Guiding CDFA Through an Era of Economic Uncertainty:
Protecting the Promise of California Agriculture
In turbulent economic times, assessing a government agency's effectiveness can be a trying task. Our nation’s and indeed the world’s recent financial history did more than force government to cut budgets; it forced many great industries to reinvent themselves. Fortunately for CDFA, the foundation was strong. Before the Great Recession and the ensuing fiscal turmoil that tied the world’s financial system and government in knots, the Little Hoover Commission’s California Performance Review issues a glowing assessment of CDFA’s condition and effectiveness, declaring the organization “a model of the type of vertically integrated, customer focused and mission driven department this organizational framework hopes to replicate throughout state government.” The challenge, then, when faced with hard decisions to make about the allocation of decreased resources, was to ensure that we maintain our core mission and customer focus to effectively support a thriving agricultural sector.

When I joined Governor Jerry Brown’s administration in January 2011, the department worked with stakeholders to prioritize services, eliminate redundancies, scale back important programs and, to the extent possible, minimize impacts of general fund reductions that were required to help stabilize the state’s fiscal situation. The process forced us to focus on our core mission and the most vital programs to ensure agricultural products can move to markets across county lines, throughout the country and around the globe. The result of this budget-cutting underscores the critical nature of our partnership with the federal government, county Agricultural Commissioners and the agricultural community to deliver services in the most efficient and effective way.

With the Governor’s leadership, the State of California is recovering and its budget is balanced. This is a good time for CDFA to take stock of its capabilities and achievements. Despite challenging times, the dedication and creativity of our staff ensures CDFA is positioned to help capture the promise of a very bright future. Agriculture has been a star in the economy and it is seeing fast-growing demand for its bountiful offering of consistently high-quality, safe products by local, national and international consumers.

This report is by no means a full account of the department’s activities, but it does take stock of many of our achievements over the past two years and offers a look ahead at the projects and developments that will carry us forward.
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The California Department of Food and Agriculture (CDFA), like virtually every other state government agency, is emerging from an extended period of budgetary contraction. From 2011 to 2013 alone, CDFA’s general fund budget shrunk from $96 million to $62.6 million – a reduction of more than 30 percent. Factoring in the simultaneous loss of general fund support for our fairs – $32 million – the cuts to agricultural programs were simply unprecedented. CDFA, its stakeholders and its federal counterparts confronted this reality with creativity and determination, focusing cuts and preserving protections by forging new partnerships within the industry and identifying special funding sources. The recently passed (and balanced) state budget, as well as financial and real estate industry indications and the steady growth and strength of the agricultural sector, give cause for cautious optimism.
Fairs:
Transition Means Opportunity for Local Focus, Entrepreneurial Exploration

California has conducted fairs for more than 150 years, with the first state-sanctioned fairs predating the Civil War. The predominant model for governance has been the District Agricultural Association (DAA), with oversight provided by CDFA. While the loss of general fund support is undeniably a source of tension and concern for those in the fairs industry, the goal for CDFA is to shepherd this transition toward a future that emphasizes entrepreneurial opportunities and a greater focus on the individuality of agriculture in each fair’s local community. CDFA has for the past two years presided over the transition and provided guidance to the DAAs as they weigh their options for new governance models.

cafairs.com: CDFA is aiding the transition with the new cafairs.com web site to guide local residents to fairs and other events at their community fairgrounds. More than a “fair calendar” site, cafairs.com is a resource for folks seeking information on everything from RV facilities at fairgrounds, to volunteer opportunities, to competitive exhibits, concerts and, of course, fair food! Check out “I Love My Fair” on Facebook at www.facebook.com/lovemyfair, post your fair pic, and get in on the fun.

Specialty Crop Block Grant Powers Mobile Ag Education and Nutrition Project at California Fairs

Many of California’s urban residents have lost touch with farmers and farming - but they still love going to the fair. This grant project uses that nexus to build an exhibit that gives urban fairgoers and students an opportunity to talk to a farmer, learn from educational displays, sign up for a community supported agriculture program, and even use interactive maps to find the closest pumpkin patch, U-pick farm or farmers’ market.
Progress and Milestones in CDFA’s Ongoing Governance, Protection and Outreach Efforts

Growing California: Video Series Captures the Pride, Pace and Precision of Agriculture

The fiscal constraints that have characterized the past several budget cycles at CDFA have had the distinct effect of driving the agency’s dedicated public servants to seek alternative funding sources for many of the worthwhile projects that might otherwise have gone by the wayside. One such effort has been the acclaimed “Growing California” video series produced by CDFA in partnership with the California Grown campaign through a USDA Specialty Crop Block Grant. Secretary Karen Ross voiced her support for the project: “In an era when people want to know more than ever about the origins of their food, we wanted to do our part in sharing these important, compelling stories.” The result of Phase One of the project is a slate of 25 videos produced on a range of appetite-whetting topics that only California could cover. The project puts the agricultural community in a position to capitalize on the public’s growing interest in how their food is grown and who grows it for them.

Coming Soon to a Pickup Near You: California Agriculture License Plates!

