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Buying Livestock Drugs in California

Morgan Doran - UCCE Napa, Yolo & Solano, Gabriele Maier - UC Davis & UC ANR, Roselle Busch - UC Davis & UCANR

A livestock producer recently (July 2023) contacted UCCE regarding a problem he was having getting livestock dewormers shipped to a California address from out-of-state online retailers. Three different online retailers told him that they didn't have a license to ship the products to California. This was a headscratcher since the same retailers had previously shipped the same products to California.

The problem triggered an exploration into the regulation of livestock drugs in California, which is helpful to understand the issue encountered with the online retailers.

Below is a brief description of how livestock drugs are regulated in California, with many references to lists published by the California Department of Food and Agriculture (CDFA), and a final suggestion on what to do if you encounter the same denial to sell a dewormer or other livestock drug.

Here are the basics of California Livestock Drug Regulations

When you buy livestock drugs from a store or an online retailer you usually don't know or need to know the regulatory process that permits such transactions, unless you are buying an antimicrobial drug that requires a prescription. Drugs that don't require a prescription are classified as either a "livestock drug" or a "restricted livestock drug." Here are the different livestock drug classifications and their corresponding regulations:

1. **Livestock Drug** – does not have any restrictions to sell or purchase.
2. **Restricted Livestock Drug** – the drug retailer is required to have an approved retailer license issued by CDFA to sell the drug in California.
3. **Restricted Livestock Drug, Rx** – the retailer has the same requirement as with a Restricted Livestock Drug and the buyer must have a veterinary prescription to purchase the drug.

Some restricted livestock drugs are further classified as Type A VFD (Veterinary Feed Directive) or Type A Non-VFD, but most livestock producers don't need to worry about Type A livestock drugs unless they are a confined animal feeding operation (CAFO).

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Here you can download a complete list of CDFA Approved Livestock Drug Registrations and their classifications.

More on the Drug Classifications

Most drugs for livestock fall under the "Livestock Drug" classification and include drugs such as antiseptics, topical medications, pain relievers, vitamins, minerals, nutrients, insecticides, and many more.

Drugs in the "Restricted Livestock Drug" category include hormones, dewormers, coccidiostats, medicated feed additives and a handful of other drugs. Here you can find a list of "Restricted Livestock Drugs." Purchasing "Restricted Livestock Drugs" in California is typically not a problem unless the retailer does not have an approved retailer license with CDFA.

Drugs classified as "Restricted Livestock Drug, Rx" include medically important antimicrobial drugs such as penicillin, oxytetracycline, sulfamethazine and others. Here is a list of "Restricted Livestock Drugs, Rx" that were available without a prescription prior to 2018 in California." These are drugs that require a prescription from your veterinarian to be purchased in the state of California, as mandated by the Livestock: Use of Antimicrobial Drugs law (FAC § 14400 – 14408). Other livestock drugs, including antimicrobials such as tulathromycin or gamithromycin have always required a prescription and will continue to do so in the future. If you do not have a veterinarian's prescription, then you must establish a veterinary-client-patient relationship (VCPR) with a veterinarian so that the veterinarian knows you and your livestock operation and has confidence in your animal care practices and ability to properly use and administer the prescription drugs.

Why Did the Retailers Decline Selling the Dewormer Products

While one of the retailers clearly does not have a retailer license to sell restricted livestock drugs in California, the other two retailers do have an approved retailer license. When we contacted the two retailers who do have an approved retailer license, they both indicated that the purchases were denied due to a website error and suggested that the purchaser call their customer service phone number to order the restricted products. Given this response, we suspect there may be confusion or glitches among some out-of-state online retailers on selling restricted livestock drugs in California. A contributing factor may be recent changes made across the nation regarding medically important antimicrobials. On June 11, 2023, the US Food and Drug Administration implemented GFI # 263 and all medically important antimicrobials in the nation now require a prescription from a veterinarian. The rest of the country essentially now follows what California has already been practicing since 2018. The drugs that were previously "Restricted Livestock Drugs, Rx" are now Federally labeled as Rx drugs and no longer require a special designation for sale to California residents. It did not, however, change the label status of other "Restricted Livestock Drugs" in California.

If you find yourself in a similar situation in which an online retailer declines the sale of a dewormer product or other restricted livestock drug, you can first check if the retailer has an approved retailer license using this CDFA Restricted Livestock Drug Licensee list. If the retailer is listed as having an approved license then you should call their customer service number to order the product and let them know of the website error so that it can be corrected.

You can find all the referenced lists of restricted livestock drugs, licensed retailers and information about the Livestock Drug Program in California at this CDFA website https://www.cdfa.ca.gov/is/ffldrs/LivestockDrug.html.

