

CgFARAD™ Year in Review

CgFARAD™ provides veterinarians with unbiased expertise on the withdrawal interval required before animals or animal products can enter the food chain. A CgFARAD™ recommendation must be obtained when drugs are used extra-label for all processed poultry and eggs. All other CgFARAD™ requests are submitted on a voluntary basis by veterinarians on behalf of their producer clients or feed companies.

CgFARAD™ responded to 2,404 withdrawal requests in 2017-2018 up from 2,257 in 2016-2017.

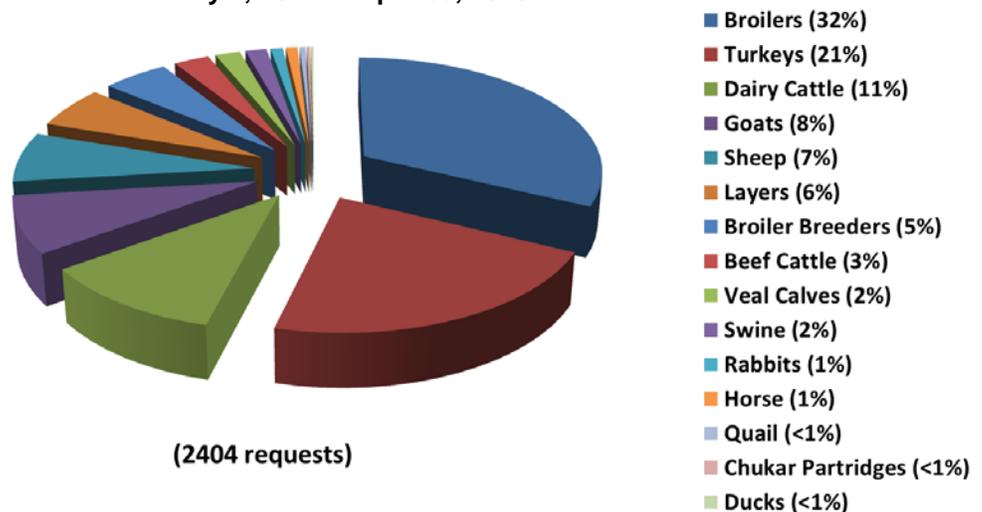
CgFARAD™ personnel also assist:

- veterinarians in determining safe withdrawal intervals when animals are accidentally exposed to pesticides, heavy metals or other chemicals;
- feed mills and processors when accidental contamination of feeds occur; and,
- regulatory agencies seeking clinical pharmacological expertise regarding drug residues.

In our spring newsletter, we have typically provided graphs illustrating requests by province and by commodity. With the launch of the new CgFARAD™ database in 2017, the data can now be summarized to illustrate requests by pharmaceutical product and by disease for each commodity group. Several graphs depicting this summary data are shown on the following pages. This is valuable information as it illustrates the health challenges with which veterinarians are dealing and highlights where there may be limited registered label options. The CgFARAD™ pharmacologists also use this knowledge to identify where drug residue research and depletion studies are needed.

**CgFARAD™ Requests by Commodity Group
May 1, 2017 to April 30, 2018**

As the CgFARAD™ team continues to work with and refine the database, we anticipate additional value will be realized for the resultant reports.

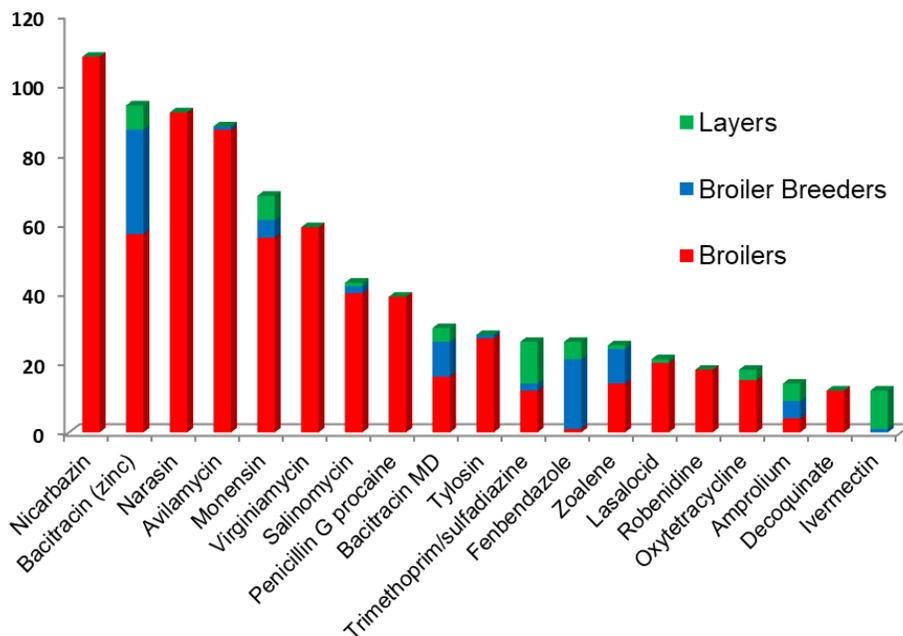


In chickens, coccidiosis and necrotic enteritis continue to be the predominant diseases that require extra-label drug use. Many of the medications being used are individually approved for these uses in chickens, but are often administered in combinations (where the combinations are not approved) or the dosage regimen is different that the label (typically increased doses and/or increased duration of therapy).

