



United States
Department of
Agriculture

Animal and
Plant Health
Inspection
Service

Veterinary
Services

National
Animal Health
Monitoring
System

Goat and Kid Predator and Nonpredator Death Loss in the United States, 2021



Version Control

This document was first released in July 2025. The June 2026 update includes the following changes:

- Formatting adjusted on pages 5, 8, 31, 37, 39, 44, 85, 86, and 109
- Superscripts and footnotes updated on pages 6, 39, 40, 41, 42, 44, 45, 46, 47, 67, 70, 72, 116, 117, and 118
- "[Q21]" text removed on page 89
- Updated blank cells with "(—)" text on page 102

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (TDD).

USDA is an equal opportunity provider and employer.

Mention of companies or commercial products does not imply recommendation or endorsement by the U.S. Department of Agriculture over others not mentioned. USDA neither guarantees nor warrants the standard of any product mentioned. Product names are mentioned solely to report factually on available data and to provide specific information.

USDA-APHIS-VS-CEAH-NAHMS
NRRC Building B, M.S. 2E7
2150 Centre Avenue
Fort Collins, CO 80526-8117
(866) 907-8190
<http://www.aphis.usda.gov/nahms>

Cover photo courtesy of Danielle McSwain.

Acknowledgments

This report was a cooperative effort between two U.S. Department of Agriculture (USDA) Agencies: the National Agricultural Statistics Service (NASS) and the Animal and Plant Health Inspection Service (APHIS).

We would like to thank the NASS enumerators who contacted goat producers and collected the data. Their hard work and dedication were invaluable. Thank you also to the personnel at the USDA–APHIS–Veterinary Services' Center for Epidemiology and Animal Health and USDA–APHIS–Wildlife Services for their efforts in generating and distributing this report.

All participants are to be commended, particularly the producers whose voluntary efforts made the Goat Death Loss 2021 study possible.



Sarah Blasko
Acting Director
Center for Epidemiology and Animal Health

Suggested bibliographic citation for this report:

USDA. 2025. Goat Death Loss 2021: Goat and Kid Predator and Nonpredator Death Loss in the United States.

USDA–APHIS–VS–CEAH–NAHMS. Fort Collins, CO
#806.0925

Contacts for further information:

Questions or comments on data analysis: Dr. Chuck Fossler (866) 907-8190

Information on reprints or other reports: Dr. Chuck Fossler (866) 907–8190

For questions about this report or additional copies, please contact:

USDA–APHIS–VS–CEAH–NAHMS
NRRC Building B, M.S. 2E7
2150 Centre Avenue
Fort Collins, CO 80526-8117
NAHMS@usda.gov

Table of Contents

Introduction 1

Terms Used in This Report 2

Section I: Population Estimates—Inventory 5

A. U.S. Demographics 5

1. Inventory trends 5
2. Operation trends 6
3. Kid crop trends 8

B. Inventory by Size and State 9

Section II: Population Estimates—Death Losses 11

A. Overall Death Loss 11

1. Death loss trends 11
2. Overall death losses by state 15
3. Operations with any loss 20

B. Nonpredator Loss 22

C. Predator Loss 54

D. Injuries by Predators 78

E. Nonlethal Predator Damage Management Methods 84

1. Nonlethal methods used 84
2. Money spent on nonlethal methods 95
3. Time spent on nonlethal methods 99

F. Lethal Predator Damage Management Methods 103

1. Lethal methods used 103
2. Money spent on lethal methods 105
3. Time spent on lethal methods 108

G. Government Specialists 110

H. Official Identification 114

Section III: Methodology 122

A. Survey Procedures 122

B. Estimation Procedures 122

1. Point estimation 122
2. Validation 122
3. Standard error and confidence interval calculations 122
4. Value of losses 123

C. Tableau Dashboard Procedures 123

1. Data resources 123
2. Mapping 123

Introduction

Each January, USDA's National Agricultural Statistics Service (NASS) collects data on goat inventory, kid crop, and total adult and kid goat death losses by breed and by animal class. Inventory and kid crop estimates (number of head) are published in January in the NASS "Sheep and Goats" report.

Beginning with the NASS January 2016 goat survey, USDA's Animal and Plant Health Inspection Service's National Animal Health Monitoring System provided funding and expertise for a detailed retrospective breakdown of goat and kid death losses by producer-attributed cause of loss (predator and non-predator) during the previous year. For years 2005 and 2010, the adult and kid goat death losses were published in May of the study year via the NASS "Sheep and Goats" report.

The present report takes the place of the 'Goat and Kid Predator and Nonpredator Death Loss in the United States, 2015' report. It provides a breakdown of adult and kid goat death losses by producer-attributed cause in 2020. Where possible, the values from the 2005, 2010, and 2016 studies are provided for comparison.

New information collected on the 2021 questionnaire

New information was collected during the Goat Death Loss 2021 study that was not reported in previous iterations of the Goat Death Loss report. The new information reported includes:

- Losses due to black vultures specifically (rather than vultures more generally), Mexican eagles (Caracara), footrot, lameness, and fire,
- Producer-reported concern regarding transmission of disease from wildlife,
- Use of lethal predator damage management methods,
- Producer-reported costs and time spent implementing non-lethal and lethal predator damage management methods, and
- Use of official identification.

Notes on estimates

Where possible, estimates sourced from NASS reports were updated to reflect updates published in NASS' Sheep and Goats Final Estimates series of reports. Estimates from NASS' Sheep and Goats reports are updated in the Sheep and Goats Final Estimates reports, and those updates are reflected in the NASS-sourced inventory estimates and estimates used in conjunction with NASS inventory estimates in this report (e.g., kid crop per 100 does on hand, percentage of inventory lost).

Where applicable, table column or row totals are shown to aid interpretation; however, estimates may not always sum to totals due to rounding. Most estimates of counts of animals or operations are rounded to a whole number. Most estimates of percentages in this report are rounded to the nearest tenth. If rounded to 100.0% or 0.0%, or the standard error is rounded to less than 0.1, the standard error is reported as (0.0%). No standard error was reported (—) if the estimate was exactly 100.0% or 0.0%. The same holds for estimates of counts or values as well; if an estimated count or value was rounded to less than 0.1, the standard error was reported as (0.0), and if the estimate was exactly 0.0, no standard error was reported (—).

When estimates are reported as being 'higher' or 'lower,' a statistical difference is implied by the overlap or absence of overlap between 95-percent confidence intervals (see the Methodology – Estimation procedures section) for the estimates being compared but was not directly tested. Not all statistically different estimates are mentioned in the text of this report.

In general, estimates published previously by NASS are not reported with uncertainty estimates. In figures with no uncertainty estimates, all uncertainty estimates may be suppressed without a note. In figures with a mixture of estimates with and without uncertainty estimates, "NR" is reported to denote uncertainty that is "not reported."

Estimates (and their estimates of uncertainty, where applicable) are reported as "(D)" to enforce disclosure avoidance in this report ensuring that the identities of individual respondents are protected.

Terms Used in This Report

Acidosis: A condition caused by excessive amounts of acid produced in the rumen, often due to ration change or grain overload.

Adult goats: Breeding bucks and does 1 year and older, and market goats 1 year and older.

Angora goats: Goats kept primarily for their hair and fiber production. Angora goats and Angora-breed crosses are the predominant fiber-producing goats.

Bloat: A condition in which ruminants cannot release the gas developed in the rumen as a result of fermentation.

Breeding buck: An uncastrated male goat 1 year and older with a primary use being a breeding animal.

Breeding doe: A female goat 1 year and older with a primary use being a breeding animal.

Cull: Adult animals permanently removed from the herd. Operations cull animals for various reasons such as old age or infertility, disease or injury, to reduce herd size for reasons such as high feed costs, or to improve genetics or desirable phenotypic traits.

Dystocia: Abnormal or difficult labor during kidding.

Enterotoxemia: A condition in which normal clostridial bacteria in the gut rapidly reproduce, producing large quantities of toxins. Vaccination reduces the risk of enterotoxemia.

Euthanization: The act of inducing humane death in an animal.

Footrot: A contagious bacterial disease of the interdigital (between the toes) skin and deeper tissues of ruminants associated with wet and muddy seasons and environmental conditions that lead to skin damage. Clinical signs include lameness, reddening and swelling of the interdigital tissue, and foul-smelling open ulcers.

Fright tactics: Devices and strategies to frighten predators, including lights, bells, radios, vehicles, propane exploders, electronic guards, and others. Predators can acclimate to these devices unless they are rotated or periodically changed.

Goat type: Primary use of goats. The primary goat types considered are Angora goats (primarily kept for hair or to produce fiber), milk goats (primarily kept for the production of milk or dairy products), and meat goats and other (primarily kept for the production of meat or another use).

Government specialist: State or federal government officials who can assist producers in managing the damage caused by predators to livestock or their operation. The term used in the questionnaire was "government trapper."

Guardian animals: A method for controlling predator losses by using guardian animals to discourage predators from approaching goats or goat areas. Guardian animals can be trained or untrained, including dogs, llamas, donkeys, or even other types of livestock, such as horned or unhorned cattle.

Herd size: Based on an operation's January 1 inventory of adult and kid goats in the respective year. Operations were placed in one of three size categories: small (1 to 9 head), medium (10 to 19 head), large (20 to 99 head), and very large (100 or more head).

Herding: Using personnel to look after goats in large pastures or on free range to help discourage predation.

Internal parasites: Internal parasites (usually worms) are a leading cause of death loss in goats. A high parasite burden can cause reduced weight gain, weight loss, anemia, watery feces, bottle jaw, and death. Worms can become resistant to anthelmintics (dewormers) if deworming agents are misused, making it harder to control these parasites.

Kid: A goat less than 1 year old.

Kid crop: Kids born in a specified period. The kid crop referred to in this report is the group of kids born in a given year.

Kid shed (or shed for kidding does): Shed or pen protecting from weather and, to some extent, predators for goats, especially during kidding season.

Market adult goats: Goats 1 year and older with primary use to be sold, especially as feeders or for slaughter.

Market kids: Goats less than 1 year old raised primarily for sale, especially as feeders or for slaughter.

Mastitis: Inflammation of the mammary gland most commonly caused by a bacterial infection.

Meat and other goats: For this study, this term refers to goats raised primarily to produce meat, regardless of their breed, or goats kept for other purposes (which can include as pets, show animals, pack animals, 4-H or competition animals, for brush control or forage management, or other use).

Metabolic problems: Diseases often associated with the reduced availability of nutrients and/or an increased demand for nutrients. Examples include milk fever (hypocalcemia) and grass tetany (hypomagnesemia).

Milk fever: A metabolic problem associated with low calcium in late pregnancy or early lactation.

Milk goats: Goats raised primarily to produce milk or dairy products, regardless of their breed.

Necropsy: An examination of an animal after death. Typically performed by a veterinarian or other trained professional to identify a cause or set of causes of death.

Neonatal disease: Disease in newborn kids, including septicemia and naval infection.

New England: Region containing the states of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont.

Night penning: Confining or concentrating herds during the night when they are most vulnerable to predation.

Official ID: Identification for an animal that bears the U.S. shield. An example of an official ID for sheep includes the National Scrapie Eradication Program ear tags. More information on official ID and identification requirements for the movement of sheep and goats can be found at the following links:

https://www.aphis.usda.gov/animal_health/animal_diseases/scrapie/downloads/nsep-program-standards-final-rule.pdf

https://www.aphis.usda.gov/animal_health/animal_diseases/scrapie/downloads/sheep-goat-id-flow-chart.pdf

Operation: An area of land managed as a unit by an individual, partnership, or hired manager. Operation here is used synonymously with “farm.”

Other states: Region containing the states of Alaska, Delaware, Hawaii, Maryland, Montana, Nevada, New Jersey, North Dakota, South Dakota, Utah, and Wyoming.

Population estimates: This report provides estimates with a measure of precision called the standard error. The confidence intervals used to make comparisons in the text of this report were computed using the methods described in the Methodology section. These confidence intervals require more information than is published in the report to compute. Still, an approximate 95-percent confidence interval can be computed with bounds equal to the estimate plus or minus two standard errors. If the only error is sampling error, the confidence intervals created in this manner will contain the true population value about 95 out of 100 times. For example, an estimated proportion of 7.5 with a standard error of 1.0 results in limits of 5.5 and 9.5 (two times the standard error above and below the estimate).

Postweaned kid: A goat less than 1 year old that is no longer nursing a doe or drinking milk or milk replacer.

Predator damage management: Methods or techniques, including husbandry practices, to reduce the impact of predation on livestock or other aspects of a livestock operation. These methods can be lethal or nonlethal. The term used in the questionnaire was “predator control.”

Pregnancy toxemia: A metabolic disease that may affect does in late gestation. Pregnancy toxemia is characterized by decreased feed intake, depression, and might include neurologic signs and even death. Pregnancy toxemia is seen most frequently in does carrying multiple fetuses and is often referred to as twin lamb disease or pregnancy ketosis.

Preweaned kid: A goat less than 1 year old that is still nursing from a doe or otherwise consuming milk or milk replacer.

Replacement kid: A goat less than 1 year old with primary use to be raised as a breeding animal.

Scours: Loose feces (diarrhea) in animals.

Scrapie: A degenerative, fatal disease affecting the central nervous system of sheep and goats. Infected flocks that contain a high percentage of susceptible animals can experience significant production losses. Over several years, the number of infected animals increases in these flocks, and the age at the onset of clinical signs decreases, making these flocks economically unviable. Animals sold from infected flocks spread scrapie to other flocks. The presence of scrapie in the United States also prevents exporting breeding stock, semen, and embryos to many other countries.

Value: Producer-reported average per-head values by goat type (Angora, milk, and meat and other) and by animal class (breeding does 1 year and older, breeding bucks 1 year and older, breeding replacement kids less than 1 year old, market kids less than 1 year old, and market goats 1 year and older) were collected on the questionnaire. The goat types of lost goats were not collected, and the animal class was collected only as losses of goats 1 year and older, kids less than 1 year old before weaning, and kids less than 1 year old after weaning. Therefore, the average value of losses was calculated first at the operation level as the weighted average of the value of adult goats on the operation (weighted by the number of goats in each class and the producer-reported average per-head value of goats in that class) and the weighted average of the kid goats on the operation multiplied by the number of lost adult and kid goats, respectively. Then, those operation-level estimated values of losses were aggregated to produce the summary-level statistics in this report.

Weaning: Removing milk or milk replacer from a kid's diet.

Section I: Population Estimates—Inventory

A. U.S. Demographics

1. Inventory trends

Since 2007, the inventory of adult and kid goats has fallen almost every study year, from a high of 3,048,000 head in 2007 to 2,582,000 head in 2021.

In 2021, a majority, 79.2 percent, of adult and kid goats in the United States were goats kept for meat or other uses. A majority, 60.8 percent, of adult and kid goats in the United States were adult does. Also, 82.0 percent of adult and kid goats were intended for breeding.

A.1. Number of adult and kid goats, by class, by goat type, and by year:

Class	January 1 Number (1,000 head)						
	Year ¹						
	2005 ³	2007 ³	2010 ⁴	2012 ⁴	2016 ⁵	2017 ⁵	2021 ⁶
Angora							
Breeding does 1 year and older	182	160	114	103	103	104	80
Breeding bucks 1 year and older	13	11	8	8	7	7	5
Replacement kids less than 1 year old	36	31	23	21	20	20	16
Market goats 1 year and older ²	20	16	12	10	12	12	9
Market kids less than 1 year old ²	14	12	8	7	8	9	7
Total	265	230	165	149	150	152	117
Milk							
Breeding does 1 year and older	190	197	228	232	248	252	270
Breeding bucks 1 year and older	20	21	23	23	24	25	27
Replacement kids less than 1 year old	61	63	69	69	73	76	80
Market goats 1 year and older ²	10	10	12	13	13	15	17
Market kids less than 1 year old ²	19	20	23	23	27	27	26
Total	300	311	355	360	385	395	420
Meat and other							
Breeding does 1 year and older	1,307	1,521	1,427	1,327	1,255	1,250	1,220
Breeding bucks 1 year and older	123	141	151	140	130	130	127
Replacement kids less than 1 year old	331	389	350	314	295	295	292
Market goats 1 year and older ²	127	150	152	136	128	134	142
Market kids less than 1 year old ²	259	306	309	277	272	271	264
Total	2,147	2,507	2,389	2,194	2,080	2,080	2,045
All goat types							
Breeding does 1 year and older	1,679	1,878	1,769	1,662	1,606	1,606	1,570
Breeding bucks 1 year and older	156	173	182	171	161	162	159
Replacement kids less than 1 year old	428	483	442	404	388	391	388
Market goats 1 year and older ²	157	176	176	159	153	161	168
Market kids less than 1 year old ²	292	338	340	307	307	307	297
Total	2,712	3,048	2,909	2,703	2,615	2,627	2,582

¹ Estimates from 2005, 2010, 2016, and 2021 are provided to serve as denominators and give broadened context to the estimates of loss later in this report. Estimates from 2007, 2012, and 2017 are provided for additional context with regard to the evolution of the inventory in the goat industry and to align better with the estimates of the numbers of operations with adult and kid goats in those years. Care should be taken comparing these estimates to those of operations, as the Census of Agriculture and the Sheep and Goat annual survey are performed with different survey and estimation methodologies.

