIVES, & CURRENT WORKPLANS

Next Steps for ASI work

Overall status: the current thematic structure and priorities for ASI initiatives is working well, though it will be some time before ASI has resources sufficient to pursue all proposed initiatives. *Blue text below indicates 2011/2012 milestones. Green text indicates 2012/13 workplans.*

IV.1. Agriculture, Resources and the Environment Theme, including SAREP and the Russell Ranch Sustainable Agriculture Facility

2011/2012 milestones

SAREP initiatives

Energy use and greenhouse gas emissions studies completed for almond production, hulling and shelling, and for pistachio production (up to farm gate). The almonds study will expand to include some post-shelling distribution. New funding received for expansion of models to additional orchard crops in CA, with special attention on calculating potential “carbon offsets” from different uses of orchard biomass. Revision of rice study underway to incorporate new field emissions data from UCD colleagues. Energy use study underway, to include conventional and organic dairies in CA.

*ASI faculty, staff, and a graduate student published a paper on the “**Carbon Footprint and Air Emissions Inventories for U.S. Honey Production: Case Studies**” in the International Journal of Life Cycle Assessment.*

***California Nitrogen Assessment** undergoing completion of final chapters and peer review process. Preliminary results presented at multiple academic and stakeholder meetings.*

***New funding to develop a SAREP Solution Center** focused on nutrient and water management and climate change.*

*ASI coordinated scientific reviews of first four metrics for the **Stewardship Index for Specialty Crops**. Review of 5th metric underway.*

Russell Ranch Sustainable Agriculture Facility

*Russell Ranch completes **ten-year soil sampling survey** of the Century Experiment plots, collecting over 3000 samples in 8 depth increments to 3 meters deep; all samples will be archived and made publicly available. The soil samples can be analyzed for microbial communities, phosphorus absorption, elemental properties, soil carbon and bulk density.*

Soil Biology workshop attended by multiple stakeholders (industry, farmers, researchers, students) produced a **new research initiative in soil biology**, including identification of partnerships, research questions and opportunities, and potential proposals.

Long term plots at Russell Ranch will be used to measure the **impacts of a soil additive**, biochar, on soil, microorganisms and crops; research project on biochar funded for new graduate student. This new experiment in “Closing the loop” holds potential to investigate other amendments in the future.

Russell Ranch field day, “Nitrogen, Water and Climate Change” on May 31st, brought together researchers and stakeholders with a record-breaking 165 attendees.

Runoff and **export of dissolved organic carbon** from furrow-irrigated corn was reduced by incorporating winter cover crops into a tillage-based farming system or by eliminating tillage altogether, based on research at Russell Ranch.

Russell Ranch introduced a new perennial in long term plots, **integrating alfalfa** into an annual farming system to investigate impacts of reducing tillage and increasing carbon inputs, as part of the new science plan.

2012/13 workplans

Energy and Climate Footprinting

- *Revise and re-submit paper on rice LCA using new field data from UCD collaborators*
- *Build on almond/pistachio LCA work to establish new, expanded orchard LCA project – with initial grower outreach, establishment of soil emissions research field sites, and development of baseline LCA models*
- *Develop web-based products for this initiative*

Responding to Climate Change

- *Provide science-based advice to California Climate and Agriculture Network (CalCAN) and other California-based coalitions working on agricultural adaptation to climate change*

Sustainable Management of Nutrients and Water in Agricultural Landscapes

- *Complete the California Nitrogen Assessment report, with review process*
- *Continue outreach activities for the Nitrogen Assessment*
- *Advise on the California Agricultural Water Stewardship website content development*
- *Begin work to develop a SAREP Solution Center for Climate Change and Agricultural Nutrient and Water Management.*
- *Continue instrumentation development for research on water use, nitrate leaching and greenhouse gas emissions in plots of the Century Experiment, using sensor technology and wireless data collection*

Closing the Loop: Integrating Sustainable Waste Management in Agriculture

- *Expand the “Close the Loop” small research plots (currently amended with biochar, compost) to integrate additional treatments with alternative agricultural waste materials*

Harnessing Ecosystem Services to Increase Agricultural Sustainability

- *Develop strategy to secure long term funding to support Russell Ranch project infrastructure and equipment needs.*
- *Publish meta-analysis of long-term impacts of nitrogen source on soil microbial communities*
- *Develop framework for evaluation of ecosystem services associated with different farming systems at Russell Ranch*
- *Upgrade Russell Ranch database by launching new web-based platform for publicly-accessible, online database, with capacity to download and upload data in a searchable, categorized web-page*
- *Publish the Russell Ranch science plan and implement full range of system comparisons (including perennial, grassland, and four-year rotations)*

IV.2. Food and Society Theme (all of the following are SAREP activities)

2011/2012 milestones

We put **values-based supply chains and food hub research** and outreach on the map at UC Davis. CA case studies and a farmer toolkit are publicly available on a separate page on the SAREP website. These publications now are recognized on two other national food hub sites—USDA AMS and the Wallace Center’s Good Food Network. We have been asked to share results in multiple conferences and meetings the last 6 months.

