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### EDITORS OF THIS NEWSLETTER

**Jennifer Heguy,**  
**UCCE Stanislaus/San Joaquin Counties**  
 3800 Cornucopia Way  
 Ste. A  
 Modesto, CA 95358  
 jmheguy@ucdavis.edu  
 phone: 209-525-6800

**Noelia Silva-del-Rio,**  
**UCCE Tulare County**  
 4437B So. Laspina St.  
 Tulare, CA 93274  
 nsilvadelrio@ucdavis.edu  
 phone: 559-685-3309

## What does Proposition 2 mean for dairies?

Betsy Karle, UCCE Glenn County and Jim Reynolds, D.V.M.

On November 4, 2008, Californians spoke loud and clear that they want farm animals to be housed in a fashion that allows them the ability to stand up, turn around and fully extend their limbs. While this legislation was not specific to dairy calves, we might expect to see the issues of dairy calf facilities brought up in the legislature as an amendment to the new law. Are you prepared to defend your method of calf rearing and take that message to your legislators and the public?

Calf housing should accommodate the calves' behavioral, health, and nutritional needs in the context of an economically viable production system. Important aspects of a calf rearing system are that it:

- 1) Provides a sanitary and comfortable environment.
- 2) Allows basic behavioral responses including most normal postures and calf-to-calf interaction (visual and perhaps tactile).
- 3) Encourages physiological development (rumen development) by providing water and grain from day 1 of life.

In many cases, these needs are being met by the current system and changes are not necessary. However, some common housing structures limit the calf's movement as she nears weaning. In this case, calves should be housed in group pens after approximately 70 days of age to accommodate their physical and behavioral needs. Calves may also be raised in groups from birth, provided that strict sanitary procedures are a high priority.

The California Dairy Quality Assurance Program and UC Davis have an excellent resource on care and welfare for dairy cattle and calves: "Dairy Cattle Welfare Evaluation Guide". Dairy owners are encouraged to get a copy of this booklet at [www.cdqa.org/ahw/dweg/](http://www.cdqa.org/ahw/dweg/) or [www.vetmed.ucdavis.edu/vetext/animalwelfare](http://www.vetmed.ucdavis.edu/vetext/animalwelfare).

If, as an industry, we are unable to educate consumers and defend our animal welfare practices, we can expect activist groups to continue to fill that void. HSUS and PETA will continue their marketing efforts to eliminate animal agriculture. In fact, on the website [www.yesonprop2.com](http://www.yesonprop2.com), the campaign manager shared her victorious thoughts. Among her comments: *"California is a big, big state. Ag is a big, big foe... Let's not stop now. Let's build on this victory. Take tomorrow to rest...But then let's resume our just and right struggle. Together...For the animals' sake. And for our own."* Will the dairy industry be proactive and meet the expectations of the people and consumers in California? The best answer to the activists opposing our industry is to show that we truly are providing housing that meets the calf's needs.

### ADDITIONAL RESOURCES

- [www.vetmed.ucdavis.edu/vetext/animalwelfare](http://www.vetmed.ucdavis.edu/vetext/animalwelfare)
- [www.dairyfarmingtoday.org](http://www.dairyfarmingtoday.org)
- [www.realcaliforniamilk.com](http://www.realcaliforniamilk.com)
- [www.dairywellbeing.org](http://www.dairywellbeing.org)

## Ruminant feed ban rule gets “enhancements”

*Mortality management implications for renderers,  
meat packers, and dairy producers*

Carol Collar, UCCE Dairy and Forage Farm Advisor, Kings County

### **NEW RESTRICTIONS**

To further reduce the risk of BSE (bovine spongiform encephalopathy – also known as mad cow disease), the FDA has added restrictions to the 1997 Ruminant Feed Ban. The 1997 Feed Ban prohibited the feeding of protein derived from mammalian sources (e.g. meat and bone meal) to ruminant animals (cattle, sheep and goats). The recent enhancements to the 1997 rule will take effect in April of 2009. They do not replace the rule, but rather strengthen existing safeguards against BSE. The new restrictions will:

1) Prohibit mammalian proteins from ALL animal feed, including poultry, swine and pet food, UNLESS it can be documented that the source does not contain high risk sources, **brain and spinal cord from cattle older than 30 months.**

2) Place restrictions on tallow used in animal feed. No more than 0.15% of impurities are allowed for tallow used in ruminant feed, because those impurities could contain protein (or risk material). Tallow for use in other animal feeds does not have the impurity restriction as long as it was not produced from prohibited sources. Tallow that is derived from prohibited material may not be used for any animal feed if it contains more than 0.15% impurities.