NEW COOPERATIVE EXTENSION TEAM MEMBERS

Agronomy & Weed Management – Merced, Stanislaus & San Joaquin Counties

My name is Giuliano Galdi, the new Agronomy and Weed Management Advisor for Merced, Stanislaus, and San Joaquin Counties. I'm glad to be back in the Central Valley after graduating from Fresno State in 2017. While my master's degree was on evaluating alfalfa salinity tolerance, I have built up my knowledge on extension in Siskiyou County, where I was an Agronomy and Crops advisor for 4 years. My cycle in Siskiyou County ended, and I started my current position on May 1st, 2023. Some of my most recent projects focused on deficit irrigated cool-season perennial grasses, dryland small grains, winter groundwater recharge, alfalfa varieties, and soil moisture sensing. I look forward to collaborating with my new clientele and stakeholders.

Dairy – Tulare & Kern Counties

Please welcome our new UCCE Dairy Farm Advisor for Tulare and Kern Counties, Rúbia Branco Lopes. Raised on a beef ranch in Brazil, Rúbia nurtured an interest in agriculture from an early age. She holds a B.S. in Agronomy and a M.S. in Animal Science. After completing her M.S., she came to the USA and worked as a visiting scholar at the Veterinary Medicine Teaching and Research Center in Tulare. There, among other projects, she studied the feeding management of close-up rations in California dairies. Recently, she finished her PhD in Animal Biology from UC Davis. Her dissertation investigated the effect of probiotics on growth of dairy calves and assessed the safety of commercial cattle probiotic products. During her academic career she conducted research in ruminant nutrition and antimicrobial stewardship. However, she is ready to expand her knowledge and skillset!

Rubia is based out of the University of California Cooperative Extension Tulare County office and will be assisting dairy producers throughout Tulare and Kern counties. She is looking forward to working with dairy producers, consultants, and allied industry. Rubia hopes to contribute to the dairy industry through developing a research and outreach program that will contribute to the competitiveness and profitability of California dairies. Please do not hesitate to contact Rubia with questions or suggestions of topics to address.

2023 Annual Field Crops, Alfalfa and Forage Field Day

Friday, September 29th, 2023
8:00 AM – 12:00 PM
UC Kearney Agricultural Research and Extension Center, Parlier
9240 S. Riverbend Ave., Parlier, CA 93648

There is **NO FEE** to attend this public meeting, and all are welcome.

See the agenda for speakers, tour details & meeting info: https://ucanr.edu/sites/kingscounty/files/387701.pdf

Pre-registration guarantees your lunch: https://surveys.ucanr.edu/survey.cfm?surveynumber=41316

Questions? Contact Nick Clark at neclark@ucanr.edu or Giuliano Galdi at gcgaldi@ucanr.edu.

Research Roundup: Feeding Calves for Success

Betsy Karle UCCE Dairy Advisor- Sacramento Valley & Northern California

Prevention and treatment of disease in calves remains a challenge on dairies throughout the world. In the past several years, UC researchers have investigated the effect of management practices on dairy calves' health and their economic implications. Our work estimated the short-term cost of bovine respiratory disease (BRD) in preweaned calves to be $42.15 per case (medication + labor + loss of average daily gain) and other researchers have placed the cost of a case of pre-weaned calf diarrhea at $56. Beyond these short-term economic impacts, improved calf health has been linked to greater productivity in future lactations. The information that follows is an overview of preweaned calf feeding related research from recent local studies and thoughts on the direction of future studies.

Colostrum

Recent recommendations for colostrum quality have upped the game and reinforced the importance of this extremely vital step in the calf raising process. The bottom line is that calves should be receiving a gallon of clean, high-quality colostrum (>22% on Brix refractometer) within 12 hours of birth (within 6 hours preferred). Brix levels of calf serum measured at 24 hours of age between 8.9%-9.3% are good and above 9.3% is considered excellent. However, 43% of California producers surveyed weren't measuring the quality of colostrum and less than half reported checking passive transfer of immunity during the first week of life. Although we know how important colostrum is, we still have a lot to learn about its components and the impact of colostrum handling, including freezing and heat treatment, on gut health and the associated health outcomes. Projects to address these questions are currently underway.