² NASS publishes the total market adult and kid goats. NAHMS estimated the breakout by market goats 1 year and older and market kids less than 1 year old. The total market adult and kid goats match the totals published by NASS each year.

³ Sheep and Goats Final Estimates, 2004–2008, NASS. An inventory of individual breeding classes was not published for 2005 and is estimated by NAHMS using the proportional breakouts of the number of goats by breeding class from 2006–2008.

⁴ Sheep and Goats Final Estimates, 2009–2013, NASS.

⁵ Sheep and Goats Final Estimates, 2014–2018, NASS.

⁶ Sheep and Goats, January 2021, NASS.

2. Operation trends

While the inventories of all adult and kid goats have generally fallen since 2007, the number of operations with goats has trended upward from a low of 91,462 operations in 2002 to a high of 150,957 operations in 2021.

The share of small operations (1–9 head) has increased from 61.8 percent in 2016 to 65.9 percent in 2021, and the percentage of goats on small operations increased from 14.1 percent in 2016 to 15.7 percent in 2021. However, these changes weren't statistically significant.

A similar, nonsignificant increase in both the share of operations and goats was seen for large operations (20–99 head), while a decrease in both operations and goats was seen for both medium (10–19 head) and very large operations (100 or more head).

A.2.a. Number of operations with adult and kid goats, by goat type and by year:

Number of Operations						
Year						
Goat type	2002 ¹	2007 ¹	2012 ¹	2016 ²	2017 ¹	2021 ²
Angora	5,075	7,215	9,479	7,419	11,293	8,086
Milk	22,389	27,481	29,570	33,448	35,682	29,451
Meat and other	74,980	123,278	100,910	118,635	101,578	122,389
Total	91,462	144,466	128,456	148,332	136,442	150,957

¹ Census of Agriculture 2002, 2007, 2012, and 2017, NASS. This was the only NASS-published source for the number of operations with adult and kid goats. So, care should be taken comparing these estimates to inventory estimates, as the Census of Agriculture and the Sheep and Goat annual survey are performed with different survey and estimation methodologies.

² Estimated by NAHMS (not published by NASS). Used the number of operations in the sample with any goats, weighted by the non-response-adjusted and calibrated expansion weight (the number of operations in the population each sampled operation represents).

A.2.b. Percentage of operations with adult and kid goats, by herd size and by year:

Percent Operations		
Year		
Herd size (number of adult and kid)	2016	2021
Small (1–9)	61.8	65.9
Medium (10–19)	19.4	15.1
Large (20–99)	16.7	17.2
Very large (100 or more)	2.2	1.9
Total	100.0	100.0

Source: Estimated by NAHMS (not published by NASS).

A.2.c. Percentage of adult and kid goats, by herd size and by year:

Percent Adult and Kid Goats		
	Year	
Herd size (number of adult and kid goats)	2016	2021
Small (1–9)	14.1	15.7
Medium (10–19)	15.6	12.2
Large (20–99)	35.9	38.7
Very large (100 or more)	34.4	33.5
Total	100.0	100.0

Source: Estimated by NAHMS (not published by NASS).

3. Kid crop trends

In 2020, the number of kids born per 100 does on hand on January 1, 2021, was greatest for milk goats (113.7 kids per 100 does) and lowest for Angora goats (85.0 kids per 100 does).

A.3. Kid crop and kid crop per 100 does on hand, by goat type and by year:

Number Kids							
Year							
Measure	2004 ²	2006 ²	2009 ³	2011 ³	2015 ⁴	2016 ⁴	2020 ⁵
Angora							
Kid crop (1,000 head)		127	86	83	78	76	68
Kid crop per 100 does on hand (January 1 of the following year)		73.8	75.4	80.6	75.7	73.1	85.0
Milk							
Kid crop (1,000 head)		220	252	267	263	271	307
Kid crop per 100 does on hand (January 1 of the following year)		114.0	110.5	115.1	106.0	107.5	113.7
Meat and other							
Kid crop (1,000 head)		1,629	1,566	1,440	1,310	1,300	1,280
Kid crop per 100 does on hand (January 1 of the following year)		115.0	109.7	108.5	104.4	104.0	104.9
All goat types							
Kid crop (1,000 head)	1,758	1,976	1,904	1,790	1,651	1,647	1,655
Kid crop per 100 does on hand (January 1 of the following year)	104.8	105.2	107.6	107.7	102.8	102.6	105.4

¹ Estimates from 2004, 2009, 2015, and 2020 are provided to serve as denominators and give broadened context to the estimates of loss later in this report. Estimates from 2006, 2011, and 2016 are provided for additional context regarding the evolution of the inventory in the goat industry and to align better with the estimates of numbers of operations with adult and kid goats in those years. Care should be taken comparing these estimates to those of operations, as the Census of Agriculture and the Sheep and Goat annual survey are performed with different survey and estimation methodologies.

² Sheep and Goats Final Estimates, 2004-2008, NASS. Kid crop not reported by goat type for 2004. NAHMS estimated kid crop per 100 does because the breeding doe inventory was not published.

³ Sheep and Goats Final Estimates, 2009-2013, NASS.

⁴ Sheep and Goats Final Estimates, 2014-2018, NASS.

⁵ Sheep and Goats, January 2021, NASS.

B. Inventory by Size and State

B.1. Number and percentage of adult goats on January 1, 2021, and 2020 kid crop, by herd size:

Number (1,000 head) and Percent										
Herd Size (number of adult and kid goats)										
Class	Small (1–9)		Medium (10–19)		Large (20–99)		Very Large (100 or more)		All operations	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Adults ¹	348.1	18.3	243.9	12.9	713.2	37.6	591.9	31.2	1,897.0	100.0
Kid crop (2020) ²	205.1	12.4	213.3	12.9	694.4	42.0	542.2	32.8	1,655.0	100.0
Total adult goats and kid crop	553.2	15.6	457.2	12.9	1,407.6	39.6	1,134.1	31.9	3,552.0	100.0

¹ Includes does, bucks, and market goats 1 year and older. Estimated by NAHMS.

² Size-level kid crop estimated by NAHMS; U.S total published by NASS.

B.2. Number and percentage of adult goats on January 1, 2021, and 2020 kid crop, by state:

State	Number (1,000 head) and Percent					
	Adults ¹		Kid crop (2020) ²		Total adult goats and kid crop	
	No.	Pct.	No.	Pct.	No.	Pct.
AL	32.8	1.7	42.7	2.6	75.5	2.1
AZ	47.3	2.5	44.9	2.7	92.2	2.6
AR	28.8	1.5	30.3	1.8	59.1	1.7
CA	92.0	4.9	74.2	4.5	166.2	4.7
CO	23.3	1.2	21.4	1.3	44.7	1.3
FL	42.8	2.3	19.1	1.2	61.9	1.7
GA	43.5	2.3	20.8	1.3	64.3	1.8
ID	19.5	1.0	14.2	0.9	33.7	0.9
IL	26.1	1.4	34.2	2.1	60.3	1.7
IN	41.3	2.2	48.0	2.9	89.3	2.5
IA	45.0	2.4	53.9	3.3	98.9	2.8
KS	29.7	1.6	28.2	1.7	57.9	1.6
KY	39.9	2.1	22.8	1.4	62.7	1.8
LA	9.2	0.5	6.5	0.4	15.7	0.4
MI	18.3	1.0	17.2	1.0	35.5	1.0
MN	29.8	1.6	50.6	3.1	80.4	2.3
MS	16.5	0.9	11.1	0.7	27.6	0.8
MO	57.4	3.0	49.7	3.0	107.1	3.0
NE	12.2	0.6	18.3	1.1	30.5	0.9
New England ³	28.4	1.5	27.9	1.7	56.3	1.6
NM	16.2	0.9	13.9	0.8	30.1	0.8
NY	24.0	1.3	32.4	2.0	56.4	1.6
NC	44.9	2.4	38.5	2.3	83.4	2.3
OH	39.7	2.1	27.4	1.7	67.1	1.9
OK	62.9	3.3	50.9	3.1	113.8	3.2
OR	32.6	1.7	32.8	2.0	65.4	1.8
PA	39.8	2.1	27.4	1.7	67.2	1.9
SC	25.6	1.3	8.1	0.5	33.7	0.9
TN	76.5	4.0	61.6	3.7	138.1	3.9
TX	605.4	31.9	487.3	29.4	1,092.7	30.8
VA	38.4	2.0	26.5	1.6	64.9	1.8
WA	35.8	1.9	19.7	1.2	55.5	1.6
WV	15.5	0.8	11.7	0.7	27.2	0.8
WI	69.3	3.7	78.1	4.7	147.4	4.1
Other states ⁴	86.6	4.6	102.6	6.2	189.2	5.3
U.S.	1,897.0	100.0	1,655.0	100.0	3,552.0	100.0

¹ Includes does, bucks, and market goats 1 year and older. Estimated by NAHMS.

² State-level kid crop estimated by NAHMS; U.S total published by NASS.

³ New England includes CT, ME, MA, NH, RI, and VT.

⁴ Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

Section II: Population Estimates—Death Losses

A. Overall Death Loss

1. Death loss trends

From 2015 to 2020, both the number of animals lost (a 12.7 percent decrease overall) and the percentage of inventory lost (a 1.0 percentage point decrease for kids and a 2.5 percentage point decrease for adult goats) decreased. However, the value of adult and kid goat losses increased by 17.6 percent (almost \$14 million) in the same period.

The distributions of the numbers and values of goats lost by type approximately match the distribution of goats by type in the population overall. For example, approximately 81.6 percent of the losses and 80.2 percent of the value of losses were in meat and other types of goats, with meat and other types of goats making up approximately 79.2 percent of the January 1, 2021, inventory.

A.1.a. Number of adult and kid goat death losses due to all causes and total value of losses, by animal class, by goat type, and by year:

Number (1,000 head) and Value ¹ (\$1,000)								
Animal class	Year							
	2004 ² number	2004 ² value	2009 ³ number	2009 ³ value	2015 ⁴ number	2015 ⁴ value	2020 ⁴ number	2020 ⁴ value
Angora								
Adult goats					6.7	778	5.8	860
Kids					14.5	1,319	10.1	1,460
Total					21.2	2,098	15.9	2,320
Milk								
Adult goats					19.9	5,010	21.2	6,373
Kids					37.0	6,880	43.9	9,261
Total					56.9	11,890	65.1	15,634
Meat and other								
Adult goats					153.4	30,756	104.6	26,346
Kids					273.5	32,161	255.1	46,154
Total					426.9	62,917	359.7	72,500
All goat types								
Adult goats	129.2		181.0		180.0	36,545	131.7	33,579
Kids	286.0		373.0		325.0	40,360	309.0	56,875
Total adult and kid goats	415.2	58,662	554.0	69,553	505.0	76,905	440.7	90,454

¹ Values have been adjusted to reflect January 2021 dollars using the U.S. Bureau of Labor Statistics CPI Inflation Calculator https://www.bls.gov/data/inflation_calculator.htm.

² Sheep and Goats Death Loss, May 2005, NASS. Only total losses by animal class and overall cause (predator, disease or other known cause, and unknown cause) were reported. Values were reported by overall cause only for adult and kid goats combined. Values were estimated using a two-year average using Texas data of the value of all goats reported in the January 1 Sheep and Goat Survey from 2004 to 2005.

³ Sheep and Goats Death Loss, May 2010, NASS. Only total losses by animal class and overall cause (predator, disease or other known cause, and unknown cause) were reported. Values were reported by overall cause only for adult and kid goats combined. Values were estimated using a two-year average using Texas data of the value of all goats reported in the January 1 Sheep and Goat Survey from 2004 to 2005.

⁴ Estimated by NAHMS.

A.1.b. Adult goat death loss as a percentage of adult goat inventory on January 1 of the following year, by goat type and by year:

Percent Inventory				
Year				
Goat type	2004	2009	2015	2020
Angora			5.5	6.2
Milk			7.0	6.8
Meat and other			10.1	7.0
All goat types	6.5	8.5	9.4	6.9

A.1.c. Kid goat death loss as a percentage of kid crop, by goat type and by year:

Percent Kid Crop				
Year				
Goat type	2004	2009	2015	2020
Angora			18.6	14.9
Milk			14.1	14.3
Meat and other			20.9	19.9
All goat types	16.3	19.6	19.7	18.7

The majority of losses in 2020 were attributed to nonpredator causes or unknown causes for both adult (76.2 percent of losses) and kid goats (65.3 percent of losses), which has been the case since 2004. Unknown losses accounted for 31.5 percent of adult goat losses and for 28.4 percent of kid goat losses overall in 2020.

Preweaned kid goat deaths accounted for 75.7 percent of the total number of kid deaths and a greater percentage of preweaned kids were lost to predation (36.8 percent) compared to postweaned kids (28.1 percent). From 2015 to 2020, the percentage of losses attributed to predation increased, though not significantly, across both adult and kid goats.

A.1.d. Number and percentage of adult goat death losses, by cause and by year:

Number and Percent Loss								
Year								
2004 ¹			2009 ²		2015		2020	
Cause of loss	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Nonpredator ³	89,200	69.0	121,000	66.9	141,120	78.4	100,360	76.2
Predator	40,000	31.0	60,000	33.1	38,880	21.6	31,310	23.8
Total	129,200	100.0	181,000	100.0	180,000	100.0	131,670	100.0

¹ Sheep and Goats Death Loss, May 2005, NASS.

² Sheep and Goats Death Loss, May 2010, NASS.

³ Nonpredator losses include losses of unknown cause.

A.1.e. Number and percentage of kid goat death losses, by animal class, by cause, and by year:

Number and Percent Loss								
Year								
Cause of loss	2004 ¹		2009 ²		2015		2020	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Preweaned kids								
Nonpredator ³					177,258	73.5	147,860	63.2
Predator					63,823	26.5	85,980	36.8
Total					241,081	100.0	233,840	100.0
Postweaned kids								
Nonpredator ³					63,989	76.3	54,070	71.9
Predator					19,930	23.7	21,100	28.1
Total					83,919	100.0	75,170	100.0
Total kids								
Nonpredator ³	171,000	59.8	253,000	67.8	241,247	74.2	201,930	65.3
Predator	115,000	40.2	120,000	32.2	83,753	25.8	107,080	34.7
Total	286,000	100.0	373,000	100.0	325,000	100.0	309,010	100.0

¹ Sheep and Goats Death Loss, May 2005, NASS. Only total kid losses were reported.

² Sheep and Goats Death Loss, May 2010, NASS. Only total kid losses were reported.

³ Nonpredator losses include losses of unknown cause.

2. Overall death losses by state

Approximately one-third of the January 1, 2021, adult goat inventory was in Texas, and approximately one-third of the 2020 kid crop was born in Texas. As expected, approximately one-quarter of the number and value of adult goats lost and approximately one-third of the number and value of total kids lost in 2020 were in Texas.

Despite the large numbers and values of goats lost in Texas, the numbers, values, and percentages of inventory lost and the percentages of operations with losses varied by state.