### **IMPLICATIONS**

FDA's move has already begun to impact rendering companies, who must implement protocols for determining the age of incoming carcasses and develop alternate processing technologies to remove and segregate brain and spinal cord tissue from all that are 30 months or older. Detailed records are required, including documentation from their suppliers about the nature of materials received. Rendering costs will sky-rocket and revenue may be reduced. Meat packers have been removing brain and spinal cord from beef products since 2004, when the first case of BSE in the US was documented. Although their procedures for removal are already in place, the new restrictions require meat packers to segregate brain and spinal cord from other meat processing waste that routinely is rendered for animal feed. Dairy producers will need to provide age documentation for all dead stock picked up by or delivered to the rendering company. Timing will be critical, especially in summer, because carcass decomposition prior to rendering impacts the ability to remove the prohibited tissue.

Dairy producers need to start communicating with their rendering service provider very soon to establish a method for documenting carcass age. Dairies with DHIA and other herd management records can use these to verify age. Sorting and marking dead stock to distinguish those that are older than 30 months from those that are younger will be necessary. Signed certification regarding truthfulness of the age verification will be needed from each dairy supplier. Keep in mind that this will be a legal obligation subject to civil and criminal penalties. Certification forms will be provided by your rendering company.

### **CARCASSES DISPOSAL OPTIONS**

Rendering is the only legal option in California, unless an emergency is declared to allow alternate methods like burial, incineration or composting. Currently, a multi-disciplinary research team at UC is looking for other disposal methods.

### **ADDITIONAL RESOURCES**

- FDA's Center for Veterinary Medicine - <http://www.fda.gov/cvm/bsetoc.html>
- National Rendering Association - <http://nationalrenderers.org/>
- And as always, you are welcome to call your local UC Cooperative Extension dairy advisor

### **BACKGROUND**

Meat processing waste, dead farm animals and other perishable materials from food processing, restaurants and supermarkets are routinely taken to rendering facilities where they are processed into marketable products. The two main products of rendering are meat and bone meal (a high quality protein) and tallow (a high energy fat). These are used as ingredients in a myriad of products, including animal feed. Contemporary rendering is a high tech, modern version of an ancient practice that has served for centuries to recycle resources while protecting public health and the environment. Present day rendering companies are regulated by many state and federal agencies including the US Food and Drug Administration (FDA).

# Feed conversion efficiency, more money and less manure?

Alejandro R. Castillo, UCCE Merced County

California dairy producers face the challenges of complying with environmental regulations while maintaining profitability. Managing feed conversion efficiency (FCE) may help to overcome both challenges. The FCE is defined as the proportion of feed that is converted into milk, and is normally expressed in lbs of milk/ lb of dry matter intake. When FCE is improved, cows produce more milk (or gross income) and less manure with the same amount of feed. Feeding according to animal requirements maximizes milk yield per cow and the efficiency of nutrient utilization. When nutrients are fed in excess both manure production and the energy cost of excretion increases, affecting energy balance and milk yield/cow.

Several factors are negatively associated with FCE including: days in milk, proportion of first lactation cows, animal comfort, and unbalanced diets. All these factors should be planned and controlled to reduce or minimize any possible negative impact on FCE. Some management practices that minimize unbalanced diets and maximize FCE are: (1) Managing 3 to 5 diets or total mixed rations (TMR) according to milk yield per cow, and/or (2) Balancing diets based on the complete nutrient composition of each feed ingredient, including macro and trace minerals.

Results from two surveys carried out in Merced County in 2003 and 2008 indicated an improvement in group feeding management practices. The proportion of dairies feeding 2, 3, and 4 TMR increased in 2008 relative to the information from the 2003 survey (Figure 1). However, the estimates of FCE were similar in both surveys: 1.40 vs. 1.38 lb milk/lb dry matter intake in 2003 and 2008 respectively.