Milk

A significant factor in calf health outcomes, especially relative to respiratory illness in calves, is the amount of milk fed daily. Our studies found that increasing milk intake beyond the typical 8 pints daily was valuable. Providing just one additional pint of milk during the first 21 days of life reduced BRD incidence by 92% and cost approximately $1.19[a] per calf to implement on a typical California herd. Over a one-year period, dairies could save up to $8.51 per calf where BRD typically affects 25% of pre-weaned calves. Even herds with BRD incidence as low as 5%, savings on treatment costs were $0.75 per calf. Research from others has yielded similar results and recommendations to feed upwards of two gallons daily are becoming more common. Diagnostic laboratory veterinarians have reported that most scouring calves presented for necropsy are undernourished and have very little to no body fat. It is no longer recommended to withhold milk as a scours treatment strategy. Adequate nutrition is imperative to give calves the energy reserves needed to fight disease.

Buckets vs. Bottles

Research on the effects of feeding milk via nipple or bucket and on the effects of nipple type and flow rate is limited, but an area that warrants further investigation. When considering natural behaviors in calves, our current feeding practices are likely not meeting suckling needs, even if calves are fed from a bottle. Future research is needed to address these questions.

Calf feeding practices are ever evolving as we learn more from both research and on the ground practice. The days of limit feeding calves are behind us and efforts to meet calves' nutritional needs more effectively are proving to have economic benefits as well. Participation in research projects and ideas for additional research questions are always welcome as we strive to continuously improve the future of California dairy herds.

[a] *Calculated as the mean of saleable, non-saleable, and milk replacer per Pennsylvania State's Calf Milk Pasteurization Evaluator spreadsheet*

It is Summer – Let's Adjust Electrolytes in the Diet!

Noelia Silva-del-Rio – UC Davis & UCANR

Cows try to adapt to the high summer temperatures through several physiological mechanisms such as reducing dry matter intake, changing their eating patterns, increasing water intake, and losing heat through respiration and sweat. All these mechanisms improve thermoregulation but increase the need for electrolytes (sodium and potassium) and buffers in the diet.

Dry matter intake. Cows can reduce the production of metabolic heat by decreasing dry matter intake. However, this will also reduce the quantity of electrolytes ingested, unless their concentrations in the diet are adjusted.

- ***Tip:*** Work with your nutritionist to ensure adequate supply of electrolytes during the summer season. Current guidelines recommend that mineral concentration in a lactating cow's diet should be 1.5% of potassium and 0.35 to 0.45% of sodium. It is important to increase the concentration of magnesium, as potassium can inhibit its absorption. Aim for 0.35 to 0.45 % of magnesium concentration in the diet, but keep in mind that if the magnesium sources fed have low solubility, these percentages may need further adjustments.

Eating patterns. Cows tend to consume most of their meals during the cooler periods of the day, such as late evening and early morning. However, this behavior increases the risk of "slug feeding" which can lead to increased ruminal acid production, potentially causing metabolic acidosis.

- ***Tip:*** If possible, aim to feed fresh food in the evenings when cows eat more. Incorporating buffers in the diet will help manage the potential acidosis during the night.

Water intake. Cows drink more water in summer which results in greater urine production and electrolyte losses.

- ***Tip:*** Enhance water consumption by thoroughly cleaning and shading water throughs. Studies have shown benefits of offering cool water (at around 73 F) compared to warm water (around 82 F). Cows offered the cooled water tend to drink less, resulting in less urinary production and electrolyte losses, but they cool better.

Evaporative cooling. Cows can cool down by losing water through lungs (through rapid breathing) and some through the skin (via sweating). However, this process can also lead to electrolyte losses, as sweat is rich in potassium.

- ***Tip:*** Ensure adequate shade, functional fans, and sprinklers to mitigate excessive panting and sweating in cows during the summer. Regularly maintain your cooling equipment, replacing any broken parts and fine-tuning the settings for fans and sprinklers as needed.

Acid-base balance. Breathing fast during the hot hours of the day increases carbon dioxide (CO_2) losses that cause high blood pH (alkalosis). To correct this, the kidney excretes bicarbonate and a cation, often sodium, in the urine. At night, when the cows are cooler and their breathing rate normalizes, their blood pH can drop (acidosis). This could be due to the loss of buffer in urine during the day and increased ruminal acid production at night after slug feeding.

- ***Tip:*** Minerals and buffers are critical to maintain the acid-base balance of the cow during heat stress periods. Also, monitor the effective fiber of the ration and its particle size to ensure proper rumination and salivation, which may help buffer the ration.

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CALIFORNIA DAIRY RESEARCH FOUNDATION
Science for a Sustainable Future

Check Your Mailbox! California Dairy Industry Sustainability Metrics Survey

What. Benchmark data for energy, water & manure nutrient management.

Who. San Joaquin Valley dairies.

Why. To document additional progress with implementation of energy and water saving practices and nitrate management zone mitigation practices.