A.2.a. Number of adult and kid goat death losses in 2020, by state, by animal class, and by cause:

State	Number Cause of Loss										All causes				
	Nonpredator					Predator									
	Adults	Pre-weaned kids	Post-weaned kids	Total kids	Total adult and kid goats	Adults	Pre-weaned kids	Post-weaned kids	Total kids	Total adult and kid goats	Adults	Pre-weaned kids	Post-weaned kids	Total kids	Total adult and kid goats
AL	2,620	5,400	2,190	7,590	10,210	1,710	1,430	1,090	2,520	4,230	4,330	6,830	3,280	10,110	14,440
AZ	2,090	3,840	2,050	5,890	7,980	4,360	1,230	1,460	2,690	7,050	6,450	5,070	3,510	8,580	15,030
AR	1,890	2,530	1,390	3,920	5,810	630	1,010	200	1,210	1,840	2,520	3,540	1,590	5,130	7,650
CA	5,270	7,470	2,240	9,710	14,980	1,040	1,480	800	2,280	3,320	6,310	8,950	3,040	11,990	18,300
CO	1,520	1,580	280	1,860	3,380	90	1,440	470	1,910	2,000	1,610	3,020	750	3,770	5,380
FL	1,790	2,500	1,360	3,860	5,650	690	1,400	120	1,520	2,210	2,480	3,900	1,480	5,380	7,860
GA	1,900	2,410	940	3,350	5,250	920	1,660	500	2,160	3,080	2,820	4,070	1,440	5,510	8,330
ID	690	1,120	470	1,590	2,280	210	440	160	600	810	900	1,560	630	2,190	3,090
IL	3,380	3,620	430	4,050	7,430	50	1,360	20	1,380	1,430	3,430	4,980	450	5,430	8,860
IN	2,580	3,520	1,590	5,110	7,690	70	60	70	130	200	2,650	3,580	1,660	5,240	7,890
IA	2,350	5,770	1,610	7,380	9,730	40	240	100	340	380	2,390	6,010	1,710	7,720	10,110
KS	1,630	2,810	1,050	3,860	5,490	910	1,550	100	1,650	2,560	2,540	4,360	1,150	5,510	8,050
KY	1,570	2,530	1,250	3,780	5,350	50	400	200	600	650	1,620	2,930	1,450	4,380	6,000
LA	470	730	110	840	1,310	230	180	160	340	570	700	910	270	1,180	1,880
MI	860	2,630	460	3,090	3,950	50	30	10	40	90	910	2,660	470	3,130	4,040
MN	930	1,970	500	2,470	3,400	10	0	0	0	10	940	1,970	500	2,470	3,410
MS	1,200	1,680	740	2,420	3,620	780	760	430	1,190	1,970	1,980	2,440	1,170	3,610	5,590
MO	3,420	8,140	2,620	10,760	14,180	370	1,340	420	1,760	2,130	3,790	9,480	3,040	12,520	16,310
NE	640	1,750	710	2,460	3,100	100	120	10	130	230	740	1,870	720	2,590	3,330
New England ¹	2,850	2,830	720	3,550	6,400	150	100	30	130	280	3,000	2,930	750	3,680	6,680
NM	610	910	400	1,310	1,920	410	670	330	1,000	1,410	1,020	1,580	730	2,310	3,330
NY	1,460	2,140	2,600	4,740	6,200	60	80	50	130	190	1,520	2,220	2,650	4,870	6,390
NC	3,070	4,230	1,790	6,020	9,090	230	490	110	600	830	3,300	4,720	1,900	6,620	9,920
OH	1,560	2,240	640	2,880	4,440	170	120	230	350	520	1,730	2,360	870	3,230	4,960
OK	4,140	5,050	3,340	8,390	12,530	830	1,670	660	2,330	3,160	4,970	6,720	4,000	10,720	15,690
OR	2,030	3,460	1,320	4,780	6,810	610	1,370	660	2,030	2,640	2,640	4,830	1,980	6,810	9,450
PA	1,470	4,080	560	4,640	6,110	180	170	100	270	450	1,650	4,250	660	4,910	6,560
SC	990	1,140	810	1,950	2,940	280	250	160	410	690	1,270	1,390	970	2,360	3,630
TN	6,170	9,180	1,640	10,820	16,990	1,600	1,720	200	1,920	3,520	7,770	10,900	1,840	12,740	20,510
TX	21,720	29,610	10,990	40,600	62,320	12,800	60,150	10,520	70,670	83,470	34,520	89,760	21,510	111,270	145,790
VA	3,130	3,370	940	4,310	7,440	130	680	550	1,230	1,360	3,260	4,050	1,490	5,540	8,800
WA	3,120	1,200	350	1,550	4,670	370	60	140	200	570	3,490	1,260	490	1,750	5,240
WV	1,160	830	180	1,010	2,170	100	410	20	430	530	1,260	1,240	200	1,440	2,700
WI	4,940	7,460	2,810	10,270	15,210	40	0	120	120	160	4,980	7,460	2,930	10,390	15,370
Other states ²	5,140	8,130	2,990	11,120	16,260	1,040	1,910	900	2,810	3,850	6,180	10,040	3,890	13,930	20,110
U.S.	100,360	147,860	54,070	201,930	302,290	31,310	85,980	21,100	107,080	138,390	131,670	233,840	75,170	309,010	440,680

¹ New England includes CT, ME, MA, NH, RI, and VT.

² Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

A.2.b. Value of adult and kid goat death losses in 2020, by state and by cause:

State	Value ¹ (\$1,000)								
	Cause of Loss			Cause of Loss			Cause of Loss		
	Nonpredator			Predator			All causes		
	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats
AL	411	831	1,242	235	234	469	646	1,065	1,711
AZ	329	690	1,019	735	351	1,086	1,064	1,041	2,105
AR	423	623	1,046	150	165	315	573	788	1,361
CA	1,717	2,366	4,083	263	443	706	1,981	2,809	4,790
CO	649	767	1,416	28	519	547	676	1,286	1,962
FL	534	760	1,294	229	284	513	764	1,044	1,808
GA	296	460	756	165	262	427	460	723	1,183
ID	250	310	560	83	151	234	333	461	794
IL	838	752	1,590	10	209	219	848	960	1,808
IN	1,183	1,711	2,894	30	33	63	1,213	1,745	2,958
IA	809	1,584	2,393	18	56	74	826	1,640	2,466
KS	467	896	1,363	205	331	536	672	1,227	1,899
KY	506	715	1,221	15	117	132	521	832	1,353
LA	145	194	339	55	73	128	200	267	467
MI	315	672	987	9	5	14	325	677	1,002
MN	336	516	852	1	0	1	337	516	853
MS	231	306	537	131	123	254	363	429	792
MO	713	1,791	2,504	61	341	402	774	2,132	2,906
NE	193	526	719	27	20	47	220	547	767
New England ²	766	720	1,486	36	25	61	802	745	1,547
NM	185	275	460	92	162	254	277	438	715
NY	411	773	1,184	8	12	20	419	785	1,204
NC	929	894	1,823	58	109	167	986	1,003	1,989
OH	439	723	1,162	45	51	96	484	775	1,259
OK	1,017	1,847	2,864	204	443	647	1,221	2,290	3,511
OR	542	1,100	1,642	138	283	421	681	1,383	2,064
PA	489	1,053	1,542	63	35	98	552	1,087	1,639
SC	207	274	481	55	46	101	261	320	581
TN	1,566	2,121	3,687	355	354	709	1,920	2,475	4,395
TX	4,690	7,780	12,470	3,263	11,045	14,308	7,952	18,825	26,777
VA	789	838	1,627	26	221	247	815	1,059	1,874
WA	1,207	386	1,593	41	47	88	1,247	433	1,680
WV	313	196	509	18	81	99	331	278	609
WI	1,003	1,900	2,903	27	36	63	1,030	1,936	2,966
Other states ³	1,518	2,291	3,809	285	566	851	1,803	2,857	4,660
U.S.	26,415	39,640	66,055	7,164	17,235	24,399	33,579	56,875	90,454

¹ Values have been adjusted to reflect January 2021 dollars using the U.S. Bureau of Labor Statistics CPI Inflation Calculator https://www.bls.gov/data/inflation_calculator.htm.

² New England includes CT, ME, MA, NH, RI, and VT.

³ Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

A.2.c. Percentage of operations that had any adult goat death losses in 2020 and percentage of operations that had any kid goat death losses in 2020, by state, by animal class, and by cause:

State	Percent Operations Cause of Loss														
	Nonpredator					Predator					All causes				
	Adults	Pre-weaned kids	Post-weaned kids	Total kids	Total adult and kid goats	Adults	Pre-weaned kids	Post-weaned kids	Total kids	Total adult and kid goats	Adults	Pre-weaned kids	Post-weaned kids	Total kids	Total adult and kid goats
AL	30.7	29.0	22.4	38.8	44.2	13.0	11.1	8.1	15.5	20.1	36.5	36.3	27.3	44.1	50.1
AZ	16.0	13.5	2.9	13.7	21.8	17.6	1.4	7.1	7.2	19.8	33.4	14.7	9.9	20.8	37.8
AR	17.1	25.1	15.1	25.2	34.8	5.5	10.6	2.2	11.9	14.7	21.8	35.6	17.3	35.7	38.4
CA	21.4	20.3	4.0	20.9	31.7	4.3	6.6	2.3	8.1	10.2	24.3	23.0	6.0	24.5	35.2
CO	28.7	21.0	6.0	22.3	39.8	4.0	9.4	6.5	13.4	15.0	32.8	27.5	12.2	31.6	47.5
FL	41.7	37.7	20.5	49.9	63.1	14.5	11.7	3.8	15.1	26.4	45.4	43.0	23.8	57.9	68.7
GA	38.8	31.4	13.8	33.8	52.2	13.5	25.4	7.5	28.2	32.6	50.5	54.6	19.7	57.2	67.8
ID	13.3	9.0	6.0	12.3	18.8	2.1	1.9	2.2	3.8	4.0	14.0	9.4	7.6	14.0	19.4
IL	35.0	40.3	4.7	42.8	44.6	0.8	17.0	0.7	17.1	17.2	35.7	41.5	5.4	44.0	45.7
IN	14.6	10.1	5.7	12.8	22.6	0.8	0.8	0.1	0.8	1.6	15.1	10.7	5.8	12.9	23.2
IA	40.2	44.5	22.8	48.9	57.1	1.3	2.3	2.1	4.2	5.3	40.5	46.8	24.4	52.3	59.7
KS	31.4	37.1	14.5	40.4	48.0	3.3	11.0	2.3	13.1	13.3	34.4	43.6	16.6	47.4	52.6
KY	15.3	21.7	17.6	35.0	39.6	0.4	2.4	2.2	4.6	4.9	15.6	23.9	18.6	37.9	42.3
LA	13.6	18.8	4.7	19.2	24.7	8.6	4.0	4.5	7.1	11.4	20.8	21.3	8.8	24.2	30.0
MI	11.7	18.4	6.4	23.8	29.6	0.8	0.3	0.2	0.5	1.3	12.5	18.6	6.6	24.0	30.4
MN	9.0	9.8	4.9	11.1	13.5	0.2	0.0	0.0	0.0	0.2	9.0	9.8	4.9	11.1	13.5
MS	28.2	31.4	19.8	36.0	43.7	6.6	5.4	4.3	7.3	8.2	32.2	32.2	23.6	38.2	45.9
MO	26.0	30.9	13.2	32.3	36.6	2.1	7.4	0.6	7.8	9.5	27.5	34.2	13.6	35.2	40.2
NE	23.3	21.4	14.6	23.7	37.6	2.2	3.5	0.5	3.8	4.5	24.5	22.7	14.6	24.9	38.3
New England ¹	28.8	20.3	5.5	21.6	42.5	3.6	1.7	0.5	2.1	5.5	32.2	21.8	6.0	23.3	47.4
NM	23.6	18.5	8.1	22.4	35.0	11.6	6.6	6.6	11.8	22.4	30.1	23.7	13.9	31.6	47.3
NY	12.6	11.6	25.0	30.1	34.2	1.2	1.4	1.0	1.4	1.6	13.8	12.7	26.0	31.2	35.3
NC	18.2	14.4	9.8	17.9	25.8	1.7	2.4	0.8	3.0	3.9	19.4	16.0	10.1	19.5	27.6
OH	36.4	29.1	13.2	33.8	54.7	1.2	1.0	3.8	4.4	4.6	37.3	29.9	15.6	36.2	55.6
OK	35.0	34.0	21.0	43.1	55.3	6.6	10.3	7.1	15.9	18.3	39.5	40.1	25.4	51.4	64.5
OR	18.0	20.0	11.3	22.1	27.5	4.3	2.8	3.2	5.6	8.0	20.6	22.3	14.1	26.5	31.7
PA	9.0	19.0	4.2	21.1	24.4	0.0	0.9	0.4	0.9	0.9	9.1	20.0	4.7	22.0	24.9
SC	31.2	39.0	23.3	47.6	58.2	12.3	9.7	9.5	13.7	19.8	42.6	45.2	31.8	57.5	73.7
TN	39.1	37.3	7.0	40.1	52.7	5.8	8.6	1.3	9.9	14.0	43.7	39.8	8.4	43.6	57.9
TX	43.9	34.5	23.8	47.3	58.3	10.5	21.1	9.7	25.4	28.0	50.8	49.0	31.5	63.0	70.2
VA	31.7	23.6	7.8	26.5	44.1	1.7	3.3	2.5	5.6	5.8	32.2	26.5	10.0	29.7	46.9
WA	15.5	5.4	2.5	6.3	18.8	2.6	0.5	1.0	1.4	3.9	15.9	5.8	3.0	7.2	19.7
WV	46.2	25.2	6.8	27.3	56.6	2.4	7.9	0.7	8.3	10.3	47.0	30.2	7.1	32.2	58.7
WI	27.3	15.3	3.5	16.5	29.7	0.0	0.0	0.0	0.0	0.0	27.3	15.3	3.5	16.5	29.7
Other states ²	25.1	27.7	14.7	33.3	46.1	1.8	3.5	1.9	4.8	5.6	26.4	29.2	16.1	35.2	47.9
U.S.	25.9	23.3	11.1	27.9	38.2	4.7	6.5	3.1	8.4	10.7	29.2	27.3	13.6	32.7	42.8

¹ New England includes CT, ME, MA, NH, RI, and VT.

² Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

A.2.d. Percentage of adult goats lost in 2020 as a percentage of January 1, 2021, adult goat inventory and percentage of kids lost in 2020 as a percentage of kid crop, by state, by animal class, and by cause:

State	Percent Inventory Lost Cause of Loss														
	Nonpredator					Predator					All causes				
	Adults	Pre-weaned kids	Post-weaned kids	Total kids	Total adult and kid goats	Adults	Pre-weaned kids	Post-weaned kids	Total kids	Total adult and kid goats	Adults	Pre-weaned kids	Post-weaned kids	Total kids	Total adult and kid goats
AL	8.0	12.6	5.1	17.8	13.5	5.2	3.3	2.6	5.9	5.6	13.2	16.0	7.7	23.7	19.1
AZ	4.4	8.6	4.6	13.1	8.7	9.2	2.7	3.3	6.0	7.6	13.6	11.3	7.8	19.1	16.3
AR	6.6	8.3	4.6	12.9	9.8	2.2	3.3	0.7	4.0	3.1	8.8	11.7	5.2	16.9	12.9
CA	5.7	10.1	3.0	13.1	9.0	1.1	2.0	1.1	3.1	2.0	6.9	12.1	4.1	16.2	11.0
CO	6.5	7.4	1.3	8.7	7.6	0.4	6.7	2.2	8.9	4.5	6.9	14.1	3.5	17.6	12.0
FL	4.2	13.1	7.1	20.2	9.1	1.6	7.3	0.6	8.0	3.6	5.8	20.4	7.7	28.2	12.7
GA	4.4	11.6	4.5	16.1	8.2	2.1	8.0	2.4	10.4	4.8	6.5	19.6	6.9	26.5	13.0
ID	3.5	7.9	3.3	11.2	6.8	1.1	3.1	1.1	4.2	2.4	4.6	11.0	4.4	15.4	9.2
IL	13.0	10.6	1.3	11.8	12.3	0.2	4.0	0.1	4.0	2.4	13.1	14.6	1.3	15.9	14.7
IN	6.2	7.3	3.3	10.6	8.6	0.2	0.1	0.1	0.3	0.2	6.4	7.5	3.5	10.9	8.8
IA	5.2	10.7	3.0	13.7	9.8	0.1	0.4	0.2	0.6	0.4	5.3	11.2	3.2	14.3	10.2
KS	5.5	10.0	3.7	13.7	9.5	3.1	5.5	0.4	5.9	4.4	8.6	15.5	4.1	19.5	13.9
KY	3.9	11.1	5.5	16.6	8.5	0.1	1.8	0.9	2.6	1.0	4.1	12.9	6.4	19.2	9.6
LA	5.1	11.2	1.7	12.9	8.3	2.5	2.8	2.5	5.2	3.6	7.6	14.0	4.2	18.2	12.0
MI	4.7	15.3	2.7	18.0	11.1	0.3	0.2	0.1	0.2	0.3	5.0	15.5	2.7	18.2	11.4
MN	3.1	3.9	1.0	4.9	4.2	0.0	0.0	0.0	0.0	0.0	3.2	3.9	1.0	4.9	4.2
MS	7.3	15.1	6.7	21.8	13.1	4.7	6.8	3.9	10.7	7.1	12.0	22.0	10.5	32.5	20.3
MO	6.0	16.4	5.3	21.6	13.2	0.6	2.7	0.8	3.5	2.0	6.6	19.1	6.1	25.2	15.2
NE	5.2	9.6	3.9	13.4	10.2	0.8	0.7	0.1	0.7	0.8	6.1	10.2	3.9	14.2	10.9
New England ¹	10.0	10.1	2.6	12.7	11.4	0.5	0.4	0.1	0.5	0.5	10.6	10.5	2.7	13.2	11.9
NM	3.8	6.5	2.9	9.4	6.4	2.5	4.8	2.4	7.2	4.7	6.3	11.4	5.3	16.6	11.1
NY	6.1	6.6	8.0	14.6	11.0	0.3	0.2	0.2	0.4	0.3	6.3	6.9	8.2	15	11.3
NC	6.8	11.0	4.6	15.6	10.9	0.5	1.3	0.3	1.6	1.0	7.3	12.3	4.9	17.2	11.9
OH	3.9	8.2	2.3	10.5	6.6	0.4	0.4	0.8	1.3	0.8	4.4	8.6	3.2	11.8	7.4
OK	6.6	9.9	6.6	16.5	11.0	1.3	3.3	1.3	4.6	2.8	7.9	13.2	7.9	21.1	13.8
OR	6.2	10.5	4.0	14.6	10.4	1.9	4.2	2.0	6.2	4.0	8.1	14.7	6.0	20.8	14.4
PA	3.7	14.9	2.0	16.9	9.1	0.5	0.6	0.4	1.0	0.7	4.1	15.5	2.4	17.9	9.8
SC	3.9	14.1	10.0	24.1	8.7	1.1	3.1	2.0	5.1	2.0	5.0	17.2	12.0	29.1	10.8
TN	8.1	14.9	2.7	17.6	12.3	2.1	2.8	0.3	3.1	2.5	10.2	17.7	3.0	20.7	14.9
TX	3.6	6.1	2.3	8.3	5.7	2.1	12.3	2.2	14.5	7.6	5.7	18.4	4.4	22.8	13.3
VA	8.2	12.7	3.5	16.3	11.5	0.3	2.6	2.1	4.6	2.1	8.5	15.3	5.6	20.9	13.6
WA	8.7	6.1	1.8	7.9	8.4	1.0	0.3	0.7	1.0	1.0	9.7	6.4	2.5	8.9	9.4
WV	7.5	7.1	1.5	8.6	8.0	0.6	3.5	0.2	3.7	1.9	8.1	10.6	1.7	12.3	9.9
WI	7.1	9.6	3.6	13.1	10.3	0.1	0.0	0.2	0.2	0.1	7.2	9.6	3.8	13.3	10.4
Other states ²	5.9	7.9	2.9	10.8	8.6	1.2	1.9	0.9	2.7	2.0	7.1	9.8	3.8	13.6	10.6
U.S.	5.3	8.9	3.3	12.2	8.5	1.7	5.2	1.3	6.5	3.9	6.9	14.1	4.5	18.7	12.4

¹ New England includes CT, ME, MA, NH, RI, and VT.

² Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

3. Operations with any loss

Under half, 42.8 percent (SE = 1.9) of operations had any adult or kid goat losses in 2020, nearly the same percentage as in 2015 (42.7 percent, SE = 1.6). In both years, a lower percentage of small operations had losses of any type compared to medium, large, and very large operations. In 2020, the percentages of operations with any losses varied by state, from 13.5 percent of operations in Minnesota to 73.7 percent of operations in South Carolina.

Over one-third (38.2 percent) of operations had any losses to nonpredator causes in 2020, while just over one-tenth (10.7 percent) of operations had any losses to predator causes, with most of the states that experienced the highest percentages of operations with any predation-related losses being in the southern regions of the United States.

A.3.a. Percentage of operations that had any adult or kid goat death losses in 2020, by cause and by herd size:

Percent Operations										
Herd Size (number of adult and kid goats)										
Cause of loss	Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error
Nonpredator	19.2	(2.0)	71.9	(2.9)	76.4	(2.2)	83.8	(1.8)	38.2	(1.8)
Predator	4.7	(0.7)	17.0	(2.4)	24.1	(2.1)	39.9	(2.1)	10.7	(0.7)
Any loss	22.1	(2.1)	79.9	(2.6)	83.4	(2.2)	95.4	(0.7)	42.8	(1.9)

A.3.b. Percentage of operations that had any adult or kid goat death losses in 2020, by cause and by state:

Percent Operations Cause of Loss						
State	Nonpredator		Predator		All causes	
	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error
AL	44.2	(8.3)	20.1	(4.5)	50.1	(8.9)
AZ	21.8	(7.4)	19.8	(6.3)	37.8	(9.0)
AR	34.8	(9.7)	14.7	(6.2)	38.4	(9.6)
CA	31.7	(8.1)	10.2	(3.1)	35.2	(8.9)
CO	39.8	(8.0)	15.0	(4.4)	47.5	(9.0)
FL	63.1	(7.0)	26.4	(8.4)	68.7	(6.6)
GA	52.2	(8.4)	32.6	(8.2)	67.8	(8.3)
ID	18.8	(6.6)	4.0	(2.2)	19.4	(6.8)
IL	44.6	(13.4)	17.2	(13.3)	45.7	(13.3)
IN	22.6	(7.6)	1.6	(0.9)	23.2	(7.6)
IA	57.1	(9.1)	5.3	(2.0)	59.7	(9.4)
KS	48.0	(9.4)	13.3	(3.8)	52.6	(10.0)
KY	39.6	(12.8)	4.9	(1.9)	42.3	(13.2)
LA	24.7	(10.9)	11.4	(5.6)	30.0	(13.0)
MI	29.6	(13.9)	1.3	(0.7)	30.4	(14.0)
MN	13.5	(5.2)	0.2	(0.2)	13.5	(5.2)
MS	43.7	(17.3)	8.2	(4.2)	45.9	(18.1)
MO	36.6	(7.3)	9.5	(3.1)	40.2	(7.7)
NE	37.6	(12.6)	4.5	(1.7)	38.3	(12.6)
New England ¹	42.5	(11.0)	5.5	(2.8)	47.4	(11.9)
NM	35.0	(7.7)	22.4	(6.4)	47.3	(8.5)
NY	34.2	(20.1)	1.6	(1.1)	35.3	(20.2)
NC	25.8	(4.2)	3.9	(1.0)	27.6	(4.2)
OH	54.7	(7.7)	4.6	(2.2)	55.6	(7.6)
OK	55.3	(8.5)	18.3	(3.8)	64.5	(9.4)
OR	27.5	(5.5)	8.0	(2.5)	31.7	(5.8)
PA	24.4	(7.3)	0.9	(0.6)	24.9	(7.4)
SC	58.2	(6.1)	19.8	(4.8)	73.7	(5.6)
TN	52.7	(10.2)	14.0	(4.8)	57.9	(10.7)
TX	58.3	(4.0)	28.0	(2.9)	70.2	(4.0)
VA	44.1	(11.6)	5.8	(2.2)	46.9	(12.0)
WA	18.8	(8.5)	3.9	(2.3)	19.7	(8.7)
WV	56.6	(8.6)	10.3	(3.5)	58.7	(8.4)
WI	29.7	(12.6)	0.0	(0.0)	29.7	(12.6)
Other states ²	46.1	(5.5)	5.6	(1.0)	47.9	(5.6)
U.S.	38.2	(1.8)	10.7	(0.7)	42.8	(1.9)

¹ New England includes CT, ME, MA, NH, RI, and VT.

² Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

B. Nonpredator Loss

There were few significant differences in percentages of losses attributed to specific nonpredator causes by operation size, and these differences changed by year. For example, in 2015, a higher percentage of adult goat nonpredator losses were due to respiratory disease on very large operations compared to small or medium operations. Additionally, a higher percentage of adult goat nonpredator losses on small operations were due to being found dead compared to very large operations.

In 2020, a higher percentage of adult and kid goats nonpredator losses were due to respiratory problems on very large operations compared to small operations, a higher percentage of adult goat nonpredator losses were due to weather-related causes on very large operations compared to small or large operations, and a higher percentage of adult goat nonpredator losses were due to parasites on large operations compared to small operations.

B.1. Number and percentage of adult goat death losses in 2020, by nonpredator cause and by herd size:

Number and Percent Loss										
Herd Size (number of adult and kid goats)										
	Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
Nonpredator cause	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Internal parasites	2,390	12.4	3,360	19.0	9,660	25.1	4,320	17.4	19,730	19.7
Enterotoxemia ¹	50	0.2	300	1.7	470	1.2	650	2.7	1,470	1.5
Other digestive problems ²	1,580	8.2	2,710	15.2	1,580	4.1	880	3.6	6,750	6.7
Respiratory problems	540	2.8	1,220	6.9	1,990	5.2	1,670	6.7	5,420	5.4
Metabolic problems ³	110	0.6	80	0.4	380	1.0	460	1.9	1,030	1.0
Pregnancy toxemia ⁴	250	1.3	370	2.1	1,180	3.1	720	2.9	2,520	2.5
Footrot	*	0.0	40	0.2	730	1.9	160	0.6	930	0.9
Other disease problems ⁵	380	2.0	380	2.1	520	1.4	680	2.8	1,960	2.0
Lameness ⁶	360	1.9	230	1.3	770	2.0	320	1.3	1,680	1.7
Kidding problems ⁷	570	2.9	630	3.5	1,800	4.7	1,070	4.3	4,070	4.1
Starvation	0	0.0	*	0.0	10	0.0	0	0.0	10	0.0
Poisoning ⁸	270	1.4	260	1.5	300	0.8	220	0.9	1,050	1.0
Weather-related causes ⁹	140	0.7	530	3.0	380	1.0	1,920	7.7	2,970	3.0
Fire ¹⁰	*	0.0	0	0.0	60	0.1	0	0.0	60	0.1
Theft (stolen)	60	0.3	0	0.0	40	0.1	100	0.4	200	0.2
Other nonpredator causes ¹¹	3,680	19.1	2,010	11.4	2,200	5.7	2,990	12.0	10,880	10.8
Found dead ¹²	2,910	15.1	1,700	9.6	4,860	12.6	2,720	10.9	12,190	12.1
Missing, unknown status	510	2.7	710	4.0	4,860	12.6	1,080	4.4	7,160	7.1
Unknown nonpredator causes	5,460	28.4	3,220	18.2	6,740	17.5	4,860	19.6	20,280	20.2
Total	19,260	100.0	17,750	100.0	38,530	100.0	24,820	100.0	100,360	100.0

¹ Also known as overeating disease.

² Such as bloat, scours, or acidosis.

³ Such as milk fever.

⁴ Applies only to adult does.

⁵ Such as mastitis. Also includes footrot in 2015.

⁶ Such as joint swelling, wounds, and accidents due to farm equipment, fencing, or other livestock.

⁷ Such as dystocia or floppy kid syndrome. Not applicable to postweaned kids.

⁸ Such as by nitrate, noxious feeds, or noxious weeds.

⁹ Such as chilling, drowning, or lightning.

¹⁰ Such as barn fire or pasture fire.

¹¹ Includes lameness in 2015.

¹² With cause undetermined.

* Estimate was less than or equal to 5.

B.2. Number and percentage of preweaned kid goat death losses in 2020, by nonpredator cause and by herd size:

Number and Percent Loss										
	Herd Size (number of adult and kid goats)									
	Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
Nonpredator cause	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Internal parasites	1,660	9.5	3,050	13.4	10,430	16.4	4,140	9.3	19,280	13.0
Enterotoxemia ¹	20	0.1	590	2.6	1,310	2.1	1,510	3.4	3,430	2.3
Other digestive problems ²	440	2.5	600	2.7	5,030	7.9	3,890	8.8	9,960	6.7
Respiratory problems	490	2.8	2,030	9.0	4,140	6.5	5,560	12.6	12,220	8.3
Metabolic problems ³	30	0.1	170	0.7	670	1.1	80	0.2	950	0.6
Pregnancy toxemia ⁴	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Footrot	0	0.0	*	0.0	30	0.0	30	0.1	60	0.0
Other disease problems ⁵	850	4.9	150	0.7	770	1.2	370	0.8	2,140	1.4
Lameness ⁶	1,780	10.2	680	3.0	350	0.6	180	0.4	2,990	2.0
Kidding problems ⁷	2,500	14.3	2,530	11.1	6,560	10.3	4,200	9.5	15,790	10.7
Starvation	90	0.5	890	3.9	880	1.4	840	1.9	2,700	1.8
Poisoning ⁸	230	1.3	40	0.2	730	1.1	920	2.1	1,920	1.3
Weather-related causes ⁹	1,050	6.0	3,550	15.7	6,570	10.4	2,870	6.5	14,040	9.5
Fire ¹⁰	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Theft (stolen)	40	0.3	10	0.1	10	0.0	30	0.1	90	0.1
Other nonpredator causes ¹¹	650	3.7	920	4.1	2,820	4.4	1,050	2.4	5,440	3.7
Found dead ¹²	4,100	23.4	2,500	11.0	8,190	12.9	6,290	14.2	21,080	14.3
Missing, unknown status	610	3.5	760	3.4	4,170	6.6	3,790	8.6	9,330	6.3
Unknown nonpredator causes	2,950	16.8	4,190	18.5	10,790	17.0	8,510	19.2	26,430	17.9
Total	17,490	100.0	22,660	100.0	63,450	100.0	44,260	100.0	147,850	100.0

¹ Also known as overeating disease.

² Such as bloat, scours, or acidosis.

³ Such as milk fever.

⁴ Applies only to adult does.

⁵ Such as mastitis. Also includes footrot in 2015.

⁶ Such as joint swelling, wounds, and accidents due to farm equipment, fencing, or other livestock.

⁷ Such as dystocia or floppy kid syndrome. Not applicable to postweaned kids.

⁸ Such as by nitrate, noxious feeds, or noxious weeds.

⁹ Such as chilling, drowning, or lightning.

¹⁰ Such as barn fire or pasture fire.

¹¹ Includes lameness in 2015.

¹² With cause undetermined.

NA Information not collected in that year for those causes.

* Estimate was less than or equal to 5.

