2007 University of California Combined Research and Extension Annual Report

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I. Report Overview

1. Executive Summary

The University of California Division of Agriculture and Natural Resources (UC-ANR) is the major land-grant arm of the University of California, part of a nationwide public university system "built on behalf of the people" (Abraham Lincoln's words) with Experiment Stations established to develop "useful and practical information...and to promote scientific investigations and experiments," and Cooperative Extension programs to "aid in diffusing...useful and practical information."UC-ANR's mission, "... is to serve California through the creation, development and application of knowledge in agricultural, natural and human resources."

UC-ANR members are based on the Berkeley, Davis and Riverside campuses, and in more than 50 regional and county offices throughout the state. The Division is composed of the UC Agricultural Experiment Station (AES) and UC Cooperative Extension (CE), supplemented by 20 Statewide Programs and projects, and supported by nine Research and Extension Centers.

The AES has about 700 academic researchers, most of whom also have professorial appointments representing dozens of scientific disciplines.Cooperative Extension, the principal outreach arm of the Division, comprises academic appointees attached to campus departments as CE specialists or county offices as CE advisors; there are about 120 specialists and 235 advisors.

The following narratives describe program highlights of FY 2007 by the California federal Planned Programs

CaliforniaFamilies, Youth and Community Development
Activities in this area tend to use highly collaborative, multidisciplinary, and multi-level approaches to address the critical issues related to human nutrition and health, youth development, and sustainable, strong communities.There are more than 99 Hatch and Regional Research projects funded through Hatch and Multi state Research sources to investigators at UC Riverside, Davis, and Berkeley with a focus on California families, youth and communities. There are also 53 extension research projects by UCCE Advisors under the Federal Planned Program: Sustaining California Families, Youth and Community Development.In addition, at the local county level, there 278 extension projects/programs and the advisors conducted 3,046 short courses and workshops with 43,970 participants.

Projects are being conducted in several areas that are essential to this area; a few illustrative examples follow

In the area of human nutrition, UC researchers reveal that the rise in childhood and adult obesity is rooted in fundamental social, including lifestyle, changes. Consequently, UC nutrition specialists and county advisors have been instrumental in forming community coalitions in 13 counties and empowering them to create environments to foster healthy lifestyles using multiple approaches, ranging from educating individuals and providers to advocating for environmental change. UC ANR researchers are evaluating California’s legislative and local initiatives to improve the quality of food available to school children. UC ANR teams have developed model nutrition programs for school settings.
•In a program designed for elementary schools, children pair up with an adult, important in the child’s life, to learn about nutrition and fitness while having fun together.Involvement of teens in writing nutrition-related stories for a fotonovela project, led by UC ANR, has spurred the Monterey school district to make salad bars available, with the help of local agriculture, to 14,000 students. •Working with adults, UC ANR has collaborated with African American faith-based groups and Latino adults to change nutrition behaviors (shopping, cooking, eating) and encourage physical activity in adults at risk of obesity and diabetes.A team of UC and California State University researchers collaborated with the Department of Health Services and the grocery industry to test the feasibility, cost and effectiveness of creating a targeted nutrition education campaign, at the supermarket checkout stand, reaching a total of 9,850 food stamp participants.

In the area of youth development, there is an urgent need to develop early literacy and science skills; promote agricultural and environmental awareness; and help young people become engaged in their communities.
•To promote early literacy, UC ANR advisors developed a train-the-trainer approach (Let’s Read Together) to educate parents on the importance of reading with their children and using other simple strategies, reaching educators from 28 counties, 14 states and Puerto Rico. •UC ANR developed a school-readiness program (Off to a Good Start) for parents of four- and five-year-olds, covering kindergarten expectations, language development, reading readiness, social-emotional development, problem-solving, nutrition and home-to-school connections. •Special projects involving 4H have contributed to science skills and agricultural literacy. In Ventura County, 4-H youth wrote articles for Fields to Fridge – What’s Growing in Ventura County, which appeared as

a 12-page newspaper tabloid and reached about 200,000 households to increase their awareness of local agricultural issues.The 4-H Ladybug and Butterfly Garden School Enrichment project was developed to meet the need for inquiry-based learning, reaching more than 1,200 students in the Foothill counties. •A UC workgroup studied the traits of successful positive approaches to youth development and developed a practical "how-to" manual that assist many positive-approach initiatives throughout the United States.

Other UC ANR programs have explored successful strategies for engaging Latino families in community programs; identified promising approaches to use tobacco tax revenue (through Proposition 10) to fund health, child care and school readiness programs for young children; and provided training on safe food handling practices to community-based organizations.

CaliforniaPest Management

The scope of activities in pest management in California is extensive and very diverse.There are 148 Hatch and Regional Research projects funded through Hatch and Multi state Research fund sources to investigators at UC Riverside, Davis, and Berkeley that have a pest management focus.In addition there are 145 extenson research projects reported by UC Cooperative Advisors under the Federal Planned Program:California Pest Management. In addition, at the local level, there were 148 extension project/programs and the advisors conducted 144 short course/workshops/field days for 8,281 participants.

The management of key pests in California's diverse agricultural, natural, and urban ecosystems continues as on going efforts to reduce the impact of both native and exotic pests and diseases.The environment that allows tremendous specialty crop and animal diversity also provides niches for various pest organisms, including weeds, insects, plant diseases, nematodes, mites, and vertebrate pests that can affect the cost of production and the loss of yield. For example, two new viral pathogens have been detected in California: cucurbit yellow stunting disorder virus (CYSDV) and tomato yellow leaf curl virus (TYLCV).Through UC's educational efforts, growers and allied industries were informed of methods to stop the spread of CYSDV and manage the severity of the disease to minimize losses to cucurbit crops. Fall melon crops in Southern California and Arizona were again infected with CYSDV, but most growers were able to produce melon crops of market quality with acceptable yields. The spread of TYLCV to other parts of the state has been arrested. This was due to efforts to rapidly define the geographic area with TYLCV-infected tomato plants and to get voluntary destruction of all infected plants in commercial and home garden tomato production.

The olive fruit fly is an exotic pest in California that directly infests the fruit limiting its value for both processed fruit and for olive oil UC investigators in California have conducted research programs addressing phenology models, varietal susceptibility, monitoring, pest dynamics, integrated control, classical biological control, non-target impacts of bait sprays, sterile insect technique, spray materials evaluation and mass trapping.Mass trapping can be used to reduce overall fly numbers, which will likely reduce the number of spray treatments, making control more efficient and less expensive. In small-scale commercial orchards that are somewhat isolated, growers can use kaolin clay, or spinosad bait sprays or various combinations. Any of the treatment methods combined with early harvest and prompt processing to avoid fruit breakdown can easily achieve adequate control with minimal cost or environmental contamination, and still produce excellent quality olive oil.

The population of the beet cyst nematode has been suppressed for more than a quarter of a century in some sites because of suppressive soils. Investigations into the cause and nature of this phenomenon identified a fungal hyperparasite that attacks developing juveniles, females and eggs of beet cyst nematodes, thereby diminishing their population development. Introduction of this fungus into other beet cyst nematode-infested soils caused similar population declines.

Sustainability and Viability of California Agriculture

There are more than 305 Hatch and Regional Research projects funded through Hatch and Multi state Research sources to investigators at UC Riverside, Davis, and Berkeley with an agricultural focus. There are also195 extension research projects by UCCE Advisors under the Federal Planned Program: Sustainability and Viability of California Agriculture. In addition, at the local county level, there were 315 project/programs and the advisors conducted 423 short courses and workshops with 24,142 participants.

Projects are being conducted in several areas that are essential to the sustainability and viability of California's agriculture; a few illustrative examples follow.

Food Safety:

•Research and Extension:Consumer confidence in fresh produce is critical; these foods are essential to achieving national nutrition enhancement and obesity-reduction goals and in significantly cutting long-term health costs.Recent incidents of E. coli O157:H7 and other microbial contaminants in spinach and leafy greens in California's agriculturally important Salinas Valley and elsewhere, resulting in serious illnesses and several deaths, has shaken consumer confidence and cost growers millions of dollars. The local UCCE Plant Pathology Farm Advisor has been involved with food safety research with a UC Davis CE

Specialist for a number of years. When the recent spinach contamination event occurred in Monterey County, the advisor was able to redirect his program and laboratory facility so as to focus more intently on food safety research as it applies to the field ecology of enteric bacteria. Monterey County already had a lab facility and infrastructure that would enable applied research to be done on food borne pathogens, so this group was well positioned to rapidly respond to industry needs for field research. He converted one of these labs to food safety research efforts. UCCE Monterey County hopes to increase the scope of this program by adding additional equipment and capability to this lab. The CE Specialist provided the technical expertise regarding the detection and culture of fecal indicators and target pathogens. He provided extensive support to industry and Farm Advisors regarding research planning and food borne pathogen issues. He is advising the advisor on further expansion of the Salinas lab so that additional projects can be hosted locally in Monterey County.

A team of Monterey County Farm Advisors collaborated with UC Davis researchers to obtain industry funding to examine the ecology and biology of E. coli under field conditions. Initial studies are looking at the role of irrigation and crop nutrient on survival of generic E. coli in the field. The team is involved with extensive outreach (newsletters, trade journal articles, commodity board presentations, vegetable crop conferences, pest control advisor and grower meetings, research conferences) in the area of food safety and leafy vegetable commodities. Targeted audiences include the following: fellow UC colleagues and advisors, farmers and associated industry clientele, agricultural leadership groups involved in the food safety issue and policy development, regulatory agencies involved in this issue, state officials, researchers with USDA and other agencies.

•Food Safety Forum:After Food and Drug Administration reports in September 2006 of an outbreak of E.coli 0157:H7 in bagged spinach, the topic of food safety became headline news to the general public. Already a leader in promoting principles of food safety, the UC Small Farm Program redoubled its efforts to educate farmers on this important topic. The Small Farm advisor in Fresno County was instrumental in planning a multi-agency Food Safety Forum. The half-day event was held in November 2006 and was sponsored by the Small Farm Program, the Farm Bureau, the Fresno County Agricultural Commissioner’s office, and UC Cooperative Extension. More than 75 farmers participated, with expert speakers including Marita Cantwell, SFP interim director, in addition to other UCCE food safety specialists.

Competition for Water

•Each year UC conducts dozens of projects addressing the need for increased efficiency of water use and better crop water management.An excellent example is a Farm Advisor on the Central Coast working with wine grapes.He reported that most growers apply less irrigation than the vines can theoretically use in the pursuit of better quality fruit, but little information exists on how these long-term irrigation deficits will affect the growth, productivity, and health of the vine. The objective of this project was to monitor the effect of various levels of irrigation deficit on the yield, quality, and long-term health of wine grapes. Over the four seasons of work, there has been no significant decrease in yield in the lower irrigation treatments; there is however a significant decrease in berry size and an increase in juice soluble solids with decreasing irrigation amounts, both of which are generally desirable traitsThis project is the first long-term irrigation trial in this area, and will fill an information void regarding the long-term effects of deficit irrigation practices on yields, quality, and overall vine growth. As more growers adopt deficit irrigation programs in the search for higher quality harvests or to minimize the increasing costs of pumping groundwater, there will be increasing demand for information to assess the overall effects of these practices.

Genetically Engineered Technologies

•A UC Farm Advisor in the Sacramento Valley has responded to the need to perform more studies on how genetic engineering is affecting food production systems in California.At the request of corn growers and corn seed companies, he started a variety evaluation program which heexpanded to include genetic engineered technologies (GE).He annually conducts at least three field corn variety trials. These trials represent the only continuous public evaluation trials of commercial grain corn varieties in the state.In these trials, GE corn lines are showing similar yield responses with cost savings and reduced environmental impacts in weed and insect control.His trials are the grain corn industries source of nonbiased information on new cultivars and production practices.

