CDFA selected the following nine (9) projects to enhance the awareness, consumption and increase the competitiveness of California specialty crops.

1. ***El Dorado County Ag in the Classroom*** **-** *Expand Specialty crops education /outreach for school-aged children and the public in the Sierra Nevada Region.* As a specialty crop-producing county, it is essential to educate and inform about the positive contributions of agriculture to the region. An understanding of agriculture's stewardship to the land and contribution to our quality of life will help ensure our continued viability. In order to reach more students, teachers, and members of the public, it is necessary to invest in increasing our program capacity, improving communications, and providing more training. Expanding the reach of the program throughout the Sierra Nevada region will be critical to survive the continued pressures of encroaching suburban development.

2. ***Cachuma Resource Conservation District-*** *Technical assistance to small acreage farmers on the California Central Coast.* The Cachuma Resource Conservation District (CRCD) will assist small-acreage (50 acres or less) farmers to improve their agricultural practices and competitive position through bilingual education and outreach. Proven technology and best management practices will be transferred through workshops, field demonstration sites, individual consultations, and follow up. The project will assist farmers with planning and implementing: irrigation management, soil and nutrient management, integrated pest management, and information management through recordkeeping and organization. The primary focus will be on specialty crop growers in Santa Barbara County. These growers are often native Spanish speakers and immigrants who have minimal agronomic training or access to agricultural education opportunities. CRCD can enable these growers to address the challenges facing them and produce more marketable specialty crops with the best possible combination of quantity, quality, and value.

3. ***California University, Fresno- Center for Food Science/Nutrition Research (CFSNR)-*** *Eco-friendly System/Technology for Lye- Peeling of Tomatoes.* This collaborative study with tomato processing industry will develop an eco-friendly system/technology by determining the geometrical configuration of the peel removal system and the characteristics of peel removing fluid containing minimal or no water. Successful implementation of the proposed research will provide data on design characteristics for a commercial eco-friendly tomato lye peeling system that will comply with the state and federal pollution control regulations, significantly reduce fresh water use and wastewater disposal cost, and improve profitability and overall economic viability of the tomato processing industry in California.

4. ***Cal Poly Corporation-*** *Impacts of Kaolin Clay Spray on almonds/pistachios leaves to reduce evapotranspiration, insecticide usage, and energy consumption through water pumping.* This project will research a possible means of reducing evapotranspiration (ET) for nut crops, or at least minimizing stress if insufficient water is available. If it works well, it would provide a significant relief to growers. A commercial kaolin "whitewash" spray (Surround) will be applied to the leaves twice, prior to and during the nut filling period. The white covering will reflect heat back into the sky, and thereby reduce the heat available for transforming liquid water into vapor (ET). ET, yield, and observations for pesticides for treated and untreated plots (40 acres each, each replicated four times) will be compared. If the spray is effective and economical, it will be of great importance in sustaining existing acreage with limited water supplies.

5. ***Western Growers-*** *Sampling Protocol for E. coli in the Irrigation Water Canals of Imperial Valley, CA.* A team of scientists from the University of California and Western Growers will develop a risk-based sampling protocol for generic (commensal) *E. coli* in the irrigation canals, correlated to targeted testing for enterohemorrhagic *E. coli* O157:H7 and *Salmonella*, and validated by statistical analysis. The primary outcomes will be the development of a standardized water sampling and analysis program that will advance

science-based water quality criteria for irrigation source water used in California, the creation and delivery of extension training materials, and data-based guidance tools for decision-making. The project will result in improvement in irrigation water quality management practices and will impact fresh and fresh-cut fruit and vegetable producers, packers, retailers, and consumers by reducing microbial risks to fresh produce and optimizing grower expenditures in microbial testing.

6. ***University of California, Davis- Agricultural Sustainability Institute: Children's Garden Program.*** *Supporting USDA Fresh Fruit and Vegetable Program (FFVP) in California schools.* This project supports and amplifies the impact of FFVP through a training and technical assistance program for school-based personnel. The training, *Fresh Fruits and Vegetables: A Centerpiece for a Healthy School Environment* (FFVCHSE), being developed in partnership with California Department of Education's Nutrition Services Division, provides participants with skills for procuring, preparing, serving, and promoting fresh California produce; and for providing garden-enhanced nutrition education. The initial pilot and roll-out of the seasonal trainings will provide a professional development "Train-the-Trainers" workshop to insure quality of FFVCHSE delivery; completing the roll-out of FFVCHSE trainings in 2009-2010, and extending FFVCHSE trainings into 2010-2011. This will result in well-trained professionals delivering 14 additional trainings to school professionals representing as many as 370 school sites.

7. ***University of California, Davis-*** *Integration of a robotic cultivation system into California vegetable* crop *production systems.* The objective of this project is to reduce hand weeding requirements for lettuce and tomato. Increasing costs for labor and other inputs is hurting vegetable grower profitability. This project will evaluate and demonstrate to vegetable growers a robotic cultivator that is capable of removing weeds from within lettuce and tomato rows. Currently the only way to remove weeds from the crop row is by hoeing, hand weeding or selective herbicides. The Tillet rotating cultivator (a robotic cultivator), being sold commercially in England, is capable of removing weeds in the plant row of vegetable crops such as lettuce and tomato. The purpose of this project is to test and demonstrate the Tillet cultivator in typical California lettuce and tomato fields to determine if it is effective at removing weeds and minimizing hand weeding.

8. ***CDFA, Plant Pest Diagnostic Branch-*** *Enhancing identification of agromyzid leaf-miners threatening California's specialty crops.* In collaboration with UC-Davis, this study aims to enhance understanding of leaf-mining flies (family Agromyzidae), of particular importance to California's specialty crops. Potential impact of these flies is due to larval feeding on living tissue from plants in over 160 families, including most fruit, nut, vegetable, ornamental, and forestry, nursery and horticultural crops. Although primarily leaf-miners, many species burrow in roots, flower heads, stems and tree trunks. Damage caused by infestation can lead to decreased growth, disfigurement, increased pesticide use, and secondary infection. To rapidly respond to introductions or to prevent entry at borders, the first steps are to increase knowledge of them and to develop comprehensive identification resources.

9. ***Buy California Marketing Agreement (BCMA) -*** *"California Grown" Retail Campaign – Southern and Northern California*. The goal of the Buy California Marketing Agreement (BCMA) is to educate consumers about the importance of buying locally grown agricultural products in support of the Golden State's overall economy. In addition to conventional advertising methods, the "California Grown" campaign will reach out to consumers through grocery retailers. This project will utilize free standing inserts in area newspapers, grocery cart advertisements and in store floor graphics to drive sales at the point of purchase in Albertsons stores located throughout Southern California and Safeway stores located throughout Northern California.