

Antimicrobial Use in CA Livestock



October 2017

Antimicrobial Use and Stewardship

California Department of Food and Agriculture

<https://www.cdfa.ca.gov/ahfss/AUS/>



Relevant Terms



Medically Important Antimicrobial Drug (MIAD)

- Antibiotics identified by the FDA as **significant to human health**

Guidance For Industry (GFI)

- Federal Documents published by the FDA Center for Veterinary Medicine (GFI 209, 213, 152 specifically address antibiotic use in livestock feed and water)

SB 27

- Senate Bill 27(Hill) was signed into California law ([FAC, Division 7, Chapter 4.5, Sections 14400-14408](#)) in 2015; restrictions effective **Jan 1st, 2018**

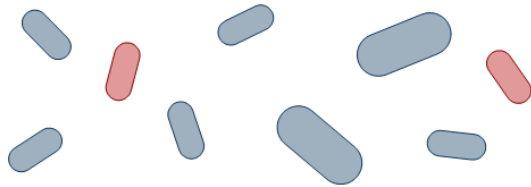
Livestock

- “All animals and poultry, including aquatic and amphibian species, that are raised, kept, or used for profit. Livestock does not include bees or those species that are usually kept as pets, such as dogs, cats, and pet birds.” - *excerpt from Food and Agriculture Code §14400*

Antimicrobial Resistance

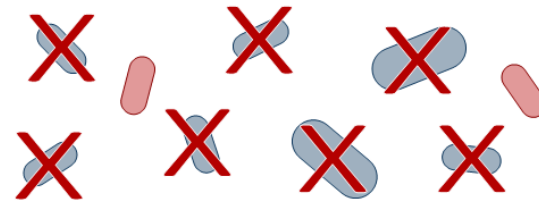
1.

Lots of germs.
A few are drug resistant.



2.

Antibiotics kill bacteria
causing the illness, as well as
good bacteria protecting the
body from infection.



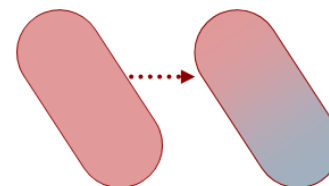
3.

The drug-resistant
bacteria are now allowed
to grow and take over.



4.

Some bacteria give their drug-
resistance to other bacteria,
causing more problems.



Review of National Regulations



Veterinary Feed Directive (VFD) for MIADs in Livestock Feed

- A written statement issued by a licensed veterinarian (in the State where it is used) for the use of VFD drugs or combination VFD drugs in or on feed.

Limitations on Use

- Must be used according to the label (**no extra-label use**)
- Only for treatment, control or prevention of disease (**not for growth promotion**)

Requirements

- Valid **Veterinarian-Client-Patient Relationship (VCPR)**
- New VFD if feeding continues beyond expiration of VFD document
- All parties, including the client and the veterinarian, must maintain a copy of the VFD for a minimum of **2 years**

Medications in Water → Require Prescription (not a VFD)