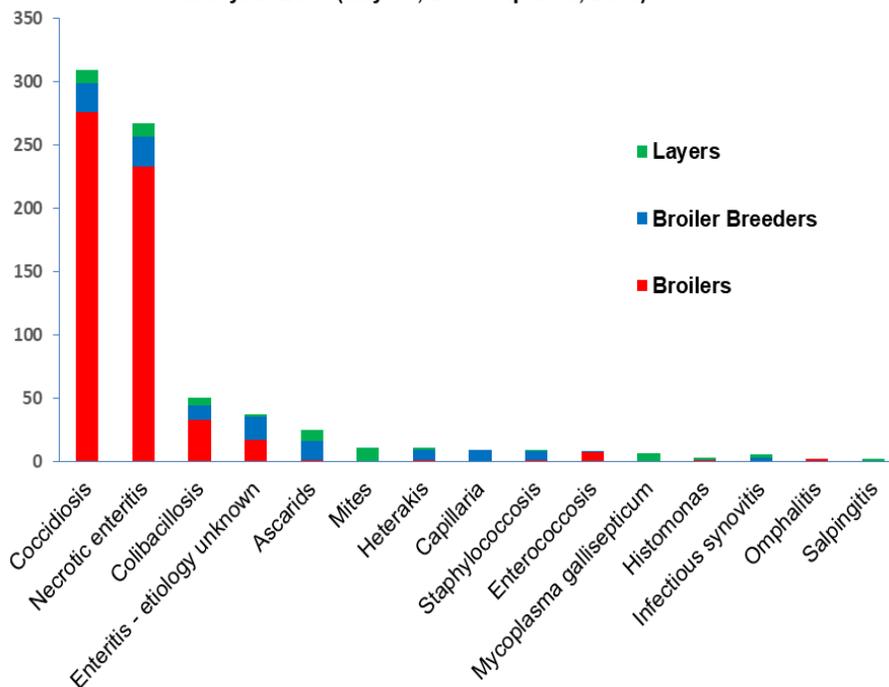
Colibacillosis and enteritis tend to occur in outbreak situations with high morbidity and mortality and antimicrobial resistance limits treatment choices in some cases.

Mites are problematic both in commercial birds and backyard flocks, as pesticides cannot be used in an extra-label manner and carbaryl (dusting powder) has been removed from the market. Ivermectin and eprinomectin are drugs that can be used in an ELDU manner for the safe and effective treatment of mites. But these drugs are persistent and easily detectable; the CgFARAD™ lacks good depletion data for making adequate withdrawal recommendations. Residue depletion studies are needed for these drugs in broilers and layers.

