



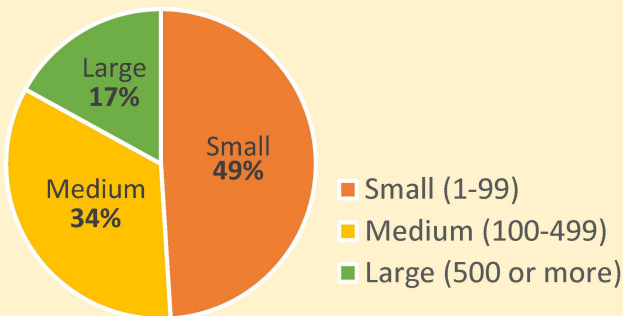
ANTIBIOTIC USE AND STEWARDSHIP ON CALIFORNIA'S SHEEP OPERATIONS

In summer 2018, the California Department of Food and Agriculture (CDFA) Antimicrobial Use and Stewardship (AUS) program conducted an anonymous, mail out survey of commercial sheep producers across the state.

The AUS 2018 Commercial Sheep Survey requested information for calendar year 2017, prior to changes in state antibiotic use laws.

AUS received responses from over three quarters of the sheep-producing counties in California

Surveys by Flock Size



AUS received responses from **108** operations across California



110,715 total sheep reported, representing **23%** of all sheep in California (NASS 2017 Census)

<6%

Fewer than **6%** of flocks spent time out-of-state

Most sheep producers were using a vet in 2017*

59% of all survey respondents reported using a vet for any reason in 2017

35% of all survey respondents indicated veterinary involvement in antibiotic use decision-making

Likelihood of using a veterinarian was **similar** across all flock sizes



***Starting in 2018, California law requires veterinary oversight of all antibiotic use**

Most antibiotics used for sheep in 2017 were administered individually through injectable or oral routes

Note: Oral antibiotics refers to antibiotics administered to individual animals via oral routes (i.e., bolus or drench)







78% of all farms reported some type of **antibiotic use** (feed, water, oral, and/or injectable routes)

73% of all farms reported **administration via oral and/or injectable routes**

Tetracyclines were the **most commonly reported** antibiotics administered for oral and/or injectable treatment

Top 3 Reasons for Antibiotic Use

Among farms who reported oral and/or injectable treatment

 <p>Respiratory Disease[†]</p>	<ul style="list-style-type: none"> ▪ 6% used oral antibiotics ▪ 63% used injectable antibiotics 	<ul style="list-style-type: none"> ▪ 5% used oral antibiotics ▪ 82% used injectable antibiotics 	 <p>Respiratory Disease[†]</p>
 <p>Lameness</p>	<ul style="list-style-type: none"> ▪ 0% used oral antibiotics ▪ 38% used injectable antibiotics ▪ Smaller flocks were less likely to use antibiotics 	<ul style="list-style-type: none"> ▪ 35% used oral antibiotics ▪ 17% used injectable antibiotics 	 <p>Diarrhea[†]</p>
 <p>Reproductive Issues*</p>	<ul style="list-style-type: none"> ▪ 0% used oral antibiotics ▪ 36% used injectable antibiotics ▪ Smaller flocks were less likely to use antibiotics 	<ul style="list-style-type: none"> ▪ 0% used oral antibiotics ▪ 23% used injectable antibiotics 	 <p>Injury[†]</p>

[†] No difference in use between flock sizes

* Reproductive issues did not include abortion. Abortion was a separate category.

OUTREACH & EDUCATION

72% of respondents kept records of antibiotics used, mostly in paper form

18% reported being trained in or belonging to sheep quality assurance (SQA) programs

How this helps sheep producers

The findings from this survey are utilized in the development of best management practices and stewardship resources for sheep producers in California.

AUS uses survey information to generate resources for California