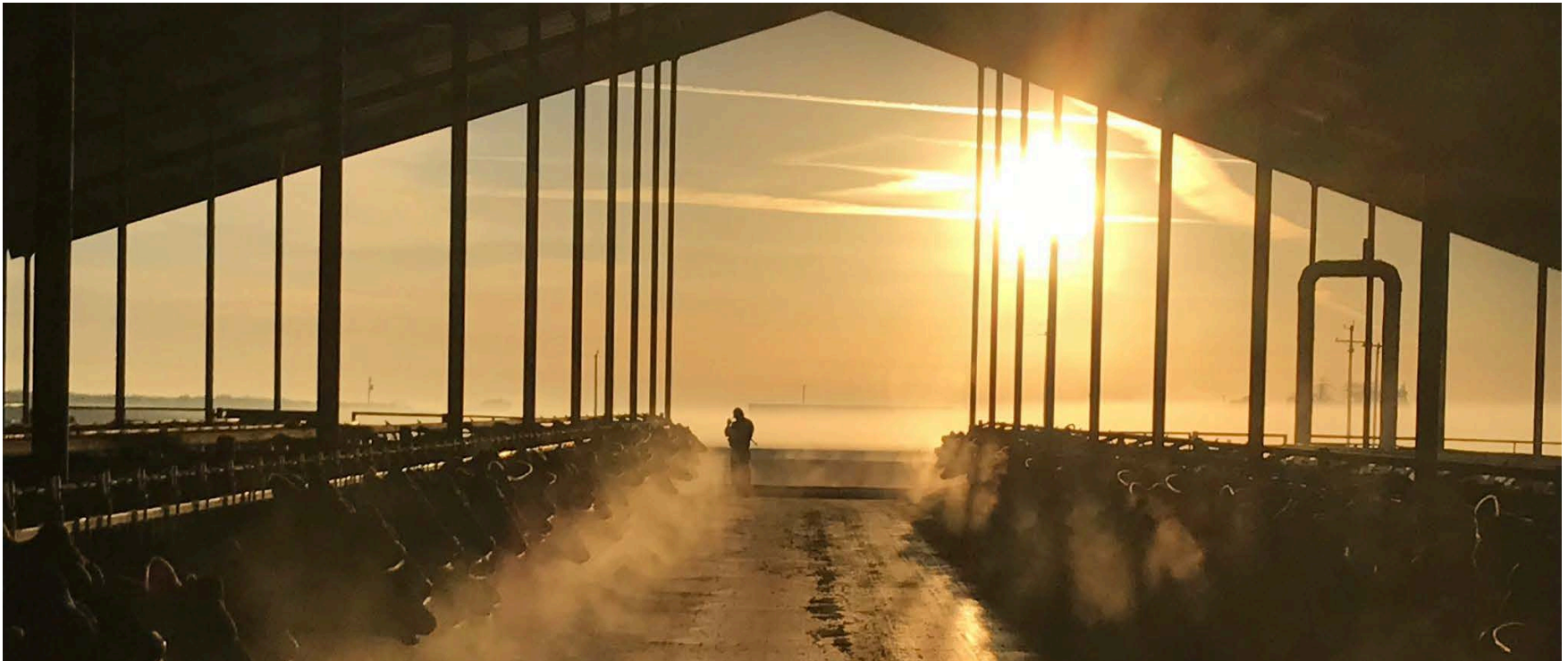
For links related to the Federal Mandate and Veterinary Feed Directives:
<https://www.cdfa.ca.gov/ahfss/AUS/AboutAUS.html>

Livestock: Use of Antimicrobial Drugs



CA Law for all MIADs in Livestock

- Effective **Jan. 1st, 2018**, over-the-counter injectable and all other forms of MIADs must be given with a prescription or VFD ordered by a California licensed veterinarian.



Livestock: Use of Antimicrobial Drugs



Limitations of Use

- Permitted when deemed necessary by the professional judgement of a California licensed veterinarian for any of the following
 - *Necessary to **treat** a disease or infection*
 - *Necessary to **control** the spread of a disease or infection*
 - *Necessary in relation to surgery or a medical procedure*
- **Not for growth promotion** or improved feed efficiency
- Necessary for **prophylaxis** to address an **elevated risk** of contraction of a particular disease
 - Not administered in a “**Regular Pattern**”