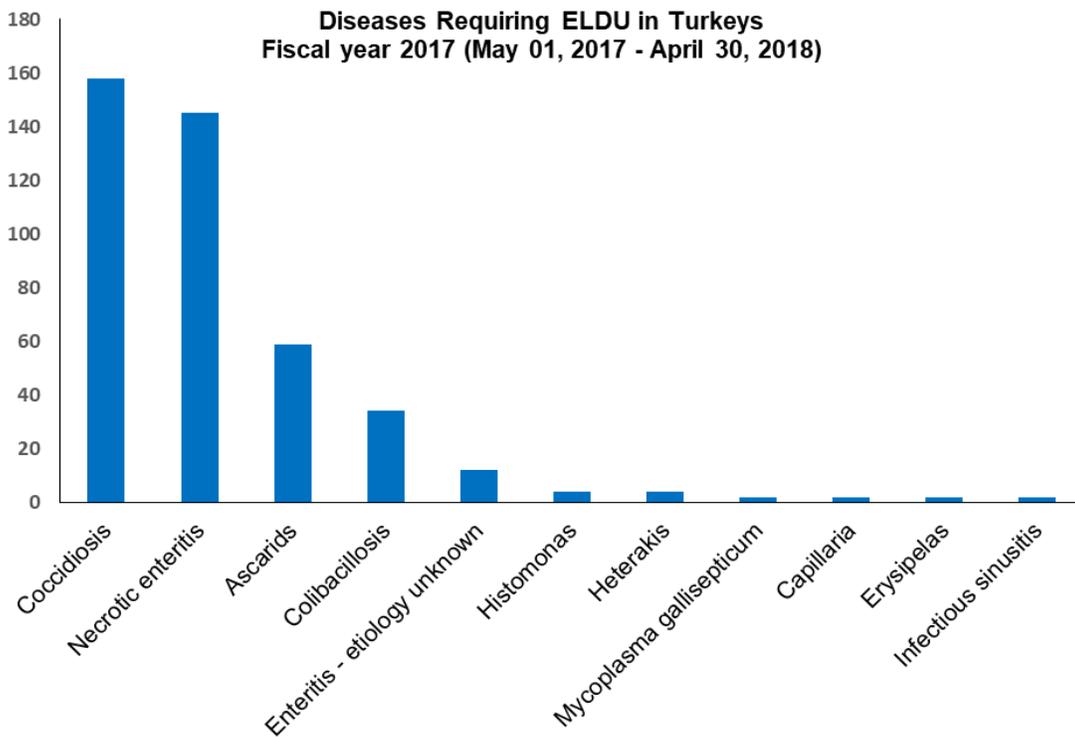
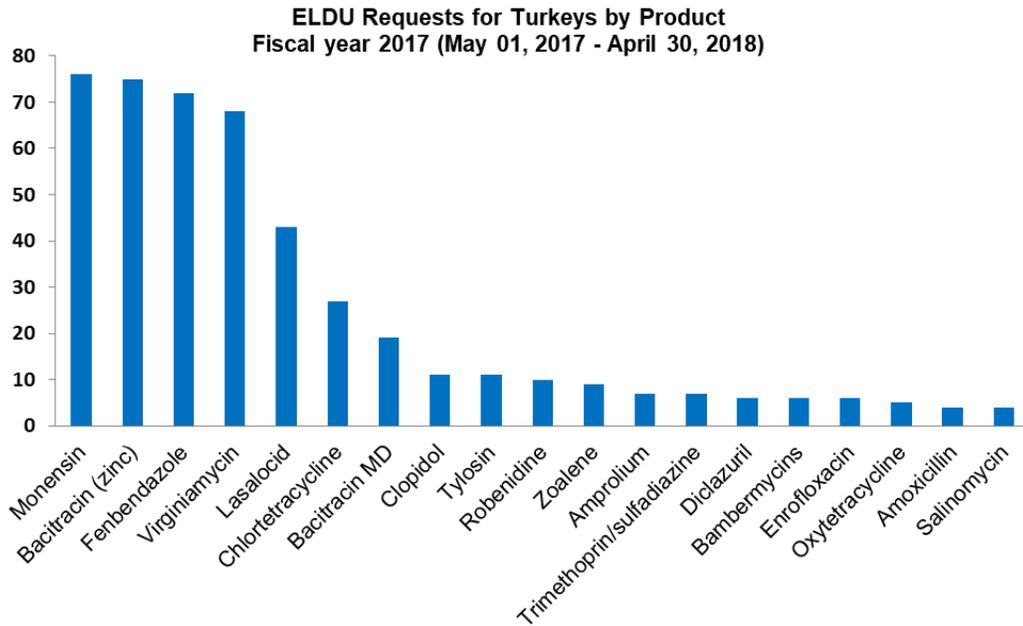
ELDU Requests for Chickens by Product
Fiscal year 2017 (May 01, 2017 - April 30, 2018)



Diseases Requiring ELDU in Chickens
Fiscal year 2017 (May 01, 2017 - April 30, 2018)