B.3. Number and percentage of postweaned kid goat death losses in 2020, by nonpredator cause and by herd size:

Number and Percent Loss										
	Herd Size (number of adult and kid goats)									
	Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
Nonpredator cause	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Internal parasites	1,050	15.4	2,210	33.6	5,770	23.3	2,750	17.2	11,780	21.8
Enterotoxemia ¹	120	1.8	320	4.9	340	1.4	510	3.2	1,290	2.4
Other digestive problems ²	310	4.5	320	4.8	1,650	6.7	1,530	9.6	3,810	7.0
Respiratory problems	120	1.8	450	6.9	2,910	11.7	2,520	15.8	6,000	11.1
Metabolic problems ³	10	0.2	70	1.0	330	1.4	30	0.2	440	0.8
Pregnancy toxemia ⁴	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Footrot	0	0.0	0	0.0	*	0.0	10	0.1	10	0.0
Other disease problems ⁵	130	1.8	20	0.3	190	0.8	220	1.4	560	1.0
Lameness ⁶	170	2.5	70	1.1	250	1.0	240	1.5	730	1.4
Kidding problems ⁷	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Starvation	0	0.0	50	0.7	60	0.3	40	0.2	150	0.3
Poisoning ⁸	160	2.3	10	0.2	160	0.6	100	0.6	430	0.8
Weather-related causes ⁹	460	6.8	420	6.4	440	1.8	470	3.0	1,790	3.3
Fire ¹⁰	50	0.8	0	0.0	10	0.0	0	0.0	60	0.1
Theft (stolen)	0	0.0	20	0.2	20	0.1	30	0.2	70	0.1
Other nonpredator causes ¹¹	120	1.7	280	4.2	810	3.3	370	2.3	1,580	2.9
Found dead ¹²	820	12.0	370	5.7	2,740	11.1	1,980	12.4	5,910	10.9
Missing, unknown status	840	12.3	480	7.3	3,630	14.7	1,440	9.0	6,390	11.8
Unknown nonpredator causes	2,460	35.9	1,490	22.7	5,400	21.8	3,730	23.3	13,080	24.2
Total	6,820	100.0	6,580	100.0	24,710	100.0	15,970	100.0	54,080	100.0

¹ Also known as overeating disease.

² Such as bloat, scours, or acidosis.

³ Such as milk fever.

⁴ Applies only to adult does.

⁵ Such as mastitis. Also includes footrot in 2015.

⁶ Such as joint swelling, wounds, and accidents due to farm equipment, fencing, or other livestock.

⁷ Such as dystocia or floppy kid syndrome. Not applicable to postweaned kids.

⁸ Such as by nitrate, noxious feeds, or noxious weeds.

⁹ Such as chilling, drowning, or lightning.

¹⁰ Such as barn fire or pasture fire.

¹¹ Includes lameness in 2015.

¹² With cause undetermined.

NA Information not collected in that year for those causes.

* Estimate was less than or equal to 5.

B.4. Number and percentage of total kid goat death losses in 2020, by nonpredator cause and by herd size:

Number and Percent Loss										
Nonpredator cause	Herd Size (number of adult and kid goats)									
	Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Internal parasites	2,710	11.2	5,260	18.0	16,200	18.4	6,890	11.4	31,060	15.4
Enterotoxemia ¹	140	0.6	910	3.1	1,650	1.9	2,020	3.4	4,720	2.3
Other digestive problems ²	750	3.1	920	3.1	6,680	7.6	5,420	9.0	13,770	6.8
Respiratory problems	610	2.5	2,480	8.5	7,050	8.0	8,080	13.4	18,220	9.0
Metabolic problems ³	40	0.2	240	0.8	1,000	1.1	110	0.2	1,390	0.7
Pregnancy toxemia ⁴	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Footrot	0	0.0	*	0.0	30	0.0	40	0.1	70	0.0
Other disease problems ⁵	980	4.0	170	0.6	960	1.1	590	1.0	2,700	1.3
Lameness ⁶	1,950	8.0	750	2.6	600	0.7	420	0.7	3,720	1.8
Kidding problems ⁷	2,500	10.3	2,530	8.6	6,560	7.4	4,200	7.0	15,790	7.8
Starvation	90	0.4	940	3.2	940	1.1	880	1.5	2,850	1.4
Poisoning ⁸	390	1.6	50	0.2	890	1.0	1,020	1.7	2,350	1.2
Weather-related causes ⁹	1,510	6.2	3,970	13.6	7,010	8.0	3,340	5.5	15,830	7.8
Fire ¹⁰	50	0.2	0	0.0	10	0.0	0	0.0	60	0.0
Theft (stolen)	40	0.2	30	0.1	30	0.0	60	0.1	160	0.1
Other nonpredator causes ¹¹	770	3.1	1,200	4.1	3,630	4.1	1,420	2.4	7,020	3.5
Found dead ¹²	4,920	20.2	2,870	9.8	10,930	12.4	8,270	13.7	26,990	13.4
Missing, unknown status	1,450	5.9	1,240	4.3	7,800	8.9	5,230	8.7	15,720	7.8
Unknown nonpredator causes	5,400	22.2	5,680	19.4	16,190	18.4	12,240	20.3	39,510	19.6
Total	24,300	100.0	29,240	100.0	88,160	100.0	60,230	100.0	201,930	100.0

¹ Also known as overeating disease.

² Such as bloat, scours, or acidosis.

³ Such as milk fever.

⁴ Applies only to adult does.

⁵ Such as mastitis. Also includes footrot in 2015.

⁶ Such as joint swelling, wounds, and accidents due to farm equipment, fencing, or other livestock.

⁷ Such as dystocia or floppy kid syndrome. Not applicable to postweaned kids.

⁸ Such as by nitrate, noxious feeds, or noxious weeds.

⁹ Such as chilling, drowning, or lightning.

¹⁰ Such as barn fire or pasture fire.

¹¹ Includes lameness in 2015.

¹² With cause undetermined.

NA Information not collected in that year for those causes.

* Estimate was less than or equal to 5.

B.5. Number and percentage of adult and kid goat death losses in 2020, by nonpredator cause and by herd size:

Number and Percent Loss										
	Herd Size (number of adult and kid goats)									
	Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
Nonpredator cause	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Internal parasites	5,100	11.7	8,620	18.3	25,860	20.4	11,210	13.2	50,790	16.8
Enterotoxemia ¹	190	0.4	1,210	2.6	2,120	1.7	2,670	3.1	6,190	2.0
Other digestive problems ²	2,330	5.4	3,630	7.7	8,260	6.5	6,300	7.4	20,520	6.8
Respiratory problems	1,150	2.6	3,700	7.9	9,040	7.1	9,750	11.5	23,640	7.8
Metabolic problems ³	150	0.3	320	0.7	1,380	1.1	570	0.7	2,420	0.8
Pregnancy toxemia ⁴	250	0.6	370	0.8	1,180	0.9	720	0.8	2,520	0.8
Footrot	*	0.0	40	0.1	760	0.6	200	0.2	1,000	0.3
Other disease problems ⁵	1,360	3.1	550	1.2	1,480	1.2	1,270	1.5	4,660	1.5
Lameness ⁶	2,310	5.3	980	2.1	1,370	1.1	740	0.9	5,400	1.8
Kidding problems ⁷	3,070	7.0	3,160	6.7	8,360	6.6	5,270	6.2	19,860	6.6
Starvation	90	0.2	940	2.0	950	0.8	880	1.0	2,860	0.9
Poisoning ⁸	660	1.5	310	0.7	1,190	0.9	1,240	1.5	3,400	1.1
Weather-related causes ⁹	1,650	3.8	4,500	9.6	7,390	5.8	5,260	6.2	18,800	6.2
Fire ¹⁰	50	0.1	0	0.0	70	0.1	0	0.0	120	0.0
Theft (stolen)	100	0.2	30	0.1	70	0.1	160	0.2	360	0.1
Other nonpredator causes ¹¹	4,450	10.2	3,210	6.9	5,830	4.6	4,410	5.2	17,900	5.9
Found dead ¹²	7,830	18.0	4,570	9.7	15,790	12.5	10,990	12.9	39,180	13.0
Missing, unknown status	1,960	4.5	1,950	4.2	12,660	10.0	6,310	7.4	22,880	7.6
Unknown nonpredator causes	10,860	24.9	8,900	19.0	22,930	18.1	17,100	20.1	59,790	19.8
Total	43,570	100.0	46,990	100.0	126,690	100.0	85,050	100.0	302,290	100.0

¹ Also known as overeating disease.

² Such as bloat, scours, or acidosis.

³ Such as milk fever.

⁴ Applies only to adult does.

⁵ Such as mastitis. Also includes footrot in 2015.

⁶ Such as joint swelling, wounds, and accidents due to farm equipment, fencing, or other livestock.

⁷ Such as dystocia or floppy kid syndrome. Not applicable to postweaned kids.

⁸ Such as by nitrate, noxious feeds, or noxious weeds.

⁹ Such as chilling, drowning, or lightning.

¹⁰ Such as barn fire or pasture fire.

¹¹ Includes lameness in 2015.

¹² With cause undetermined.

* Estimate was less than or equal to 5.

Among specific, known nonpredator causes of loss, internal parasites caused the greatest percentage of loss for both adult and total kid goats in both 2015 and 2020. Other top causes of loss included other digestive problems, respiratory problems, kidding problems, and weather-related causes.

The largest changes from 2015 to 2020 included decreases in the percentages of kids lost to weather-related causes. There were also non-significant changes in the percentages of goats lost to internal parasites and respiratory problems.

In 2020, “Other disease problems” included mastitis, cancer, heart disease, listeriosis, and caprine arthritis encephalitis, while “Other nonpredator causes” included old age, accidents, and issues with low weight or poor gain.

Of the nonpredator goat losses, the percentages of death losses due to unknown causes (found dead, missing with unknown status, or other unknown nonpredator causes) remained high, accounting for 39.4 percent of death losses in adult goats and 40.8 percent of death losses in kid goats.

B.6. Number and percentage of adult goat death losses, by nonpredator cause and by year:

	Number and Percent Loss			
	Year			
	2015		2020	
Nonpredator cause	No.	Pct.	No.	Pct.
Internal parasites	34,937	24.8	19,730	19.7
Enterotoxemia ¹	1,670	1.2	1,470	1.5
Other digestive problems ²	6,630	4.7	6,750	6.7
Respiratory problems	4,744	3.4	5,420	5.4
Metabolic problems ³	911	0.6	1,030	1.0
Pregnancy toxemia ⁴	2,255	1.6	2,520	2.5
Footrot	NA	NA	930	0.9
Other disease problems ⁵	3,469	2.5	1,960	2.0
Lameness ⁶	NA	NA	1,680	1.7
Kidding problems ⁷	7,394	5.2	4,070	4.1
Starvation	1,499	1.1	10	0.0
Poisoning ⁸	2,273	1.6	1,050	1.0
Weather-related causes ⁹	5,580	4.0	2,970	3.0
Fire ¹⁰	NA	NA	60	0.1
Theft (stolen)	2,037	1.4	200	0.2
Other nonpredator causes ¹¹	14,938	10.6	10,880	10.8
Found dead ¹²	22,688	16.1	12,190	12.1
Missing, unknown status	NA	NA	7,160	7.1
Unknown nonpredator causes	30,095	21.3	20,280	20.2
Total	141,120	100.0	100,360	100.0

¹ Also known as overeating disease.

² Such as bloat, scours, or acidosis.

³ Such as milk fever.

⁴ Applies only to adult does.

⁵ Such as mastitis. Also includes footrot in 2015.

⁶ Such as joint swelling, wounds, and accidents due to farm equipment, fencing, or other livestock.

⁷ Such as dystocia or floppy kid syndrome. Not applicable to postweaned kids.

⁸ Such as by nitrate, noxious feeds, or noxious weeds.

⁹ Such as chilling, drowning, or lightning.

¹⁰ Such as barn fire or pasture fire.

¹¹ Includes lameness in 2015.

¹² With cause undetermined.

NA Information not collected in that year for those nonpredator causes.

B.7. Percentage of adult goats lost as a percentage of adult goat inventory on January 1 of the following year, by nonpredator cause and by year:

	Percent Inventory	
	Year	
Nonpredator cause	2015	2020
Internal parasites	1.82	1.04
Enterotoxemia ¹	0.09	0.08
Other digestive problems ²	0.35	0.36
Respiratory problems	0.25	0.29
Metabolic problems ³	0.05	0.05
Pregnancy toxemia ⁴	0.12	0.13
Footrot	NA	0.05
Other disease problems ⁵	0.18	0.10
Lameness ⁶	NA	0.09
Kidding problems ⁷	0.39	0.21
Starvation	0.08	0.00
Poisoning ⁸	0.12	0.06
Weather-related causes ⁹	0.29	0.16
Fire ¹⁰	NA	0.00
Theft (stolen)	0.11	0.01
Other nonpredator causes ¹¹	0.78	0.57
Found dead ¹²	1.18	0.64
Missing, unknown status	NA	0.38
Unknown nonpredator causes	1.57	1.07
Total	7.35	5.29

¹ Also known as overeating disease.

² Such as bloat, scours, or acidosis.

³ Such as milk fever.

⁴ Applies only to adult does.

⁵ Such as mastitis. Also includes footrot in 2015.

⁶ Such as joint swelling, wounds, and accidents due to farm equipment, fencing, or other livestock.

⁷ Such as dystocia or floppy kid syndrome. Not applicable to postweaned kids.

⁸ Such as by nitrate, noxious feeds, or noxious weeds.

⁹ Such as chilling, drowning, or lightning.

¹⁰ Such as barn fire or pasture fire.

¹¹ Includes lameness in 2015.

¹² With cause undetermined.

NA Information not collected in that year for those nonpredator causes.

B.8. Number and percentage of preweaned kid goat death losses, by nonpredator cause and by year:

	Number and Percent Loss			
	Year			
	2015		2020	
Nonpredator cause	No.	Pct.	No.	Pct.
Internal parasites	27,658	15.6	19,280	13.0
Enterotoxemia ¹	1,686	1.0	3,430	2.3
Other digestive problems ²	9,411	5.3	9,960	6.7
Respiratory problems	9,874	5.6	12,220	8.3
Metabolic problems ³	2,348	1.3	950	0.6
Pregnancy toxemia ⁴	NA	NA	NA	NA
Footrot	NA	NA	60	0.0
Other disease problems ⁵	3,357	1.9	2,140	1.4
Lameness ⁶	NA	NA	2,990	2.0
Kidding problems ⁷	18,960	10.7	15,790	10.7
Starvation	3,011	1.7	2,700	1.8
Poisoning ⁸	2,025	1.1	1,920	1.3
Weather-related causes ⁹	33,742	19.0	14,040	9.5
Fire ¹⁰	NA	NA	0	0.0
Theft (stolen)	142	0.1	90	0.1
Other nonpredator causes ¹¹	15,490	8.7	5,440	3.7
Found dead ¹²	18,879	10.7	21,080	14.3
Missing, unknown status	NA	NA	9,330	6.3
Unknown nonpredator causes	30,675	17.3	26,430	17.9
Total	177,258	100.0	147,850	100.0

¹ Also known as overeating disease.

² Such as bloat, scours, or acidosis.

³ Such as milk fever.

⁴ Applies only to adult does.

⁵ Such as mastitis. Also includes footrot in 2015.

⁶ Such as joint swelling, wounds, and accidents due to farm equipment, fencing, or other livestock.

⁷ Such as dystocia or floppy kid syndrome. Not applicable to postweaned kids.

⁸ Such as by nitrate, noxious feeds, or noxious weeds.

⁹ Such as chilling, drowning, or lightning.

¹⁰ Such as barn fire or pasture fire.

¹¹ Includes lameness in 2015.

¹² With cause undetermined.

NA Information not collected in that year for those nonpredator causes.

B.9. Percentage of preweaned kid goats lost as a percentage of kid crop, by nonpredator cause and by year:

	Percent Kid Crop	
	Year	
Nonpredator cause	2015	2020
Internal parasites	1.68	1.16
Enterotoxemia ¹	0.10	0.21
Other digestive problems ²	0.57	0.60
Respiratory problems	0.60	0.74
Metabolic problems ³	0.14	0.06
Pregnancy toxemia ⁴	NA	NA
Footrot	NA	0.00
Other disease problems ⁵	0.20	0.13
Lameness ⁶	NA	0.18
Kidding problems ⁷	1.15	0.95
Starvation	0.18	0.16
Poisoning ⁸	0.12	0.12
Weather-related causes ⁹	2.04	0.85
Fire ¹⁰	NA	0.00
Theft (stolen)	0.01	0.01
Other nonpredator causes ¹¹	0.94	0.33
Found dead ¹²	1.14	1.27
Missing, unknown status	NA	0.56
Unknown nonpredator causes	1.86	1.60
Total	10.74	8.93

¹ Also known as overeating disease.

² Such as bloat, scours, or acidosis.

³ Such as milk fever.

⁴ Applies only to adult does.

⁵ Such as mastitis. Also includes footrot in 2015.

⁶ Such as joint swelling, wounds, and accidents due to farm equipment, fencing, or other livestock.

⁷ Such as dystocia or floppy kid syndrome. Not applicable to postweaned kids.