Created an effective entrepreneurial/educational **strategy to help small, ethnic and minority farmers** enter values-based supply channels through wholesale distributor tours. We were invited by CDFA to be one of 4 grantees to describe our project to the Board. We are showcased on CDFA’s website.

Expanded farm-to-school research and education in CA and nationwide. Regional procurement is increasing in 4 CA school districts in which we are working; nutritional impacts are also apparent. We completed another farm to school case study (Denver Public Schools) as part of a national School Food Initiative—School Food FOCUS. We wrote a lead article about the history of the farm to school movement in the United States, now published in the Journal of Childhood Obesity.

Created a **bibliography of over 1400 local/regional/sustainable food systems articles** with colleagues in the Community Development, available on SAREP website.

2012/13 workplans

Building Regional Markets and Communities

- *Organize and conduct farm-to-school research in at least nine school districts. These will include: Davis, Winters, Oakland, Redding, Elk Grove, Sylvan (Stanislaus), Esparto, Woodland and West Sacramento*
- *Expand our small and ethnic farm marketing project and build capacity so farmer groups can continue this work on their own*
- *Expand our values-based supply chain initiative*
- *Begin a new urban agriculture initiative with ANR partners*

Community Food Security

- *Develop and evaluate a new initiative with Yolo Food Connect*

Food System Assessments/ Food Policy

- *Complete San Luis Obispo food system assessment and share results in professional venues*
- *Begin a Yolo County food system assessment*
- *Partner with Yolo Food Connect and Yolo AFA to create/evaluate a Yolo County Food Policy Council*

IV.3. Education and Leadership Theme, including the Student Farm

2011/2012 milestones

*The first round of **Van Vlierden Scholarships** has been awarded; three of our SA&FS students are among the ten inaugural recipients. In future years, SA&FS majors will have priority for these scholarships. We also continued our traditions of recognition by awarding the annual **Bradford- Rominger Sustainability Leadership Award and the Shapiro Family Award** for best dissertation in agroecology or a related field.*

Student Farm

*The **program planning and development** project launched at the Student Farm (SF) in early 2011 and the excellent work of graduate student field-based mentors hired with grant funding have had very positive impacts. The number of students involved in field-based SF learning experiences has increased by more than 50% and these students are developing and meeting clearer and more ambitious learning objectives, reflecting more on their experiences and helping guide the SF development process.*

*ASI is **deepening its collaborative educational efforts and relationships on campus**. With Dining Services, the SF is simultaneously providing diverse, integrated learning experiences across the food system and increasing the volume and diversity of SF-grown produce sold to Dining Services. ASI faculty and staff are playing key roles in developing the academic plan for the campus Sustainable Living and Learning Community.*

*We collaborate with partners on campus and around the state on several of grant-funded **projects focused on school gardens, garden-based education and farm-to-school**. These include train-the-trainer programs to reach diverse communities and provide professional development, training and support for teachers, nutritionists, garden educators, food service providers, farmers and others involved in developing regional farm to school networks and school garden programs.*

Sustainable Agriculture and Food Systems major

*UC Davis students began transferring into the new Sustainable Agriculture and Food Systems (SA&FS) major in Fall 2011. In Fall 2012, the first group of incoming freshman SA&FS majors started their studies. Currently, **there are over 40 students in the major**, the senior capstone course series is being offered for the first time to ten seniors, and **two students have graduated from the major** (both already are employed in their field and using their skills). The internship program and on-line portfolio project are developing rapidly (with grant funding).*

*The Sustainable Agriculture and Food Systems major was selected as winner of the **MacArthur Foundation-funded Digital media learning grant competition** in early March. The funding will support program development for a digital portfolio for SA&FS students that helps them build 'badges' they can then display on LinkedIn, Facebook and to future employers. Our project was featured in an article in the Chronicle of Higher Education.*