Agriculture is a signature industry for the Golden State, so an agriculture-themed license plate just makes sense. What makes even more sense is for the proceeds from the so-called “vanity plates” to support future generations of farmers and ranchers through agricultural education, ag career awareness and training, and youth leadership programs. When the agricultural community – and especially FFA students – heard what the proposal was all about, they exceeded the pre-registration requirement of 7,500 plates with a wave of 8,355 orders – quite a show of support. Special thanks to all of the farmers, ranchers, workers, ag educators, supporters and others who put us over the top. If you would like to wear your “Food Fiber Fuel Flora” ag plate proudly, applications are being accepted and processed through the DMV.
Responding to – and Preventing – Invasive Pest Infestations

On any given day, you’ll find CDFA staff responding to many invasive pest infestations. Farmers depend on our ability to quickly detect, measure, respond to and often eradicate these infestations. But the bigger story is that these response efforts often protect much more than our crops – the same pests often threaten backyard gardens, landscaping, natural habitat and the larger environment. Some of our larger and more recent response programs include:

**European Grapevine Moth (EGVM):** The infestation is down from 100,954 moths in 2010 to 38 so far in 2013.

**Asian Citrus Psyllid (ACP) and Huanglongbing (HLB):** A pest-disease complex as daunting as this one deserves a response that is as dynamic and multi-faceted as the problem itself. Since the detection of the pest, CDFA and its partners remain committed to protecting the state’s citrus industry, partnering with researchers to develop response options like biological control, and giving the scientific community ample opportunity to provide an eventual solution.

**Japanese Beetle:** In the Sacramento-area community of Fair Oaks, the original detection of a single beetle in 2010 was followed by two more in 2011 and four in 2012, triggering treatments on approximately 100 local properties. So far in 2013, no beetles have been detected; add to that the fact that the infestation has not been permitted to spread beyond its original neighborhood, and all indications are positive so far.

**“Buy It Where You Burn It” Firewood Campaign:** To help prevent the spread of pests such as the goldspotted oak borer, Emerald ash borer, sirex woodwasp, gypsy moth and Asian longhorned beetle (not to mention diseases like Sudden Oak Death), CDFA has joined the multi-agency Firewood Task Force to deliver key messages to Californians such as: “use firewood from local sources” and “if you’re going camping, leave firewood at home” through web sites (www.firewood.ca.gov and www.dontmovefirewood.org), videos, billboards, posters at rest stops, handouts at campgrounds, and other means.

**Hydrilla:** CDFA’s Hydrilla Program has declared eradication in recent years on three projects: the Bear Creek and Mokelumne Hill projects in Calaveras County, and the Springville Ponds project in Tulare County. These achievements represent the protection and eventual restoration of 22 ponds covering 57 acres and 25 miles of creekbed. Treatment efforts have also beaten back other significant infestations including one in Lake County’s Clear Lake, limiting it to just 26 hydrilla plants detected in five locations last season.
Border Stations Expand Duties Beyond Agricultural Inspections

CDFA’s border inspection stations serve as checkpoints for inbound vehicles that could be carrying the state’s next invasive pest, and that role alone makes them well worth the investment. But did you know our inspectors also lend a hand to help other agencies and industries protect California?

Helping CalRecycle Thwart Recycling Fraud

Under an interagency agreement with CalRecycle, CDFA agents are keeping track of recyclable beverage containers being brought in from out-of-state in an effort to cut down on a particularly costly form of fraud. Why is it illegal to recycle these out-of-state containers in California? Beverage distributors pay into a fund used to reimburse consumers who redeem containers that have been purchased in California. Unscrupulous individuals defraud California taxpayers when they smuggle in and redeem comparable containers that were purchased outside California. Because no fee was paid into the California system for those containers, they don’t qualify for reimbursement. In the Summer of 2012, the two agencies conducted a pilot project at all of CDFA’s stations. From June to August, 3,588 vehicles were identified as importing out-of-state beverage containers; 528 of the vehicles were rental trucks full of out-of-state beverage containers. The interagency agreement is now inked and operative, poised to save the state millions.

Board of Equalization Use Tax Collection Pilot Program

In conjunction with the Board of Equalization (BOE), CDFA’s Border Protection Station program has conducted a pilot program to determine the level of use tax compliance. CDFA personnel have been trained to identify interstate commercial shipments of commodities that are subject to use tax, and information on these shipments is passed on to BOE analysts who determine whether or not appropriate taxes are being paid. This program is projected to collect tens of millions of dollars in use tax and penalties that otherwise might not have been paid.

Protecting the Farmer’s Favorite Bug: Bees!

While we’re on the subject of “things you didn’t know our border stations do,” try this one: bee watering! Yes, you read that right. Bees need water just like the rest of us. Every year, more than a million beehives are trucked into the golden state to help pollinate our crops. The apiary industry (that’s beekeepers for the rest of us) has worked with CDFA to help upgrade or install relatively simple but important watering systems at key border stations, where the bulk of the beehives come into California. Kudos to the folks at the California State Beekeepers Association (CSBA), Project Apis m (PAM), the Almond Board of California and the California State Apiary Board for finding the funds and working with CDFA to make this happen.
Pollinator Projects:
Specialty Crop Block Grants Aim to Fortify Forage, Food and Best Management Practices for Bees

Project Apis m (PAm) $254,400
Best Management Practices (BMPs) for Honey Bees Pollinating California’s Specialty Crops
This grant seeks to improve pollination services for California’s specialty crops by developing and implementing an outreach program of sustainable Best Management Practices (BMPs) for commercially managed honey bees. Growers will have access to BMPs to encourage their beekeepers to adopt sustainable colony-management practices.

California State Beekeepers Assn. $260,675
Improving Forage Resources for Pollinators of California’s Specialty Crops
Bees require a diversity of food sources to maintain health. Drought, wildfires, herbicide use, urbanization and other factors have reduced natural pollinator habitat and food sources. This project encourages land owners and land managers to produce food resources for pollinators, specifically forage crops for honey bees pollinating California specialty crops.

San Luis Obispo Bee Company $280,138
Best Management Practices (BMPs) for Blue Orchard Bees, Wildflower Seed Production
The research develops BMPs for (1) California native blue orchard bees (BOBs) in Central Valley orchards, coastal vineyards and wild coastal production areas, and (2) native wildflower seed production in Central valley orchards and coastal vineyards.