⁸ Such as by nitrate, noxious feeds, or noxious weeds.

⁹ Such as chilling, drowning, or lightning.

¹⁰ Such as barn fire or pasture fire.

¹¹ Includes lameness in 2015.

¹² With cause undetermined.

NA Information not collected in that year for those nonpredator causes.

B.10. Number and percentage of postweaned kid goat death losses, by nonpredator cause and by year:

	Number and Percent Loss			
	Year			
	2015		2020	
Nonpredator cause	No.	Pct.	No.	Pct.
Internal parasites	24,106	37.7	11,780	21.8
Enterotoxemia ¹	1,511	2.4	1,290	2.4
Other digestive problems ²	3,630	5.7	3,810	7.0
Respiratory problems	3,415	5.3	6,000	11.1
Metabolic problems ³	162	0.3	440	0.8
Pregnancy toxemia ⁴	NA	NA	NA	NA
Footrot	NA	NA	10	0.0
Other disease problems ⁵	1,806	2.8	560	1.0
Lameness ⁶	NA	NA	730	1.4
Kidding problems ⁷	NA	NA	NA	NA
Starvation	140	0.2	150	0.3
Poisoning ⁸	1,377	2.2	430	0.8
Weather-related causes ⁹	4,152	6.5	1,790	3.3
Fire ¹⁰	NA	NA	60	0.1
Theft (stolen)	1,146	1.8	70	0.1
Other nonpredator causes ¹¹	5,708	8.9	1,580	2.9
Found dead ¹²	6,103	9.5	5,910	10.9
Missing, unknown status	NA	NA	6,390	11.8
Unknown nonpredator causes	10,732	16.8	13,080	24.2
Total	63,988	100.0	54,080	100.0

¹ Also known as overeating disease.

² Such as bloat, scours, or acidosis.

³ Such as milk fever.

⁴ Applies only to adult does.

⁵ Such as mastitis. Also includes footrot in 2015.

⁶ Such as joint swelling, wounds, and accidents due to farm equipment, fencing, or other livestock.

⁷ Such as dystocia or floppy kid syndrome. Not applicable to postweaned kids.

⁸ Such as by nitrate, noxious feeds, or noxious weeds.

⁹ Such as chilling, drowning, or lightning.

¹⁰ Such as barn fire or pasture fire.

¹¹ Includes lameness in 2015.

¹² With cause undetermined.

NA Information not collected in that year for those nonpredator causes.

B.11. Percentage of postweaned kid goats lost as a percentage of kid crop, by nonpredator cause and by year:

	Percent Kid Crop	
	Year	
Nonpredator cause	2015	2020
Internal parasites	1.46	0.71
Enterotoxemia ¹	0.09	0.08
Other digestive problems ²	0.22	0.23
Respiratory problems	0.21	0.36
Metabolic problems ³	0.01	0.03
Pregnancy toxemia ⁴	NA	NA
Footrot	NA	0.00
Other disease problems ⁵	0.11	0.03
Lameness ⁶	NA	0.04
Kidding problems ⁷	NA	NA
Starvation	0.01	0.01
Poisoning ⁸	0.08	0.03
Weather-related causes ⁹	0.25	0.11
Fire ¹⁰	NA	0.00
Theft (stolen)	0.07	0.00
Other nonpredator causes ¹¹	0.35	0.10
Found dead ¹²	0.37	0.36
Missing, unknown status	NA	0.39
Unknown nonpredator causes	0.65	0.79
Total	3.88	3.27

¹ Also known as overeating disease.

² Such as bloat, scours, or acidosis.

³ Such as milk fever.

⁴ Applies only to adult does.

⁵ Such as mastitis. Also includes footrot in 2015.

⁶ Such as joint swelling, wounds, and accidents due to farm equipment, fencing, or other livestock.

⁷ Such as dystocia or floppy kid syndrome. Not applicable to postweaned kids.

⁸ Such as by nitrate, noxious feeds, or noxious weeds.

⁹ Such as chilling, drowning, or lightning.

¹⁰ Such as barn fire or pasture fire.

¹¹ Includes lameness in 2015.

¹² With cause undetermined.

NA Information not collected in that year for those nonpredator causes.

B.12. Number and percentage of total kid goat death losses, by nonpredator cause and by year:

	Number and Percent Loss			
	Year			
	2015		2020	
Nonpredator cause	No.	Pct.	No.	Pct.
Internal parasites	51,764	21.5	31,060	15.4
Enterotoxemia ¹	3,197	1.3	4,720	2.3
Other digestive problems ²	13,041	5.4	13,770	6.8
Respiratory problems	13,289	5.5	18,220	9.0
Metabolic problems ³	2,510	1.0	1,390	0.7
Pregnancy toxemia ⁴	NA	NA	NA	NA
Footrot	NA	NA	70	0.0
Other disease problems ⁵	5,163	2.1	2,700	1.3
Lameness ⁶	NA	NA	3,720	1.8
Kidding problems ⁷	18,960	7.9	15,790	7.8
Starvation	3,150	1.3	2,850	1.4
Poisoning ⁸	3,402	1.4	2,350	1.2
Weather-related causes ⁹	37,894	15.7	15,830	7.8
Fire ¹⁰	NA	NA	60	0.0
Theft (stolen)	1,288	0.5	160	0.1
Other nonpredator causes ¹¹	21,198	8.8	7,020	3.5
Found dead ¹²	24,983	10.4	26,990	13.4
Missing, unknown status	NA	NA	15,720	7.8
Unknown nonpredator causes	41,407	17.2	39,510	19.6
Total	241,246	100.0	201,930	100.0

¹ Also known as overeating disease.

² Such as bloat, scours, or acidosis.

³ Such as milk fever.

⁴ Applies only to adult does.

⁵ Such as mastitis. Also includes footrot in 2015.

⁶ Such as joint swelling, wounds, and accidents due to farm equipment, fencing, or other livestock.

⁷ Such as dystocia or floppy kid syndrome. Not applicable to postweaned kids.

⁸ Such as by nitrate, noxious feeds, or noxious weeds.

⁹ Such as chilling, drowning, or lightning.

¹⁰ Such as barn fire or pasture fire.

¹¹ Includes lameness in 2015.

¹² With cause undetermined.

NA Information not collected in that year for those nonpredator causes.

B.13. Percentage of total kid goats lost as a percentage of kid crop, by nonpredator cause and by year:

Nonpredator cause	Percent Kid Crop	
	Year	
	2015	2020
Internal parasites	3.14	1.88
Enterotoxemia ¹	0.19	0.29
Other digestive problems ²	0.79	0.83
Respiratory problems	0.80	1.10
Metabolic problems ³	0.15	0.08
Pregnancy toxemia ⁴	NA	NA
Footrot	NA	0.00
Other disease problems ⁵	0.31	0.16
Lameness ⁶	NA	0.22
Kidding problems ⁷	1.15	0.95
Starvation	0.19	0.17
Poisoning ⁸	0.21	0.14
Weather-related causes ⁹	2.30	0.96
Fire ¹⁰	NA	0.00
Theft (stolen)	0.08	0.01
Other nonpredator causes ¹¹	1.28	0.42
Found dead ¹²	1.51	1.63
Missing, unknown status	NA	0.95
Unknown nonpredator causes	2.51	2.39
Total	14.61	12.20

¹ Also known as overeating disease.

² Such as bloat, scours, or acidosis.

³ Such as milk fever.

⁴ Applies only to adult does.

⁵ Such as mastitis. Also includes footrot in 2015.

⁶ Such as joint swelling, wounds, and accidents due to farm equipment, fencing, or other livestock.

⁷ Such as dystocia or floppy kid syndrome. Not applicable to postweaned kids.

⁸ Such as by nitrate, noxious feeds, or noxious weeds.

⁹ Such as chilling, drowning, or lightning.

¹⁰ Such as barn fire or pasture fire.

¹¹ Includes lameness in 2015.

¹² With cause undetermined.

NA Information not collected in that year for those nonpredator causes.

B.14. Percentage of operations that had any death losses due to nonpredator causes in 2020 in goats in the following animal classes, by nonpredator cause and by animal class:

Nonpredator cause	Percent Operations									
	Animal Class									
	Adults		Preweaned kids		Postweaned kids		Total kids		Total adult and kid goats	
	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error
Internal parasites	5.1	(0.5)	2.7	(0.2)	2.8	(0.3)	4.7	(0.4)	7.7	(0.6)
Enterotoxemia ¹	0.4	(0.1)	0.7	(0.2)	0.3	(0.1)	1.0	(0.2)	1.3	(0.2)
Other digestive problems ²	2.1	(0.6)	1.7	(0.2)	0.9	(0.1)	2.4	(0.2)	4.2	(0.6)
Respiratory problems	1.6	(0.3)	1.9	(0.3)	0.9	(0.1)	2.4	(0.3)	3.6	(0.4)
Metabolic problems ³	0.4	(0.1)	0.2	(0.1)	0.1	(0.0)	0.3	(0.1)	0.6	(0.1)
Pregnancy toxemia ⁴	1.1	(0.1)	NA	NA	NA	NA	NA	NA	1.1	(0.1)
Footrot	0.3	(0.2)	0.0	(0.0)	0.0	(0.0)	0.0	(0.0)	0.3	(0.2)
Other disease problems ⁵	0.8	(0.1)	0.4	(0.2)	0.1	(0.0)	0.5	(0.2)	1.3	(0.2)
Lameness ⁶	0.8	(0.1)	1.4	(0.6)	0.3	(0.1)	1.7	(0.6)	2.4	(0.6)
Kidding problems ⁷	1.5	(0.1)	3.9	(0.5)	NA	NA	3.9	(0.5)	5.0	(0.5)
Starvation	0.0	(0.0)	0.7	(0.2)	0.1	(0.0)	0.7	(0.2)	0.8	(0.2)
Poisoning ⁸	0.3	(0.1)	0.2	(0.1)	0.1	(0.0)	0.2	(0.1)	0.5	(0.1)
Weather-related causes ⁹	0.6	(0.2)	2.5	(0.5)	0.4	(0.1)	2.8	(0.5)	3.2	(0.5)
Fire ¹⁰	0.0	(0.0)	0.0	(—)	0.0	(0.0)	0.0	(0.0)	0.0	(0.0)
Theft (stolen)	0.0	(0.0)	0.0	(0.0)	0.0	(0.0)	0.0	(0.0)	0.1	(0.0)
Other nonpredator causes	4.3	(0.8)	1.4	(0.3)	0.3	(0.1)	1.6	(0.3)	5.6	(0.9)
Found dead ¹¹	4.5	(0.6)	4.0	(0.5)	1.4	(0.2)	4.7	(0.5)	8.1	(0.8)
Missing, unknown status	2.3	(0.4)	1.7	(0.3)	2.0	(0.5)	3.3	(0.6)	3.9	(0.6)
Unknown nonpredator causes	5.6	(0.7)	5.0	(0.5)	2.7	(0.5)	6.8	(0.7)	10.5	(1.0)
Total	25.9	(1.5)	23.3	(1.3)	11.1	(0.9)	27.9	(1.5)	38.2	(1.8)
Any disease- or parasite-related loss ¹²	10.1	(0.9)	6.7	(0.5)	4.6	(0.4)	9.3	(0.6)	15.3	(1.0)

¹ Also known as overeating disease.

² Such as bloat, scours, or acidosis.

³ Such as milk fever.

⁴ Applies only to adult does.

⁵ Such as mastitis. Also includes footrot in 2015.

⁶ Such as joint swelling, wounds, and accidents due to farm equipment, fencing, or other livestock.

⁷ Such as dystocia or floppy kid syndrome. Not applicable to postweaned kids.

⁸ Such as by nitrate, noxious feeds, or noxious weeds.

⁹ Such as chilling, drowning, or lightning.

¹⁰ Such as barn fire or pasture fire.

¹¹ With cause undetermined.

¹² Includes losses to internal parasites, enterotoxemia, other digestive problems, respiratory problems, metabolic problems, pregnancy toxemia, footrot, and other disease problems.

NA Information not collected in that year for those nonpredator causes.

B.15. Number of adult and kid goats that were lost due to internal parasites, enterotoxemia (overeating), other digestive problems, or respiratory problems in 2020, by state:

Number Adult and Kid Goats												
Nonpredator Cause												
State	Internal parasites			Enterotoxemia ¹			Other digestive problems ²			Respiratory problems		
	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats
AL	990	2,980	3,970	20	50	70	10	1,470	1,480	10	70	80
AZ	20	0	20	*	0	*	10	*	10	10	40	50
AR	680	2,080	2,760	0	*	*	60	240	300	490	40	530
CA	90	350	440	190	350	540	360	1,040	1,400	610	1,860	2,470
CO	30	120	150	90	150	240	230	210	440	500	170	670
FL	640	1,170	1,810	20	140	160	70	20	90	60	20	80
GA	500	1,270	1,770	0	10	10	80	30	110	0	30	30
ID	20	190	210	30	90	120	90	230	320	30	350	380
IL	500	450	950	20	210	230	70	210	280	80	330	410
IN	360	580	940	30	340	370	690	450	1,140	250	680	930
IA	420	600	1,020	50	250	300	80	1,210	1,290	180	1,290	1,470
KS	470	470	940	10	130	140	40	170	210	60	160	220
KY	690	860	1,550	0	70	70	50	250	300	70	270	340
LA	100	180	280	0	10	10	*	20	20	*	70	70
MI	200	110	310	10	190	200	50	100	150	20	90	110
MN	190	60	250	0	30	30	40	660	700	150	320	470
MS	290	630	920	*	20	20	90	170	260	20	20	40
MO	1,470	2,530	4,000	40	50	90	300	1,160	1,460	370	540	910
NE	130	190	320	10	30	40	40	120	160	80	740	820
New England ³	230	180	410	40	70	110	20	120	140	100	240	340
NM	10	20	30	130	*	130	0	120	120	50	160	210
NY	300	70	370	0	360	360	30	210	240	80	370	450
NC	1,340	1,380	2,720	60	120	180	40	160	200	30	100	130
OH	340	470	810	10	30	40	120	140	260	70	300	370
OK	1,200	1,630	2,830	30	130	160	80	560	640	320	1,660	1,980
OR	470	580	1,050	10	*	10	30	340	370	30	370	400
PA	280	270	550	40	120	160	90	290	380	60	210	270
SC	240	550	790	*	20	20	30	100	130	10	50	60
TN	1,240	2,460	3,700	0	250	250	140	560	700	320	1,470	1,790
TX	3,930	6,430	10,360	280	290	570	470	1,400	1,870	570	2,540	3,110
VA	940	680	1,620	190	40	230	60	210	270	210	60	270
WA	40	60	100	10	10	20	2,040	90	2,130	*	50	50
WV	200	120	320	10	20	30	10	10	20	20	50	70
WI	300	310	610	90	390	480	800	1,110	1,910	300	2,060	2,360
Other states ⁴	880	1,030	1,910	50	750	800	430	590	1,020	260	1,440	1,700
U.S.	19,730	31,060	50,790	1,470	4,720	6,190	6,750	13,770	20,520	5,420	18,220	23,640

¹ Also known as overeating disease.

² Such as bloat, scours, or acidosis.

³ New England includes CT, ME, MA, NH, RI, and VT.

⁴ Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

* Estimate was less than or equal to 5.