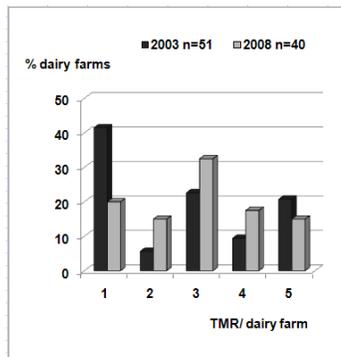


Figure 1. Proportion of dairies feeding different diets or Total Mixed Rations (TMR) for lactating dairy animals in Merced County.

Formulating diets without the appropriate feed analysis and/or not following recommendations may explain the lack of response of FCE in 2008. In both surveys, the nitrogen utilization efficiency (NUE) was positively correlated with FCE, indicating that FCE increased as NUE increased, and vice-versa (Figure 2). Based on these results, when FCE is 1.65 lb milk/lb dry matter intake the NUE is approximately 30%, which is the suggested benchmark for nitrogen utilization. Balancing dietary nitrogen (protein) may improve FCE, but balancing other nutrients and minerals may also help to improve FCE and/or mitigate possible environmental impacts.

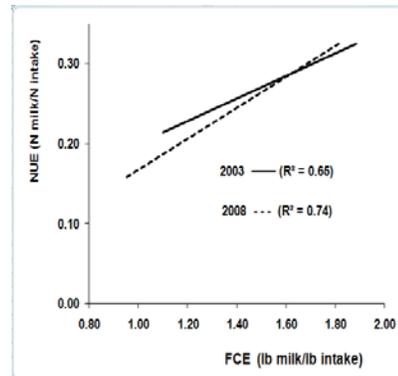


Figure 2. Relationship among Feed Conversion Efficiency (FCE) and Nitrogen Utilization Efficiency (NUE) in Merced County dairy farms.

Grouping animals according to nutrient requirements and balancing dietary ingredients based on complete chemical analysis should be considered to maximize FCE and minimize manure and nutrient excretion. But, improving feeding strategies by grouping cows is not a viable option for all dairy operations, especially those with a low number of cows and/or with infrastructure limitations. In these cases, dairy farmers and nutritionists should review all the possibilities to control and improve FCE, particularly complete feed ingredient chemical analysis.

The suggested benchmark challenges are:

- FCE no less than 1.6 lb milk/ lb dry matter intake
- 30% NUE for lactating dairy cows.

## Upcoming WDR deliverables for Central Valley dairy operators: July, 2009

Deanne Meyer, Livestock Waste Management Specialist, UCCE

There is no time like the present to begin thinking about the July deliverables, now that December is behind us. The General Order for Existing Milk Cow Dairies has a staged implementation process. The deliverables due July, 2009 will require organization of the dairy compliance team by the dairy operator/owner. This is the largest deliverable due to the Regional Board.

**Annual Report:** The annual report due in July, 2009 covers the calendar year 2008. The Executive Officer will provide the Annual Report form (excel spreadsheet). This is a spreadsheet; therefore you or a member of your compliance team will be able to do it on a computer. You will need your records from 2008 related to planting dates, harvest dates, crop yields, applications to fields, off-site discharges, manure manifests, etc. It will also be helpful for you to have an electronic copy of last year's report. It is assumed that the spreadsheet will be available at the RB 5 website: ([http://www.waterboards.ca.gov/centralvalley/water\\_issues/dairies/complying\\_with\\_general\\_order/software/index.shtml](http://www.waterboards.ca.gov/centralvalley/water_issues/dairies/complying_with_general_order/software/index.shtml)). As part of this process you will also need to submit an Annual Dairy Facility Assessment.

**Documentation of Interim Facility Modifications Completion for Storage Capacity and to Balance Nitrogen:** In July, 2008 you potentially submitted interim facility modifications for storage and/or nitrogen balance if your December, 2007 Preliminary Dairy Facility Assessment (PDFFA) submittal to RB 5 indicated you had insufficient storage capacity (Figure 1) or inadequate nitrogen balance (whole farm number identified below Figure 2). If necessary, operators proposed management practices to carry out between July, 2008 through June, 2009 to improve these balances (document 6.6 in your WDR Reference Binder provided at outreach meetings by CDQAP). In July, 2009 you need to identify completion of these proposed interim facility modifications.