2012/13 workplans

Post-Secondary Experiential Learning and Formal Post-Secondary Education

- *Continue Student Farm program planning and development process, particularly:*
 - *enhance learning by focusing on objectives and reflection on experiences*
 - *strengthen and diversify student leadership development opportunities, including*
 - *develop new methods for advanced student engagement*
- *Shepherd the Sustainable Agriculture & Food Systems major, particularly:*
 - *further develop the internship and student portfolio aspects of the major*
 - *enhance the integration of competency development across the curriculum*
- *Contribute to academic program development of the campus Sustainable Living and Learning Community.*
 - *help develop an academic plan for, and provide mentorship to, the SLLC*

Education for Primary and Secondary School Audiences

- *Provide on-campus, hands-on educational programs in food, nutrition, agriculture and ecology to over 1700 regional primary school students.*
- *Provide on-campus field-based learning experiences for traditionally underrepresented high school students and increase their awareness of, and interest in, college studies and careers in sustainable agriculture and related areas.*
- *Provide opportunities for primary and secondary school students to learn about scientific and cultural aspects of crop genetic diversity and varietal development.*
- *Develop and conduct statewide train the trainer programs in school gardening and for garden-enhanced nutrition education and support new trainers by offering mini-grants and mentoring.*
- *Facilitate and study the development of Farm to School programs statewide through professional development, peer-to-peer programs, and program evaluations.*

Cultivating Leadership in Sustainable Agriculture and Food Systems

- *Identify 2012 winner for the Bradford-Rominger Sustainability Leadership Award*
- *Identify 2012 winner for the Shapiro Family Agroecology Award*

IV.4. SAREP Grants and Crosscutting Initiatives

2011/2012 milestones

SAREP grant program. Final reports have been submitted for each of the 14 grants funded in 2011.

Benchmarking Sustainability. The project on Sustainable Sourcing of Global Agricultural Raw Materials, funded by Mars, Incorporated, has established conceptual frameworks and systematically identified a preliminary list of prevailing global sustainability issues pertaining to agriculture and supply chains. The project team has also initiated creation of a publicly accessible networked database that will link sustainability issues, indicators, spatial data, and scientific information pertaining to sustainability in commodity production and supply chains. The project has also assembled both a technical advisory group and a stakeholder advisory group composed of prominent stakeholder representatives from around the globe, to be convened for an in-person consultation in December 2012.

Farmworker and Rural Community Wellbeing. The final report on SAREP's Farmworker Initiative is in draft form. It will be ready for outreach by the end of the year. We were approached by DPR to conduct a study of farmworker activity patterns to use in updating their pesticide exposure data.

2012/13 workplans

SAREP grant program

- *Develop and implement a plan for publicizing results from the 14 funded projects and for leveraging the results of selected projects to advance work within relevant ASI initiatives*

Benchmarks for Food System Sustainability

- *Utilize input from stakeholder engagement to refine lists of sustainability issues and frameworks, assess indicators for those issues, and develop a prototype web-based information management tool to advance Sustainable Sourcing of Global Agricultural Raw Materials*

Farmworker and Rural Community Well-being

- *Complete farmworker needs assessment and share with wide audience*
- *Start a Department of Pesticide Regulation-funded study of farmworker activity and chemical exposure*

IV.5. INTER-INSTITUTIONAL NETWORK FOR FOOD, AGRICULTURE AND SUSTAINABILITY (INFAS)

2011/2012 milestones

We successfully **recruited the national coordinator for INFAS** in January. Since then, network activities stepped up to a higher level. The INFAS Executive Committee (EC) formed in February, 2012; the INFAS Research Subcommittee (RSC) formed May, 2012.

A summer meeting provided space for the newly-formed EC and other Network members to meet and discuss the INFAS plan of action for the next year.

Network members collaboratively-developed and submitted a major funding proposal for a national food assessment survey. While not funded, the effort facilitated effective Network interactions and resulted in useful feedback from the agency which will be leveraged.

2012/13 workplans

- *Seek Research Coordination Network funding from the National Science Foundation for INFAS collaborations, meetings, and stakeholder consultations*
- *Seek funding for an INFAS workshop on climate change and globalization of food markets and effects on the resilience of the US and global food systems*
- *Seek funding to develop a new graduate training program in topics relevant to Sustainable Agriculture and Food Systems*
- *The INFAS research subcommittee is planning a winter 'write-shop' to focus on setting a domestic research and education agenda intended to impact policy makers and funding agencies as well as research and education at academic institutions*

IV.6. FUNDRAISING

2011/2012 milestones

We project total **annual funding for ASI will exceed \$3.75 million** for 2012/13. This is more than a 20% increase over 2011/12, which itself was the first time ASI's budget exceeded \$3 million.