B.16. Number of adult and kid goats that were lost due to metabolic problems, pregnancy toxemia, footrot, or other disease problems in 2020, by state:

Number Adult and Kid Goats												
Nonpredator Cause												
State	Metabolic problems ¹			Pregnancy toxemia ²			Footrot			Other disease problems ³		
	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats
AL	120	390	510	20	NA	20	0	0	0	10	0	10
AZ	0	0	0	0	NA	0	0	0	0	0	0	0
AR	(D)	0	(D)	80	NA	80	(D)	(D)	(D)	0	0	0
CA	50	50	100	220	NA	220	30	40	70	50	30	80
CO	30	110	140	30	NA	30	0	0	0	50	0	50
FL	10	0	10	20	NA	20	0	0	0	50	50	100
GA	0	0	0	60	NA	60	0	0	0	50	50	100
ID	20	70	90	*	NA	*	0	0	0	10	40	50
IL	30	110	140	60	NA	60	10	0	10	40	30	70
IN	50	140	190	310	NA	310	40	0	40	120	790	910
IA	80	40	120	100	NA	100	0	0	0	250	70	320
KS	10	0	10	20	NA	20	20	0	20	10	0	10
KY	30	30	60	60	NA	60	0	0	0	10	20	30
LA	0	10	10	20	NA	20	0	0	0	20	50	70
MI	20	0	20	20	NA	20	10	(D)	(D)	50	0	50
MN	0	0	0	60	NA	60	10	0	10	20	100	120
MS	10	20	30	0	NA	0	20	0	20	20	10	30
MO	10	160	170	60	NA	60	30	0	30	40	30	70
NE	*	40	40	50	NA	50	0	(D)	(D)	0	0	0
New England ⁴	40	30	70	100	NA	100	10	0	10	80	10	90
NM	0	*	*	20	NA	20	0	0	0	0	20	20
NY	10	0	10	130	NA	130	0	0	0	10	0	10
NC	30	10	40	80	NA	80	20	0	20	40	30	70
OH	10	20	30	50	NA	50	0	0	0	40	10	50
OK	50	10	60	40	NA	40	0	0	0	50	0	50
OR	(D)	*	(D)	60	NA	60	(D)	0	(D)	140	0	140
PA	10	0	10	60	NA	60	*	*	*	40	30	70
SC	10	30	40	30	NA	30	0	0	0	*	30	30
TN	10	0	10	20	NA	20	690	0	690	150	110	260
TX	40	100	140	280	NA	280	0	0	0	210	740	950
VA	0	0	0	30	NA	30	0	0	0	80	140	220
WA	40	*	40	20	NA	20	0	0	0	*	0	*
WV	20	10	30	40	NA	40	0	0	0	20	0	20
WI	110	0	110	220	NA	220	0	0	0	70	190	260
Other states ⁵	180	10	190	150	NA	150	30	0	30	230	120	350
U.S.	1,030	1,390	2,420	2,520	NA	2,520	930	70	1,000	1,960	2,700	4,660

¹ Such as milk fever.

² Applies only to adult does.

³ Such as mastitis. Also includes footrot in 2015.

⁴ New England includes CT, ME, MA, NH, RI, and VT.

⁵ Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

(D) Values suppressed to avoid potential disclosure.

NA Information not collected in that year for those nonpredator causes.

* Estimate was less than or equal to 5.

B.17. Number of adult and kid goats that were lost due to lameness, kidding problems, starvation, or poisoning in 2020, by state:

State	Number Adult and Kid Goats											
	Nonpredator Cause											
	Lameness ¹			Kidding problems ²			Starvation			Poisoning ³		
	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats
AL	70	30	100	50	220	270	0	90	90	90	70	160
AZ	120	0	120	0	500	500	10	20	30	0	0	0
AR	20	(D)	(D)	0	760	760	0	(D)	(D)	0	0	0
CA	320	300	620	330	1,140	1,470	0	370	370	120	80	200
CO	60	30	90	100	420	520	0	30	30	*	10	10
FL	10	40	50	80	420	500	0	0	0	40	70	110
GA	20	60	80	10	210	220	0	80	80	30	0	30
ID	80	20	100	60	160	220	0	20	20	0	0	0
IL	20	940	960	50	380	430	*	10	10	10	*	10
IN	40	100	140	240	800	1,040	0	10	10	10	0	10
IA	20	60	80	180	370	550	0	90	90	0	10	10
KS	40	10	50	30	70	100	0	70	70	0	30	30
KY	20	40	60	70	240	310	0	50	50	30	120	150
LA	0	50	50	20	150	170	0	*	*	0	0	0
MI	10	(D)	(D)	20	90	110	0	40	40	0	0	0
MN	30	60	90	70	220	290	0	0	0	0	0	0
MS	70	100	170	10	60	70	0	30	30	0	0	0
MO	20	20	40	180	280	460	0	210	210	10	0	10
NE	10	50	60	20	220	240	0	(D)	(D)	10	10	20
New England ⁴	50	0	50	50	800	850	0	10	10	40	390	430
NM	20	0	20	100	40	140	0	20	20	*	40	40
NY	10	20	30	30	400	430	0	0	0	10	0	10
NC	10	10	20	140	90	230	0	0	0	20	40	60
OH	20	40	60	70	720	790	0	120	120	0	0	0
OK	20	350	370	170	500	670	0	80	80	60	50	110
OR	20	20	40	40	100	140	0	0	0	110	0	110
PA	*	20	20	270	250	520	0	10	10	120	10	130
SC	0	*	*	30	40	70	0	30	30	0	0	0
TN	110	20	130	130	270	400	0	650	650	30	10	40
TX	90	160	250	900	3,090	3,990	0	590	590	20	740	760
VA	60	180	240	90	440	530	0	30	30	210	0	210
WA	30	30	60	40	160	200	0	10	10	*	*	*
WV	*	40	40	30	130	160	0	*	*	10	*	10
WI	110	700	810	180	480	660	0	0	0	30	620	650
Other states ⁵	150	210	360	280	1,570	1,850	*	160	160	40	50	90
U.S.	1,680	3,720	5,400	4,070	15,790	19,860	10	2,850	2,860	1,050	2,350	3,400

¹ Such as joint swelling, wounds, and accidents due to farm equipment, fencing, or other livestock.

² Such as dystocia or floppy kid syndrome. Not applicable to postweaned kids.

³ Such as by nitrate, noxious feeds, or noxious weeds.

⁴ New England includes CT, ME, MA, NH, RI, and VT.

⁵ Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

(D) Values suppressed to avoid potential disclosure.

* Estimate was less than or equal to 5.

B.18. Number of adult and kid goats that were lost due to weather-related causes, fire, theft, or other nonpredator causes in 2020, by state:

State	Number Adult and Kid Goats											
	Nonpredator Cause											
	Weather-related causes ¹			Fire ²			Theft (stolen)			Other nonpredator causes ³		
	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats
AL	10	40	50	0	0	0	0	10	10	0	100	100
AZ	0	1,040	1,040	0	0	0	0	0	0	300	0	300
AR	0	180	180	0	0	0	0	0	0	200	80	280
CA	0	1,250	1,250	0	0	0	60	60	120	1,740	940	2,680
CO	80	200	280	0	0	0	0	0	0	40	40	80
FL	0	70	70	0	0	0	10	0	10	30	230	260
GA	60	380	440	0	10	10	0	10	10	60	370	430
ID	0	110	110	0	0	0	0	0	0	150	70	220
IL	10	680	690	0	0	0	0	0	0	50	40	90
IN	0	50	50	0	0	0	0	0	0	150	380	530
IA	30	300	330	0	0	0	0	10	10	40	30	70
KS	30	540	570	0	0	0	0	0	0	110	80	190
KY	0	190	190	0	0	0	0	20	20	280	160	440
LA	40	20	60	0	0	0	50	0	50	20	20	40
MI	10	20	30	0	0	0	0	*	*	100	140	240
MN	0	90	90	0	0	0	0	0	0	90	70	160
MS	30	110	140	0	0	0	0	0	0	40	190	230
MO	260	2,490	2,750	0	0	0	0	0	0	60	130	190
NE	30	260	290	0	0	0	0	50	50	30	50	80
New England ⁴	20	30	50	0	0	0	0	0	0	1,220	20	1,240
NM	0	260	260	0	0	0	10	0	10	70	20	90
NY	10	240	250	0	0	0	0	0	0	90	180	270
NC	20	160	180	0	0	0	0	*	*	110	140	250
OH	80	140	220	0	50	50	0	0	0	120	60	180
OK	20	380	400	0	0	0	0	0	0	380	150	530
OR	10	180	190	0	0	0	0	0	0	180	30	210
PA	0	30	30	0	0	0	0	0	0	50	400	450
SC	0	460	460	0	0	0	0	0	0	60	90	150
TN	80	1,910	1,990	0	0	0	0	0	0	760	180	940
TX	1,280	2,360	3,640	60	0	60	70	0	70	1,500	1,690	3,190
VA	30	250	280	0	0	0	0	0	0	670	160	830
WA	0	70	70	0	0	0	0	0	0	270	80	350
WV	*	70	70	0	0	0	0	0	0	150	100	250
WI	0	340	340	0	0	0	0	0	0	1,270	110	1,380
Other states ⁵	830	930	1,760	*	0	*	0	*	*	490	490	980
U.S.	2,970	15,830	18,800	60	60	120	200	160	360	10,880	7,020	17,900

¹ Such as chilling, drowning, or lightning.

² Such as barn fire or pasture fire.

³ Includes lameness in 2015.

⁴ New England includes CT, ME, MA, NH, RI, and VT.

⁵ Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

* Estimate was less than or equal to 5.

B.19. Number of adult and kid goats that were lost due being found dead, being missing with unknown status, or unknown nonpredator causes in 2020, by state:

State	Number Adult and Kid Goats								
	Nonpredator Cause								
	Found dead ¹			Missing, unknown status			Unknown nonpredator causes		
	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats
AL	950	1,420	2,370	40	140	180	230	510	740
AZ	130	60	190	20	20	40	1,470	4,210	5,680
AR	120	160	280	0	0	0	230	350	580
CA	700	390	1,090	50	10	60	350	1,450	1,800
CO	170	280	450	0	0	0	110	90	200
FL	550	910	1,460	30	600	630	170	120	290
GA	320	230	550	30	380	410	680	230	910
ID	130	160	290	10	*	10	60	80	140
IL	40	360	400	0	10	10	2,390	290	2,680
IN	240	380	620	0	30	30	50	380	430
IA	460	1,740	2,200	0	10	10	460	1,300	1,760
KS	70	430	500	70	380	450	640	1,320	1,960
KY	50	130	180	0	30	30	210	1,300	1,510
LA	20	60	80	0	0	0	180	200	380
MI	120	2,070	2,190	0	0	0	220	230	450
MN	70	100	170	0	30	30	200	730	930
MS	290	270	560	0	70	70	310	720	1,030
MO	160	1,010	1,170	10	0	10	400	2,150	2,550
NE	210	220	430	10	60	70	10	400	410
New England ²	280	300	580	*	0	*	570	1,350	1,920
NM	80	190	270	10	0	10	110	420	530
NY	140	210	350	0	50	50	610	2,630	3,240
NC	690	2,290	2,980	20	30	50	420	1,460	1,880
OH	210	330	540	230	10	240	190	440	630
OK	390	990	1,380	690	880	1,570	640	1,020	1,660
OR	290	570	860	0	330	330	640	2,260	2,900
PA	200	2,160	2,360	0	20	20	250	820	1,070
SC	160	220	380	10	20	30	410	310	720
TN	700	1,380	2,080	20	120	140	1,770	1,430	3,200
TX	2,410	3,590	6,000	5,860	12,370	18,230	3,750	4,510	8,260
VA	150	1,200	1,350	0	20	20	410	900	1,310
WA	60	580	640	0	0	0	570	410	980
WV	70	50	120	0	30	30	580	380	960
WI	970	930	1,900	0	0	0	490	3,030	3,520
Other states ³	590	1,620	2,210	50	70	120	500	2,080	2,580
U.S.	12,190	26,990	39,180	7,160	15,720	22,880	20,280	39,510	59,790

¹ With cause undetermined.

² New England includes CT, ME, MA, NH, RI, and VT.

³ Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

* Estimate was less than or equal to 5.

B.20. Percentage of adult goats lost in 2020 as a percentage of January 1, 2021, adult goat inventory and percentage of kids lost in 2020 as a percentage of kid crop due to internal parasites, enterotoxemia (overeating), other digestive problems, or respiratory problems in 2020, by state:

Percent Inventory Lost												
Nonpredator Cause												
State	Internal parasites			Enterotoxemia ¹			Other digestive problems ²			Respiratory problems		
	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats
AL	3.02	6.98	5.26	0.06	0.12	0.09	0.03	3.44	1.96	0.03	0.16	0.11
AZ	0.04	0.00	0.02	*	0.00	*	0.02	*	0.01	0.02	0.09	0.05
AR	2.36	6.86	4.67	0.00	*	*	0.21	0.79	0.51	1.70	0.13	0.90
CA	0.10	0.47	0.26	0.21	0.47	0.32	0.39	1.40	0.84	0.66	2.51	1.49
CO	0.13	0.56	0.34	0.39	0.70	0.54	0.99	0.98	0.98	2.15	0.79	1.50
FL	1.50	6.13	2.92	0.05	0.73	0.26	0.16	0.10	0.15	0.14	0.10	0.13
GA	1.15	6.11	2.75	0.00	0.05	0.02	0.18	0.14	0.17	0.00	0.14	0.05
ID	0.10	1.34	0.62	0.15	0.63	0.36	0.46	1.62	0.95	0.15	2.46	1.13
IL	1.92	1.32	1.58	0.08	0.61	0.38	0.27	0.61	0.46	0.31	0.96	0.68
IN	0.87	1.21	1.05	0.07	0.71	0.41	1.67	0.94	1.28	0.61	1.42	1.04
IA	0.93	1.11	1.03	0.11	0.46	0.30	0.18	2.24	1.30	0.40	2.39	1.49
KS	1.58	1.67	1.62	0.03	0.46	0.24	0.13	0.60	0.36	0.20	0.57	0.38
KY	1.73	3.77	2.47	0.00	0.31	0.11	0.13	1.10	0.48	0.18	1.18	0.54
LA	1.09	2.77	1.78	0.00	0.15	0.06	*	0.31	0.13	*	1.08	0.45
MI	1.09	0.64	0.87	0.05	1.10	0.56	0.27	0.58	0.42	0.11	0.52	0.31
MN	0.64	0.12	0.31	0.00	0.06	0.04	0.13	1.30	0.87	0.50	0.63	0.58
MS	1.76	5.68	3.33	*	0.18	0.07	0.55	1.53	0.94	0.12	0.18	0.14
MO	2.56	5.09	3.73	0.07	0.10	0.08	0.52	2.33	1.36	0.64	1.09	0.85
NE	1.07	1.04	1.05	0.08	0.16	0.13	0.33	0.66	0.52	0.66	4.04	2.69
New England ³	0.81	0.65	0.73	0.14	0.25	0.20	0.07	0.43	0.25	0.35	0.86	0.60
NM	0.06	0.14	0.10	0.80	*	0.43	0.00	0.86	0.40	0.31	1.15	0.70
NY	1.25	0.22	0.66	0.00	1.11	0.64	0.13	0.65	0.43	0.33	1.14	0.80
NC	2.98	3.58	3.26	0.13	0.31	0.22	0.09	0.42	0.24	0.07	0.26	0.16
OH	0.86	1.72	1.21	0.03	0.11	0.06	0.30	0.51	0.39	0.18	1.09	0.55
OK	1.91	3.20	2.49	0.05	0.26	0.14	0.13	1.10	0.56	0.51	3.26	1.74
OR	1.44	1.77	1.61	0.03	*	0.02	0.09	1.04	0.57	0.09	1.13	0.61
PA	0.70	0.99	0.82	0.10	0.44	0.24	0.23	1.06	0.57	0.15	0.77	0.40
SC	0.94	6.79	2.34	*	0.25	0.06	0.12	1.23	0.39	0.04	0.62	0.18
TN	1.62	3.99	2.68	0.00	0.41	0.18	0.18	0.91	0.51	0.42	2.39	1.30
TX	0.65	1.32	0.95	0.05	0.06	0.05	0.08	0.29	0.17	0.09	0.52	0.28
VA	2.45	2.57	2.50	0.49	0.15	0.35	0.16	0.79	0.42	0.55	0.23	0.42
WA	0.11	0.30	0.18	0.03	0.05	0.04	5.70	0.46	3.84	*	0.25	0.09
WV	1.29	1.03	1.18	0.06	0.17	0.11	0.06	0.09	0.07	0.13	0.43	0.26
WI	0.43	0.40	0.41	0.13	0.50	0.33	1.15	1.42	1.30	0.43	2.64	1.60
Other states ⁴	1.02	1.00	1.01	0.06	0.73	0.42	0.50	0.58	0.54	0.30	1.40	0.90
U.S.	1.04	1.88	1.43	0.08	0.29	0.17	0.36	0.83	0.58	0.29	1.10	0.67

¹ Also known as overeating disease.