**Nutrient Management Plan (NMP):** In July, 2009 you will submit the last part of the Statements of Completion. You certify on this form that you have completed the map associated with the NMP (also required for the WMP below) and that you and your professional (whether a Certified Crop Adviser or a Technical Service Provider with USDA NRCS certified in nutrient management) have developed a nutrient budget that will allow application of nutrients to achieve the targeted application of nitrogen at not more than 1.4 times crop removal. On the surface this looks like an easy task. It will be a tremendous amount of work to determine if and how you can deliver nitrogen to crops. A retrofit plan with schedule will need to be developed if you currently are unable to meet or document that you meet your targeted application rates. It is assumed that potential items to include in this plan are "piping, meters, pumps, etc." An electronic template that has been reviewed by RB 5 staff is available through <https://www.co.merced.ca.us/EnvironmentalHealthWM>.

**Waste Management Plan (WMP):** Completion and submittal of the final map associated with the waste management plan is due July, 2009. Greater detail will be added to previous mapping exercises. In both the production area and the land application areas your maps will now need to include: process wastewater conveyance structures, discharge points, and discharge/mixing points with irrigation water supplies; pumping facilities and flow meter locations; drainage ditches and canals, culverts, drainage controls (berms/levees, etc.), and drainage easements. Other items to include in the production area maps are: upstream diversion structures, and any additional components of the waste handling and storage system.

You will need the assistance of a Registered Professional (engineer or hydrologist) to complete the storage capacity calculations. These calculations are very different from the ones done initially (PDFFA) since these must include use of liquid manure as part of a nutrient management plan. Simply stated, have sufficient capacity to be able to allow water to leave only when nutrients need to be applied and not because there is insufficient capacity to hold water. An electronic template that has been reviewed by RB 5 staff is available through <https://www.co.merced.ca.us/EnvironmentalHealthWM>. You will need to manage your compliance team very closely so that the information generated in the NMP is available for the engineer calculating storage capacity.

Two additional deliverables are included in the WMP. There is a requirement to submit a production area design/construction document as well as documentation that adequate backflow prevention is in place for all wells identified in July, 2008. You may have completed document 6.7 from your WDR Reference Binder.

**Salinity Report:** The last item to submit in July is a salinity report that identifies sources of salt at dairy, evaluates measures to minimize salt in the dairy waste, and a self certification that you will implement measures identified to minimize salt in the dairy waste. An industry wide salinity report will be available for your use. Be advised: the salinity report required represents the production area only. Do not invest resources to have a salinity report developed for your land application area.

**To do and not submit:** the General Order has numerous requirements for documentation, record keeping, and data collection. You are obligated to collect and maintain records for 5 years (10 years for annual reports). Many of the records kept as part of the NMP require additional work (will be summarized or transferred to a spreadsheet to determine if you have met your targeted application of nitrogen) prior to inclusion in the Annual Report.

## Are tricolored blackbirds nesting in your backyard?

Noelia Silva-del-Rio and Carol Collar, UCCE Dairy Advisors



California, specifically the Central Valley, is home to 95% of the world's tricolored blackbirds. This species closely resembles the more common red-winged blackbird. However, the male can be distinguished by the color bordering the bright red shoulder patch, white in the tricolored blackbird and yellowish in the red-winged blackbird. This California native forms the largest breeding colonies of any North America song bird at times up to 80,000 adults. From March to July, flocks of tricolored blackbirds swirl over fields looking for the best nesting location. During incubation, colony activity is low, but when eggs hatch, flocks fly back and forth to distant feeding areas. A grandiose spectacle, especially for bird lovers!

The severe decline from about 700,000 adult birds in 1937 to only 35,000 in the late 1980's resulted in designation of the tricolored blackbird as a Species of Special Concern by the California Department of Fish and Game in 1990. In addition, the US Fish and Wildlife Service considers the tricolored blackbird as a Species of Conservation Concern. Currently, the population is estimated to be fewer than 400,000 adult birds. **The recovery of this bird species during the last two decades is owed greatly to dairy producers.**

The major threats for tricolored blackbirds are predators and the decrease in their preferred nesting habitat, native wetlands. However, field crops near dairy farms offer these birds a very desirable breeding environment. Every year, a handful of dairy farmers are affected when tricolored blackbirds nest in their winter forage crops. In the last several years, many of the affected dairymen have voluntarily participated in a program that compensates them for the losses associated with delaying harvest until the young birds leave the nest. UCCE farm advisors in Tulare and Kings Counties have helped facilitate discussions between dairy producers and state and federal agencies to negotiate a fair price for the crop losses.