Requirements

- Valid **VCPR**
- Prescription or VFD

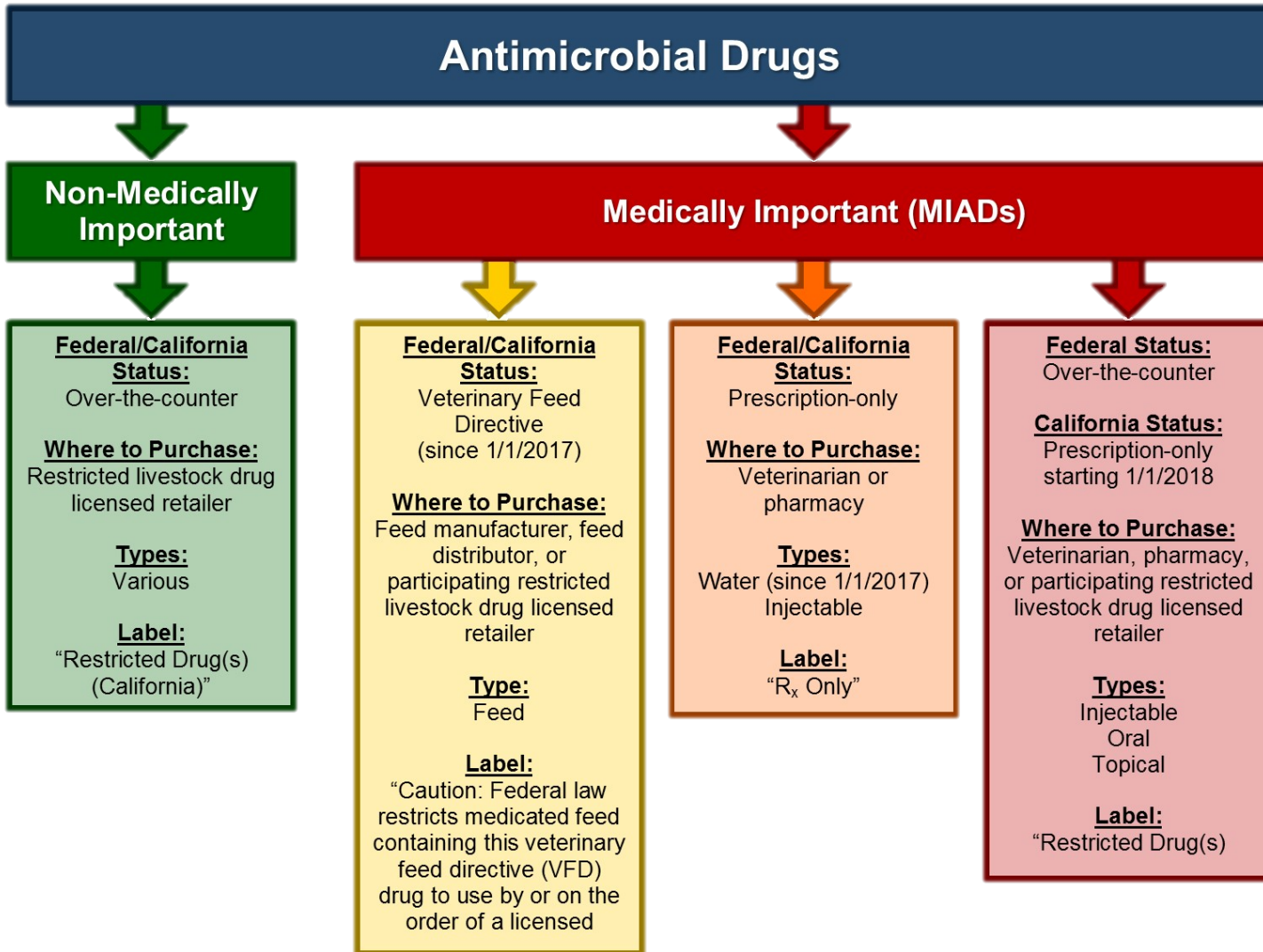


What's the difference?



Source		
Drugs	Medically Important Antibiotics	Same
Formulations	Medicated feed and water	All (injectable, intra-mammary, feed, water, etc)
New Systems	Feed: VFD w/VCPR Water: Rx w/VCPR	Rx or VFD w/VCPR
Indications	Treatment, control and prevention	Same
Limitations	No use for growth promotion or feed efficiency	Same, plus "regular pattern" preventative use
Effective Date	Jan 1, 2017	Jan 1, 2018

Need to use a livestock drug?



Medically Important Antibiotic Drugs



ANTIBIOTIC LIVESTOCK DRUGS IN CALIFORNIA		
Not Medically Important No prescription required	Medically Important Prescription or VFD required after January 1, 2018	
Aminocoumarins Novobiocin (<i>only available in combination with a MIAD in California</i>) Glycolipids Bambermycins (<i>Gainpro 10, Flavomycin</i>) Ionophores Laidlomycin*** Lasalocid (<i>Avatec, Bovatec</i>) Monensin (<i>Rumensin, Coban</i>) Narasin (<i>Maxiban, Monteban</i>) Salinomycin (<i>Sacox, Bio-cox</i>) Pleuromutilins Tiamulin (<i>Denagard, Triamulox</i>) Polypeptides Bacitracin (<i>Pennitracin, BMD</i>) Quinoxalines Carbadox (<i>Mecadox</i>)	Aminoglycosides Dihydrostreptomycin*** Gentamicin** (<i>Garacin, Gen-Gard</i>) Hygromycin B** (<i>Hygromix</i>) Neomycin** (<i>Neo-Sol 50, Neovet</i>) Spectinomycin* (<i>L-S50, Spectlinx-50</i>) Amphenicols Florfenicol*** (<i>Nuflor</i>) Cephalosporins Ceftiofur*** (<i>Naxcel, Excede, Excenel</i>) Cephapirin (<i>Today, Tomorrow</i>) Diaminopyrimidines Ormetoprim (<i>Rofenaid</i>) Fluoroquinolones Danofloxacin*** Enrofloxacin*** (<i>Baytril</i>) Lincosamides Lincomycin** (<i>Lincosol, Lincomix</i>) Pirlimycin*** Polymyxins Polymyxin B (<i>Terramycin</i>)	Macrolides Erythromycin** (<i>Gallimycin</i>) Gamithromycin*** (<i>Zactran</i>) Tildipirosin*** Tilmicosin (<i>Pulmotil AC</i>) Tulathromycin*** (<i>Draxxin</i>) Tylosin** (<i>Tylan, Tylovet, Tyloved</i>) Tyvalosin (<i>Aivosin</i>) Penicillins Amoxicillin*** Ampicillin*** (<i>Polyflex</i>) Cloxacillin*** Penicillin** (<i>Pennchlor, R-Pen, Bactracillin</i>) Streptogramins Virginiamycin** (<i>V-max, Stafac</i>) Sulfonamides (Sulfas) Sulfadimethoxine** (<i>Salfadived, Albon, Sulfamed</i>) Sulfamerazine** (<i>Poultrysulfa</i>) Sulfamethazine** (<i>Poultrysulfa, Aureo</i>) Sulfaquinoxaline** (<i>Sul-Q-Nox, Poultrysulfa</i>) Tetracyclines Chlortetracycline** (<i>ChlorMax, Pennchlor</i>) Oxytetracycline** (<i>LA-200, Duramycin, Bio-Mycin</i>) Tetracycline** (<i>Duramycin, Tetramed</i>)
* Feed/water drugs must follow FDA VFD and water prescription requirement as of 1/1/2017. ** May be used in feed *** Federally labeled as prescription-only (regulatory restrictions unchanged by SB 27)		