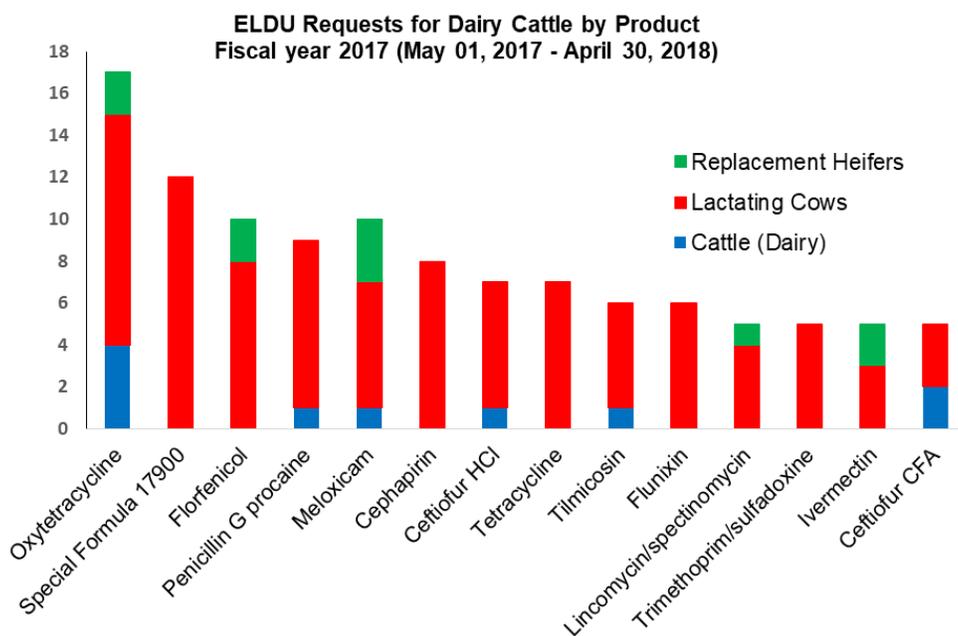
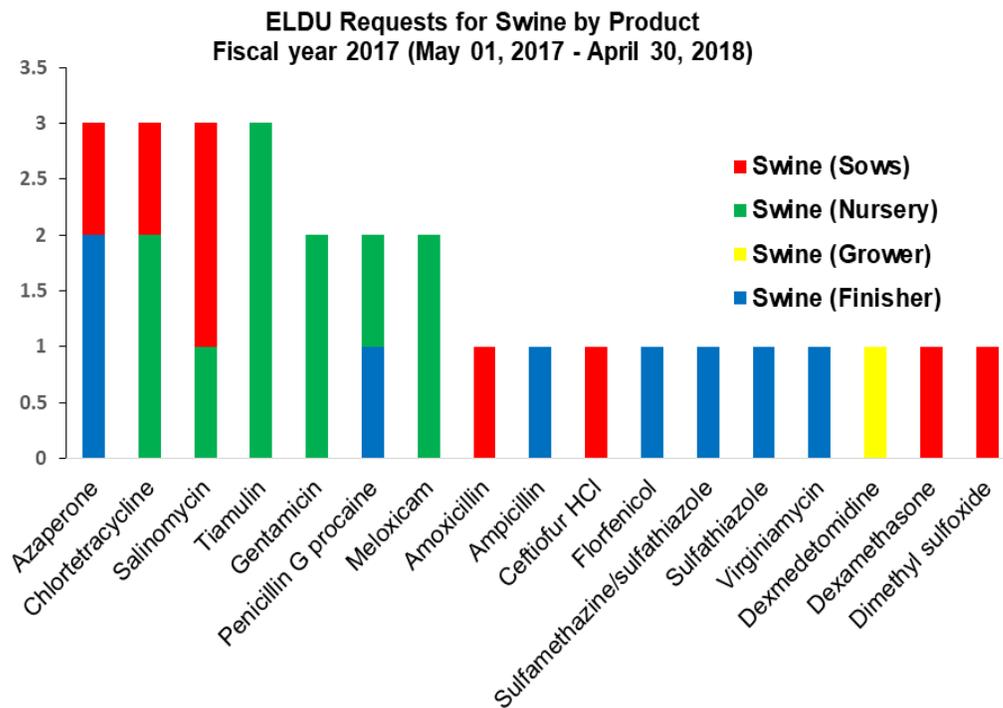


As for chickens, control of coccidiosis and necrotic enteritis are the predominant reasons for ELDU in turkeys. The next most significant concern is the control of roundworms with fenbendazole. The CgFARAD™ has recently released new withdrawal recommendations based on research funded by the Ontario Ministry of Agriculture, Food and Rural Affairs and Turkey Farmers of Ontario.



The request caseload for swine is relatively low and the reasons for ELDU were very variable. In the new database, launched in July 2017, we have separated swine requests by market class. Therefore, requests in blue are from the old database, while red, green and yellow were submitted to the new database.