Project Apis m. $344,124
Building California Bees for California Specialty Crops
This project aims to identify, develop, and test low-water-use wildflower and oilseed mixtures as a means of providing sustainable nutritional sources for the building and retention of honey bees in California.

CDFA’s Program EIR: Toward a Time-Sensitive, Efficient Framework for Pest Prevention and Management
If California agriculture has a defining characteristic, it is “variety”—the impressive range of its crops is due in part to its widely differing topography, climate, soil types, and several other factors that produce the variability of CDFA’s many growing regions. Unfortunately, the qualities that make California so desirable for farmers also make it a must-see destination for invasive pests, weeds and other organisms that threaten our farms, our habitat and environment, and the food supply we all depend upon. Protecting these resources is CDFA’s mission, and that’s why CDFA continues development of an environmental impact report for its Statewide Plant Pest Prevention and Management Program. Knowing that pests and other invasive species can and do breach our borders, CDFA has a responsibility to provide a time-sensitive framework for efficiently evaluating potential impacts so that our response can be as swift and effective as possible. The development of this Program EIR also provides expanded participation, comprehensive human health and ecological risk assessment, and consideration of a wide variety of treatment methods including cultural, physical, biological and chemical options. To keep stakeholders apprised of the project’s progress, CDFA has established a free Listserv that sends periodic e-mails with the newest Program EIR Updates. Go to www.cdfa.ca.gov/plant/peir for more information.
BSE: Protecting Cattle from Disease — and Ranchers from Trade Risks

Bovine Spongiform Encephalopathy (BSE), widely known as “mad cow disease,” was detected in a California dairy cow in April of 2012 by the California Animal Health and Food Safety Laboratory. In previous years, BSE detections in Washington, Texas and Alabama had resulted in deep public concern, serious trade embargoes and the media’s rapid descent upon the impacted farmer. The attention and concern were driven largely by memories of the first recognized outbreak of this disease in the United Kingdom, identified in 1986 and peaking in 1993 at almost 1,000 new cases per week (CDC). However, due to advancements in the understanding of and response to BSE outbreaks, and to CDFA’s long-standing and close relationship with fellow state agencies and USDA, California’s most recent detection of BSE was announced in a clear, measured and coordinated fashion, with a correspondingly rapid and well-executed field response. The incident management team was immediately activated, impacted herds were quarantined the same day the detection was made, and the extent of the detection was fully evaluated within one week. When key trading partners visited California from Korea and Taiwan to evaluate our BSE prevention and response system, they were impressed. Even with intense public pressure in their home countries to slam the door on trade, our trading partners kept the doors open – thanks to the solid work of CDFA and our USDA counterparts.

Good Grease: Protecting the Biofuel Economy by Curtailing Kitchen Grease Theft

Of the innumerable innovations made in the industries of agriculture and food production, one of the more recent and unusual is certainly the conversion of inedible kitchen grease (IKG) into a valuable biofuel source. So valuable, in fact, that it has just as rapidly become a target for theft, usually of the late-night, back-alley variety. It is every bit as seedy as it sounds, as CDFA makes clear in this online video – but it is also lucrative for the enterprising thieves, who can pump hundreds or even thousands of dollars’ worth of stolen grease in a night’s work. How big is the problem? California has 28 rendering facilities that process IKG, and a survey of police reports from just two of these companies from June 1, 2012 through February 15, 2013 show 210 thefts spread across 22 jurisdictions. Bakersfield had 38 reports of IKG theft in that stretch, and Sacramento 33.

Funded by fees paid annually by renderers, collection centers and transporters of IKG, CDFA’s IKG Program functions as part of the agency’s Meat, Poultry and Egg Safety branch under the Animal Health and Food Safety Services division. The program works with local law enforcement and the legal system to prevent, investigate and stop grease theft and the related damage done to containers. Once IKG is processed through licensed renderers, it is transformed into a bulk commodity called yellow grease that can then be sold to the agricultural, biofuel, and commercial industries and transformed into livestock/pet feed, bio-diesel and other fuel components, and products like soaps, cosmetics and shampoos.
Food Safety:
Protecting Consumers By Educating Food Producers

» Food Safety Workshops for Artisan Cheese Makers
To protect both consumers and producers who benefit from the proliferation of new varieties of artisan cheeses, the California Department of Food and Agriculture (CDFA), the California Dairy Research Foundation, Cal Poly and contributors from the dairy industry delivered specific, effective food safety strategies for the artisan cheese maker at workshops November 15, 2012 in Rohnert Park and November 16, 2012 in Visalia.

» Small Farm Food Safety Workshops
CDFA’s Small Farm Food Safety Project, funded through the Specialty Crop Block Grant Program, centered on a series of workshops in 2012 throughout the state designed to help small, specialty crop farmers establish comprehensive food safety programs. The workshops were offered in multiple languages (English, Spanish, Hmong and Chinese). The training included a checklist of key food safety topics including recordkeeping, harvest activities, storage, transportation, hygiene, water testing and handling of manure. The grant also incorporated a cost share program for eligible farmers.

» Safe Animal Feed Education (SAFE)
CDFA’s Safe Animal Feed Education (SAFE) program, developed in collaboration with the animal feed industry, established a voluntary process bolstered by on-farm outreach and education. Department staff provide outreach and education to farmers and ranchers in support of an audit-based, comprehensive, voluntary quality assurance approach for commercial feed manufacturers. Funding for the program comes from license fees and a tax paid on each ton of feed sold to livestock producers in the state.