Specialty Crops

•California is home to many exotic specialty crops.Solid research-based information is difficult to obtain in many cases.Peppermint is one example of how UC is filling this void.A Farm Advisor in Modoc County has been working with peppermint for several years and his work has tremendous impact with the industry.An elaborate field trial was conducted to determine the optimum irrigation cut off and harvest date to maximize oil yields and quality in the Klamath Basin. This trial involved imposing four levels of moisture stress on peppermint plots harvested over a 6 week period.Peppermint on more than 100 plots was hand harvested and distilled for oil yield in the Research and Extension Center built mini-still.In addition to the above tightly controlled study on IREC, weekly yield samples were collected and distilled from commercial fields. While yields were down through out the Basin, the grower sample yields suggest a fairly broad harvest interval for optimizing oil yields. Analysis of the oil quality from the grower samples is in progress.

•An Advisor in Santa Clara County has extensive experience with the state’s mushroom industry. Santa Clara County

represents 25% of the national industry value.Her extensive research activities have been all around the issue of sustainability and viability of agriculture.The farmers, support industries, and governmental organizations feel that UC is working in their best interest and are quick not only to adopt but also to come up with new ideas, methods, techniques and cultural practices that positively impact their industry.

Food Systems

•A Farm Advisor in Humboldt County has considerable interest in community food systems.She initiated a program in the county which she believes is unique in UCCE farm to school programs. She obtained funding form the UC Sustainable Agriculture and Education Program to hire a contractor who is a produce broker. He worked with her to do all the face to face contacting and arranging of local produce in the farm to school program, which is new.They developed a relationship with a distributor and hope to increase the coordination of trucking and local produce sales. Their vision is for school districts to actually contract with local growers. One district has created this new way of buying local. They agreed to purchase a dollar amount of produce from a local farm, the farmer and cafeteria staff then work around the availability of the local produce. He delivered fresh produce each school week.

Multilingual Outreach

•A priority among the UC ANR's Small Farm Program's outreach efforts is reaching underserved farming populations with useful information and pertinent research. To that end, the Small Farm Program has made efforts to become multi lingual, reaching out to California's diverse agricultural communities where English is not necessarily the primary language. This year, Small Farm Center staff began work to translate food safety and risk management publications into Spanish and traditional Chinese. A staff member translated multiple documents into Spanish which are currently undergoing peer review before publication. A student assistant translated many of the same documents into traditional Chinese. Her translation of Food Safety at farmers markets and agri- tourism venues was distributed to ethnic Chinese growers at a San Jose meeting focused on food safety. The workshop was just one of a series of workshops on post harvest quality, water quality, and pesticide management designed for Chinese growers, organized by a Small Farm advisor.

In addition to employing myriad languages, Small Farm advisors sought culturally appropriate avenues of communication with farmers and farm workers. Two advisors e found success among the Hmong community in and around Fresno County through a one-hour radio program every other Monday evening on KQEQ, a local Hmong-American radio station. In Tulare County, another advisor reached many of his small-scale Hispanic clients through a 30-minute Spanish broadcast he hosts on KGST, where he discusses topics such as specialty crop research and responds to listeners' questions.

Disaster Assistance

•The January 2007 freeze was one of the worst in California history for farmers. Losses to all crops exceeded $100 million. The recorded low temperatures ranged from 14 degrees on the west side of Fresno County to 22 degrees on the east side beginning on Jan. 12 and continuing for about seven days. Large and small farms were impacted, but the impact on Fresno County's Southeast Asian refugee farmers was especially severe because of their marketing methods and lack of monetary reserves.Some had to go on public assistance simply to put food on the table.

A UCCE Small Farms Advisor served on a committee organized by the Fresno City Council to determine how the city could help. He provided statistics to the Council, testified at hearings, and was interviewed by radio, newspaper and television in January and February explaining how the freeze impacted small-scale farmers. He served on the city's loan committee and the Fresno Regional Foundation asked him to help locate a group of farmers in need of a special grant.Fresno City Council approved a $500,000 special zero-interest loan program for people living or farming in the city. The loan committee approved 35 loans to small family farmers ranging from $8,000 to $20,000 to be paid back over 4 to 10 years.

As a result of the media coverage, an anonymous donor gave a $1,000 check specifically to one of the Hmong farmers mentioned in a Los Angeles Times article. The advisor identified and recommended a group of 10 Hmong farmers to receive a $10,000 grant from the Fresno Regional Foundation to help them in purchasing a pre cooler for their vegetables. An additional 20 small family farmers in the city and county who did not qualify for the zero-interest loans were given a $1,663 grant from additional monies provided by Fresno Regional Foundation, United Way and the Fresno Economic Opportunities Commission.In all, 66 Southeast Asian, African American, and Caucasian farmers received financial assistance amounting to $555,000 through these efforts.

Sustaining California's Natural Resources

California's environment is extremely diverse and wide ranging, from urban areas to wildlands to coastal areas to deserts to mountains, involving aquatic, terrestrial and atmospheric ecosystems.

There are 174 Hatch and Regional Research projects funded through Hatch and Multi state Research sources to investigators at UC Riverside, Davis, and Berkeley with a natural resources focus. There are also 67 extension research projects

by UCCE Advisors under the Federal Planned Program: Sustaining California's Natural Resources. In addition, at the local level, there were 174 extension project/programs and the advisors conducted 492 short courses/workshops with 8,214 participants.

Projects are being conducted in several areas that are essential to sustaining California's natural resources; a few illustrative examples follow.

- Water Quality: Projects to reduce the loading of pesticides, nutrients, pathogens, sediments, and salts from agriculture, rangeland, oak woodlands, and urban runoff into surface and ground waters are being conducted.

- Air Quality: Projects on: greenhouse gas emissions and climate change used in the development of California's greenhouse gas legislation; data used to predict formation of ozone and secondary particles; improved models for prediction of greenhouse gas emissions from agricultural soils; reducing dust emissions using native plants in Owens Valley and developing BMPs for feedlots.

- Land Use: Developing regional models to make more reliable estimates of impacts of land use changes and anthropogenic activities (e.g., greenhouse gas emissions, aerosol formation) on climate. Developing planned growth strategies to address population growth, loss of agricultural land, poor air and water quality, and urban encroachment on wildlands.

- Sustainable Use: Providing data to agencies on: impacts of agricultural and environmental contaminants on wildlife, waterfowl, and aquatic organisms; developing strategies for management and restoration of the Bay-Delta; and implementing California's Marine Life Protection Act.Conducting projects to examine the effects of invasive species and environmental stresses (natural and anthropogenic) on biodiversity; developing a rangeland health indicators systems to allow landowners to assess ecological and economic health of their lands.

- Water Supply and Allocation: Developed economic models allowing policy makers to calculate agricultural costs vs. environmental benefits of agricultural/urban water trades and land fallowing schemes in Salton Sea region; developing user-friendly model for growers to assess impacts of irrigation with reclaimed wastewater.

- Wildland Fire:Developed interactive website to assist residents to prepare for wildfire and deal with the aftermath. Conducting projects on: forest management practices to reduce wildfire risk and enhance long-term forest productivity, elevated soil nitrogen effects on fuel load that supports increased fire frequency, impact of prescribed burns and wildfires on the erosion potential of soils.

Total Actual Amount of professional FTEs/SYs for this State

Year:2007	**Extension**		**Research**	
	1862	**1890**	**1862**	**1890**
Plan	288.8	0.0	331.8	0.0
Actual	264.2	0.0	339.2	0.0

II. Merit Review Process

1. The Merit Review Process that was Employed for this year

- Internal University Panel
- Combined External and Internal University Panel
- Combined External and Internal University External Non-University Panel
- Expert Peer Review

2. Brief Explanation

Scientific Peer Review

Each project funded under the Hatch Act was peer reviewed at the department level in the colleges and School of Veterinary Medicine at Berkeley, Davis, and Riverside. A peer review committee is appointed by the department chair. The committee evaluated the relevance, quality and scientific value of the proposed research. Upon completion of the peer review, the project was reviewed at the dean's office for USDA compliance and forwarded to the Vice President's office for final review and submission.

Merit Review

The Division's organizational structure emphasizes that resource allocation decisions will be driven by programmatic considerations and developed through a broad participatory process. This process will include review of the quality and relevance to program goals for all of the Division's programs.

Workgroups are the focal point and primary mechanism for accomplishing ANR's high priority research and extension goals. They provided grass□roots leadership for program development and evaluation at the statewide level. Structured to bring together CE and AES personnel with non□ANR partners to work on emerging and continuing issues, they looked at the Division's program priorities and determine the programs that will best address these needs. The workgroups also evaluate and report the program results of their efforts.

At the statewide level, the UC ANR Program Council is charged with coordinating statewide planning and program policies and providing statewide leadership for coordination of resource allocation. Chaired by the Asst Vice President-Programs, it is composed of the Associate Deans for Research and Extension at the three colleges and the school of Veterinary Medicine at the Berkeley, Davis, and Riverside campuses, 3 CE Regional Directors, and 4 Program Leaders. The Associate Vice President and Assistant Vice President□Administrative Services serve as ex officio members.

The Program Council reviewed all ANR budget proposals, program area budget proposals, and position proposals from a statewide perspective and develop recommendations for a comprehensive ANR program budget. These recommendations were then considered by the Associate Vice President and Vice President for final decisions on allocations.

The Program Council is also charged with providing leadership for 5-year program reviews of statewide programs. Each of the Division's 20 statewide programs undergoes a program review initiated by the appropriate Program Leader every five years. A review panel of ANR members and external stakeholder representatives is appointed and conducts the review. The review results are presented and discussed by Program Council members who make recommendations to the Associate Vice President for possible actions.During this past year, the Mosquito Research, Genetic Resources Conservation and the Integrated Pest Management Programs were reviewed by panels composed of ANR members, academics from other institutions and appropriate agency representatives.The review reports were presented at a Program Council meeting and the Program Council made recommendations to the Associate Vice President on potential actions.

III. Stakeholder Input

1. Actions taken to seek stakeholder input that encouraged their participation

- Use of media to announce public meetings and listening sessions
- Targeted invitation to traditional stakeholder groups
- Targeted invitation to non-traditional stakeholder groups
- Targeted invitation to traditional stakeholder individuals
- Targeted invitation to non-traditional stakeholder individuals
- Targeted invitation to selected individuals from general public
- Survey of traditional stakeholder groups
- Survey of traditional stakeholder individuals
- Survey specifically with non-traditional groups
- Survey specifically with non-traditional individuals
- Survey of selected individuals from the general public

Brief Explanation

The University of California, Division of Agriculture and Natural Resources (UC ANR) continued to use a variety of mechanisms to encourage stakeholder input on the development of Division program priorities and use of its research, extension and education funds. CE advisors delivering programs in 57 California counties received input on local needs from their local clientele on a daily basis through their program activities.ANR's 20 statewide programs regularly communicated with their stakeholders through newsletters, annual reports and program meetings.

ANR workgroups and coordinating conferences are primary mechanisms for accomplishing ANR's high priority research and extension goals through grassroots leadership. They brought together AES and CE personnel and non-ANR partners to work on emerging and continuing priority issues in Division program areas. There were 74 Divisionwide workgroups and 11 Coordinating Conferences with a total membership of over 2,200 individuals. All members of the workgroups had the opportunity to identify high priority program needs and gave feedback on research and extension programs needed to address those needs.

Information on ANR programs and activities were also communicated through agencies, institutions and other programmatic groups that encourage stakeholder participation in ANR programs.

2(A). A brief statement of the process that was used by the recipient institution to identify individuals and groups stakeholders and to collect input from them

1. Method to identify individuals and groups

- Use Advisory Committees
- Use Internal Focus Groups
- Use External Focus Groups
- Open Listening Sessions
- Needs Assessments
- Use Surveys

Brief Explanation

External stakeholders are identified through a variety of mechanisms including the activities mentioned in Section 1. At the local county level, all Cooperative Extension advisors and county directors receive feedback on external stakeholders and groups as they conduct their programs.

In the ANR workgroups and coordinating conferences, non-ANR participants were identified by the scientists, advisors and specialists working in the specific program area and invited to participate in workgroup activities, including needs assessment and issue identification and evaluation and reporting of program results.