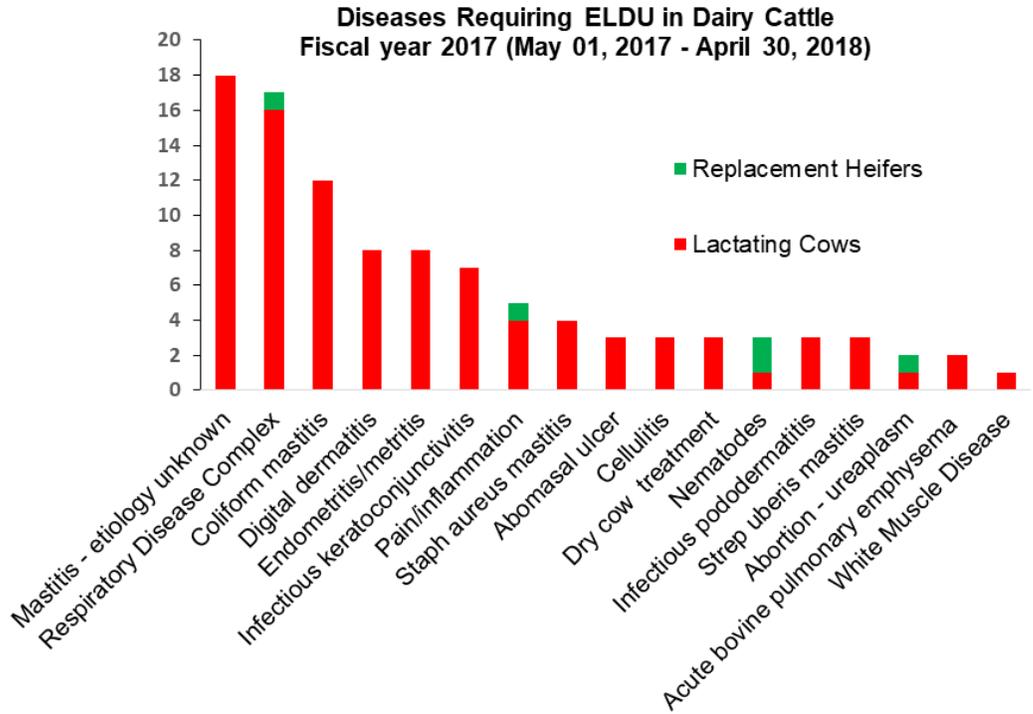
Treatment of respiratory disease and enteritis are frequent reasons for ELDU, but the requests for meloxicam, dexmedetomidine, dexamethasone and DMSO reflect the lack of approved drugs for treatment of pain and inflammation in swine.



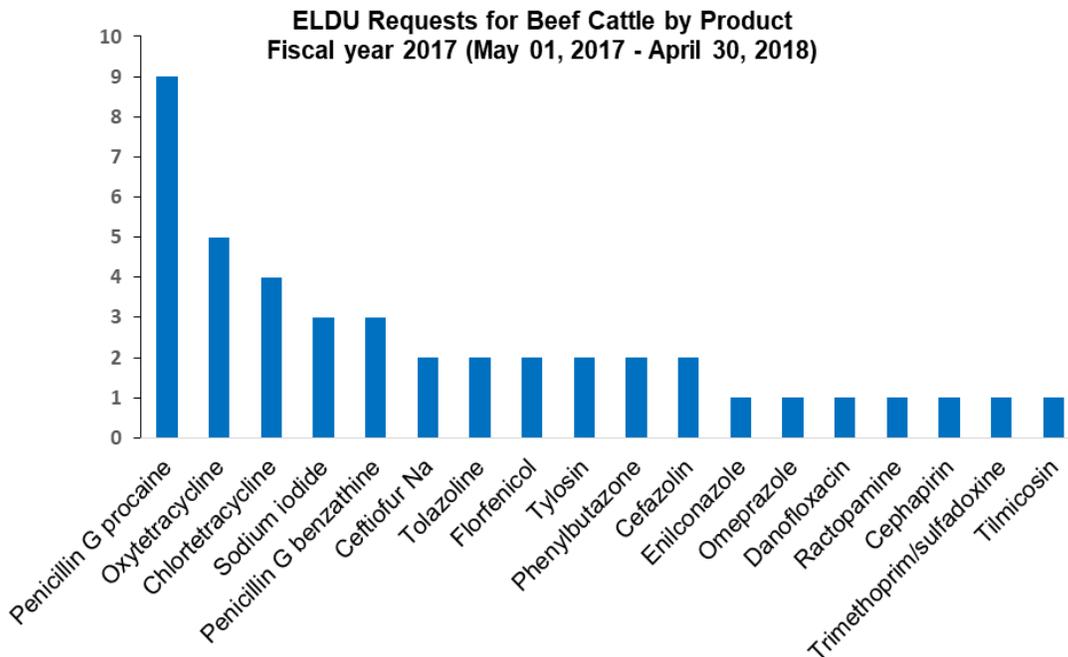
With the new database launch, dairy cattle were subdivided into lactating dairy cows (red) and replacement heifers (green). Data in blue reflects requests made prior to the new database in July.