Trade Missions Put Focus on Future of Agricultural Exports to Asia
Governor Jerry Brown’s choice of China as a trade mission destination earlier in 2013, as well as Secretary Karen Ross’ leadership of a separate 2012 mission to China and South Korea, put the focus on the future of agricultural exports. In both cases, CDFA Secretary Karen Ross traveled with large groups of agricultural representatives to destinations that figure prominently in many firms’ export plans in the coming decades. Population growth and gains in the Asian middle class are expected to be drivers of demand for high-quality agricultural products. California’s expertise, experience and Pacific Rim placement all point to prime preparedness to meet the coming demand. On the 2012 trip alone, Secretary Ross and the 28 company representatives in her delegation conducted 934 one-on-one appointments, with 390 in China and 534 in South Korea (CITD). The big news during the 2013 trip was Governor Brown cutting the ribbon on the state’s new California-China Trade and Investment Office to facilitate future trade growth.
A Healthy Combination: Seniors and Certified Farmers Markets

When you get right down to it, agriculture is about getting healthy, nutritious food to everyone who needs it. CDFA’s Senior Farmers’ Market Nutrition Program (SFMNP) is one way the department improves access to fresh fruits and vegetables for our older residents. This 100 percent federally funded program provides low-income seniors with check booklets that can be used to purchase locally grown produce and other items such as honey and herbs from Certified Farmers’ Markets, roadside stands and community supported agriculture programs. CDFA partners with 32 of California’s Area Agencies on Aging to distribute approximately 44,000 of the SFMNP booklets, which include ten checks redeemable for $2 each. Whenever a consumer can purchase fresh, California grown produce, it’s good for farmers – but the health benefits for low-income seniors are what really make this program worthwhile.

California’s Specialty: Specialty Crops

What is a “specialty crop”? Technically, it’s a term that includes “fruits, vegetables, tree nuts, dried fruits, horticulture, and nursery crops.” Generally speaking, though, it’s a way of describing all of the things agriculture grows besides the most common commodity program crops nationally (think corn, soybeans and so forth). It’s also a way of describing what California does best – the Golden State’s real agricultural claim to fame is its unmatched variety. The Specialty Crop Block Grant Program (SCBGP) is a major USDA effort to encourage investment, research and development of these crops and markets, and California, as the largest specialty crop producer, receives the largest share of the federal funding for these efforts – more than $18 million of the $55 million awarded nationally in 2012.

Funding is tied to passage of the federal Farm Bill. The previous rounds of funding included awards for projects including:

- The development of a quick-drying method that reduces energy usage for almonds and pistachios while improving product quality and safety
- Customized training and counseling on trade and export needs to assist industry stakeholders
- Offering low-income families access to fruits and vegetables at Certified Farmers’ Markets through weight management and diabetes clinics
- Researching strategies for efficient nitrogen management
- Researching management strategies to mitigate diseases affecting the citrus industry.

As part of the continual improvement of this program, CDFA has begun a partnership with the Center for Produce Safety at UC Davis for the evaluation and recommendation of food safety-related projects that will help minimize illness outbreaks.

SCBG Grant Awards, 2008-2012

1040 Concept proposals submitted
528 Advanced to full grant proposal phase
272 Grants awarded
$66 million in grants awarded
Measurement Standards: Did You Get What You Paid For? How Do You Know?

Consumers in California generally get what they pay for, from a gallon of gas to a pound of produce. But how do you know? That’s where CDFA’s Division of Measurement Standards (DMS) comes in. Over the past year alone, the division’s oversight, inspections and investigations have generated settlements totaling approximately $10 million, illustrating just how vigilant and attentive this office is to the protection of consumers.

Listening Sessions Lead To California’s Priorities on Farm Bill

As Congress remains mired in its second year of debate about the federal Farm Bill, California farmers and their colleagues across the country keep a watchful eye on the Capitol in hopes that their representatives will do what it’s required to keep agriculture strong well into the future. California, for its part, has contributed a highly specific and broadly supported list of priorities for this Farm Bill. The document sent Eastward from California was produced on the strength of input from hundreds of farmers, ranchers and the public at a series of listening sessions hosted by CDFA in 2011, when debate on the current Farm Bill was just gaining steam; it incorporates the collective insights and experience of more than 70 diverse stakeholder organizations as well as contributions from partner agencies in state government. “The importance of the Farm Bill cannot be underestimated,” said Secretary Ross. “This legislation supports a wide array of programs and initiatives that the public relies on every day – from the abundance and safety of our food, to public health and nutrition, economic development, and the protection of our natural resources.” For more information, see “California and the Farm Bill” online at http://www.cdfa.ca.gov/farm_bill/pdfs/FarmBill-Cof12.pdf.
Section 3: FUTURE
The New Normal: Sustainability through Collaboration, Efficiency, Transparency and Connectivity

Climate Change: Consortium Developing Strategies to Help Agriculture Adapt

California's finely tuned agricultural industry is threatened by climate-related phenomena including reduced water supplies, increased heat stress for plants, decreased chill hours, shifts in pollinator life cycles, and increased influx of invasive species – just to name a few. Addressing these risks requires a concerted effort; to address this need, Secretary Karen Ross in 2012 announced the formation of a consortium of growers, educators and technical experts to study and make recommendations on strategies for climate change adaptation. The project was funded by a Specialty Crop Block Grant. The Climate Change Consortium met four times during 2012 and 2013 to hear from researchers on the impacts of increasing temperatures, changing precipitation patterns and water availability, increased pest pressures, and pollination concerns. The Consortium made recommendations for climate change adaptation drawing from their varied backgrounds as growers, researchers, and representatives from agricultural associations. The Consortium’s recommendations fall into five categories:

» On-farm strategies to improve resilience (directed toward growers)
» Planning and resource optimization
» Research needs
» Outreach and education
» Technology and innovation