Formal advisory groups

The President of the University chairs the President's Advisory Commission on Agriculture and Natural Resources.This group identified the education needs of California's agricultural, natural and human resources interests and advise him on how the University can best meet these needs through its science-based research, classroom instruction and educational outreach. The members represented 28 business, consumer, youth and government leaders from throughout California and met twice last year to provide input.The Vice President - Agriculture and Natural Resources participated as a member of this Commission and brought the Commission's advice to the Executive Council, the Division's administrative group charged with Divisionwide strategic planning.

Each of the three colleges at Berkeley, Davis and Riverside and the School of Veterinary Medicine at Davis, have external stakeholder advisory councils that met last year to provide feedback on their research, extension, and teaching programs.Members of these councils represented the spectrum of clientele who use the Division's programs and who have expressed interest in providing input to the college/school planning efforts.

Several of the Statewide Special Projects and Programs have external Advisory Councils that met at least annually to review progress and offer recommendations for future program direction.

Commodity Organizations/Marketing Order Boards:Members of these organizations provided annual input on research and extension needs for their commodities to UC ANR members through regular meetings and discussion of funding for research projects.These individual groups also came together at their annual meeting of the California Commodity Commission.These particpants can also identify additional stakeholders who had interest in ANR's programs and program planning processes.

2(B). A brief statement of the process that was used by the recipient institution to identify individuals and groups who are stakeholders and to collect input from them

1. Methods for collecting Stakeholder Input

- Meeting with traditional Stakeholder groups
- Survey of traditional Stakeholder groups
- Meeting with traditional Stakeholder individuals
- Survey of traditional Stakeholder individuals
- Meeting with the general public (open meeting advertised to all)
- Survey of the general public
- Meeting specifically with non-traditional groups
- Survey specifically with non-traditional groups
- Meeting specifically with non-traditional individuals
- Survey specifically with non-traditional individuals
- Meeting with invited selected individuals from the general public

Brief Explanation

The groups described in Section 2A gave their input on ANR programs and future program needs at the various meetings with ANR members.

Regular 5-year program reviews are conducted of the ANR statewide programs.During the past year, review committees included external stakeholders or gathered feedback from external stakeholders in surveys or interviews of the Mosquito Research Program, Integrated Pest Management, and the Genetic Resources Conservation Program.

3. A statement of how the input was considered

- In the Budget Process
- To Identify Emerging Issues
- Redirect Extension Programs
- Redirect Research Programs
- In the Action Plans
- To Set Priorities

Brief Explanation

At the individual level, the input received from stakeholders in local county and regional programs by CE advisors was used to aid in further program planning and implementation of programs at the local, regional, and statewide level.ANR workgroups and coordinating conferences identified and/or gave feedback on priority academic positions to be filled and this information was communicated to ANR administration through the four statewide Program Leaders and the ANR annual budget process.Feedback from external stakeholders compiled during the 5-year program reviews of statewide programs was considered and included in the review committees' reports to ANR administration.

Brief Explanation of what you learned from your Stakeholders

•ANR’s role as provider of critically needed unbiased science relevant to issues facing California today was highly valued by clientele representatives from agriculture, natural resources and human services. •Stakeholders appreciated being given the opportunity to give their input in identifying the priority program issues. •Development of of research based knowledge and dissemination of the new knowledge is a critical role of University research and extension functions got our stakeholders.

IV. Expenditure Summary

1. Total Actual Formula dollars Allocated (prepopulated from C-REEMS)

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
7114227	0	9274127	0

2. Totaled Actual dollars from Planned Programs Inputs				
	Extension		Research	
	Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
Actual Formula	5760631	0	3565334	0
Actual Matching	5760631	0	3565334	0
Actual All Other	81499738	0	193436179	0
Total Actual Expended	93021000	0	200566847	0

3. Amount of Above Actual Formula Dollars Expended which comes from Carryover funds from previous years				
Carryover	2143475	0	0	0

V. Planned Program Table of Content

Program #1

V(A). Planned Program (Summary)

1. Name of the Planned Program

Sustainability and Viability of California Agriculture

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	17%		4%	
201	Plant Genome, Genetics, and Genetic Mechanisms	3%		33%	
202	Plant Genetic Resources	6%		6%	
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants	3%		7%	
204	Plant Product Quality and Utility (Preharvest)	11%		3%	
205	Plant Management Systems	40%		6%	
206	Basic Plant Biology	1%		21%	
212	Pathogens and Nematodes Affecting Plants	0%		18%	
307	Animal Management Systems	10%		1%	
601	Economics of Agricultural Production and Farm Management	9%		1%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2007	Extension		Research	
	1862	1890	1862	1890
Plan	112.2	0.0	140.9	0.0
Actual	93.5	0.0	152.6	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
2038307	0	1100705	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
2038307	0	1100705	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
28837372	0	86973983	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

UC ANR's integrated research and extension activities conducted research projects, workshops, education classes and demonstrations as well as one-on-one interventions.In addition, the programs used PSAs, newsletters, mass media, web sites and collaborations with other agencies and organizations to create and deliver programs.Thorough collaborative and participatory activities, cooperating farmers helped demonstrated improved practices.

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2. Brief description of the target audience

• Farmers/ranchers and rangeland owners/operators/managers •Allied agricultural industries professionals •Landscaping professionals •Organic famers •Consumers •Food suppliers •Food processors •Food retailers

V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	**Target**	**Target**	**Target**	**Target**
Plan	82100	0	9100	0
2007	508692	0	0	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year	Target
Plan:	20
2007 :	24

Patents listed

Multi-Subtype Fiv Vaccines
Alfalfa (Medicago Sativa L.) Cultivar
Purification, Presentation, And Characterization Of The Cytotoxin Of Moraxella
Using Recombinase Proteins To Increase Transgene Integration Efficiency
Bogsl-Alk, A Key Gene For Glucosinolate Biosynthesis In Cruciferous Crops
Equine Epsilon Immunoglobulin Chain Derived Peptides For Induction Of Anti-Ige Antibodies
Changing The Fatty Acid Composition Of Animals By Genetic Engineering
Overexpression Of Leafy Cotyledon2 Gene Delays Senescence Of Vegetative And Reproductive Structures In Plants
Another Novel Feline Calicivirus Causing A Highly Contagious And Fatal Hemorrhagic Fever Syndrome
Il-4 Receptor Antagonists For Companion Animals: Horse, Dog And Cat
Development Of Precision Harvesting And Analysis Techniques For Orchard Crops
A Systemic Small Rna Signaling System In Plants
Est Hills Female Pistachio
Lost Hills Female Pistachio
Carrier Tests For Albinism In The Domestic Cat
Carrier Tests For Polycystic Kidney Disease In The Domestic Cat
'Gillet' -A New Walnut Cultivar
Precision Gas Flow Meter
Hard White Spring (Hws) Wheat Variety 'Patwin'
Change In Redox Status And Abundance Of Allergens In Transgenic Wheat Overrexpressing Thioredoxin H
A Novel Formulation Of Phosphorus Fertilizers For Plants
Staygreen Maize
Mango Mandarin
Nematode Resistant Vine Baby Lima

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	100	577	625

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Classes/Short Courses Conducted

Year	Target	Actual
2007	220	230

Output #2

Output Measure

- Workshops Conducted

Year	Target	Actual
2007	180	132

Output #3

Output Measure

- Demonstrations and Field Days Conducted

Year	Target	Actual
2007	130	61

Output #4

Output Measure

- Newsletters Produced

Year	Target	Actual
2007	220	56

Output #5

Output Measure

- Web Sites Created or Updated

Year	Target	Actual
2007	90	39

Output #6

Output Measure

- Research Projects Conducted

Year	Target	Actual
2007	530	500

Output #7

Output Measure

- Videos, Slide Sets and other A/V or Digital Media Educational Products Created

Year	Target	Actual
2007	15	17

Output #8

Output Measure

- Manuals and Other Printed Instructional Materials Produced

Year	Target	Actual
2007	80	31

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O No.	OUTCOME NAME
1	Percentage of farm and ranch owners/operators and allied industry professionals participating in the program gaining knowledge of crop and varietal selection factors and research-based performance data
2	Percentage of farm/ranch/landscaping owners/operators/managers and allied industry professionals participating in the program adopting improvements in cultural practices, pest and disease management, irrigation and drainage or other aspects of comprehensive management systems for plant and animal production
3	Percentage of farm, ranch and landscaping owners/operators and managers and allied industry professionals participating in the program adopting superior varieties of crops
4	Percentage of farmers and ranchers participating in the program realizing lower production costs and/or increased economic sustainability
5	Percentage of farm/ranch/landscaping owners/operators/managers and allied industry professionals participating in the program gaining knowledge of cultural practices, pest and disease management, irrigation and drainage or other aspects of comprehensive management systems for plant and animal production
6	Number of farm, ranch and landscaping owner/operators and managers and allied industry professionals participating in the programs who gained knowledge of aspects of comprehensive management systems for plant and animal production
7	Number of farm owner/operators and managers and allied industry professionals participating in the programs who gained knowledge of cultural practices for crop production
8	Number of acres of almonds farmed by orchard owners/operators, participating in the program, who gained knowledge that chipping almond prunings is a viable alternative to burning, and it reduces air pollution and improves soil health
9	Number of farm owner/operators and managers and allied industry professionals participating in the programs who gained knowledge of irrigation management practices
10	Number of acres of agronomic, forage, and orchard crops farmed by farm owner/operators, participating in the programs, who gained knowledge on irrgation management practices
11	Number of farm owner/operators and managers and allied industry professionals participating in the programs who gained knowledge of pest and disease management for plant and animal production
12	Number of farm, orchard, landscape and turfgrass owner/operators and allied industry professionals participating in the programs who gained knowledge of crop and varietal selection factors and research-based performance data
13	Number of farm owner/operators and managers, including small and mono-lingual Spanish speaking farmers, and allied industry professionals participating in the programs who gained knowledge on farm management and marketing techniques, including the costs and risks associated with producing speciality crops
14	Number of farm owner/operators, allied water professionals, and governmental agency representatives participating in the program who gained knowledge of how Lake Oroville operations impact rice productivity in the northern Sacramento Valley
15	Number of farm and ranch owner/operators and managers and allied industry profesionals participating in the programs who intended to try out or adopt the recommended cultural practices, pest and disease management, or other aspects of comprehensive management systems for plant and animal production
16	Number of dairy farm owners/operators, managers, and consultants participating in the programs who gained confidence in using soil analyses to reduce excessive fertilizer applications and potential for groundwater contamination
17	Number of public and private turfgrass managers participating in the programs who reported increased favorability toward using recycled water for turf irrigation
18	Number of farm owners/operators, including small scale speciality crop growers and family farmers participating in the programs who intended to adopt superior varieties of crops or new commercial crops to improve economic viability
19	Number of members of the public participating in agritourism programs and events who reported feeling more connected to local farms and increased likelihood of buying local agricultural products
20	Number of farm and ranch owners/operators, particularly small scale and minority producers, participating in the programs who acquired skills in business management practices and marketing strategies
21	Number of public and private turgrass managers participating in the programs who gained the ability to understand and implement Integrated Pest Management practices in turfgrass management
22	Number of acres being farmed by orchard owner/operators, participating in the programs, who acquired skills for irrigation, grazing rotation, and vegtation filters to help protect surface water quality affected by these production systems