Because the breeding colonies formed are so dense, large numbers of birds can be gained or lost in a single field each spring, so the cost to prevent this species from going extinct is small. Fortunately, state funding has been available for silage buyouts, but that is not likely to continue, so other sources will need to be considered for the short term. Stakeholders from throughout California have formed a tricolored blackbird working group to discuss longer term solutions for protecting this unique bird. Tricolored blackbirds are a great example of how dairy production in California can provide habitat and coexist with wild life. If this spring you notice a colony of tricolored blackbirds nesting on your land, contact your local UCCE farm advisor.

## Meet Russ Hovy, new faculty at UC Davis

### *What is your background?*

I grew up in Australia as a typical city kid, just outside of Brisbane. My involvement with dairying dates back to high school when I got my first Jersey heifer in a 4H-like program. From there I ended up milking cows all my vacations and fitting for various herds at shows across Australia. In 1992, I graduated with an Agricultural Science degree from The University of Queensland. Originally I thought I wanted to be a dairy nutritionist, but I realized that what really fascinated me was the process of milk synthesis by the udder and ways it could be studied. So I set off to New Zealand where I undertook my PhD at the Ruakura Research Center. My grad work sought to understand how the mammary gland grows and becomes programmed to make milk, and the hormones that regulate the process. This is still what we are working on; one additional component of our work is trying to understand how "good cells in the mammary gland go bad" in breast cancer. It's amazing what a dairy cow can teach a human! Actually, this is what led me to Washington where I did a postdoctoral training experience at the National Institutes of Health to gain additional experience in genetics and human medicine-related research. At the end of this experience, I took a job in the Department of Animal Science in Vermont in 2002. In December 2007, my partner Josie Trott and I moved to California for my current position at UC Davis.



Russ Hovey, Associate Professor  
Lactation and Mammary Gland Biology  
Dept of Animal Science, UC Davis  
Email: [rchovey@ucdavis.edu](mailto:rchovey@ucdavis.edu)  
Phone: 530 752 1682

### *How are your efforts relevant to the California dairy industry?*

This is one of the reasons I am so excited to be at UC Davis. While our research is all about what makes the mammary gland "tick", this has a lot of potential relevance to everything from mastitis to milk composition. I'm looking forward to working with others to address some of these issues. In the big picture, the overall goal of our work is to help improve efficiency of the dairy cow by understanding how her udder works. The opportunity to dovetail our research with parallel interests in the classroom and with others across campus and the state is nothing but a bonus! Plus, I always appreciate working with, talking about and seeing good cows!



## Pasteurized colostrum and your calf management system.

Jennifer Heguy, UCCE Stanislaus/San Joaquin Counties

There are few doubts about the value of colostrum, but there are differences in colostrum management that can have a significant impact on the effectiveness of your heifer's first meal. Good colostrum management is vital to raising healthy calves. Over the years, emphasis has properly been placed upon colostrum quality, amount of colostrum fed (based on quality), and time of first colostrum feeding. While colostrum plays an important role in protecting the calf at the start of life, it can also be one of the first introductions of infectious agents into the calf's system. For example, *E. coli*, *salmonella* spp, and *mycoplasma* spp. can directly cause diseases in calves such as scours and septicemia. It is also thought that bacteria in colostrum can interfere with the passive transfer of antibodies that calves need to build their own immune systems. Recently discovered cases of TB in California herds are another good example of why pasteurizing colostrum may be the next logical step in your colostrum regimen.

Early attempts at pasteurizing colostrum led to destruction of IgG (antibodies) and thickened colostrum, causing problems with feeding and the pasteurizing equipment. Problems arise when heating colostrum to temperatures above 60°C (140°F), and also when pasteurizing large batches of colostrum, even at acceptable temperature. Large batches increase the time to reach optimal temperature for pasteurization, resulting in thickening and loss of antibodies.