Mars, Incorporated, announced additional gifts of \$475,000 to support ASI's sustainable sourcing research agenda in 2012/13, which will bring the company's total support for this research area to \$875,000.

Further development of **Sustainable Agriculture and Food Systems Endowment**, a general endowment fund to be used at the discretion of the ASI Director to support all aspects of the ASI program in perpetuity. Status as of November 2012: Just over \$16,000.

Launched a campaign for an Endowed Professorship in Agroecology

Contributions from a variety of donors totaling \$1 million will create a prestigious endowed faculty position in agroecology at UC Davis affiliated with the Agricultural Sustainability Institute and our Sustainable Agriculture and Food Systems undergraduate major. Status as of November 2012: \$200,000 secured from TomKat Charitable Trust.

Adopt-an-Acre of the Russell Ranch Sustainable Agriculture Facility

To launch the Russell Ranch Endowment Campaign, we are offering a limited opportunity to adopt an acre at Russell Ranch. Donors are invited to adopt one, or more, of the 72 one-acre plots of the Century Experiment. For \$10,000, your name (or a name you designate) will be associated with an acre in perpetuity. Status as of November 2012: First acre adopted by Del Monte Foods. Verbal pledge for at least one additional acre. With three acres adopted we will exceed the threshold (\$25,000) to endow the fund and allow it to begin accruing interest.

2012/13 workplans

- *Develop a new ASI case statement*
- *Conduct the first yearend appeal for ASI*
- *Grow the Sustainable Agriculture and Food Systems Endowment to support ASI in perpetuity. Immediate goal: exceed \$25,000 to endow the fund.*
- *Work toward \$1 million goal for Endowed Professorship of Agroecology (fundraising deadline for this target is December 2014)*
- *Establish endowment for Russell Ranch Sustainable Agriculture Facility. Immediate goal: exceed \$25,000 to endow fund*

IV.7. COMMUNICATION

2011/2012 milestones

We produced five new sets of printed **promotional material** to share new efforts, such as the Adopt and Acre initiative for the Russell Ranch endowment campaign.

We increased our production of **videos**, producing eight new promotional and educational videos this year. Our most popular video, 3,244 hits, is a two-minute explanation of basil care, which accompanied gifts of basil seedlings at Picnic Day, the UC Davis campus' largest outreach event.

We launched the **SAREP section of ASI's Web site** and posted several new publications and information about new efforts.

We're increasingly placing stories about ASI projects and programs in campus and ANR publications. For example, the **UC TV "Future of Farming" video series** highlights UC Davis' role in agricultural innovations, and includes several ASI-affiliated programs and people.

We strengthened our outreach event efforts by focusing activities that **direct people to the ASI Web site** after, or during, the event to learn more about the institute. Directing traffic to the Web site allows us to connect with stakeholders a second time. For example, a **Picnic Day plant give away** with basic information about ASI attached to seedlings along with a QR code took people to our Web site to learn how to care for the seedlings and learn about the students who planted them. We also had a very popular **Farm to College photo booth event**, which directed students to our Web site in order to find their photos. Once on the Farm to College photo booth page, students were also exposed to information about SA&FS major and internship/volunteer opportunities at the Student Farm and Russell Ranch.

2012/13 workplans

- Clarify and strengthen ASI branding
- Redesign and re-launch the ASI website

IV.8. MONITORING AND EVALUATION

2012/13 workplans

- Complete evaluation of ASI institutional strengthening, considerations for design of future ASI assessments, and other lessons learned during the California Nitrogen Assessment
- Support CA&ES five-year evaluation of ASI and the WK Kellogg Endowed Chair

V - INDICATORS OF SUCCESS

Where are we going?

ASI's strategic plan, and particularly our vision statement, suggests a number of desired transformations within agriculture and the food system and institutional capabilities to be built within ASI. With input from our director, deputy director, academic coordinators, communication coordinator, and proposal coordinator, ASI's program manager is working to institutionalize monitoring and evaluation of various performance indicators, including measures of inputs, outputs, their uptake by partners, and ultimately studies of outcomes for our partners and impacts in the "real world".