23	Number of farm and ranch owner/operators and managers and allied industry professionals participating in the programs who adopted recommended cultural practices for plant and animal production
24	Number of farm, ranch, and horticultural producers participating in the programs who adopted recommended irrigation or other soil management practices
25	Number of tree fruit and nut producers, key decision makers, and governmental agency representatives participating in the programs who adopted recommended pruning techniques or other orchard management practices
26	Number of acres of walnuts being farmed by orchard owner/operators and managers, participating in the programs, who adopted the proper use of the new Valent BioSciences plant growth regulator, ReTain, as a solution to pislatte flower abortion
27	Number of farm owner/operators and managers, including for small farmers, and allied industry professionals participating in the programs who adopted superior varieties of crops
28	Number of small farm and ranch owner/operator and managers participating in the programs who utilized alternative marketing of their crops to local consumers, including farmers markets, schools, restaurants, community supported agriculture boxes
29	Number of K-12 schools in Santa Clara County participating in the programs that either built new school gardens or revamped their pre-exisiting existing garden programs
30	A new ordinance was passed to allow on-farm sales
31	Number of farm and ranch owner/operators, including small scale and minority farmers, participating in the programs who realized lower production costs and/or higher return on investment
32	Number of acres of tree fruits and nuts being farmed by orchard owner/operators, participating in the programs, who realized lower production costs and/or higher return on investment
33	Number of acres of pistachios being farmed by orchard owner/operators, participating in the programs, who began to utilize mechanical pruning instead of labor-based cultural practices, which reduced their management costs from $200 per acre to about $50
34	Number of avocado and citrus growers participating in the programs who experienced an economic benefit from growing more profitable speciality crops, specifically pitahaya and blueberries
35	Number of tree fruit and nut owner/operators and decision makers participating in the programs who used soft materials and mating disruption, which contributed to the 80-90% decrease in organophosphate use in pears and walnuts
36	Number of egg production farm owner/operators participating in the programs that improved fly control and reduced their fly complaints and violations
37	Members of the public that work or live in or around agriculture experienced health benefits from decreased spray drift incidents
38	Number of members of the public participating in Master Gardener Programs who gained knowledge of sustainable home gardening techniques, including varietal selection, composting, water conservation and proper use of pest control
39	Number of members of the public participating in Master Gardener Programs who gained knowledge of crop and landscape pest detection and least toxic control methods

Outcome #1

1. Outcome Measures

Percentage of farm and ranch owners/operators and allied industry professionals participating in the program gaining knowledge of crop and varietal selection factors and research-based performance data

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	80	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
202	Plant Genetic Resources

Outcome #2

1. Outcome Measures

Percentage of farm/ranch/landscaping owners/operators/managers and allied industry professionals participating in the program adopting improvements in cultural practices, pest and disease management, irrigation and drainage or other aspects of comprehensive management systems for plant and animal production

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	40	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems

Outcome #3

1. Outcome Measures

Percentage of farm, ranch and landscaping owners/operators and managers and allied industry professionals participating in the program adopting superior varieties of crops

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	55	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
204	Plant Product Quality and Utility (Preharvest)

Outcome #4

1. Outcome Measures

Percentage of farmers and ranchers participating in the program realizing lower production costs and/or increased economic sustainability

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	20	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management

Outcome #5

1. Outcome Measures

Percentage of farm/ranch/landscaping owners/operators/managers and allied industry professionals participating in the program gaining knowledge of cultural practices, pest and disease management, irrigation and drainage or other aspects of comprehensive management systems for plant and animal production

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	50	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
307	Animal Management Systems

Outcome #6

1. Outcome Measures

Number of farm, ranch and landscaping owner/operators and managers and allied industry professionals participating in the programs who gained knowledge of aspects of comprehensive management systems for plant and animal production

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	1182

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
307	Animal Management Systems
601	Economics of Agricultural Production and Farm Management
205	Plant Management Systems
204	Plant Product Quality and Utility (Preharvest)

Outcome #7

1. Outcome Measures

Number of farm owner/operators and managers and allied industry professionals participating in the programs who gained knowledge of cultural practices for crop production

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	12423

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems
601	Economics of Agricultural Production and Farm Management
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants

Outcome #8

1. Outcome Measures

Number of acres of almonds farmed by orchard owners/operators, participating in the program, who gained knowledge that chipping almond prunings is a viable alternative to burning, and it reduces air pollution and improves soil health

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	136620

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems

Outcome #9

1. Outcome Measures

Number of farm owner/operators and managers and allied industry professionals participating in the programs who gained knowledge of irrigation management practices

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	441

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants

Outcome #10

1. Outcome Measures

Number of acres of agronomic, forage, and orchard crops farmed by farm owner/operators, participating in the programs, who gained knowledge on irrgation management practices

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	15000

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants

Outcome #11

1. Outcome Measures

Number of farm owner/operators and managers and allied industry professionals participating in the programs who gained knowledge of pest and disease management for plant and animal production

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	2077

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
212	Pathogens and Nematodes Affecting Plants

Outcome #12

1. Outcome Measures

Number of farm, orchard, landscape and turfgrass owner/operators and allied industry professionals participating in the programs who gained knowledge of crop and varietal selection factors and research-based performance data

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	18739

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
202	Plant Genetic Resources
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants

Outcome #13

1. Outcome Measures

Number of farm owner/operators and managers, including small and mono-lingual Spanish speaking farmers, and allied industry professionals participating in the programs who gained knowledge on farm management and marketing techniques, including the costs and risks associated with producing speciality crops

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	25384

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management

Outcome #14

1. Outcome Measures

Number of farm owner/operators, allied water professionals, and governmental agency representatives participating in the program who gained knowledge of how Lake Oroville operations impact rice productivity in the northern Sacramento Valley

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	15000

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems

Outcome #15

1. Outcome Measures

Number of farm and ranch owner/operators and managers and allied industry profesionals participating in the programs who intended to try out or adopt the recommended cultural practices, pest and disease management, or other aspects of comprehensive management systems for plant and animal production

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	726

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
212	Pathogens and Nematodes Affecting Plants
205	Plant Management Systems
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants

Outcome #16

1. Outcome Measures

Number of dairy farm owners/operators, managers, and consultants participating in the programs who gained confidence in using soil analyses to reduce excessive fertilizer applications and potential for groundwater contamination

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	15000

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships

Outcome #17

1. Outcome Measures

Number of public and private turfgrass managers participating in the programs who reported increased favorability toward using recycled water for turf irrigation

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	441

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants
205	Plant Management Systems

Outcome #18

1. Outcome Measures

Number of farm owners/operators, including small scale speciality crop growers and family farmers participating in the programs who intended to adopt superior varieties of crops or new commercial crops to improve economic viability

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	296

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
205	Plant Management Systems
601	Economics of Agricultural Production and Farm Management

Outcome #19

1. Outcome Measures

Number of members of the public participating in agritourism programs and events who reported feeling more connected to local farms and increased likelihood of buying local agricultural products

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:
Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	2100

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
601	Economics of Agricultural Production and Farm Management

Outcome #20

1. Outcome Measures
Number of farm and ranch owners/operators, particularly small scale and minority producers, participating in the programs who acquired skills in business management practices and marketing strategies

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:
Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	280

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management

Outcome #21

1. Outcome Measures

Number of public and private turgrass managers participating in the programs who gained the ability to understand and implement Integrated Pest Management practices in turfgrass management

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	441

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
212	Pathogens and Nematodes Affecting Plants

Outcome #22

1. Outcome Measures

Number of acres being farmed by orchard owner/operators, participating in the programs, who acquired skills for irrigation, grazing rotation, and vegtation filters to help protect surface water quality affected by these production systems

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	100000

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
205	Plant Management Systems
204	Plant Product Quality and Utility (Preharvest)

Outcome #23

1. Outcome Measures

Number of farm and ranch owner/operators and managers and allied industry professionals participating in the programs who adopted recommended cultural practices for plant and animal production

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	2285

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
307	Animal Management Systems

Outcome #24

1. Outcome Measures

Number of farm, ranch, and horticultural producers participating in the programs who adopted recommended irrigation or other soil management practices

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	7056

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
205	Plant Management Systems

Outcome #25

1. Outcome Measures

Number of tree fruit and nut producers, key decision makers, and governmental agency representatives participating in the programs who adopted recommended pruning techniques or other orchard management practices

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	7252

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
205	Plant Management Systems
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants

Outcome #26

1. Outcome Measures

Number of acres of walnuts being farmed by orchard owner/operators and managers, participating in the programs, who adopted the proper use of the new Valent BioSciences plant growth regulator, ReTain, as a solution to pislatte flower abortion

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	30000

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
212	Pathogens and Nematodes Affecting Plants

Outcome #27

1. Outcome Measures

Number of farm owner/operators and managers, including for small farmers, and allied industry professionals participating in the programs who adopted superior varieties of crops

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	11701

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
202	Plant Genetic Resources
204	Plant Product Quality and Utility (Preharvest)

Outcome #28

1. Outcome Measures

Number of small farm and ranch owner/operator and managers participating in the programs who utilized alternative marketing of their crops to local consumers, including farmers markets, schools, restaurants, community supported agriculture boxes

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	326

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management

Outcome #29

1. Outcome Measures

Number of K-12 schools in Santa Clara County participating in the programs that either built new school gardens or revamped their pre-exisiting existing garden programs

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:
Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	35

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems

Outcome #30

1. Outcome Measures
A new ordinance was passed to allow on-farm sales

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:
Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	1

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Placer and Nevada Counties continue to experience rapid development in agricultural lands. Land prices continue to skyrocket, in some cases as high as $50,000 an acre. Over 30% of producers in both counties are 65 years of age or older and do not have a younger generation to take over the family farm. It has become increasingly difficult for agricultural production in the foothills to remain profitable with commodity marketing. A growing number of producers seek ways to market directly to consumers and retail outlets. Ranchers need a better understanding of their economic and financial situation. A better understanding would give them the ability to make informed decisions on which enterprises to expand, add, or delete in order to improve profitability.

What has been done

UC Cooperative Extension worked with the Nevada County Board of Supervisors , the Planning Department, Agricultural Commissioner, the Nevada County Ag Commission, and the Local Food Coalition.

Results

A new ordinance was passed that allowed on-farm sales of your own products plus other Nevada County producer products. The Nevada County Board of Superivisors is interested in providing $10,000 in start-up funding for the creation of Nevada County Grown, a local agricultural marketing organization. The funds would be made available in the 2008-2009 budget year.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships

Outcome #31

1. Outcome Measures

Number of farm and ranch owner/operators, including small scale and minority farmers, participating in the programs who realized lower production costs and/or higher return on investment

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	14521

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management

Outcome #32

1. Outcome Measures

Number of acres of tree fruits and nuts being farmed by orchard owner/operators, participating in the programs, who realized lower production costs and/or higher return on investment

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	34000

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management

Outcome #33

1. Outcome Measures

Number of acres of pistachios being farmed by orchard owner/operators, participating in the programs, who began to utilize mechanical pruning instead of labor-based cultural practices, which reduced their management costs from $200 per acre to about $50

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	50000

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management

Outcome #34

1. Outcome Measures

Number of avocado and citrus growers participating in the programs who experienced an economic benefit from growing more profitable speciality crops, specifically pitahaya and blueberries

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	160

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
601	Economics of Agricultural Production and Farm Management

Outcome #35

1. Outcome Measures

Number of tree fruit and nut owner/operators and decision makers participating in the programs who used soft materials and mating disruption, which contributed to the 80-90% decrease in organophosphate use in pears and walnuts

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	7000

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
212	Pathogens and Nematodes Affecting Plants

Outcome #36

1. Outcome Measures

Number of egg production farm owner/operators participating in the programs that improved fly control and reduced their fly complaints and violations

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	35

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
212	Pathogens and Nematodes Affecting Plants

Outcome #37

1. Outcome Measures

Members of the public that work or live in or around agriculture experienced health benefits from decreased spray drift incidents

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The residents of Kern County, that work or live in or around agriculture, experience adverse health affects from spray drift incidents.

What has been done

During the past three years we have conducted Worker Protection Trainings.

Results

Over the last three years, the spray drift incidents have decreased from 5 to 4 to 3 to 1, with individuals affected going from 183 to 125 to 70 to 18.