Pasteurizing colostrum at 60°C (140°F) for 60 minutes minimized the loss of IgG and prevented increased viscosity of colostrum compared with heat-treatment at higher temperatures. A 2007 study compared feeding raw colostrum with heat-treated colostrum. Colostrum from a group of cows was pooled and then divided to be fed to calves either as raw or pasteurized colostrum. Raw colostrum was transferred into sanitized feeding bottles, covered and refrigerated. The colostrum destined for pasteurization was heat-treated at 60°C (140°F) for 60 minutes using a commercial on-farm batch pasteurizer, and then packaged in the same manner as raw colostrum. Refrigerated colostrum was fed to calves within 36 hours of bottling. Pasteurizing colostrum resulted in lowered bacterial counts, with IgG concentrations similar to that of non-treated raw colostrum. Bacterial counts rose between time of packaging and feeding in both groups, but pasteurized bacterial counts remained significantly lower than non-treated colostrum. Calves fed pasteurized colostrum had greater apparent efficiency of absorption of IgG, and greater serum IgG concentrations at 24 hours when compared with calves fed non-treated colostrum. The efficiency of IgG absorption increases the effectiveness of passive immune transfer, resulting in healthier calves that are better able to respond to environmental stress.

While efficiency of absorption of IgG increased with pasteurization, it is important that quality and quantity of colostrum fed remain consistent with recommendations of your veterinarian. Pasteurization is not a replacement for other good colostrum handling practices, but may enhance your feeding protocols.

## Making every dollar count

Jennifer Heguy, UCCE Stanislaus/San Joaquin Counties

Dairy animals account for about 20 percent of the beef produced in the US, and contrary to popular belief are used for a lot more than just hamburger. According to 2006 study funded by the CA Beef Council, dairy producers were losing approximately \$76/head to quality defects. Low body condition scores accounted for most of this loss (\$64.79), while bruising accounted for a loss of \$4/head. The following are recommendations to better market and manage cull animals:

1. Ensure adequate body condition and muscling to prevent bruising and produce a better quality carcass.
2. Decrease incidence of lameness to prevent trim loss at slaughter due to arthritic joints and extreme bruising.
3. Administer injections in the neck. Injection-site lesions (Figure 1) of the rump damage the higher valued beef cuts.
4. Follow label directions and proper withdrawal periods to prevent drug residues at the time of culling.
5. Have bio-security measures in place on your dairy to prevent the spread of disease.

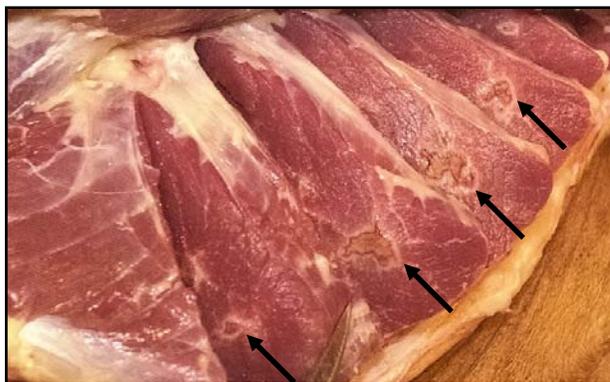


Figure 1. Arrows point to injection site lesions that span cuts of beef.

## Top notch dairy practices

Noelia Silva-del-Rio, UCCE Tulare County

Delta View Dairy is located on a very busy road in Tulare County. Sixteen years ago the owners decided to have carcasses placed near the road for easy pick-up (as well as farm security), but hidden from public view. They built this "carcass shack" with a number of helpful features. There is a **flag** to alert the truck driver when a carcass is present, **shade** to slow down carcass decomposition in summer time, and a **water hose** for easy clean-up. Delta View Dairy recognized the importance of maintaining a positive image of their business. We commend Delta View Dairy and others like it, who acknowledge the importance of the image of the California Dairy Industry.

*Do you have an innovation you'd like to share with your fellow dairy producers? If yes, let your local farm advisor know and we'll try to incorporate your idea in our next issue.*



## How much lagoon nitrogen did you apply to each field?

Marsha Campbell Mathews, UCCE Agronomy Advisor, Stanislaus County

Simple worksheets to hand-calculate the amount of nitrogen, phosphorus and potassium you applied to each field last season are available for download at [manure.ucdavis.edu](http://manure.ucdavis.edu) under the topic "**Tracking Nutrient Applications**". Two forms of the worksheet are provided. One uses flow meter totalizer readings (thousand gallons) and a separate worksheet uses pump output in gpm and run time. You will also need a laboratory analysis of your lagoon water to complete the calculations.