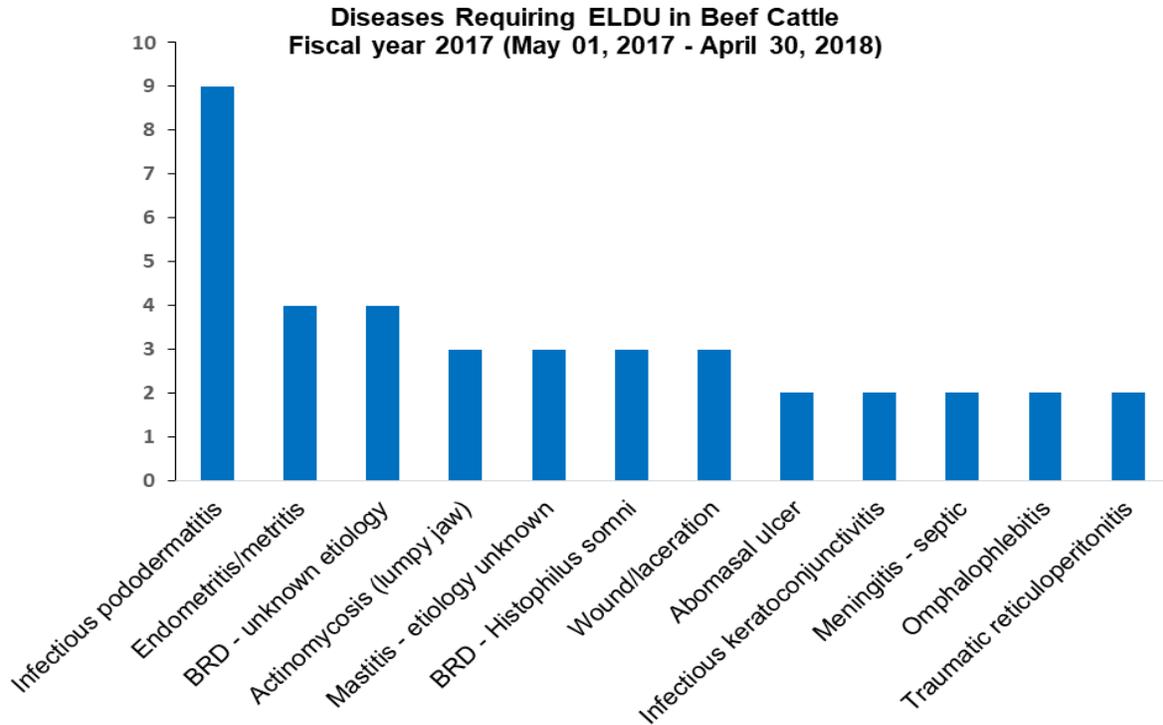
Data on specific diseases is now being captured by the new database, so this information reflects requests submitted since last July.

Mastitis and Respiratory Disease Complex are the most frequent reasons for ELDU in dairy cattle. Digital dermatitis is also a problem requiring ELDU, and CgFARAD™ has collaborated on a study providing new data on the potential for violative residues with ELDU of topical tetracyclines.