4. Associated Knowledge Areas

KA Code	Knowledge Area
212	Pathogens and Nematodes Affecting Plants

Outcome #38

1. Outcome Measures

Number of members of the public participating in Master Gardener Programs who gained knowledge of sustainable home gardening techniques, including varietal selection, composting, water conservation and proper use of pest control

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	2500

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems

Outcome #39

1. Outcome Measures

Number of members of the public participating in Master Gardener Programs who gained knowledge of crop and landscape pest detection and least toxic control methods

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:
Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	6333

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Populations changes (immigration,new cultural groupings,etc.)

Brief Explanation

- Parcelization of farmland into ranchettes
- Western states drought
- Chronic labor shortages with labor intensive crops
- Rapid increase in labor costs due to a minimum wage rate that is higher than almost all other states.
- Rapid population growth driving competition for water and land.
- A 50% to 300% increase in fertilizer costs.
- Flood of imports of certain labor-intensive commodities.
- Skyrocketing fuel costs
- Increased demand for energy crops

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)
- Case Study
- Comparisons between program participants (individuals,group,organizations) and non-participants
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.
- Comparison between locales where the program operates and sites without program intervention

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

Program #2

V(A). Planned Program (Summary)

1. Name of the Planned Program

California Families, Youth and Communitiy Development

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
501	New and Improved Food Processing Technologies	3%		6%	
701	Nutrient Composition of Food	0%		5%	
702	Requirements and Function of Nutrients and Other Food Components	0%		39%	
703	Nutrition Education and Behavior	29%		25%	
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources.	1%		1%	
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	6%		9%	
724	Healthy Lifestyle	6%		2%	
802	Human Development and Family Well-Being	6%		8%	
803	Sociological and Tech Change Affecting Indivs, fams and comms	1%		5%	
806	Youth Development	48%		0%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2007	Extension		Research	
	1862	1890	1862	1890
Plan	58.6	0.0	46.9	0.0
Actual	52.6	0.0	50.4	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
1147024	0	904353	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
1147024	0	904353	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
16227769	0	28725352	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

UC ANR's integrated research and extension activities conducted research projects, workshops, education used PSAs, newsletters, mass media, web sites and collaborations with other agencies and organizations to create and deliver programs

.

2. Brief description of the target audience

•Adults, children, youth and families in general •Children in general •Low and moderate income adults, children, youth and families •Adults and children at-risk for nutrition-related health problems, including individuals living in poverty, recent immigrants, and African American, Native American and Hispanic populations •Nutrition and healthcare professionals •Preschool, primary, and secondary school teachers and administrators •Professional childcare providers •Private organizations •Public agencies and private organizations concerned with food, nutrition, and health

The target audience of some programs is underserved groups but also UC ANR reaches out to the general public, especially through its efforts to change state and local policies and create environments conducive to healthy lifestyles and positive youth development. In 2007, EFNEP reached low-income families with children through 16 county programs; FSNEP reached food stamp eligible youth and/or adults in 35 counties. School-age programs (including 4H clubs, classroom enrichment and afterschool activities) reach both the children at-risk, as well as the general child population. Caregivers (of young children and seniors) are reached through informal educational programs. Paid staff and volunteers from private and public entities receive in-service training on safe food handling to reduce food-borne illness in the general population.In-service training and web-based newsletters and fact sheets in other topic areas (nutrition, health, youth development, parenting, etc) reach a wide audience, including health professionals, school administrators and teachers, paraprofessional staff from public health programs (such as WIC).

V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	123000	0	234600	0
2007	610488	0	272636	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year	Target
Plan:	0
2007 :	4

Patents listed

Magnetic Imaging Probes For Membrane Potential
Method For Measuring Rates Of Reverse Cholesterol Transport In Vivo, As An Index Of Anti-Atherogenesis.
Method Of Assessing The Effects Of Therapies On Aging
Aquatag: A Process For Measuring Multiple Classes Of Molecular Fluxes (Molecular Kinetics) Concurrently, For Pharmaceutical Drug Discovery

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	30	250	279

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Classes/Short Courses Conducted

Year	Target	Actual
2007	900	2514

Output #2

Output Measure

- Workshops Conducted

Year	Target	Actual
2007	1800	395

Output #3

Output Measure

- Demonstrations and Field Days Conducted

Year	Target	Actual
2007	230	137

Output #4

Output Measure

- Newsletters Produced

Year	Target	Actual
2007	70	20

Output #5

Output Measure

- Web Sites Created or Updated

Year	Target	Actual
2007	45	23

Output #6

Output Measure

- Research Projects Conducted

Year	Target	Actual
2007	180	152

Output #7

Output Measure

- Videos, Slide Sets, and other AV or Digital Media Educational Products Created

Year	Target	Actual
2007	70	18

Output #8

Output Measure

- Manuals and Other Printed Instructional Materials Produced

Year	Target	Actual
2007	340	22

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O No.	OUTCOME NAME
1	Percentage of youth and adults in the general population participating in nutrition education gaining knowledge of nutrition, healthy food choices and dietary practice
2	Percentage of individuals and families participating in healthy lifestyle education who will gain knowledge of healthy lifestyle practices
3	Percentage of individuals participating in food safety education gaining knowledge of safe food handling and preparation techniques
4	Percentage of low-income individuals and families participating in nutrition and consumer education who will gain knowledge of food resource management techniques
5	Percentage of youth participating in 4H clubs acquiring leadership and civic skills
6	Percentage of youth participating in 4H club, community, in-school and afterschool education acquiring planning, problem solving, teamwork and other life skills
7	Percentage of low-income adults and families participating in nutrition education adopting recommended dietary practices
8	Percentage of low-income children and youth participating in nutrition education adopting recommended dietary practices
9	Percentage of low-moderate income individuals and families participating in nutrition and consumer education adopting recommended food resource management techniques
10	Percentage of individuals participating in food safety education adopting safe food handling and preparation techniques
11	Percentage of youth participating in 4-H clugs assuming leadership roles in organizations or taking part in community affairs.
12	Percentage of children and youth participating in 4H club, community, in-school and afterschool education increasing their level of science, agricultural and environmental litracy
13	Percentage of low income children and youth participating in nutrition education gaining knowledge of nutrition, healthy food choies, and dietary practices.
14	Percentage of low income adults and families participating in nutrition education gaining knowledge of nutrition, healthy food choices and dietary practices.
15	Number of children and youth participating in 4-H club, community, in-school and afterschool education programs who increased their level of science, agricultural and environmental literacy
16	Number of low-income children and youth participating in nutrition education programs who gained knowledge of nutrition, healthy food choices and dietary practices
17	Number of low-income adults and families participating in the nutrition education programs who gained knowledge of nutrition, healthy food choices and dietary practices
18	Number of youth and adults in the general population participating in nutrition education programs who gained knowledge of nutrition, healthy food choices and dietary practices
19	Number of individuals and families participating in healthy lifestyle education programs who gained knowledge of healthy lifestyle practices
20	Number of individuals participating in food safety education programs who gained knowledge of safe food handling and preparation techniques
21	Number of parents and parent educators participating in parent education programs who gained knowledge of parenting techniques to promote child development and learning
22	Number of youth educators and child care resource specialists participating in youth development education programs who gained knowledge of youth development practices
23	Number of individuals and families participating in nutrition and health education programs who reported readiness to adopt healthier dietary, food safety, and lifestyle practices
24	Number of members and veterans of the armed forces participating in family and consumer well-being education programs who intended to start or increase personal savings or pay down high cost debt
25	Number of in-home care givers and child care providers participating in the programs who intended to use the recommended nutrition education and life skills activities with their clientele
26	Number of youth participating in 4-H club, community and afterschool education programs who acquired leadership or civic skills
27	Number of partner agencies' staff and youth participating in 4-H club, community and afterschool education programs who acquired planning, problem solving, teamwork or other life skills

28	Number of low-income adults and families participating in nutrition education programs who adopted healthier dietary practices
29	Number of individuals participating in food safety education programs who adopted safe food handling and preparation techniques
30	Number of low-moderate income individuals and familes participating in nutrition and consumer education programs who adopted food resource management techniques
31	Number of individuals and families participating in resource management education programs who adopted financial management techniques
32	Youth participating in 4-H clubs assumed leadership roles in organizations or participate in community affairs
33	Military communities and their forces deployed around the world, many of whom are in the lower ranks earning low-to-moderate incomes, are able to access savings options that meet their needs
34	Low-income residents in Tulare County participating in the food security program established 2 farmer's markets to increase their access to fresh fruits and vegetables
35	Number of egg producers and processors participating in food safety education improved egg quality and reduced risk of egg associated human disease
36	Number of teachers and youth leaders at 30 schools participating in Youth FSNEP changed the school culture to be healthier
37	Number of low-moderate income individuals and families participating in nutrition and consumer education programs who gained knowledge of food resource management techniques

Outcome #1

1. Outcome Measures

Percentage of youth and adults in the general population participating in nutrition education gaining knowledge of nutrition, healthy food choices and dietary practice

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	65	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior

Outcome #2

1. Outcome Measures

Percentage of individuals and families participating in healthy lifestyle education who will gain knowledge of healthy lifestyle practices

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	70	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior

Outcome #3

1. Outcome Measures

Percentage of individuals participating in food safety education gaining knowledge of safe food handling and preparation techniques

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	65	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

Outcome #4

1. Outcome Measures

Percentage of low-income individuals and families participating in nutrition and consumer education who will gain knowledge of food resource management techniques

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	70	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior

Outcome #5

1. Outcome Measures

Percentage of youth participating in 4H clubs acquiring leadership and civic skills

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	50	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #6

1. Outcome Measures

Percentage of youth participating in 4H club, community, in-school and afterschool education acquiring planning, problem solving, teamwork and other life skills

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:
Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	50	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #7

1. Outcome Measures
Percentage of low-income adults and families participating in nutrition education adopting recommended dietary practices

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:
Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	65	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior

Outcome #8

1. Outcome Measures

Percentage of low-income children and youth participating in nutrition education adopting recommended dietary practices

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	40	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior

Outcome #9

1. Outcome Measures

Percentage of low-moderate income individuals and families participating in nutrition and consumer education adopting recommended food resource management techniques

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	65	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior

Outcome #10

1. Outcome Measures

Percentage of individuals participating in food safety education adopting safe food handling and preparation techniques

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	50	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

Outcome #11

1. Outcome Measures

Percentage of youth participating in 4-H clugs assuming leadership roles in organizations or taking part in community affairs.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	50	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #12

1. Outcome Measures

Percentage of children and youth participating in 4H club, community, in-school and afterschool education increasing their level of science, agricultural and environmental litracy

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	50	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #13

1. Outcome Measures

Percentage of low income children and youth participating in nutrition education gaining knowledge of nutrition, healthy food choies, and dietary practices.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	60	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior

Outcome #14

1. Outcome Measures

Percentage of low income adults and families participating in nutrition education gaining knowledge of nutrition, healthy food choices and dietary practices.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	45	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle
703	Nutrition Education and Behavior

Outcome #15

1. Outcome Measures

Number of children and youth participating in 4-H club, community, in-school and afterschool education programs who increased their level of science, agricultural and environmental literacy

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	245

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #16

1. Outcome Measures

Number of low-income children and youth participating in nutrition education programs who gained knowledge of nutrition, healthy food choices and dietary practices

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	2069

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior

Outcome #17

1. Outcome Measures

Number of low-income adults and families participating in the nutrition education programs who gained knowledge of nutrition, healthy food choices and dietary practices

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	1687

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior

Outcome #18

1. Outcome Measures

Number of youth and adults in the general population participating in nutrition education programs who gained knowledge of nutrition, healthy food choices and dietary practices

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	23201

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior

Outcome #19

1. Outcome Measures

Number of individuals and families participating in healthy lifestyle education programs who gained knowledge of healthy lifestyle practices

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	509

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle

Outcome #20

1. Outcome Measures

Number of individuals participating in food safety education programs who gained knowledge of safe food handling and preparation techniques

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	436

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

Outcome #21

1. Outcome Measures

Number of parents and parent educators participating in parent education programs who gained knowledge of parenting techniques to promote child development and learning

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	786

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being

Outcome #22

1. Outcome Measures

Number of youth educators and child care resource specialists participating in youth development education programs who gained knowledge of youth development practices