The final report is set for completion in July 2013 and is directed toward a large audience including growers, researchers, and agency partners. We hope that the report can guide CDFA and its partners in future activities and reduce agriculture’s vulnerability to climate change.
Planting Seeds Blog:  
Keeping Cal Ag on the Social Media Menu

Invasive Snails? Honey Bee Robots? Foodies, fairs and alternative fuels? The daily flood of interesting, compelling, and just plain weird issues involving agriculture is enough to... to... to blog about! That’s why Secretary Karen Ross instituted the department’s first blog, “Planting Seeds.” This thoroughly modern tool gives the agency a platform that extends its reach across an industry whose growth only promises to continue – and the blog has the additional benefit of broadening our audience with each eye-grabbing video, article and photograph. The blog enjoyed more than 50,000 page views in 2012, and it is on pace to pass that in about the first six months of 2013, and daily page views are up from 171 in 2012 to 241 so far in 2013, so all indications are that the blog is trending upward. With about 400 posts since its inception in 2012, the blog has quickly become one of the busiest and most anticipated sources of CDFA outreach. And – thanks to our persistent presence on Twitter, Facebook, YouTube and other electronic avenues – CDFA has positioned itself to take full advantage of the tremendous communications opportunities that the dynamic social media field continues to invent, produce and promote.

Farm to Fork:  
From “Health in All Policies” to “Produce on All Plates”

The establishment in 2010 of the state’s Health in All Policies Task Force brought together a multi-agency collaborative effort to support health and sustainability goals by incorporating health considerations into traditionally non-health policy areas. Among the priorities and recommendations of this group was the implementation of a Farm to Fork program housed by CDFA and operated collaboratively with participation by the California Department of Education (CDE) and California Department of Public Health (CDPH). Funding comes from a federal grant, with the initial priority of farm-to-school programs and policies. Specific activities planned:

» Identifying zoning barriers to farmers’ markets, produce stands, and other sources of fruits and vegetables in residential areas, particularly food deserts; and recommending solutions.
» Researching creative land uses for community gardens and orchards, considering safety concerns and disseminating promising practices.
» Exploring approaches to expand the availability of locally grown produce in schools while considering food safety in production.
» Promoting and disseminating Good Agricultural Practices (GAPs) to ensure safe and healthy delivery of locally grown fruits and vegetables.
» Compiling a list of schools that have career technical education programs to support development of agriculture, food service, and culinary workforces; identify best practices and expansion opportunities.
» Assessing and documenting how large institutions, hospitals, prisons, etc., currently procure produce from local producers and identify barriers to such arrangements.
iPads Poised to Power CDFA’s Field Staff

Technology is often seen as a constant flow of incremental innovation, such as the speed of a processor or the size of a hard drive. But every so often, there are also inventions like the tablet computer that aren’t just an end-point innovation but rather a driver of innovation that ripples through entire industries. For example, these powerful, portable devices promise a sea-change for field staff like CDFA biologists who generate data all day as they work in the fields checking and setting traps, or our veterinarians who detect and report animal illnesses. Thanks to projects like CDFA’s recently approved implementation of iPads as data collection devices for field staff in our Asian citrus psyllid (ACP) response program, we are hastening the end of the era when field-generated paperwork has to be driven back to a satellite office, collated with other field workers’ forms, and finally keyed into office-anchored computers, then transferred via email or database to the decision-makers. Because of their portability, connectivity, durability and ease of use, tablets can erase some of those steps completely and accelerate or automate others – adding valuable minutes to every hour for field staff who will now be free to concentrate more on agricultural pests and diseases and less on the paperwork that awaits them back at the office.

Report A Pest: Giving Consumers the Power to Protect the Food Supply

With every public meeting, blog post, press release and poster, CDFA reaches out to the public, to consumers of agriculture, with an invitation to participate. Often, these invitations involve CDFA asking for the public’s assistance in an effort to respond to an invasive pest infestation. It’s the responsibility of government to provide such outreach opportunities – and to pursue new ones. That’s where the department’s Report A Pest mobile app comes in: it enables people to take photos of a suspected invasive pest or plant and send them to CDFA for evaluation. The app includes an option for GPS coordinates of the find, just in case a rapid response is deemed necessary. It is available now as a free download for Apple iPhones and iPads. An Android version is under development. The application is an extension of the Report A Pest link on CDFA’s web site, which features more information on submitting photographs or even live specimens of suspected invasive species. CDFA’s divisions of Plant Health and Pest Prevention Services and Information Technology Services worked together to develop the app.

Cowboy App!

Brand Inspectors Lighten the Workload with Digital Brand Book

Not so long ago, a brand was as good as a handshake... except for those pesky rustlers. Come to think of it, they’re still around: in 2012, California cattle owners reported 1,110 cattle stolen. CDFA’s Bureau of Livestock Identification oversees this and many other livestock-related issues with its team of 50 brand inspectors. Prior to this year, brand inspectors had no choice but to carry a 247-page Brand Book (think phone book) out to the fields, corrals, feedlots and fence lines that, on a good day, would keep their four-hooved workload contained. Brand inspection is perhaps the original “field job” and that’s where a mobile app like CDFA’s new digital Brand Book is a truly powerful proposition (currently a government-to-government app only; CDFA is considering expanding availability in the future). Where once brand inspectors had to swipe at flies with one hand while flipping through a phone-bookish tome searching for a tiny, printed brand with the other, CDFA’s Livestock ID field staff now have a mobile app that helps them use database power, search capabilities and improved visibility to identify livestock brands on-site, without the old saddlebag full of soiled papers. When your workload consists of annually inspecting 3.2 million head of cattle, a little added efficiency goes a long, long way.
CDFA’s IT Roadmap: Today’s Plans for Tomorrow’s Technologies

In CDFA’s balanced agency-wide roadmap, information technology drives and supports innovative and cutting-edge initiatives that will position board members, inspectors, veterinarians, scientists, technicians and other CDFA constituents not only to achieve the goals of today and tomorrow, but to reach beyond and foster the information technology of the future. CDFA is focused on four technology areas to drive this future:

**Big Data:** Specialists in CDFA and elsewhere are generating data at increasing rates. To maximize knowledge extracted from these large and diverse data sets, CDFA should support computing to efficiently manage its data and geospatial information which will further its organization’s mission. This includes moving from collecting data on paper to systems that capture the information at the source and eventually providing predictive and real-time analytics.