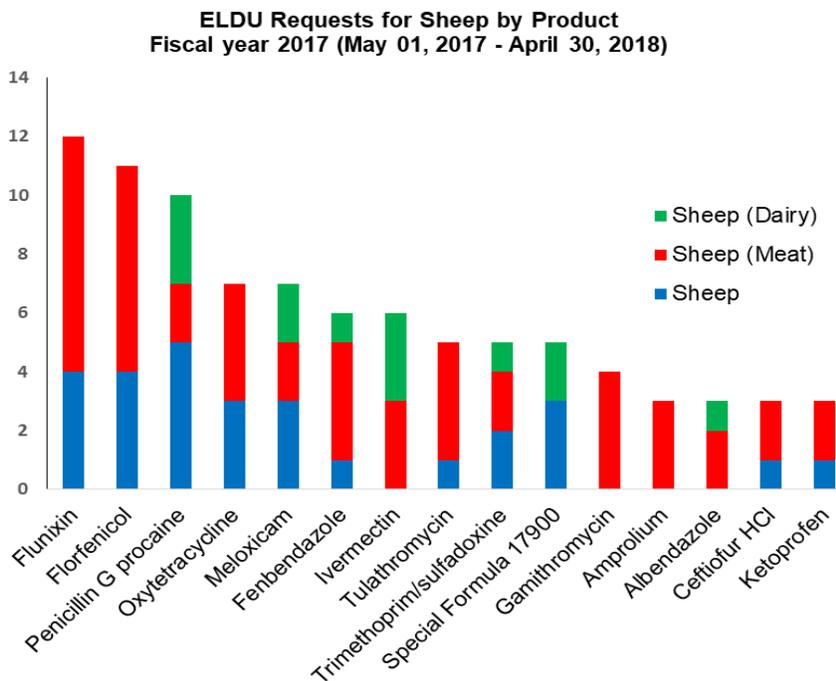


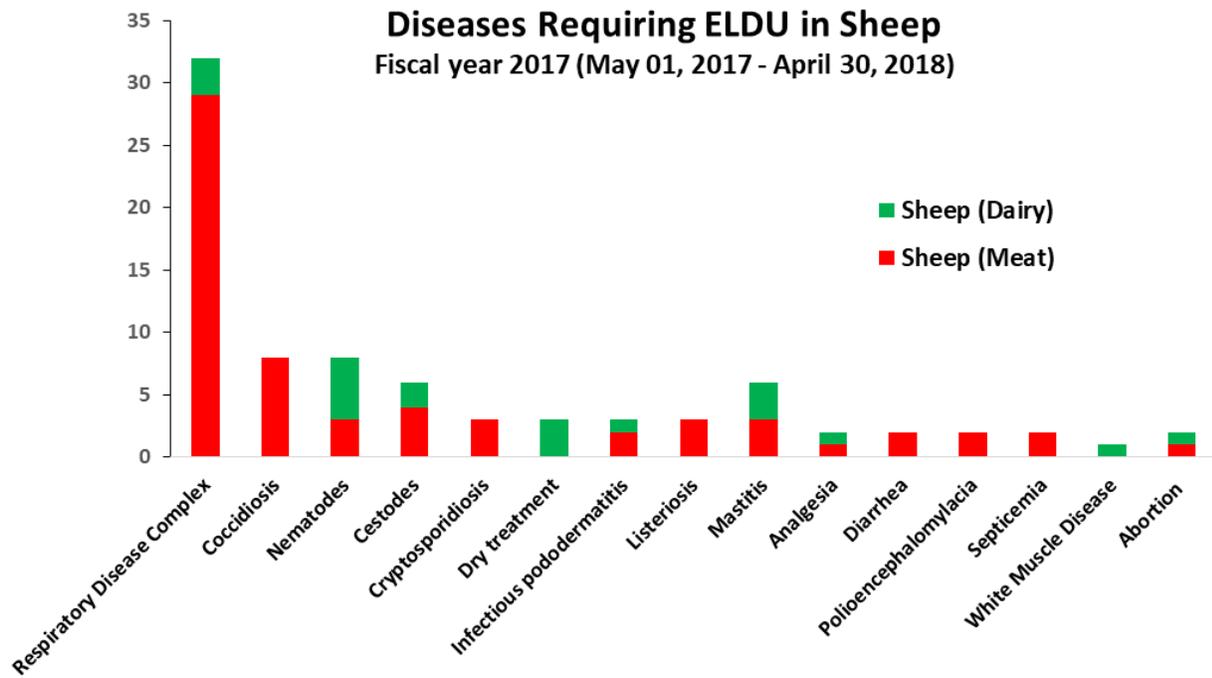
Requests for withdrawal information for ELDU in beef cattle are traditionally low. Cow/calf operations have animals that are far from the time of slaughter and feedlot operations typically do not use drugs in an ELDU manner. Requests reflect common diseases in beef cattle that may require ELDU because of handling and management factors.





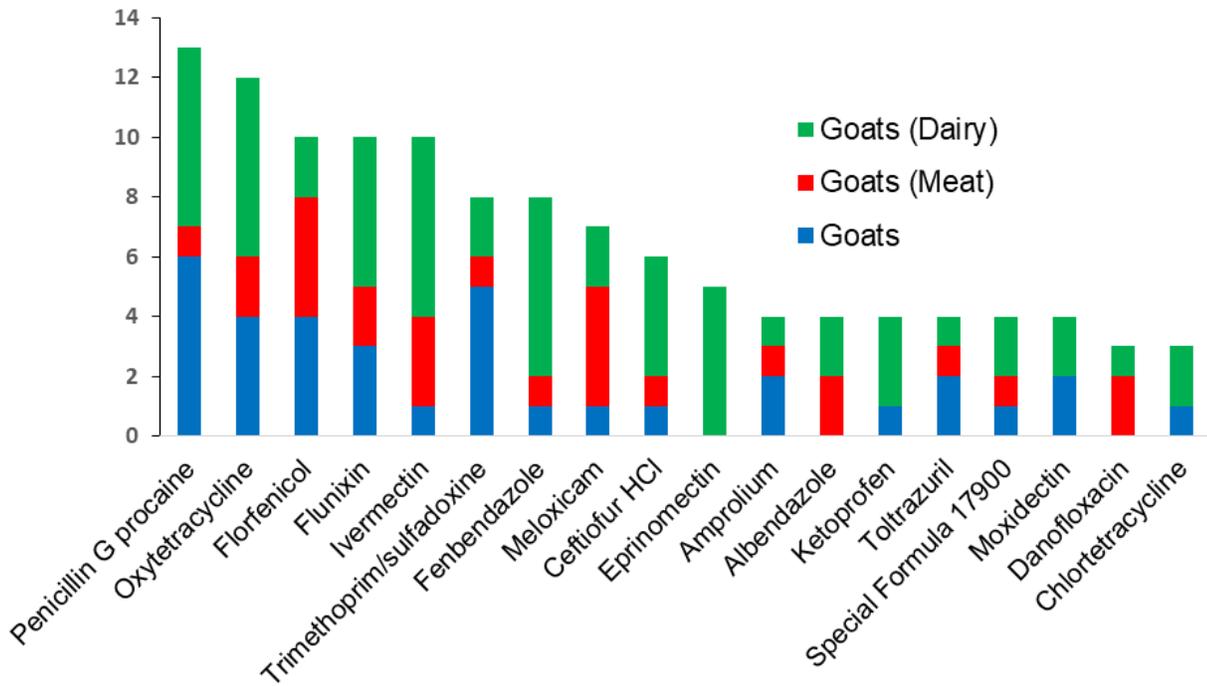
Due to limited drug approvals and bacterial and parasite resistance, antimicrobials, coccidiostats and dewormers are the most common reasons for ELDU in sheep and goats. Even if parasite resistance is not present, residues in milk of lactating sheep and goats can be very problematic due to persistence and very sensitive detection methods.