To download this drug list go to:

<https://www.cdfa.ca.gov/ahfss/AUS/Outreach.html>

Veterinary Oversight



Veterinarian-Client-Patient Relationship (VCPR)

- ✓ Veterinarian assumed responsibility
 - ✓ Communicated with client
- ✓ Client authorized
- ✓ Knowledge of animal(s)
 - ✓ Examination of patient **OR**
 - ✓ Medically appropriate and timely visits



As defined by the California Veterinary Medical Board



For links related to VCPR see:

<https://www.cdfa.ca.gov/ahfss/AUS/AnimalHealth.html>

Veterinary Shortage



Timely Access to Treatment

- Identify 'rural' areas with a limited access to **veterinary care**
- Consult with livestock producers and licensed veterinarians

Working on solutions in the following areas:

- **Feed Stores**
- Treatment protocols
 - Within an existing valid VCPR
- Supplemental **education** for all veterinarians
 - Herd Health (Preventative Medicine)
 - Responsible antimicrobial use



Subscribe to the AUS Listserv for updates by email:
<https://www.cdffa.ca.gov/subscriptions/#Animal>



Complexities re: Veterinary Access



Regions with urban populations

- **Backyard** or small hobby farms
- Livestock kept as **pets**
- **Youth** agriculture groups



Not rural, but limited access to veterinary care

- Veterinary **workshops**
- **Database** of veterinarians
 - Links to similar resources
- Veterinary **consultants**



Changes in Antimicrobial Sales



CDFA Objectives

- Targeted **education and outreach** to licensed retailers ensuring compliance in 2018
- Collection of drug sales logs to provide **baseline compliance data**
- Facilitate **timely access** to antibiotics necessary to care for livestock
 - federally labelled as over the counter (OTC) prescribed by CA veterinarians within a valid VCPR



Restricted Livestock Drug Retailers



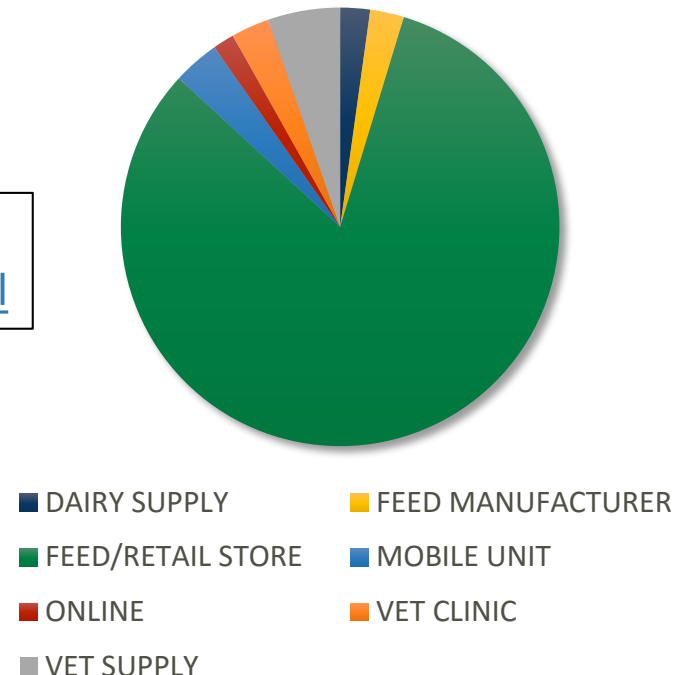
Requirements

- Additional procedures may be applied in order to sell MIADs beyond what is currently required of a CDFA Restricted Livestock Drug Retailer licensee
- Stakeholders will be informed as soon as regulations are finalized