**User Interface:** Field office specialists need flexible software and hardware to accomplish their mission. CDFA is shifting its development team from desktop applications to mobile web development and in-time alternative user interfaces such as voice and gesturing. These alternative interfaces will make it possible to capture data efficiently.

**Social Communication:** As the world becomes increasingly interconnected, people are finding new ways of sending and receiving information. In the new social media arena, the public is an active participant and user instead of a passive reader or viewer. Self-signup channels, real-time continuous feedback and social media enabled applications are part of CDFA’s technology evolution.

**Sensors:** In the future CDFA will use remote-sensing data from ground, aircraft, and satellite platforms to develop methods to monitor, assess, and manage the agricultural ecosystem on small and large scales. This will include airborne and satellite hyperspectral images to help detect problem areas and the chemical composition of plants.

National IT Group Recognizes CDFA’s Tech Talent

Leveraging information technology is one of the ways agencies like CDFA have weathered the budgetary storm of the past several years. A 2012 National Association of Chief Information Officers (NASCIO) Recognition Award was given to an exemplary undertaking: the department’s Emerging Threats (ET) project, a comprehensive solution for the surveillance of animal disease and food safety threats that can cause huge economic losses, the deaths of millions of animals, and even disease transmission to humans. This web-based, GIS-enabled system provides accurate animal population information and milk safety surveillance information at all times. Significantly, this system is not only designed to be used under emergency conditions, but will also support day-to-day operations related to food safety and livestock and poultry disease testing. The daily use will ensure that the information remains current and will also help avoid duplication of effort while improving data integrity.

The NASCIO award for the ET project was one of two presented to CDFA’s IT office in 2012 – the other being its Video Interact Project (VIP) that is essentially a portable cart providing two-way, interactive video conferencing that enables CDFA employees to communicate with peers by voice, video and instant messaging over the Internet using common collaboration tools. For CDFA’s far-flung urban/suburban/rural/remote/field employees, this solution saves time, reduces the need for travel, and keeps information flowing toward solutions.
Pursuing ever-lower-emission vehicles has become a natural evolution for car makers, largely because their consumers (and hence, their governments) demand it. But what about the fuel? CDFA’s Division of Measurement Standards (DMS) is the regulatory “little engine that could,” with a small but dedicated staff long recognized as experts ensuring safe, legal and fairly marketed fuels in California. Following the lead of Governor Brown’s Executive Order (B-16-2012), DMS assisted a multi-agency effort to create the 2013 Zero Emission Vehicle (ZEV) Action Plan. DMS is identified as the key office to ensure that hydrogen and electricity can legally be sold as retail transportation fuels, and to ensure pricing transparency for ZEV charging and fueling. Other examples of DMS’ alternative fuel initiatives:

» Hydrogen fuel purity, dispenser accuracy – interagency contract with the California Energy Commission

» Testing high-concentration biodiesel blends – interagency contract with the California Energy Commission

» Modifying ethanol and methanol standards to facilitate increased use – DMS on ASTM International task force

» Developing a natural gas (CNG) fuel specification for use in motor vehicles – DMS leading an ASTM task force

Diesel Fuel Substitute Shows Promise

A new fuel will soon be powering some vehicles in a test project in California. Volvo’s heavy truck division is partnering with an innovative California start-up, Oberon Fuels, to develop Dimethyl Ether (DME) as a non-toxic, non-carcinogenic replacement for diesel engine fuel, at a comparable price. DME could potentially reduce California’s dependence on crude oil, decrease methane emissions, and reduce air pollution.

CDFA’s Division of Measurement Standards (DMS) has issued a developmental engine fuel variance to Oberon Fuels for this project. Fuel variances permit companies to use fleets to perform road tests of fuels in controlled environments. Starting in early 2014, Safeway and Oberon Fuels will conduct a one-year study, based at the Safeway Distribution Center in the San Joaquin Valley, using a small fleet of specially-modified Volvo trucks. If all goes well, the data will be used to help develop an international standard so that CDFA and other jurisdictions could allow the retail sale of DME.

To protect the driving public and retail businesses, CDFA requires all commercially sold fuels to meet ASTM or SAE International standard specifications. This ensures the fuels sold will not harm vehicle engines or create unsafe situations on California’s roads.
Improving Food Access and Security

» Direct Marketing: Good Food is Only a Farmer’s Handshake Away
Recent budget constraints and increased consumer focus on direct marketing outlets have contributed to renewed efforts to provide regulatory guidance and adequate funding for the Direct Marketing Program. These efforts culminated in the formation of the Direct Marketing Ad Hoc Committee, which has developed several concepts with the potential to allow the direct marketing industry to flourish. Certified Farmers Markets (CFMs) are the most prevalent form of direct marketing in California agriculture, but they are by no means the only one. CDFA’s Direct Marketing Program provides opportunities for approximately 3,350 certified producers to sell their certifiable agricultural products directly to the public at approximately 800 CFMs throughout California.