If you are making multiple applications of liquid manure to each field, it's easy to maintain a running total of the amount of nutrients applied if you use a different worksheet for each field and enter the data as you get it. Excel spreadsheet versions of these simple calculation forms are also available for download.

### Dairy Herdsman Shortcourse



April 21-23, 2009

Consumer Education Pavilion  
University of California-Davis  
Veterinary Medicine  
Teaching and Research Center  
18830 Rd. 112  
Tulare, CA

This shortcourse is designed for working dairy employees. Its purpose is to provide the people who do the actual work on the dairy the opportunity to receive information about the latest technology and training in all aspects of dairy management.

Registration fee for the shortcourse is \$260. Companies and/or dairies with more than one participant will be \$260 for the 1<sup>st</sup> participant and \$220 thereafter. The fee includes a notebook with handouts, lunch, plus shortcourse shirt. Preregistration is required. No registration at the door will be accepted.

To register contact Gerald Higginbotham, UCCE Dairy Advisor, at 559-456-7558 or register online at: [http://cefresno.ucdavis.edu/Dairy/Dairy\\_Herdsman\\_Shortcourse.htm](http://cefresno.ucdavis.edu/Dairy/Dairy_Herdsman_Shortcourse.htm)



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## **Expect Inspections from the Regional Water Quality Control Board**

Deanne Meyer, Livestock Waste Management Specialist, UCCE

*California dairy operators find themselves regulated by various regulatory agencies. The number of agencies who will send staff out on a regular basis will depend on the location of the dairy. One common agency with inspectors is the Regional Water Quality Control Board. Prepare your records and facility before your inspector arrives. You will typically receive advanced notification if the inspection is a routine inspection to determine if you are complying with your requirements. No advanced notification will occur if a discharge has occurred from your facility. Here are a few areas to review prior to an inspection.*

**Paperwork:** Dairies regulated through individual or general Waste Discharge Requirements (Southern California, Lahontan Region, Central Valley and some in the San Francisco Bay Region) have mandatory obligations to maintain records associated with production and land application of manures. These records must be current and must be maintained on-site for 5 years. Manure manifests are an example of documentation needed when manure leaves the facility to be handled by another entity. These manifests are the 'passport' for the manure to leave the property and serve to 'take it off the books' from the viewpoint of the nutrient management plan. Included among the paperwork in the Central Valley are monthly photos, documentation of pond level weekly (for most of the year), and daily documentation when liquid manure is applied to land.

**Operation and Maintenance Plans:** Typically, off-site discharges could have been prevented had equipment been maintained. Making and following a routine list of maintenance schedules for all equipment associated with transportation and handling of manure is critical for the success of an operation.

**Mortality management:** Water Board inspectors will be looking more closely for proper mortality management with the new Specific Risk Management (SRM) Rule for handling of mortality over 30 months of age. Neither burial nor composting of mortality is acceptable in CA (unless there is a declared State of Emergency).

**Application of manure to human edible crops:** Concerns of pathogens from manure to food crops have increased. Inspectors want to know that manure is not applied to human edible crops. If manure is applied, it is important to document that either the manure or the crop is treated prior to entering the food chain.

**Central Valley (Regional Board 5):** Inspections associated with the General Order have identified that not all facilities have adequate backflow prevention (not required until July 1, 2009), pond depth markers are not present (most people may not be able to determine where the depth marker belongs until the waste management plan is completed – due July 1, 2009), and that there is inadequate setback between wellheads and corrals or land application areas. This latter issue becomes quite complicated and the Regional Board is currently evaluating its approach for the future.

**Successful inspections do occur!** Operators who are knowledgeable about their regulatory process, understand where their records are and are able to provide information to inspectors during inspections have successful inspections. Inspectors in the Central Valley have commented that producers who have attended the Dairy Quality Assurance Program educational meetings (held in cooperation with the local Dairy Advisor or UC Cooperative Extension office) are far better prepared for their inspections.

**Cooperative Extension  
University of California  
4437B S Laspina St  
Tulare, CA 93274**

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# **California Dairy Newsletter**

## **January 2009**



**Noelia Silva del Rio, Farm Advisor**

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