Contra Costa County Agriculture and Weights & Measures Newsletter

Fall 2013

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This is a part of a series of quarterly newsletters designed to inform growers in Contra Costa County about issues important to the Agricultural community. We welcome your questions and comments about any topics in this newsletter as well as suggestions for future newsletters. Contact us at:

Contra Costa County Department of Agriculture /Weights & Measures
2366 A Stanwell Circle
Concord, CA 94520
(925) 646-5250 FAX (925) 646-5732

Knightsen Branch Office
P.O. Box 241
Knightsen, CA 94548
(925) 427-8610 FAX (925) 427-8612

or visit our website at: www.co.contra-costa.ca.us/ and click on Departments, then Agriculture/Weights & Measures.

New Plant Detector Dogs

The Contra Costa County Department of Agriculture is proud to welcome two new plant detector dogs. Cairo and Conan are the newest members of our detector dog teams, replacing Bart and Bella who have retired.

The U.S. Department of Agriculture (USDA), which operates the detector dog program, sets detector dogs' mandatory retirement age at nine years. After retirement, the dogs are usually adopted by their handlers. Bella is currently living with her handler and is looking forward to a new career as a pet assisted therapy dog. Bart unfortunately was diagnosed with cancer and has passed away.

Both Cairo and Conan are veterans of the USDA detector dog program. They already have three

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Cairo alerting on an unmarked shipment of plant material at a package delivery service.

Conan received a food reward for alerting on this shipment of cut flowers.

years' experience working with USDA handlers on various inspection programs. Because they have worked on quarantine programs before, both dogs will adjust easily to their new duties in Contra Costa County.

Cairo and Conan were rescued from Georgia animal shelters to work in the detector dog program. Before recruiting dogs, USDA trainers check them for good health, proper temperament, and suitability. The trainers look for dogs that are highly motivated to get food rewards, even if the dog has to go over and around obstacles to get it. Candidate dogs are also taken to busy airport terminals and construction sites to test their ability to handle crowds and loud noises.

Dogs that pass the initial testing are trained at the USDA training center in Georgia. After a final exam, the detector dogs graduate to working with a single handler or with several handlers on various missions.

When the Contra Costa County handlers came to the USDA center to be matched with new dogs, they were able to choose from either experienced dogs or dogs who had been newly trained. Our handlers worked with the available dogs and chose the ones that were the best match. We wish Cairo and Conan a long and happy career protecting California from exotic plant pests.

Pesticide Storage

Pesticide use can be an important part of farming. However, pesticide storage can also create a potential risk for people, animals, and the environment. When not stored properly, accidents involving stored pesticides can cause illness, death, property damage, chemical fires, and even explosions. Pesticide leakage and spills can contaminate soil and water, leading to legal penalties and expensive cleanup costs.

The County Departments of Agriculture only regulate some aspects of pesticide storage. Local fire districts, County Environmental Health, air pollution control districts, food certification agencies, etc. may have additional requirements for chemical storage. It's a good idea to discuss your pesticide storage with any agencies that regulate or certify your operation.

The following tips can help you create and maintain a safe, well organized, and efficient storage area.

Pesticides must be stored in a securely locked area any time they are not under direct supervision. If the storage area has any pesticides with "Danger" or "Warning" on the label, it must also have a warning sign posted. It's a good idea though to

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Maintaining a well organized pesticide storage area will help help prevent accidents and injuries.

Some pesticides, such as fumitoxin and rodenticide smoke bombs, can release deadly gases when stored improperly.

have posting signs even when they aren't required. Firefighters and other emergency responders appreciate having a clear warning that a building contains hazardous materials.

Pesticide storage areas should be structurally sound, well lit, and properly ventilated to avoid the buildup of chemical fumes. Ensure that potential spills or flooding won't allow pesticides to move off site by providing containment and sealing the floors. Avoid locating storage areas near water sources, livestock enclosures, offices, and homes. Install sturdy shelves made from metal or other materials that are easy to clean and will not absorb pesticides.

Make sure storage areas can keep out both weather and rodents. Water will damage pesticide containers and may react with the chemicals inside them. Rodents can chew through plastic and paper, causing leaks. Consider storing pesticide containers in plastic tubs to contain spills and help protect the containers from falling over during earthquakes. Have a spill kit, fire extinguisher, and first aid kit available near the storage area for emergencies.