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	626

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #23

1. Outcome Measures

Number of individuals and families participating in nutrition and health education programs who reported readiness to adopt healthier dietary, food safety, and lifestyle practices

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	670

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
724	Healthy Lifestyle

Outcome #24

1. Outcome Measures

Number of members and veterans of the armed forces participating in family and consumer well-being education programs who intended to start or increase personal savings or pay down high cost debt

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	432

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
803	Sociological and Tech Change Affecting Indivs, fams and comms

Outcome #25

1. Outcome Measures

Number of in-home care givers and child care providers participating in the programs who intended to use the recommended nutrition education and life skills activities with their clientele

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:
Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	113

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
501	New and Improved Food Processing Technologies
802	Human Development and Family Well-Being

Outcome #26

1. Outcome Measures
Number of youth participating in 4-H club, community and afterschool education programs who acquired leadership or civic skills

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:
Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	7435

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #27

1. Outcome Measures

Number of partner agencies' staff and youth participating in 4-H club, community and afterschool education programs who acquired planning, problem solving, teamwork or other life skills

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	270

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #28

1. Outcome Measures

Number of low-income adults and families participating in nutrition education programs who adopted healthier dietary practices

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	4976

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior

Outcome #29

1. Outcome Measures

Number of individuals participating in food safety education programs who adopted safe food handling and preparation techniques

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	1328

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

Outcome #30

1. Outcome Measures

Number of low-moderate income individuals and familes participating in nutrition and consumer education programs who adopted food resource management techniques

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	887

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
803	Sociological and Tech Change Affecting Indivs, fams and comms
703	Nutrition Education and Behavior

Outcome #31

1. Outcome Measures

Number of individuals and families participating in resource management education programs who adopted financial management techniques

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	262

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
501	New and Improved Food Processing Technologies

Outcome #32

1. Outcome Measures

Youth participating in 4-H clubs assumed leadership roles in organizations or participate in community affairs

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:
Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	492

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #33

1. Outcome Measures
Military communities and their forces deployed around the world, many of whom are in the lower ranks earning low-to-moderate incomes, are able to access savings options that meet their needs

2. Associated Institution Types

•1862 Extension
•1862 Research

3a. Outcome Type:
Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

One barrier to savings among many low-to-moderate incomes (LTMI) households is that they typically have only small amounts to save and hence earn a very low return of approximately 1.5%, the amount paid on a regular savings account. This low return us hardly enough to motivate them to save. They often do not have the $500-$1,000 need to earn the 4-5% interest paid on Certificates of Deposit.

What has been done

UCCE Extension worked with small financial instiutions on San Diego Saves Week 2007. A message, 'Build Wealth, Not Debt' was spread to the institutional members and the community, through (1) display ads in the 2 major newspapers, the San Diego Union-Tribune and North County Times,and (2)two articles published in both the Camp Pendleton Scout and Navy Dispatch newspapers, (3) statement inserts sent to 110,000 members and potential members, (4) inserts in 7,000 e-statements, and presentations to businesses and philanthropic organizations including the Chamber of Commerce and Kiwanis.

Results

Members of Pacific Marine Credit Union gained access to a new savings product for those with small dollar amounts to save (typically the LTMI population). PCMU created the 'Saver Certificate' that can be opened with a deposit of $25, with monthly deposits for 12 months. It earns the same interest rate as a $2,000 certificate of deposit if it remains on deposit for 12 months. This product fills an important niche in retail banking since it creates an incentive to save for some who might not otherwise be motivated to save, and its success (for the financial institution) makes it a model for other banks and credit unions seving LTMI consumers. In response to the message of San Diego Saves Week, new and existing PMCU members made monthly commitments to save money. The total projected new savings dollars are $86,500 monthly or $1,038,000 during the first year of saving.

4. Associated Knowledge Areas

KA Code	Knowledge Area
803	Sociological and Tech Change Affecting Indivs, fams and comms

Outcome #34

1. Outcome Measures

Low-income residents in Tulare County participating in the food security program established 2 farmer's markets to increase their access to fresh fruits and vegetables

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	2

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
803	Sociological and Tech Change Affecting Indivs, fams and comms

Outcome #35

1. Outcome Measures

Number of egg producers and processors participating in food safety education improved egg quality and reduced risk of egg associated human disease

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	40

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources.
501	New and Improved Food Processing Technologies

Outcome #36

1. Outcome Measures

Number of teachers and youth leaders at 30 schools participating in Youth
FSNEP changed the school culture to be healthier

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	91

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
803	Sociological and Tech Change Affecting Indivs, fams and comms

Outcome #37

1. Outcome Measures

Number of low-moderate income individuals and families participating in nutrition and consumer education programs who gained knowledge of food resource management techniques

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	562

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
803	Sociological and Tech Change Affecting Indivs, fams and comms

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Populations changes (immigration,new cultural groupings,etc.)

Brief Explanation

•Public policy changes: UC ANR has been active in guiding schools to develop campus wellness policies. Efforts have focused on creating school environments that: 1) establish salad bars; 2) develop education and activity curricula that link school wellness programs to the state's nutrition competencies and education content standards; 3) integrate a garden "laboratory" with nutrition education, and; 4) develop a food-waste composting system to reduce the lunch waste stream.

•Population changes (immigration, new cultural groupings): In recent years, thousands of Hmong -- a Southeast Asian ethnic group -- settled and established communities in San Joaquin, Fresno, Butte, Sacramento and Merced counties. Community health educators working with Hmong families have reported increased concern about the upward trends in overweight and chronic disease. UC ANR research, conducted in the Hmong community, has guided the adaptation of the existing California EFNEP curriculum and take-home materials to be culturally and linguistically appropriate. Another UC ANR program reaching the Hmong community is the Healthy Homes Program, a joint USDA/CSREES-HUD program that aims to help families identify and address environmental hazards around their homes and to increase parents' awareness of asthma triggers.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)
- Case Study
- Comparisons between program participants (individuals,group,organizations) and non-participants
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.
- Comparison between locales where the program operates and sites without program intervention

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

Program #3

V(A). Planned Program (Summary)

1. Name of the Planned Program

California Pest Management

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
135	Aquatic and Terrestrial Wildlife	0%		3%	
211	Insects, Mites, and Other Arthropods Affecting Plants	19%		21%	
212	Pathogens and Nematodes Affecting Plants	23%		32%	
213	Weeds Affecting Plants	17%		0%	
215	Biological Control of Pests Affecting Plants	4%		14%	
216	Integrated Pest Management Systems	33%		12%	
305	Animal Physiological Processes	0%		3%	
311	Animal Diseases	1%		2%	
312	External Parasites and Pests of Animals	1%		3%	
721	Insects and Other Pests Affecting Humans	2%		10%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2007	Extension		Research	
	1862	1890	1862	1890
Plan	62.5	0.0	63.2	0.0
Actual	59.3	0.0	63.9	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
1293101	0	778533	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
1293101	0	778533	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
18294412	0	36529643	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

UC ANR's integrated research and extension activities conducted research projects, workshops, education classes and demonstrations as well as one-on-one interventions.In addition, the programs used PSAs, newsletters, mass media, web sites and collaborations with other agencies and organizations to create and deliver programs

2. Brief description of the target audience

•Farmers •Ranchers •Rangeland owners/managers •Landscaping professionals •Owners/operators of allied agricultural industries •General public •Crop and pest consultants

California has the most diverse agricultural production and among the most diverse range of production units, ranging from large industrial agriculture to small specialized family-operated urban agriculture.The nature of the diverse production and producers fundamentally influences the types and scales of management approaches that are appropriate.Similarly, there is a large urban audience as part of the general public that has similar needs for information.Research and delivery of information to this audience must take approaches that are different from those take to commodity-based clientele.The challenges are to provide the appropriate information and training to the appropriate target audience.This presents a particular challenge when invasive species are found in the urban, wildlands, and agricultural environments and move across the interfaces among those environments.Pest populations may be controlled in one of those environments, but not in others.Similarly, specific control strategies may not be appropriate in all environments.The approaches for research and education must account for the needs and the capacities of the audiences.

V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	57000	0	0	0
2007	207465	0	0	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year	Target
Plan:	0
2007 :	3

Patents listed

Cloning And Characterization Of A Novel Inhibitor Of Apoptosis Protein
Novel Sodium Channel Toxins From The Venom Of Parabuthus Scorpions
Nematode Resistant Vine Baby Lima

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	127	338	410

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Classes/Short Courses Conducted

Year	Target	Actual
2007	80	63

Output #2

Output Measure

- Workshops Conducted

Year	Target	Actual
2007	40	49

Output #3

Output Measure

- Demonstrations and Field Days Conducted

Year	Target	Actual
2007	80	32

Output #4

Output Measure

- Newsletters Produced

Year	Target	Actual
2007	150	18

Output #5

Output Measure

- Web Sites Created or Updated

Year	Target	Actual
2007	25	11

Output #6

Output Measure

- Research Projects Conducted

Year	Target	Actual
2007	380	145

Output #7

Output Measure

- Videos, Slide Sets and Other AV or Digital Media Educational Products Created

Year	Target	Actual
2007	10	4

Output #8

Output Measure

- Manuals and Other Printed Instructional Materials Produced

Year	Target	Actual
2007	40	13

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O No.	OUTCOME NAME
1	Percentage of farm, ranch, range and landscaping owner/operators and managers and allied industry professionals participating in the program gaining knowledge of integrated pest management strategies and techniques
2	Percentage of farm, ranch, range and landscaping owner/operators and managers and allied industry professionals participating in the program gaining knowledge of pesticide and pharmaceutical efficacy and optimal use
3	Percentage of farm, ranch and landscaping owner/operators and managers and allied industry professionals participating in the program adopting recommended prevention, detection and monitoring, and treatment practices for integrated pest management
4	Percentage of farm, ranch, range and landscaping owner/operators and managers and allied industry professionals participating in the program realizing lower costs for pest prevention and management
5	Number of farm, ranch, range, and landscaping owner/operators and managers and allied industry professionals participating in the programs who gained knowledge of Integrated Pest Management strategies and techniques
6	Number of farm and ranch owner/operators and managers and allied industry professionals participating in the programs who gained knowlede of pesticide and pharmaceutical efficacy and optimal use
7	Number of farm, forest, range, and boat owner/operators, Pest Control Advisors, and other allied industry professionals participating in the programs who gained knowledge of prevention, detection and treatement practices for invasive species
8	Number of farm, ranch, rangeland, and marine industry owner/operators, Pest Control Advisors, and other allied industry professionals participating in the programs who intended to adopt recommended strategies and techniques for invasive species and pest management
9	Number of farm owners/operators and managers and landscape technicians, and Pest Control Advisors and other allied industry professionals participating in the programs who acquired skills to detect, monitor, and treat weeds and pests
10	Number of representatives of boat owner organizations, boating businesses, governmental agencies, and allied industry professionals, in other states and other countries, participating in the programs who acquired boat inspection skills to identify invasive species to reduce risks of transporting invasive species on boat hulls
11	Number of farm owner/operators and Pest Control Advisors participating in the programs who adopted pest, disease, and weed detection and monitoring practices
12	Number of farm owner/operators and Pest Control Advisors participating in the programs who adopted pesticide and pharmaceutical efficacy and optimal use
13	Number of acres being stewarded by farm owner/operators, managers, consultants, and Pest Control Advisors participating in the programs who adopted recommended Integrated Pest Management practices
14	Number of farm owner/operators and managers, Pest Control Advisors and other allied industry professionals participating in the programs who adopted treatment practices for invasive species
15	Number of acres of pistachios infested with the new invasive pest, Gill's mealybug, being farmed by orchard owner/operators and managers who adopted recommended pest management practices; this is over 95% of pistachio acreage statewide
16	Number of farm owner/operators participating in the programs who realized lower costs for pest control
17	Number of farm and nursery owner/operators participating in the programs who used recommended pest and disease management practices, which resulted in reduced crop losses and thus more economic gain
18	Number of farm owner/operators, managers, consultants, and Pest Control Advisors participating in the programs who adopted recommended Integrated Pest Management practices