Fighting Food Insecurity in California’s Heartland
Do you know where your next meal will come from? For more than four million people in this state, that answer is too often “No.” What’s worse, many who live in our Central Valley do not have access as consumers to the same food they may have picked, packed or otherwise handled just hours before. Farmers and ranchers want to be part of the solution, and that’s why CDFA supported the Governor’s signature on legislation to create a new tax credit for 10 percent of inventory costs of fresh fruits and vegetables donated to California food banks after January 1, 2012. It’s an incentive that marks further progress toward a goal set by the California Board of Food and Agriculture and the California Association of Food Banks to double farm-to-food bank contributions from 100 million pounds to 200 million pounds by 2015.

» From Interaction to Action: Engaging with Food Policy Councils
CDFA Secretary Karen Ross joined with California Health and Human Services Agency Secretary Diana Dooley in 2011 to convene a meeting inviting all local food policy councils to Sacramento. That kernel grew into what is now the statewide Food Policy Council. Interaction with the local and state food policy councils ensures that CDFA can stay engaged with a broad base of diverse stakeholders on the very important discussions of food access, improving nutrition in all of our communities, and working together to create robust local and regional food systems. CDFA has hosted the statewide group each year since, building toward policy consensus among local food policy councils. Locally and individually, these councils are self-motivating and they are gaining momentum in their communities; united, they stand to extend and expand their reach into the policymaking process in Sacramento and well beyond.

What is Food Access?
Access to healthy food means having a variety of affordable, good quality, healthy food within one’s community. Sufficient food access requires all of the following components:

» Proximity
The distance residents have to travel to reach outlets that sell healthy foods can impact the amount of healthy food they purchase. Travel costs (including both the time spent traveling and the cost of driving a private vehicle or taking public transportation) can increase the real cost of healthy food and keep people from purchasing it.

» Variety
Access to a variety of healthy food choices is another important part of food access. Variety ensures sufficient choice – beyond a single option or two – and supports a healthy diet.

» Quality
Accessible, healthy food should also be of good quality.

» Affordability
Accessible food needs to be affordable. This includes both an affordable sticker price as well as the ability to use nutrition program benefits (e.g. CalFresh or WIC) in addition to cash.

For more information about food access, see CDFA’s report Improving Food Access in California online.
Nitrogen Management: CDFA Pursuing Several Parallel Initiatives

Water quality carries such importance for consumers, farmers, and industrial users that the issue has, over time, generated a complex regulatory system overseen by a dedicated slate of water quality agencies at several levels of government. While CDFA does not own a lead role on this issue, the agricultural agency in the nation’s number-one ag state has a clear responsibility to ensure that its growers maintain a meaningful presence at this particular regulatory table. CDFA is currently pursuing seven initiatives related to water quality and nitrogen, five of which are being addressed directly through the Fertilizer Research and Education Program (FREP):

» FREP-Funded Research on Nitrogen
FREP has remained true to its original mission by continuing to fund research on the management of agricultural nitrogen. For example, FREP is currently funding a project with the UC Davis Department of Plant Sciences, titled “Remediation of tile drain water using denitrification bioreactors.”

» FREP Special Request for Proposals (RFP)
In 2012, FREP released its first-ever Special Request for Proposals to specifically address the issue of nitrates in groundwater in environmentally sensitive areas of California. The Special RFP called for proposals focusing on research that utilized the “pump and fertilize” method in concert with nitrogen budget worksheets to show proof-of-concept. Two projects were selected for funding and are currently in the development stages.

» FREP Database
In partnership with researchers at UC Davis, FREP has developed a searchable, web-based database of FREP research projects (see page 21).

» FREP CCA/Grower Nitrogen Management Training and Certification
FREP is currently working on two nitrogen management training programs: the first is a nitrogen management training and certification program for Certified Crop Advisors (CCAs), and the second is a nitrogen management education and outreach program targeting growers. FREP has drafted a course outline in consultation with the CCA Board of Directors and is working with the University of California’s Division of Agriculture and Natural Resources (UC ANR) regarding curriculum development and training.

» CDFA/FREP Coordination with UC ANR - Workshops
In June 2012, the CDFA FREP program partnered with the UC ANR Institute for Water Resources (CIWR) to hold a series of forums titled “Managing Agricultural Nitrogen.” Held in Sacramento and Tulare, the forums were free and open to the public and were geared toward growers, dairy operators, agency representatives, agricultural commissioners, policymakers, and other concerned community members.

» CDFA Collaboration with Central Valley Water Board / Coalition on Waste Discharge Requirements
CDFA has engaged in discussions with the Central Valley Water Quality Control Board (CVWQCB) staff on the East San Joaquin Valley Water Quality Coalition (ESJVWQC) waste discharge requirements for irrigated lands by providing agronomic expertise and addressing the feasibility of some of the requirements. CDFA has also been engaged in discussions with the coalition on providing scientific expertise on potential practical solutions to address nitrates in groundwater systems. The FREP CCA/Grower nitrogen management training and certification initiatives were designed to help growers with nitrogen management plans which will be required in some areas according to the waste discharge requirements.

» CDFA Science Panel on Nitrogen Trading Markets
The Environmental Farming Act Science Advisory Panel is working to establish a pilot project on nitrogen trading between a point source (e.g., water treatment facility) and a non-point source (farm) operation. The science panel and CDFA are exploring the benefits of this method in incentivizing growers to manage their nitrogen further.
Ecosystem Services: Recognizing Ag Stewardship Practices

CDFA recognizes the importance of environmental stewardship practices in agriculture – and we want to make sure our farmers and ranchers get the credit they deserve for the good work they do in that regard. Ecosystem services are defined as “the multiple benefits we gain from farming and ranching including crop and livestock production. In addition to valuable open space and wildlife habitat, the management decisions and conservation practices of farmers and ranchers also enhance environmental quality, provide recreational opportunities and offer social benefits.” CDFA has embarked on an ambitious effort to highlight agriculture’s ecosystem services, and to increase awareness on the part of other regulatory agencies and stakeholders who will benefit from this deeper knowledge of farming’s stewardship. A few examples of ecosystem services:

» Wildlife habitat
» Nutrient cycling
» Recreational, cultural activities
» Soil structure, formation, fertility
» Biodiversity conservation
» Water cycling
» Water quality
» Pollination services

Further information on CDFA’s efforts regarding ecosystem services is available online.