Pesticide labels include directions about how the pesticide should be stored. Some important conditions include: temperature, reactivity with other chemicals, flammability, corrosive effects, volatility, and explosion hazard. To avoid accidents, don't store flammable materials in direct sunlight or near heat sources. Make sure pesticide containers remain securely sealed, especially if they contain volatile pesticides.

Whenever possible, store pesticides in the original container with the original label. Never store pesticides in food or drink containers. Keep a list of the pesticides in your storage area along with copies of their labels in case a container is damaged or the label on it becomes illegible. If you need to transfer a pesticide into another container, be sure to label it properly.

Keep pesticide storage areas organized and easily accessible. Be familiar with each product and its location. It's best to store different types of pesticides on different shelves to avoid cross contamination. Place liquids on lower shelves so spills and leaks won't contaminate dry materials that might be stored below them. Have a designated place inside the storage area to hold empty rinsed pesticide containers for disposal.

Never store personal protective equipment such as gloves, eye protection, respirators, etc. inside a pesticide storage area. If the safety equipment becomes contaminated, the next person who uses it will be exposed to concentrated pesticide. If the outside of a container becomes contaminated

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Exposure from pesticide concentrate spills onto shelves and containers may lead to serious illnesses or even death.

Identify and dispose of old, unused pesticides regularly.

during use or storage, wear personal protective equipment to clean it before placing it back in the storage area.

Pesticides often have a limited shelf life and will generally deteriorate over time. Old pesticides tend to separate, clump, crystalize, change color, or act in unpredictable ways if used. Pesticide containers can also break down over time. Plastic gets brittle, metal rusts, and paper rips. For all these reasons, it's important to dispose of old, unneeded pesticides. Regularly inspect storage areas and look for old, damaged, unsecured, or leaking containers. If you aren't sure what the shelf life for a particular pesticide is, contact the manufacturer and ask.

To help eliminate stocks of old, unused pesticides, buy only what you need. It's better to use pesticides for their intended purpose than pay to dispose of them later. Mark new containers with the date of purchase and use up the oldest ones first. You can often return unopened containers to your pesticide dealer. Partial containers may be given or traded to other growers (if their pesticide permit allows) or disposed of as hazardous waste. Pesticides should never be burned, buried, or poured down the drain.

As soon as pesticide containers have been emptied, they must be triple rinsed. Store the empty containers in a securely locked enclosure until they can be disposed of properly.

New Water Quality Requirements

In 2010, the California State Water Board contracted with the University of California to study nitrate contamination in groundwater. Nitrate, a by-product of fertilizers, can cause serious health risks, especially for children and pregnant women. U.C. researchers found that groundwater in some areas was severely contaminated with nitrates. This is a serious problem in regions that rely on groundwater as the main source of their drinking water.

In February 2013, the State Water Board delivered a report to the Legislature based on the study results. The report makes fifteen recommendations that will help provide safe drinking water and prevent future groundwater contamination. These include regulating the use of nitrogen fertilizers by growers statewide.

In August 2013, the Central Valley Regional Water Quality Board released a draft of the general order that will establish new waste discharge requirements. It includes requirements that growers monitor water quality, report nitrogen fertilizer applications, and manage runoff and leaching from their fields. It will operate through third party groups such as the San Joaquin County and Delta Water Coalition.

For more information about the new waste discharge requirements, go to the San Joaquin County and Delta Water Coalition website at: http://www.sjdeltawatershed.org/

The use of nitrogen fertilizers will be subject to new waste discharge requirements.

Agricultural Burning

On July 1, 2013, the Bay Area Air Quality Management District (BAAQMD) established new fees for open burning notifications. These fees will help pay for the District's inspection of farm burn piles to ensure compliance with the requirements. The new fees range from $98 to $600 per notification, depending on the type of material being burned.

Smoke from open, outdoor fires is one of many sources of local air pollution. Open burning is generally prohibited by BAAQMD. However, there are some exemptions given for the burning of agricultural crop prunings, stubble, infected plant material, and for weed control in certain areas. It is always prohibited to burn trash or residential yard waste such as leaves, grass, prunings, etc. in farm burn piles.

