

## FARAD AND CHEMICAL FOOD SAFETY

Residues of drugs, pesticides and other chemical substances can reduce the safety of animal-derived foods, adversely affecting the health and confidence of consumers. The **Food Animal Residue Avoidance Databank (FARAD)** is a program aimed at providing veterinarians and livestock producers with knowledge and tools that can help in preventing or reducing the presence of chemical residues in food, balancing animal health, food safety and regulatory controls.

FARAD is a unique national program staffed by highly-trained veterinary pharmacologists, toxicologists and food animal specialists at five Universities: **University of California-Davis, University of Florida, North Carolina State University, Virginia-Maryland, and Kansas State University Olathe**. Our **Regional Access Call Centers** mean that the program is well-suited to address issues unique to livestock in different regions and ensures continuity of service in the event of natural or man-made disasters that might otherwise impact a centralized location.

## EXTRA-LABEL DRUG USE (ELDU)

Owing to the limited availability of approved drugs for treating diseases in food animals, veterinarians must often use drugs that have not been specifically approved for a particular indication in a given species. Such uses, classified as **extra-label drug use (ELDU)**, are allowable as specified in the **Animal Medicinal Drug Use Clarification Act (AMDUCA)**. However, to comply with AMDUCA, veterinarians must **"...establish a substantially extended withdrawal period prior to marketing of milk, meat, eggs, or other edible products..."** and the extended withdrawal period must be **"...supported by appropriate scientific information."** Most veterinarians lack the time, expertise, and resources to calculate a science-based extended withdrawal period and, therefore, seek expert assistance from FARAD.

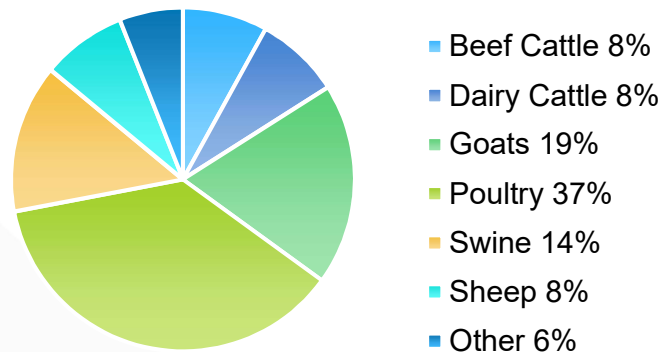
## HOW FARAD OPERATES

FARAD personnel gather and analyze information on drugs and chemicals in food-producing animals and other agricultural species, amassed from numerous resources, including scientific publications, pharmaceutical company reports, information from regulatory agencies, and other public and proprietary sources. This information and relevant US drug approvals and regulatory tolerances in edible animal tissues have been organized into pharmacokinetic databases that all members of the FARAD team can access in real-time. With over 43,000 entries from over 8,000 sources, these databases are the most comprehensive collection of residue data available globally. FARAD responders use this unique data source in conjunction with state-of-the-art pharmacokinetic modeling approaches (proprietary software and algorithms, statistical analyses, validation strategies, etc.) to conduct real-time calculations of drug withdrawal intervals. Similar approaches are used to develop appropriate guidelines for mitigating accidental exposures to harmful agricultural, industrial or radiological agents.

## FARAD'S IMPACT

FARAD handles thousands of calls each year, with an estimated impact on more than 10 million animals.

**Annual Distribution of Calls by Species**



## LIMITATIONS TO WITHDRAWAL ADVICE

FARAD is not able to provide withdrawal intervals for certain scenarios:

### ➤ **ELDU prohibited by FDA**

Some exceptions for accidental exposures on a case-by-case basis.

### ➤ **Carcinogenic drugs or chemicals**

Due to the high risk for human health.

### ➤ **Chemotherapeutic drugs**

Due to the high risk for human health.

### ➤ **Compounded drugs**

Due to lack of quality control assurance and unknown alterations in pharmacokinetics.