FREP: Putting the Power of Research in the Hands of California Farmers

The term “nutrient management” is nothing new to a farmer, but it has enjoyed a definite increase in usage among government agencies recently – largely due to discussions about nitrate contamination in the water supply, but also due to the general advancement of technology and research that give farmers new tools to precisely tailor their fertilizer inputs. CDFA’s credentials are well recognized on issues surrounding fertilizer use and management because of the department’s Fertilizer Research and Education Program (FREP), a long-term partnership with the University of California. FREP has launched a searchable, web-based database of all completed FREP research projects. This database serves to disseminate FREP research findings and is an easily accessible, understandable, and convenient way for growers and crop advisors to learn about and implement the findings. Phase I of the project, completed in July 2012, summarized all completed projects and entered them into the database, available online at http://www.cdfa.ca.gov/is/frep/Default.aspx. Phase II includes the creation of crop fertilization guidelines, based in part on nitrate sensitivities, of a given agricultural area or region. The first guideline will focus on crops in the nitrate sensitive regions of the Tulare Lake Basin and the Salinas Valley. Phase II is anticipated to conclude in late 2014.
Dairy Digesters:
Technology Whose Time Has Come

Did you know a dairy cow can produce 150 pounds of manure daily? Did you know that methane holds about 24 times more heat than carbon dioxide? And everybody knows where methane comes from... That may be trivia to some - but information, as they say, is power, and our state's dairy facilities know it. They generate significant amounts of methane from on-site lagoons, and that “waste” has some pretty powerful potential. Dairy digesters, or biodigesters, capture that gas and turn it into energy, reducing greenhouse gas emissions from dairies and reducing the (expensive) power drawn from the grid. Seems simple enough, and several California dairies have given it a go – but widespread adoption of these technologies in California has been fraught with overlapping regulatory challenges and technical hiccups. Generator technology is constantly improving. CDFA, USDA and U.S. EPA convened a state-federal dairy digester working group with the common goal of identifying and removing regulatory, economic and technical barriers to the widespread adoption of dairy digester systems in California. As a result of this multi-agency, academia and private sector collaboration, several projects are currently in the new consolidated permit review process.

The ultimate goals of the collaboration are to see the widespread adoption of digester systems to better manage manure and nutrients, help address air and water quality concerns, reduce greenhouse gas emissions and produce renewable energy, fertilizer, and other value-added products.

Bioenergy:
Clean, Safe Energy that Reduces Waste and Creates Jobs

In August 2012, Governor Jerry Brown’s office and a team of eight state agencies jointly released a Bioenergy Action Plan to accelerate clean energy development, job creation and protection of public health and safety. Secretary Karen Ross called it “an exciting new frontier for agriculture,” turning farm waste into fuel along with forest and urban waste products and other, similar sources. Bioenergy is simply the production of energy from organic waste – but inventing and refining the technical and regulatory systems to achieve that goal safely, consistently and profitably is not so simple. The plan contains more than 50 recommended actions to increase the sustainable use of organic waste, expand research and development of bioenergy facilities, reduce permitting and regulatory challenges, and address economic barriers to bioenergy development. According to the Action Plan, California already produces about 600 megawatts of electricity and 50 to 100 million gasoline gallon equivalents from organic waste each year. Expanding bioenergy development benefits California agriculture by providing onsite or local sources of clean energy such as electricity or liquid fuels for farm vehicles. Technologies such as anaerobic digestion also reduce waste and pollutants from dairies, agricultural prunings/trimmings and residues, and food processing operations. Bioenergy generation can also produce biochar, a valuable soil amendment that can be used in place of chemical fertilizers. With so many “upsides,” it’s easy to see why so much energy is being invested in this technology.
Ag Vision:
Will Your Great-Grandchildren Be Able to Choose to Farm?

That’s the kind of question the State Board of Food and Agriculture was asking itself, the industry it represented, the public and CDFA back in the mid-2000s, when the board created its Ag Vision Advisory Subcommittee. The board’s “California Agricultural Vision” report came out in December 2010, and it has since been updated with a progress report. It is a durable document because the board has sustained its efforts to bring together diverse stakeholders who share a common goal – the long-term viability of California agriculture. The state board set out to build bridges with environmental, labor and food security interests to see if it could broaden the base of support for good agricultural public policy, and that work continues. Will your great-grandchildren still be able to choose to farm? CDFA and the State Board of Food and Agriculture want the answer to be “Yes,” and Ag Vision continues to provide an important framework for maintaining the environment to allow that to happen.

Ag Vision’s 12 key strategies:

» Improve Access to Safe, Healthy Food for All Californians
» Ease the Burden of Regulation on Agriculture While Maintaining Health, Safety and Environmental Standards
» Secure an Adequate Supply of Water for Agricultural Purposes
» Assure a Strong Labor Force through Fairness to Agricultural Workers and Employers
» Effectively Detect, Exclude and Control Invasive Species
» Adopt a Policy of Conserving Agricultural Land and Water Resources
» Expand Environmental Stewardship on Farms and Ranches
» Promote Renewable Energy & Substitutes for Fossil-Based Inputs
» Assure Agricultural Adaptation to Climate Change
» Promote Robust Regional Markets for All California Producers
» Cultivate the Next Generation of Farmers and Ranchers
» Promote Agricultural Research that Anticipates 21st Century Challenges