Each approved type of open burning is usually allowed only during a specific time of year called a permissive burn period. For example, November 1 to April 30 is a permissive burn period for orchard prunings. However, even during a permissive burn period, open burning is only permitted on specific days when the weather conditions allow smoke to disperse properly. To find out if burning is allowed on a specific day, growers must call the 24-Hour Burn Day Status Recording at (800) 792-0787.

In order to legally burn agricultural crop material, growers must: submit a completed notification form to BAAQMD; pay the required fee; get a fee payment invoice back from BAAQMD; notify the local fire department (growers may also need to get a burn permit if the local fire department requires it); and determine that it is an allowable burn day. Other requirements such as burn pile size, smoke production, ignition method, wind conditions, hour restrictions, etc. can be found in the information accompanying the notification form.

Smoke from agricultural burn piles is one of many sources of local air pollution.

During certain weather conditions such as temperature inversions, smoke can be trapped near the ground.

Normally, the County Agriculture Departments don't get involved with open burning notifications. However, if a grower wants to burn diseased or infested agricultural plant material ***outside*** the permissive burn period, BAAQMD requires prior authorization by our Department. This Department will ***only*** authorize open burning notifications for diseased or infested plant material to be burned ***outside*** of the regular permissive burn period. Before authorizing an open burning notification, a Department biologist will inspect the burn pile to verify that the plant material is diseased or infested with pests. The grower will still be responsible for all other open burning notification and fee requirements.

For open burning notification forms, the fee schedule, pemissive burn periods, and other information, go to the BAAQMD website at http://www.baaqmd.gov/

Border Protection Stations

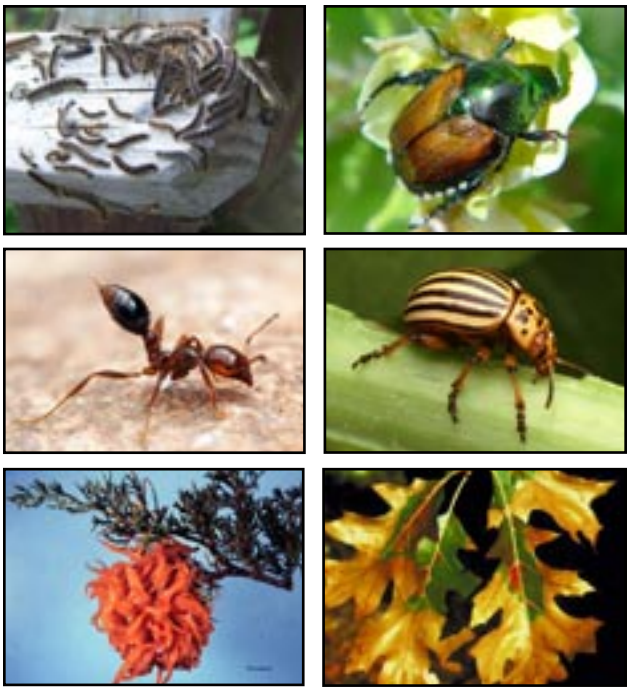
California is generally free from many of the invasive insects, weeds, and plant diseases that infest other states and countries. This is partly because they have trouble crossing mountains, deserts, and oceans on their own. Unfortunately, plant pests are skillful hitchhikers and often get human help to spread into new areas. Exotic, invasive pests often travel along with produce, plants or vehicles brought or shipped by unsuspecting individuals and companies.

California's Border Protection Stations help keep these pests out by inspecting incoming vehicles for infested and quarantined commodities. In 2010, more than 27.5 million private vehicles and 7 million commercial vehicles were inspected at the border stations. State inspectors found 12,152 plant pest specimens (insects, diseases, weeds, mollusks, and vertebrate animals). Of these, 1,820 were exotic invasive species capable of causing serious damage in California.

Travelers often wonder why some vehicles are inspected more thoroughly than others. Border station inspectors are trained to assess the risk that a vehicle may be carrying hitchhiking pests. Inspectors consider factors such as route of travel, time of year, and vehicle type. The higher the risk, the more thorough the inspection.

The primary focus at the border stations is plant material (fruits, vegetables, nursery stock, hay, firewood, etc.). Plant material can act as a mobile home for pests and diseases, providing food, water, and shelter as they travel. Pests can be very hard to find. Insects hide as adults, larvae, or eggs on or inside plant material. Disease microorganisms are virtually invisible.