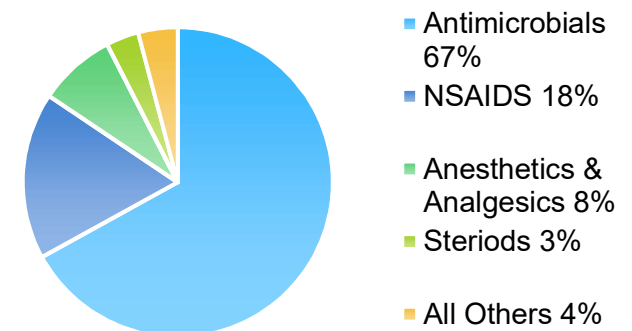
### ➤ **Requests from outside the US**

Because each country's recommendations are formulated based on their government's extra-label drug use requirements, legislation, and residue tolerance levels, and therefore recommendations provided by US FARAD are not valid in other countries. Canadian veterinarians can contact Canadian FARAD ([cgfarad.usask.ca](http://cgfarad.usask.ca))

### ➤ **Requests from producers**

ELDU must be prescribed by a veterinarian and in the context of a valid veterinarian-client-patient relationship. Producers should ask their veterinarian to contact FARAD for withdrawal interval advice.

**Annual Distribution of Calls by Drug Class**



## EXPERT-MEDIATED CONSULTATIONS

FARAD provides scientifically-derived responses covering a wide range of drugs and chemicals. Questions concerning drug withdrawal intervals or accidental exposure to chemicals may be submitted via our toll-free hotline or website.

## FARAD RESOURCES

FARAD maintains an informative, accurate, and up-to-date website ([www.farad.org](http://www.farad.org)) providing ready access to a library of informational documents and interactive databases.

- **VetGRAM:** The **V**eterinarian's **G**uide to **R**esidue **A**voidance **M**anagement is a searchable database for approved uses, restrictions, and required withdrawal times for drugs approved in food animal species.
- **WDI Lookup:** A searchable database of withdrawal interval recommendations for extra-label use, published in FARAD digests.
- **Withdrawal Date Calculator (WDC):** A tool within VetGRAM to calculate a future withdrawal date and time for FDA-approved drug use in food animals.
- **Bibliographic Database for Citations:** A searchable database of publications with time versus concentration data in food animals.
- **Residue Screening Test Database:** A searchable list of commercially available drug residue screening tests for various species, drug residues and matrices.
- **PBPK Physiological Parameters:** A searchable database of physiological parameters for food animal PBPK modeling.

## PUBLICATIONS & PRESENTATIONS

FARAD scientists publish in peer-reviewed articles in scientific journals, including **FARAD digests** in the Journal of the American Veterinary Medical Association, as well as books detailing unique aspects of FARAD's kinetic databases. FARAD members make regular presentations at scientific meetings and are available to meet with interested groups.

# Access our Veterinarian's Guide to Residue Avoidance Management (VetGRAM)



Scan to search  
VetGRAM now



**Internet:**  
Web Submission at  
**[www.farad.org](http://www.farad.org)**

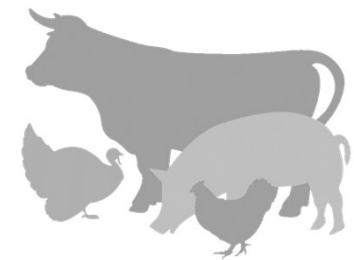
**Telephone:**  
**1-888-873-2723**



# FARAD

## Food Animal Residue Avoidance Databank

a component of the  
**Food Animal Residue  
Avoidance & Depletion  
Program**



**A national consortium to  
promote Chemical Food Safety**

**University of California-Davis CVM**  
**University of Florida CVM**  
**North Carolina State University CVM**  
**Virginia-Maryland CVM**  
**Kansas State University Olathe**

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