Outcome #1

1. Outcome Measures

Percentage of farm, ranch, range and landscaping owner/operators and managers and allied industry professionals participating in the program gaining knowledge of integrated pest management strategies and techniques

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	45	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
216	Integrated Pest Management Systems

Outcome #2

1. Outcome Measures

Percentage of farm, ranch, range and landscaping owner/operators and managers and allied industry professionals participating in the program gaining knowledge of pesticide and pharmaceutical efficacy and optimal use

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	40	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
721	Insects and Other Pests Affecting Humans

Outcome #3

1. Outcome Measures

Percentage of farm, ranch and landscaping owner/operators and managers and allied industry professionals participating in the program adopting recommended prevention, detection and monitoring, and treatment practices for integrated pest management

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	40	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
216	Integrated Pest Management Systems

Outcome #4

1. Outcome Measures

Percentage of farm, ranch, range and landscaping owner/operators and managers and allied industry professionals participating in the program realizing lower costs for pest prevention and management

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:
Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	15	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
216	Integrated Pest Management Systems

Outcome #5

1. Outcome Measures
Number of farm, ranch, range, and landscaping owner/operators and managers and allied industry professionals participating in the programs who gained knowledge of Integrated Pest Management strategies and techniques

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:
Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	88976

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
216	Integrated Pest Management Systems

Outcome #6

1. Outcome Measures

Number of farm and ranch owner/operators and managers and allied industry professionals participating in the programs who gained knowlede of pesticide and pharmaceutical efficacy and optimal use

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	850

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
211	Insects, Mites, and Other Arthropods Affecting Plants

Outcome #7

1. Outcome Measures

Number of farm, forest, range, and boat owner/operators, Pest Control Advisors, and other allied industry professionals participating in the programs who gained knowledge of prevention, detection and treatement practices for invasive species

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	6319

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
135	Aquatic and Terrestrial Wildlife
213	Weeds Affecting Plants
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants

Outcome #8

1. Outcome Measures

Number of farm, ranch, rangeland, and marine industry owner/operators, Pest Control Advisors, and other allied industry professionals participating in the programs who intended to adopt recommended strategies and techniques for invasive species and pest management

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	19185

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
135	Aquatic and Terrestrial Wildlife
212	Pathogens and Nematodes Affecting Plants
215	Biological Control of Pests Affecting Plants
216	Integrated Pest Management Systems
213	Weeds Affecting Plants
211	Insects, Mites, and Other Arthropods Affecting Plants

Outcome #9

1. Outcome Measures

Number of farm owners/operators and managers and landscape technicians, and Pest Control Advisors and other allied industry professionals participating in the programs who acquired skills to detect, monitor, and treat weeds and pests

2. Associated Institution Types

•1862 Extension
•1862 Research

3a. Outcome Type:
Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	184

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
135	Aquatic and Terrestrial Wildlife

Outcome #10

1. Outcome Measures
Number of representatives of boat owner organizations, boating businesses, governmental agencies, and allied industry professionals, in other states and other countries, participating in the programs who acquired boat inspection skills to identify invasive species to reduce risks of transporting invasive species on boat hulls

2. Associated Institution Types

•1862 Extension
•1862 Research

3a. Outcome Type:
Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	108

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
135	Aquatic and Terrestrial Wildlife

Outcome #11

1. Outcome Measures

Number of farm owner/operators and Pest Control Advisors participating in the programs who adopted pest, disease, and weed detection and monitoring practices

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	102

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
212	Pathogens and Nematodes Affecting Plants
211	Insects, Mites, and Other Arthropods Affecting Plants
213	Weeds Affecting Plants

Outcome #12

1. Outcome Measures

Number of farm owner/operators and Pest Control Advisors participating in the programs who adopted pesticide and pharmaceutical efficacy and optimal use

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	501

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
135	Aquatic and Terrestrial Wildlife

Outcome #13

1. Outcome Measures

Number of acres being stewarded by farm owner/operators, managers, consultants, and Pest Control Advisors participating in the programs who adopted recommended Integrated Pest Management practices

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	492764

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
216	Integrated Pest Management Systems

Outcome #14

1. Outcome Measures

Number of farm owner/operators and managers, Pest Control Advisors and other allied industry professionals participating in the programs who adopted treatment practices for invasive species

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	277

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
211	Insects, Mites, and Other Arthropods Affecting Plants
213	Weeds Affecting Plants
212	Pathogens and Nematodes Affecting Plants

Outcome #15

1. Outcome Measures

Number of acres of pistachios infested with the new invasive pest, Gill's mealybug, being farmed by orchard owner/operators and managers who adopted recommended pest management practices; this is over 95% of pistachio acreage statewide

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	4750

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
211	Insects, Mites, and Other Arthropods Affecting Plants

Outcome #16

1. Outcome Measures

Number of farm owner/operators participating in the programs who realized lower costs for pest control

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	25

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
216	Integrated Pest Management Systems
213	Weeds Affecting Plants

Outcome #17

1. Outcome Measures

Number of farm and nursery owner/operators participating in the programs who used recommended pest and disease management practices, which resulted in reduced crop losses and thus more economic gain

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	5395

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
216	Integrated Pest Management Systems
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants

Outcome #18

1. Outcome Measures

Number of farm owner/operators, managers, consultants, and Pest Control Advisors participating in the programs who adopted recommended Integrated Pest Management practices

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	13014

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
216	Integrated Pest Management Systems

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Populations changes (immigration,new cultural groupings,etc.)
- Other (Avail. of grad students/others)

Brief Explanation

The past year was one of the driest on record in many parts of California.The severe drought and reduced water applications may have had significant detrimental impacts on plants and animals, making them more susceptible to pests. Reduced moisture availability may also have significant negative impacts on biological control efforts.The drought, combined with high winds and low relative humidities, facilitated some of the largest wildfires in state history.The fires devastated forest, rangeland, and urban environments.The plant communities will be badly stressed and recovery will be hampered by invasive pests, particularly weed species that flourish in disturbed environments.The combinations of drought and wildfire will create significant economic challenges, but will also provide important opportunities to understand how pest species affect community level processes.The change in government priorities at boarder stations and at port facilities has resulted in continued or accelerated introduction of exotic pest species into the state (e.g., quagga mussel and diaprepes weevil).The new pest species will continue to create challenges in urban, natural, and agricultural environments.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)
- Case Study
- Comparisons between program participants (individuals,group,organizations) and non-participants
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.
- Comparison between locales where the program operates and sites without program intervention

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

Program #4

V(A). Planned Program (Summary)

1. Name of the Planned Program

Sustaining California's Natural Resources

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	5%		16%	
111	Conservation and Efficient Use of Water	18%		4%	
112	Watershed Protection and Management	22%		11%	
121	Management of Range Resources	11%		2%	
132	Weather and Climate	2%		8%	
133	Pollution Prevention and Mitigation	20%		12%	
135	Aquatic and Terrestrial Wildlife	18%		16%	
206	Basic Plant Biology	0%		8%	
212	Pathogens and Nematodes Affecting Plants	0%		9%	
605	Natural Resource and Environmental Economics	4%		14%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2007	Extension		Research	
	1862	1890	1862	1890
Plan	55.5	0.0	80.8	0.0
Actual	58.8	0.0	72.3	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
1282199	0	781743	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
1282199	0	781743	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
18140185	0	41207201	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

UC ANR's integrated research and extension activities conducted research projects, workshops, education classes and demonstrations as well as one-on-one interventions.In addition, the programs used PSAs, newsletters, mass media, web sites and collaborations with other agencies and organizations to create and deliver programs.

2. Brief description of the target audience

•Farmers •Ranchers •Marine industry owners/operators •Governmental agencies •Agricultural and fishing organizations •Owners/managers of private and public rangeland, forest and wildlands •Community organizations •Resource managers

Because of the extreme diversity of California's natural resources, the clientele is necessarily diverse.In many cases, the issues at hand are somewhat contentious, with a wide range of viewpoints represented by the various interest groups.It is essential that information that is presented has a sound scientific basis, and that it is presented in a clear, understandable manner, at a level that is appropriate for the target audience. Recognition of the clientele's position on a specific topic is also important.

V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	56000	0	0	0
2007	245765	0	0	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year	Target
Plan:	1
2007 :	4

Patents listed

Characterization Of Individual Polymer Molecules Based On Monomer-Interface Interactions
Calcineuric B-Like Protein 1 As A Stress-Tolerance Protein
A Gene For Green Alga Hydrogen Production
Gene Regulation By Alternative Splicing And Nonsense-Mediated Decay

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	69	474	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Classes/Short Courses Conducted

Year	Target	Actual
2007	100	376

Output #2

Output Measure

- Workshops Conducted

Year	Target	Actual
2007	120	67

Output #3

Output Measure

- Demonstrations and Field Days Conducted

Year	Target	Actual
2007	90	49

Output #4

Output Measure

- Newsletters Produced

Year	Target	Actual
2007	90	12

Output #5

Output Measure

- Web Sites Created or Updated

Year	Target	Actual
2007	30	13

Output #6

Output Measure

- Research Projects Conducted

Year	Target	Actual
2007	300	241

Output #7

Output Measure

- Videos, Slide Sets and Other AV or Digital Media Educational Products Created

Year	Target	Actual
2007	30	4

Output #8

Output Measure

- Manuals and Other Printed Instructional Materials Produced

Year	Target	Actual
2007	70	15

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O No.	OUTCOME NAME
1	Percentage of farm, ranch and rangeland and marine industry owners/operators and managers and allied industry professionals participating in water quality education gaining knowledge of best management practices for preserving water quality
2	Number of governmental agencies, agricultural and fishing organizations, resource managers and other stakeholders in marine and inland fishery management issues gaining knowledge of strategies and techniques for sustainable use of marine and inland fishery resources.
3	Percentage of owners/managers of private and public rangeland, forest and wildlands participating in range, forest and wildland education gaining knowledge of strategies and techniques for sustainable use of range, forest and wildland resources
4	Number of governmental agencies, community organizations and other stakeholders in land use policy issues gaining increased understanding of land use planning strategies, methodologies and data
5	Percentage of farm, ranch and rangeland and marine industry owners/operators and managers and allied industry professionals participating in water quality education adopting best management practices for preserving water quality
6	Percentage of owners/managers of private and public rangeland, forest and wildlands participating in range, forest and wildland education adopting recommended strategies and techniques for sustainable use of range, forest and wildland resources
7	Number of farm, ranch, rangeland and marine industry owner/operators and managers, allied industry professionals, and members of the public participating in water quality education programs who gained knowledge of best management practices for preserving water quality
8	Number of state, regional, and local governments, districts, and regulatory agencies participating in water quality education programs that gained knowledge on residential landscapes design to mitigate pollutants in surface runoff arising from poor irrigation uniformity and storm events
9	Number of owners/managers of private and public rangeland, forest and wildlands participating in sustainable use of natural resources education programs who gained knowledge of strategies and techniques for sustainable use of range, forest and wildland resources
10	Number of farm owner/operators, allied industry and natural resource professionals, and members of the public who participating in water conservation education programs gained knowledge of water use and conservation practices
11	Number of farm owners/operators and allied industry professionals participating in soil quality education programs who gained an understanding of soil salinity conditions and soil-plant-water nutrient relationships, and the relevant management practices
12	Number of fire protection and land management agencies, land and home owners, community organizations, and landscape professionals participating in wildland fire education programs that gained knowledge on how to increase the fire resistance of homes and landscaping
13	Number of farm, ranch, and landscape owner/operators and managers, allied industry professionals, and governmental agency representatives participating in air quality education programs who gained knowledge of the atmospheric system and/or how policies, products, and plants, and practices can help improve air quality
14	Number of ranch and rangeland owner/operators and managers and allied industry professionals participating in the sustainable use of natural resource education programs who gained knowledge in goat browsing and sheep grazing
15	Number of farm and nursery owner/operators participating in water quality education programs who intended to use best management practices for preserving water quality
16	Number of natural resource professionals and members of the public participating in wildland fire education programs who demonstrated an increased interest in gaining knowledge and/or working together to help protect property from wildfire damage
17	Having participated in the wildland fire education program, the Los Angeles County Fire Department intended to incorporate a newly gained understanding about invasive plants into its fire-safe landscaping and fuel modification policies and its homeowner education programs
18	Number of fishery and marine resource managers and allied industry professionals participating in sustainable use of natural resources education programs who gained an appreciation for the importance of considering social, cultural and economic impacts of management actions for sustainable fisheries
19	Number of farm, nursery, and marine industry owner/operators and managers and allied industry professionals participating in water quality education programs who acquired water quality skills to reduce run-off and water pollution