California's Border Protection Stations help prevent exotic plant pest infestations.



Border station inspectors enforce quarantines against pests such as (clockwise from upper left); Gypsy Moth, Japanese Beetle, Colorado Potato Beetle, Oak Wilt Disease, Cedar-Apple Rust, and Red Imported Fire Ant.

Like all plant material, firewood is inspected for insects and disease symptoms when it arrives at the border stations. Because of the high likelihood of wood-boring insects and other pests hitchhiking in shipments of firewood, travelers are strongly discouraged from moving it out of the local area from where it was cut.

Protecting California against aquatic invasive species, such as quagga and zebra mussels is another important part of the job. Invasive mussels easily hitchhike on the bottoms of boats and are spread by unsuspecting boat owners as they move from place to place. Aquatic pests threaten both waterways and the environment.

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A truck full of beehives is just too hard for inspectors to check at the border station.

Sometimes, a shipment just can't be inspected properly at the border station. Examples of this include: large nursery stock shipments, live bees, bulk seed, inaccessible commercial trailers, etc. In these cases, the shipment will be placed under a quarantine hold until it can be thoroughly inspected and released. The border station inspector issues an official notice to the driver stating that the shipment is under quarantine. The notice instructs the receiver of the shipment to call the County Agriculture Department at destination and have it inspected.

When border station inspectors find invasive pests or quarantine violations, the shipment is rejected and not allowed to enter California. Shippers then have several choices. They can have the shipment treated or certified, go to another destination outside California, or destroy the infested commodity.

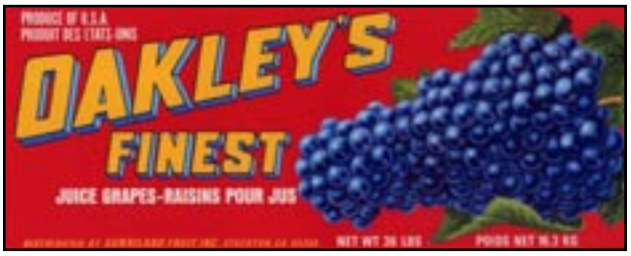
California established its first agricultural inspection stations in the early 1920s. Today there are 16 of these facilities located on major highways entering the State. Their work helps save California taxpayers the high cost of controlling invasive species infestations. One study indicates that for every dollar spent on pest prevention, $14 will be saved in later control costs and economic losses.

Contra Costa Yesterdays

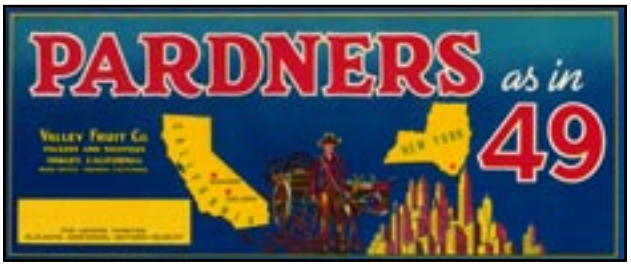
When the first settlers arrived, the area that would become Oakley was sand, sagebrush, and chaparral. Jackrabbits were so plentiful that they were a popular main dish at barbecues. Many people believed the land was far too poor for farming. Others, such as James O'Hara, proved them wrong with rich orchards and field crops.

With the establishment of a railroad depot and a post office, Oakley soon became a great success. Businesses, schools, churches, and homes moved in and the town grew rapidly. Due to the railroad, Oakley was a natural location for packing sheds handling the celery, asparagus, potatoes, and other crops grown in the nearby area.

Although many types of crops were planted in the Oakley area, almonds and grapes were among the most profitable. G. Continente became a major grape grower with one of the largest vineyards in the county and a packing shed by the railroad tracks in Oakley.



Some of Oakley's vineyards have survived both grape phylloxera and Prohibition.



When grape phylloxera devastated California grapes in the late 19th century, Oakley's vineyards survived due to its sandy soils. When Prohibition ruined the wine industry in the 1920's, Oakley's grape growers survived by selling to home winemakers. Today, grapevines over 100 years old can still be found in the Oakley area.

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Department of Agriculture and
Division of Weights & Measures
2366 A Stanwell Circle
Concord, CA 94520