How. Postcards will be mailed in early September: scan the QR code with your smartphone camera or type the website directly into your web browser.

Time to complete. ~ 10 minutes

Questions. Jennifer Heguy, UCCE Dairy Advisor: (209)525-6800 or jmheguy@ucdavis.edu

Vesicular Stomatitis Virus: An Unwelcome Guest in Livestock's Mouth

Gabriele Maier - UC Davis & UCANR & Roselle Busch – UC Davis & UCANR

On May 18, 2023, Vesicular Stomatitis Virus was detected in a horse premises in San Diego County. Since then, several more counties in the southern half of California have reported positive cases of vesicular stomatitis, mainly in horses. Two cattle premises and a rhino in a wildlife park were also confirmed positive for the virus. A current map of affected counties with quarantined premises can be accessed through the California Department of Food and Agriculture (CDFA) at this link. The CDFA also offers a number of informational materials related to Vesicular Stomatitis Virus on this dedicated webpage.

What is Vesicular Stomatitis Virus (VSV)? Vesicular Stomatitis (VS) is a contagious viral disease that often affects horses, but can also lead to clinical signs in cattle, swine, wild ruminants, small ruminants, llamas and alpacas, causing painful sores and blisters in their mouths and on their hooves. Though not typically fatal, VS can have significant economic and welfare impacts on affected animals. In rare cases, people can also become infected and develop flu-like symptoms. Understanding VS during the current outbreak is crucial for producers, veterinarians, and anyone involved in the livestock industry.

Transmission and Spread. VSV primarily spreads through direct contact with infected animals. The virus can also be transmitted through contaminated equipment, feed, or water sources. Certain insects, such as midges, sandflies, and blackflies, can carry and spread the virus from one animal to another. However, there are still some uncertainties about how the virus spreads between animals and between premises.

Clinical Signs and Symptoms. Once animals are infected with VSV, it takes about 2 to 8 days for the first clinical signs to appear. Common symptoms include the formation of painful blisters and sores in the mouth, on the tongue, and around the lips which causes excessive drooling and reluctance to eat. The virus may also cause similar painful lesions on the hooves and teats. In severe cases, the animals may experience lameness due to hoof lesions further contributing to decreased feed and water intake. Severely affected animals may be

dehydrated with metabolic and acid-base derangements (especially ruminants as they produce a large amount of saliva which is critical for buffering the rumen). Animals may lose condition due to the painful lesions.

Impact on Cattle and Livestock Industry. VSV is classified as a "reportable disease," which means it must be reported to the local authorities upon detection. The reason for this classification is the potential for VSV to mimic the signs of other more dangerous diseases, such as foot-and-mouth disease (FMD). Once VSV is suspected, a quarantine will be issued so animals may not leave the premises until cases have resolved. Timely reporting and temporary movement restrictions for affected premises is the best way to reduce the spread of VS. Call your local veterinarian or your CDFA Animal Health Branch if you suspect a case of VS in your livestock. There is no “punishment” for having the disease in your livestock, other than being under temporary quarantine. Affected animals won’t be eliminated as is the case for other livestock diseases such as bovine tuberculosis or Newcastle disease in poultry. If everyone stays vigilant and reports cases of VS, spread of the disease will be minimized.

Plan ahead for interstate livestock movements. When shipping cattle or other livestock interstate, there may now be additional restrictions for the certificate of veterinary inspection required by the importing state. Make sure you plan ahead and discuss with your veterinarian when to schedule visits for health certificates for interstate movement. The same may be true when taking animals to a livestock fair.

Prevention and Control. Preventing VSV outbreaks requires a combination of biosecurity measures and vigilant monitoring. Livestock owners should:

1. Implement strict biosecurity protocols to limit contact between healthy and potentially infected animals.
2. Regularly inspect animals for any signs of the disease, such as blisters, sores, or lameness. Wear gloves when examining mouths to avoid exposure to the virus.
3. Isolate and quarantine suspected cases immediately to prevent further spread.
4. Practice proper sanitation and hygiene when handling livestock and equipment. The virus is susceptible to disinfection with various products including diluted bleach, iodine, quaternary ammonium, and phenolic compounds.
5. Minimize exposure to potential insect vectors by using repellents or insecticides. Check the VetPestX website for information on available products to kill or repel the most important vectors.

Unfortunately, there is no vaccine available for VSV, so biosecurity, hygiene, and vector control are the best ways to prevent the disease.

It's important to note that there is no specific treatment for VSV, and supportive care is the mainstay for affected animals. Veterinarians may recommend pain relief, hydration support, and providing soft and easily consumable feed.