We are developing monitoring systems that will serve several useful purposes: 1) focus our work on ASI's mission and priority goals, 2) guide adaptive management of our current projects and activities, 3) stimulate learning within our team and with our partners, and 4) provide compelling evidence of ASI's impacts for current and potential funders and other stakeholders.

Beginning in 2011 and continuing through 2012, we are working with an evaluation consultant, Francesca Wright, to guide our development of a monitoring and evaluation plan. Based on meetings with SAREP's academic coordinators and Student Farm staff, we have identified a first draft of potential outcome statements and associated data collection methods:

1. ASI Builds Knowledge through Externally Funded Projects & SAREP-awarded Grants

- For internal learning, team members identify and share process insights at key points during and after projects. Track key learnings on shared written documents, including formulation, testing, and reframing of hypotheses.
- For external audiences, identify key findings and outcomes from projects; track and report via ASI web site, press releases, various reports, as appropriate.

2. ASI Distributes Knowledge

- Track staff presentations and publications (using MyInfoVault – on-line campus academic activity reporting system)
- Track media coverage
- Track web site use
- Track meaningful and significant external inquiries via simple on-line form. (Consider follow-up w/ email survey to clients.)
- Periodic email surveys to "customers" (e.g. Student Farm alumni, key strategic partners to document uptake)

3. ASI Incubates Leaders, Producers, Consumers and Advocates

- Track SA&FS graduates
- Track # of students participating in Student Farm activities. Consider follow-up w/ some.

- Track # of K-12 students & school district personnel trained in eco-garden trained.

4. ASI Collaborates with Strategic Partners

- Explore informal group process to document growing network of strategic partners every 6 – 8 months. (Large wall paper, post-its, color coding, photo recording.) Link with ASI contacts database.

5. ASI Leverages Resources

- Track external funding

We expect our monitoring and evaluation plan to be a dynamic construct that we will adapt and improve over time. Since time is always a constraint, we are looking for ways to streamline data collection, and effectively use the support offered by our student assistants.

Lastly, our process should help us to evaluate how we are living up to our operational principles: practicing sustainability, legitimacy, usefulness, and the scientific credibility of our work.

VI – LIST OF APPENDICES

Appendices can be accessed at: <http://asi.ucdavis.edu/about/advisory-board/Board-meetings/2012-external-advisory-board-meeting>

Institutional Framework and Assets

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Appendix 2: Programs and Facilities

Appendix 3: Personnel

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Appendix 5: ASI Annual Income (2007/08 – 2012/13)

Appendix 6: Stakeholders

Appendix 7: Advisory and Accountability Structure

External Advisory Board Documents

Appendix 8: External Advisory Board - Current Members

Appendix 9: External Advisory Board – Purpose and Operation

Appendix 10: Report from 4th External Advisory Board Meeting, 2 November 2011

UC DANR Documents

Appendix 11: MOU between UC DANR and UC Davis CA&ES

Appendix 12: SAREP External Review documents

Appendix 13: DANR restructuring documents

Themes and Possible Priorities

Appendix 14. Results of the 2008 Online Consultation on Priorities

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Appendix 16: Formal Post-Secondary Education in Sustainable Agriculture and Food Systems

Appendix 17: Education for Primary and Secondary School Audiences in Agriculture, Environment, Food & Nutrition

Appendix 18: Cultivating Leadership in Sustainable Agriculture and Food Systems

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Appendix 19: Building Regional Markets and Communities

Appendix 20: Community Food Security for Low-Income Residents

Appendix 21: Food System Assessment/Food Policy

Appendix 22: Farmworker Wellbeing

Agriculture, Resources and the Environment Theme – Concept Notes

Appendix 23: Energy and Climate Footprinting of Food Production and Supply Chains

Appendix 24: Responding to Climate Change

Appendix 25: Sustainable Management of Nutrients and Water in Agriculture Landscapes

Appendix 26: “Closing the Loop”: Integrating Sustainable Waste Management in Agriculture

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Crosscutting Initiatives – Concept Notes

Appendix 28: Benchmarks for Food System Sustainability

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Appendix 30: Our messages

Appendix 31: Fenton Communications Strategy: Summary and full report

Appendix 32: Fundraising Case for Support

Appendix 33: Fundraising – ASI Grant Proposal Successes

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Appendix 35: Fundraising – Campaign Projections

SAREP Grant Program

Appendix 36: SAREP-funded Projects 2011-2012