CDFA currently has 319 licensed Restricted Livestock Drug Retailers located in 49 counties

For information related to license applications see:
<https://www.cdfa.ca.gov/is/ffldrs/LivestockDrug.html>

Current Licensed Retailer
by Type



Antimicrobial Use & Stewardship



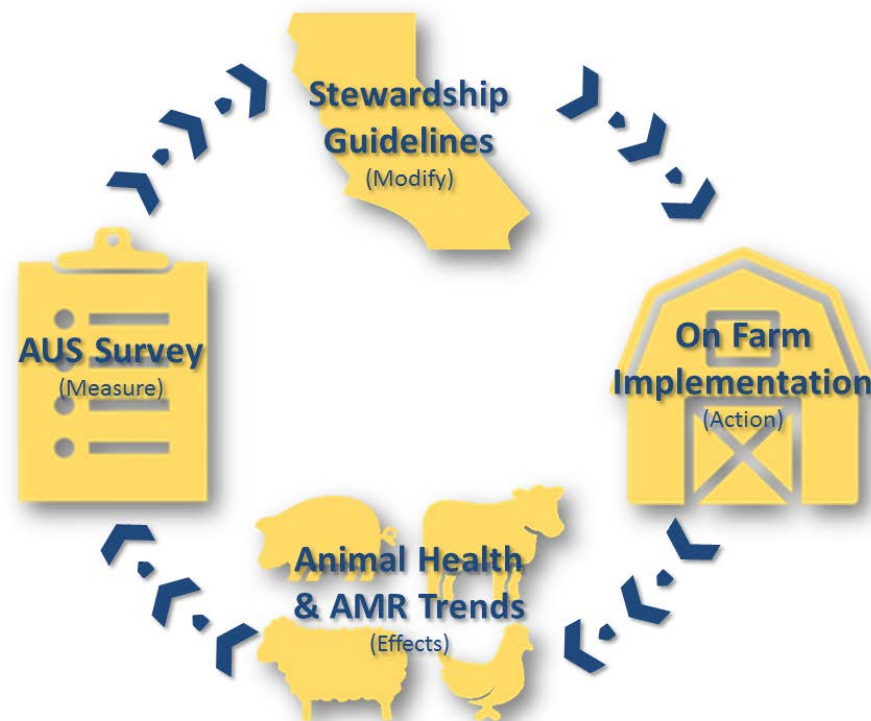
Stewardship

- **Reduce the need for antimicrobial drugs** with infectious disease prevention
- Use antimicrobials appropriately to **optimize livestock health and minimize selection for antimicrobial resistance.**

Surveillance

- Gather information on
 - **Sales & use** of MIADs
 - **Livestock management practices** (including animal health outcomes)
 - Trends in antimicrobial **resistance**

Confidentiality protected by law



Antimicrobial Stewardship



Objectives

- **Judicious Antimicrobial Use** Principles
- Herd Health Guidelines and Best Management Practices
 - Existing **Quality Assurance** programs
- Antibiotic Alternatives
 - Scientifically proven to be **effective and practical**



AUS Information Gathering



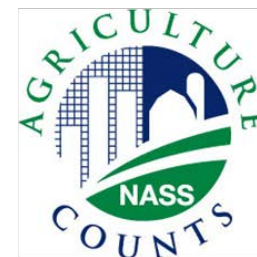
Current methods to collect information

- **Voluntary, anonymous** surveys
 - Mail-out
 - Online
- Leverage Federal efforts
- Contracted research studies

Although voluntary, participation is crucial!

- Information direct from the source
(**no assumptions** made for the industry)
- Helps the Antimicrobial Use & Stewardship program provide **useful resources**
- Deliver tools for California livestock producers to take an **active and progressive role** in the fight **against antimicrobial resistance**

<https://www.cdffa.ca.gov/ahfss/AUS/CAHMS.html>



UC DAVIS
VETERINARY MEDICINE

Three C's of Antibiotic Use



Three C's of Antibiotic Use in California

Connect – Conserve – Collaborate

Connect. Establish or maintain a working relationship with your local livestock veterinarian.

Conserve. Keep medically important antibiotics effective through diligent animal stewardship and judicious use of these valuable tools.

Collaborate. You deserve a program to address your needs. By participating in our voluntary surveys and studies, we can help you address use, resistance and husbandry practices.

Additional Resources



Antimicrobial Use and Stewardship Contact Information



CDFA_AUS@CDFA.CA.GOV



<https://www.cdfa.ca.gov/ahfss/AUS/>



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