20	Number of farm, ranch, rangeland, and lanscape owner/operators and managers and allied industry professionals participating in water efficiency and quality education who adopted best management practices for water conservation and preserving water quality
21	Number of acres of public or private rangeland with perennial or seasonal streams being stewarded by beef cattle ranchers, participating in the rangeland water quality programs, who implemented vegetative buffer strips
22	Number of redwood land acres purchased, as a result of the Redwood Forest Foundation adopting the new, recommended economic ownership model; this provides new hope to the timber industry to explore new ownership and management alternatives
23	Number of farm and ranch owner/operators and managers, allied industry professionals, and members of the public participating in soil quality education who adopted practices to improve soil quality
24	Number of forestland and home owners and fire fighting agencies participating in wildland fire education that adopted recommended wildland fire prevention and control practices
25	Number of peach and almond orchard owner/operators and managers participating in air quality education programs who adopted fumigants other than methyl bromide and fewer ineffective alternative materials, to reduce air and water contamination and ozone depletion
26	The Butte County Board of Supervisors adopted the project's recommended Oak Woodland Management Plan, providing ranchers interested in rangeland conservation access to the California Oak conservation grant funds to purchase conservation easements and improve oak habitat
27	Rice growers find an alternative market for rice straw with dairies, rather than burning the material

Outcome #1

1. Outcome Measures

Percentage of farm, ranch and rangeland and marine industry owners/operators and managers and allied industry professionals participating in water quality education gaining knowledge of best management practices for preserving water quality

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	50	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management

Outcome #2

1. Outcome Measures

Number of governmental agencies, agricultural and fishing organizations, resource managers and other stakeholders in marine and inland fishery management issues gaining knowledge of strategies and techniques for sustainable use of marine and inland fishery resources.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	1200	459

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
605	Natural Resource and Environmental Economics

Outcome #3

1. Outcome Measures

Percentage of owners/managers of private and public rangeland, forest and wildlands participating in range, forest and wildland education gaining knowledge of strategies and techniques for sustainable use of range, forest and wildland resources

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	50	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
121	Management of Range Resources

Outcome #4

1. Outcome Measures

Number of governmental agencies, community organizations and other stakeholders in land use policy issues gaining increased understanding of land use planning strategies, methodologies and data

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	600	35

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
605	Natural Resource and Environmental Economics

Outcome #5

1. Outcome Measures

Percentage of farm, ranch and rangeland and marine industry owners/operators and managers and allied industry professionals participating in water quality education adopting best management practices for preserving water quality

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	50	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management

Outcome #6

1. Outcome Measures

Percentage of owners/managers of private and public rangeland, forest and wildlands participating in range, forest and wildland education adopting recommended strategies and techniques for sustainable use of range, forest and wildland resources

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	50	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
135	Aquatic and Terrestrial Wildlife

Outcome #7

1. Outcome Measures

Number of farm, ranch, rangeland and marine industry owner/operators and managers, allied industry professionals, and members of the public participating in water quality education programs who gained knowledge of best management practices for preserving water quality

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	4111

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
133	Pollution Prevention and Mitigation

Outcome #8

1. Outcome Measures

Number of state, regional, and local governments, districts, and regulatory agencies participating in water quality education programs that gained knowledge on residential landscapes design to mitigate pollutants in surface runoff arising from poor irrigation uniformity and storm events

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	22

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management
133	Pollution Prevention and Mitigation

Outcome #9

1. Outcome Measures

Number of owners/managers of private and public rangeland, forest and wildlands participating in sustainable use of natural resources education programs who gained knowledge of strategies and techniques for sustainable use of range, forest and wildland resources

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:
Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	198

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
605	Natural Resource and Environmental Economics
135	Aquatic and Terrestrial Wildlife
121	Management of Range Resources

Outcome #10

1. Outcome Measures
Number of farm owner/operators, allied industry and natural resource professionals, and members of the public who participating in water conservation education programs gained knowledge of water use and conservation practices

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:
Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	7640

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
111	Conservation and Efficient Use of Water

Outcome #11

1. Outcome Measures

Number of farm owners/operators and allied industry professionals participating in soil quality education programs who gained an understanding of soil salinity conditions and soil-plant-water nutrient relationships, and the relevant management practices

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	797

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships

Outcome #12

1. Outcome Measures

Number of fire protection and land management agencies, land and home owners, community organizations, and landscape professionals participating in wildland fire education programs that gained knowledge on how to increase the fire resistance of homes and landscaping

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	386

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
121	Management of Range Resources
605	Natural Resource and Environmental Economics

Outcome #13

1. Outcome Measures

Number of farm, ranch, and landscape owner/operators and managers, allied industry professionals, and governmental agency representatives participating in air quality education programs who gained knowledge of the atmospheric system and/or how policies, products, and plants, and practices can help improve air quality

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	424

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
133	Pollution Prevention and Mitigation

Outcome #14

1. Outcome Measures

Number of ranch and rangeland owner/operators and managers and allied industry professionals participating in the sustainable use of natural resource education programs who gained knowledge in goat browsing and sheep grazing

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:
Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	3500

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
121	Management of Range Resources

Outcome #15

1. Outcome Measures
Number of farm and nursery owner/operators participating in water quality education programs who intended to use best management practices for preserving water quality

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:
Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	80

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
133	Pollution Prevention and Mitigation

Outcome #16

1. Outcome Measures

Number of natural resource professionals and members of the public participating in wildland fire education programs who demonstrated an increased interest in gaining knowledge and/or working together to help protect property from wildfire damage

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	150

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
605	Natural Resource and Environmental Economics
121	Management of Range Resources

Outcome #17

1. Outcome Measures

Having participated in the wildland fire education program, the Los Angeles County Fire Department intended to incorporate a newly gained understanding about invasive plants into its fire-safe landscaping and fuel modification policies and its homeowner education programs

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	1

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
605	Natural Resource and Environmental Economics

Outcome #18

1. Outcome Measures

Number of fishery and marine resource managers and allied industry professionals participating in sustainable use of natural resources education programs who gained an appreciation for the importance of considering social, cultural and economic impacts of management actions for sustainable fisheries

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	100

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
605	Natural Resource and Environmental Economics

Outcome #19

1. Outcome Measures

Number of farm, nursery, and marine industry owner/operators and managers and allied industry professionals participating in water quality education programs who acquired water quality skills to reduce run-off and water pollution

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:
Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	403

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
111	Conservation and Efficient Use of Water
132	Weather and Climate

Outcome #20

1. Outcome Measures
Number of farm, ranch, rangeland, and lanscape owner/operators and managers and allied industry professionals participating in water efficiency and quality education who adopted best management practices for water conservation and preserving water quality

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:
Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	575

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management

133	Pollution Prevention and Mitigation

Outcome #21

1. Outcome Measures

Number of acres of public or private rangeland with perennial or seasonal streams being stewarded by beef cattle ranchers, participating in the rangeland water quality programs, who implemented vegetative buffer strips

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	15000

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
121	Management of Range Resources
112	Watershed Protection and Management

Outcome #22

1. Outcome Measures

Number of redwood land acres purchased, as a result of the Redwood Forest Foundation adopting the new, recommended economic ownership model; this provides new hope to the timber industry to explore new ownership and management alternatives

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	50000

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
605	Natural Resource and Environmental Economics

Outcome #23

1. Outcome Measures

Number of farm and ranch owner/operators and managers, allied industry professionals, and members of the public participating in soil quality education who adopted practices to improve soil quality

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	1550

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships

Outcome #24

1. Outcome Measures

Number of forestland and home owners and fire fighting agencies participating in wildland fire education that adopted recommended wildland fire prevention and control practices

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:
Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	1440

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
605	Natural Resource and Environmental Economics

Outcome #25

1. Outcome Measures
Number of peach and almond orchard owner/operators and managers participating in air quality education programs who adopted fumigants other than methyl bromide and fewer ineffective alternative materials, to reduce air and water contamination and ozone depletion

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:
Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	1807

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
133	Pollution Prevention and Mitigation

Outcome #26

1. Outcome Measures

The Butte County Board of Supervisors adopted the project's recommended Oak Woodland Management Plan, providing ranchers interested in rangeland conservation access to the California Oak conservation grant funds to purchase conservation easements and improve oak habitat

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	1

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
121	Management of Range Resources

Outcome #27

1. Outcome Measures

Rice growers find an alternative market for rice straw with dairies, rather than burning the material

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	{No Data Entered}	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

California dairy operations are outgrowing the forage resources. Rice operations are interested in marketing more rice straw, as they can only dispose of 25% of the acreage by burning. The air quality regulations and time constraints require that the straw be provided in a manner that allows it to be directly added to the Total Mix Ration mixer/feeder.

What has been done

UCCE demonstrations of slicer baled straw illustrated a successful method of achieving the process to use rice straw as a dry matter supplement.

Results

Based on these fingings, one rice producer increased his marketing of rice straw to dairies by five times, with contracts for over 300 tons of straw. With more demonstrations planned, there is the opportunity for technology tranfer of the successful use of the rice straw as a dry supplement for near a million dairy replacement heifers in California. This could reduce the acreage of burning rice straw and contribute to improved air quality.

4. Associated Knowledge Areas

KA Code	Knowledge Area
133	Pollution Prevention and Mitigation
605	Natural Resource and Environmental Economics

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Populations changes (immigration,new cultural groupings,etc.)

Brief Explanation

FY07-08 was one of the driest years on record in California. Coupled with the below-average rainfall experienced the previous year, this had several significant impacts across the state.There is increasing competition for our scarce water resources among the agricultural, urban, and environmental sectors.In conjunction with a number of recent decisions regarding allocations of water from the Colorado River and the Bay-Delta, the drought exacerbated that competition.The inextricable link between water quantity and water quality has come into sharper focus as a result of water scarcity.There is an increased focus on finding appropriate, safe uses for reclaimed municipal wastewater for agricultural, urban, and environmental uses.Increased attention is being paid to protecting groundwater sources of potable water from surface contamination.In some areas of the state, agricultural lands are being fallowed as water previously used for irrigation is being sold for urban use.Water scarcity is also resulting in closer scrutiny regarding the water needs of new developments proposed in some urban areas. The below-average rainfalls also contributed to the numerous wildfires across the state.Some of the impacts were immediate, including the destruction of thousands of acres of forests, wildlands, and urban areas; air quality impacts on human health, wildlife, etc., as well as the significant economic impacts.Other impacts will take longer to occur.These include the potential for erosion during heavy rainfall events in the burn areas, which will cause increased sediment loads to surface water bodies, which can impact the aquatic ecosystem; recovery of plant and animal species in the burn areas, and economic recovery.

The 2006 nationwide outbreak caused by consumption of California-grown spinach contaminated with E. coli O157:H7 has led to a number of actions to try to prevent a recurrence of food-borne outbreaks.The link between water quality and food safety is receiving increased attention. There is an increased awareness of the proximity of animal operations to water that is used as a source of irrigation.Proposals to use treated municipal wastewater to irrigate food crops and land apply biosolids as a fertilizer are more carefully scrutinized, as there is the potential for these materials to contain disease-causing microorganisms.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)
- Case Study
- Comparisons between program participants (individuals,group,organizations) and non-participants
- Comparison between locales where the program operates and sites without program intervention

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}