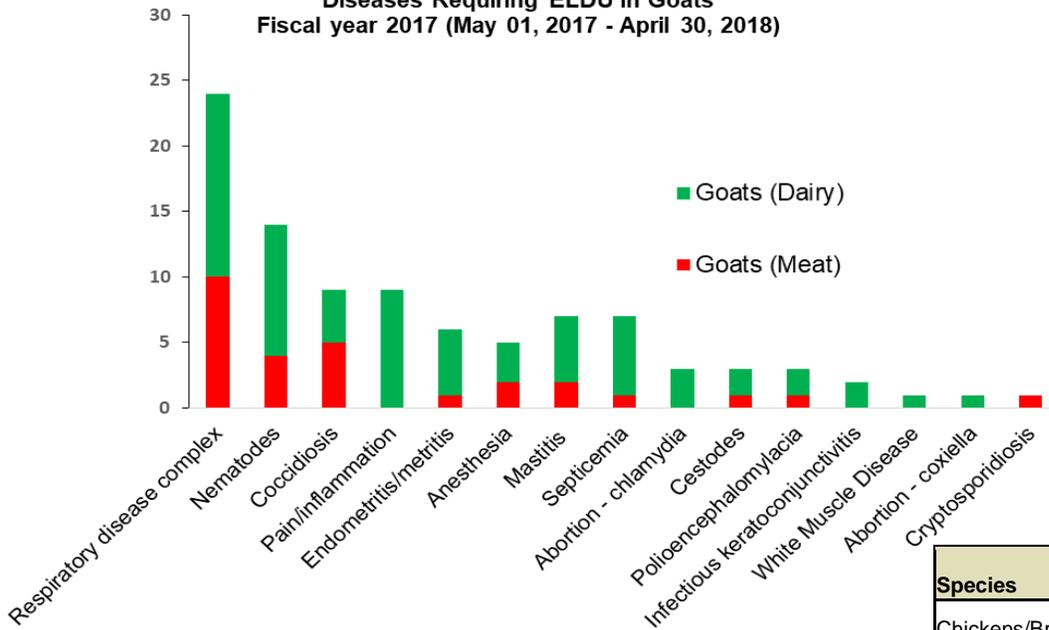


ELDU Requests for Goats by Product

Fiscal year 2017 (May 01, 2017 - April 30, 2018)



Diseases Requiring ELDU in Goats
Fiscal year 2017 (May 01, 2017 - April 30, 2018)



The chart to the right shows a comparison of ELDU requests by commodity over the past three years. Small ruminant requests have more than doubled since 2015-2016.

The data also illustrates the wide variety of species on which the CgFARAD™ team is asked to provide advice.

Species	2017-2018 requests	2016-2017 requests	2015-2016 requests
Chickens/Broilers	756	825	801
Turkeys	512	482	446
Dairy Cattle	261	232	266
Goats	189	196	90
Sheep	164	125	61
Chickens/Layers	137	92	69
Broiler Breeders	119	79	101
Beef Cattle	64	88	48
Veal Calves	45	23	48
Swine	38	40	56
Rabbits	22	21	21
Horses	21	10	19
Pigeons	14	N/A	4
Bison	13	11	7
Quail	10	5	9
Guinea Fowl	8	1	0
Chukar Partridges	6	8	19
Pheasants	6	6	4
Ducks	5	6	13
Geese	5	N/A	3
Elk (Wapiti)	4	N/A	3
Fish	4	1	2
Deer	1	1	5
Other	N/A	5	10
Total	2404	2257	2105