² Such as bloat, scours, or acidosis.

³ New England includes CT, ME, MA, NH, RI, and VT.

⁴ Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

* Estimate was less than or equal to 5.

B.21. Percentage of adult goats lost in 2020 as a percentage of January 1, 2021, adult goat inventory and percentage of kids lost in 2020 as a percentage of kid crop due to metabolic problems, pregnancy toxemia, footrot, or other disease problems in 2020, by state:

Percent Inventory Lost												
Nonpredator Cause												
State	Metabolic problems ¹			Pregnancy toxemia ²			Footrot			Other disease problems ³		
	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats
AL	0.37	0.91	0.68	0.06	NA	0.03	0.00	0.00	0.00	0.03	0.00	0.01
AZ	0.00	0.00	0.00	0.00	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AR	(D)	0.00	(D)	0.28	NA	0.14	(D)	(D)	(D)	0.00	0.00	0.00
CA	0.05	0.07	0.06	0.24	NA	0.13	0.03	0.05	0.04	0.05	0.04	0.05
CO	0.13	0.51	0.31	0.13	NA	0.07	0.00	0.00	0.00	0.21	0.00	0.11
FL	0.02	0.00	0.02	0.05	NA	0.03	0.00	0.00	0.00	0.12	0.26	0.16
GA	0.00	0.00	0.00	0.14	NA	0.09	0.00	0.00	0.00	0.11	0.24	0.16
ID	0.10	0.49	0.27	*	NA	*	0.00	0.00	0.00	0.05	0.28	0.15
IL	0.11	0.32	0.23	0.23	NA	0.10	0.04	0.00	0.02	0.15	0.09	0.12
IN	0.12	0.29	0.21	0.75	NA	0.35	0.10	0.00	0.04	0.29	1.65	1.02
IA	0.18	0.07	0.12	0.22	NA	0.10	0.00	0.00	0.00	0.56	0.13	0.32
KS	0.03	0.00	0.02	0.07	NA	0.03	0.07	0.00	0.03	0.03	0.00	0.02
KY	0.08	0.13	0.10	0.15	NA	0.10	0.00	0.00	0.00	0.03	0.09	0.05
LA	0.00	0.15	0.06	0.22	NA	0.13	0.00	0.00	0.00	0.22	0.77	0.45
MI	0.11	0.00	0.06	0.11	NA	0.06	0.05	(D)	(D)	0.27	0.00	0.14
MN	0.00	0.00	0.00	0.20	NA	0.07	0.03	0.00	0.01	0.07	0.20	0.15
MS	0.06	0.18	0.11	0.00	NA	0.00	0.12	0.00	0.07	0.12	0.09	0.11
MO	0.02	0.32	0.16	0.10	NA	0.06	0.05	0.00	0.03	0.07	0.06	0.07
NE	*	0.22	0.13	0.41	NA	0.16	0.00	(D)	(D)	0.00	0.00	0.00
New England ⁴	0.14	0.11	0.12	0.35	NA	0.18	0.04	0.00	0.02	0.28	0.04	0.16
NM	0.00	*	*	0.12	NA	0.07	0.00	0.00	0.00	0.00	0.14	0.07
NY	0.04	0.00	0.02	0.54	NA	0.23	0.00	0.00	0.00	0.04	0.00	0.02
NC	0.07	0.03	0.05	0.18	NA	0.10	0.04	0.00	0.02	0.09	0.08	0.08
OH	0.03	0.07	0.04	0.13	NA	0.07	0.00	0.00	0.00	0.10	0.04	0.07
OK	0.08	0.02	0.05	0.06	NA	0.04	0.00	0.00	0.00	0.08	0.00	0.04
OR	(D)	*	(D)	0.18	NA	0.09	(D)	0.00	(D)	0.43	0.00	0.21
PA	0.03	0.00	0.01	0.15	NA	0.09	*	*	*	0.10	0.11	0.10
SC	0.04	0.37	0.12	0.12	NA	0.09	0.00	0.00	0.00	*	0.37	0.09
TN	0.01	0.00	0.01	0.03	NA	0.01	0.90	0.00	0.50	0.20	0.18	0.19
TX	0.01	0.02	0.01	0.05	NA	0.03	0.00	0.00	0.00	0.03	0.15	0.09
VA	0.00	0.00	0.00	0.08	NA	0.05	0.00	0.00	0.00	0.21	0.53	0.34
WA	0.11	*	0.07	0.06	NA	0.04	0.00	0.00	0.00	*	0.00	*
WV	0.13	0.09	0.11	0.26	NA	0.15	0.00	0.00	0.00	0.13	0.00	0.07
WI	0.16	0.00	0.07	0.32	NA	0.15	0.00	0.00	0.00	0.10	0.24	0.18
Other states ⁵	0.21	0.01	0.10	0.17	NA	0.08	0.03	0.00	0.02	0.27	0.12	0.18
U.S.	0.05	0.08	0.07	0.13	NA	0.07	0.05	0.00	0.03	0.10	0.16	0.13

¹ Such as milk fever.

² Applies only to adult does.

³ Such as mastitis. Also includes footrot in 2015.

⁴ New England includes CT, ME, MA, NH, RI, and VT.

⁵ Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

(D) Values suppressed to avoid potential disclosure.

NA Information not collected in that year for those nonpredator causes.

* Estimate was less than or equal to 5.

B.22. Percentage of adult goats lost in 2020 as a percentage of January 1, 2021, adult goat inventory and percentage of kids lost in 2020 as a percentage of kid crop due to lameness, kidding problems, starvation, or poisoning in 2020, by state:

Percent Inventory Lost												
Nonpredator Cause												
State	Lameness ¹			Kidding problems ²			Starvation			Poisoning ³		
	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats
AL	0.21	0.07	0.13	0.15	0.52	0.36	0.00	0.21	0.12	0.27	0.16	0.21
AZ	0.25	0.00	0.13	0.00	1.11	0.54	0.02	0.04	0.03	0.00	0.00	0.00
AR	0.07	(D)	(D)	0.00	2.51	1.29	0.00	(D)	(D)	0.00	0.00	0.00
CA	0.35	0.40	0.37	0.36	1.54	0.88	0.00	0.50	0.22	0.13	0.11	0.12
CO	0.26	0.14	0.20	0.43	1.96	1.16	0.00	0.14	0.07	*	0.05	0.02
FL	0.02	0.21	0.08	0.19	2.20	0.81	0.00	0.00	0.00	0.09	0.37	0.18
GA	0.05	0.29	0.12	0.02	1.01	0.34	0.00	0.38	0.12	0.07	0.00	0.05
ID	0.41	0.14	0.30	0.31	1.13	0.65	0.00	0.14	0.06	0.00	0.00	0.00
IL	0.08	2.75	1.59	0.19	1.11	0.71	*	0.03	0.02	0.04	*	0.02
IN	0.10	0.21	0.16	0.58	1.67	1.16	0.00	0.02	0.01	0.02	0.00	0.01
IA	0.04	0.11	0.08	0.40	0.69	0.56	0.00	0.17	0.09	0.00	0.02	0.01
KS	0.13	0.04	0.09	0.10	0.25	0.17	0.00	0.25	0.12	0.00	0.11	0.05
KY	0.05	0.18	0.10	0.18	1.05	0.49	0.00	0.22	0.08	0.08	0.53	0.24
LA	0.00	0.77	0.32	0.22	2.31	1.08	0.00	*	*	0.00	0.00	0.00
MI	0.05	(D)	(D)	0.11	0.52	0.31	0.00	0.23	0.11	0.00	0.00	0.00
MN	0.10	0.12	0.11	0.23	0.43	0.36	0.00	0.00	0.00	0.00	0.00	0.00
MS	0.42	0.90	0.62	0.06	0.54	0.25	0.00	0.27	0.11	0.00	0.00	0.00
MO	0.03	0.04	0.04	0.31	0.56	0.43	0.00	0.42	0.20	0.02	0.00	0.01
NE	0.08	0.27	0.20	0.16	1.20	0.79	0.00	(D)	(D)	0.08	0.05	0.07
New England ⁴	0.18	0.00	0.09	0.18	2.87	1.51	0.00	0.04	0.02	0.14	1.40	0.76
NM	0.12	0.00	0.07	0.62	0.29	0.47	0.00	0.14	0.07	*	0.29	0.13
NY	0.04	0.06	0.05	0.13	1.23	0.76	0.00	0.00	0.00	0.04	0.00	0.02
NC	0.02	0.03	0.02	0.31	0.23	0.28	0.00	0.00	0.00	0.04	0.10	0.07
OH	0.05	0.15	0.09	0.18	2.63	1.18	0.00	0.44	0.18	0.00	0.00	0.00
OK	0.03	0.69	0.33	0.27	0.98	0.59	0.00	0.16	0.07	0.10	0.10	0.10
OR	0.06	0.06	0.06	0.12	0.30	0.21	0.00	0.00	0.00	0.34	0.00	0.17
PA	*	0.07	0.03	0.68	0.91	0.77	0.00	0.04	0.01	0.30	0.04	0.19
SC	0.00	*	*	0.12	0.49	0.21	0.00	0.37	0.09	0.00	0.00	0.00
TN	0.14	0.03	0.09	0.17	0.44	0.29	0.00	1.06	0.47	0.04	0.02	0.03
TX	0.01	0.03	0.02	0.15	0.63	0.37	0.00	0.12	0.05	0.00	0.15	0.07
VA	0.16	0.68	0.37	0.23	1.66	0.82	0.00	0.11	0.05	0.55	0.00	0.32
WA	0.08	0.15	0.11	0.11	0.81	0.36	0.00	0.05	0.02	*	*	*
WV	*	0.34	0.15	0.19	1.11	0.59	0.00	*	*	0.06	*	0.04
WI	0.16	0.90	0.55	0.26	0.61	0.45	0.00	0.00	0.00	0.04	0.79	0.44
Other states ⁵	0.17	0.20	0.19	0.32	1.53	0.98	*	0.16	0.08	0.05	0.05	0.05
U.S.	0.09	0.22	0.15	0.21	0.95	0.56	0.00	0.17	0.08	0.06	0.14	0.10

¹ Such as joint swelling, wounds, and accidents due to farm equipment, fencing, or other livestock.

² Such as dystocia or floppy kid syndrome. Not applicable to postweaned kids.

³ Such as by nitrate, noxious feeds, or noxious weeds.

⁴ New England includes CT, ME, MA, NH, RI, and VT.

⁵ Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

(D) Values suppressed to avoid potential disclosure.

* Estimate was less than or equal to 5.

B.23. Percentage of adult goats lost in 2020 as a percentage of January 1, 2021, adult goat inventory and percentage of kids lost in 2020 as a percentage of kid crop due to weather-related causes, fire, theft, or other nonpredator causes in 2020, by state:

Percent Inventory Lost												
Nonpredator Cause												
State	Weather-related causes ¹			Fire ²			Theft (stolen)			Other nonpredator causes ³		
	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats
AL	0.03	0.09	0.07	0.00	0.00	0.00	0.00	0.02	0.01	0.00	0.23	0.13
AZ	0.00	2.32	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.63	0.00	0.33
AR	0.00	0.59	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.26	0.47
CA	0.00	1.68	0.75	0.00	0.00	0.00	0.07	0.08	0.07	1.89	1.27	1.61
CO	0.34	0.93	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.19	0.18
FL	0.00	0.37	0.11	0.00	0.00	0.00	0.02	0.00	0.02	0.07	1.20	0.42
GA	0.14	1.83	0.68	0.00	0.05	0.02	0.00	0.05	0.02	0.14	1.78	0.67
ID	0.00	0.77	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.77	0.49	0.65
IL	0.04	1.99	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.12	0.15
IN	0.00	0.10	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.79	0.59
IA	0.07	0.56	0.33	0.00	0.00	0.00	0.00	0.02	0.01	0.09	0.06	0.07
KS	0.10	1.91	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.28	0.33
KY	0.00	0.83	0.30	0.00	0.00	0.00	0.00	0.09	0.03	0.70	0.70	0.70
LA	0.43	0.31	0.38	0.00	0.00	0.00	0.54	0.00	0.32	0.22	0.31	0.25
MI	0.05	0.12	0.08	0.00	0.00	0.00	0.00	*	*	0.55	0.81	0.68
MN	0.00	0.18	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.14	0.20
MS	0.18	0.99	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.24	1.71	0.83
MO	0.45	5.01	2.57	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.26	0.18
NE	0.25	1.42	0.95	0.00	0.00	0.00	0.00	0.27	0.16	0.25	0.27	0.26
New England ⁴	0.07	0.11	0.09	0.00	0.00	0.00	0.00	0.00	0.00	4.30	0.07	2.20
NM	0.00	1.87	0.86	0.00	0.00	0.00	0.06	0.00	0.03	0.43	0.14	0.30
NY	0.04	0.74	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.56	0.48
NC	0.04	0.42	0.22	0.00	0.00	0.00	0.00	*	*	0.24	0.36	0.30
OH	0.20	0.51	0.33	0.00	0.18	0.07	0.00	0.00	0.00	0.30	0.22	0.27
OK	0.03	0.75	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.29	0.47
OR	0.03	0.55	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.09	0.32
PA	0.00	0.11	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.13	1.46	0.67
SC	0.00	5.68	1.36	0.00	0.00	0.00	0.00	0.00	0.00	0.23	1.11	0.45
TN	0.10	3.10	1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.29	0.68
TX	0.21	0.48	0.33	0.01	0.00	0.01	0.01	0.00	0.01	0.25	0.35	0.29
VA	0.08	0.94	0.43	0.00	0.00	0.00	0.00	0.00	0.00	1.74	0.60	1.28
WA	0.00	0.36	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.41	0.63
WV	*	0.60	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.97	0.85	0.92
WI	0.00	0.44	0.23	0.00	0.00	0.00	0.00	0.00	0.00	1.83	0.14	0.94
Other states ⁵	0.96	0.91	0.93	*	0.00	*	0.00	*	*	0.57	0.48	0.52
U.S.	0.16	0.96	0.53	0.00	0.00	0.00	0.01	0.01	0.01	0.57	0.42	0.50

¹ Such as chilling, drowning, or lightning.

² Such as barn fire or pasture fire.

³ Includes lameness in 2015.

⁴ New England includes CT, ME, MA, NH, RI, and VT.

⁵ Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

* Estimate was less than or equal to 5.

B.24. Percentage of adult goats lost in 2020 as a percentage of January 1, 2021, adult goat inventory and percentage of kids lost in 2020 as a percentage of kid crop due to being found dead, being missing with unknown status, or unknown nonpredator causes in 2020, by state:

State	Percent Inventory Lost								
	Nonpredator Cause								
	Found dead ¹			Missing, unknown status			Unknown nonpredator causes		
	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats
AL	2.90	3.33	3.14	0.12	0.33	0.24	0.70	1.19	0.98
AZ	0.27	0.13	0.21	0.04	0.04	0.04	3.11	9.38	6.16
AR	0.42	0.53	0.47	0.00	0.00	0.00	0.80	1.16	0.98
CA	0.76	0.53	0.66	0.05	0.01	0.04	0.38	1.95	1.08
CO	0.73	1.31	1.01	0.00	0.00	0.00	0.47	0.42	0.45
FL	1.29	4.76	2.36	0.07	3.14	1.02	0.40	0.63	0.47
GA	0.74	1.11	0.86	0.07	1.83	0.64	1.56	1.11	1.42
ID	0.67	1.13	0.86	0.05	*	0.03	0.31	0.56	0.42
IL	0.15	1.05	0.66	0.00	0.03	0.02	9.16	0.85	4.44
IN	0.58	0.79	0.69	0.00	0.06	0.03	0.12	0.79	0.48
IA	1.02	3.23	2.22	0.00	0.02	0.01	1.02	2.41	1.78
KS	0.24	1.52	0.86	0.24	1.35	0.78	2.15	4.68	3.39
KY	0.13	0.57	0.29	0.00	0.13	0.05	0.53	5.70	2.41
LA	0.22	0.92	0.51	0.00	0.00	0.00	1.96	3.08	2.42
MI	0.66	12.03	6.17	0.00	0.00	0.00	1.20	1.34	1.27
MN	0.23	0.20	0.21	0.00	0.06	0.04	0.67	1.44	1.16
MS	1.76	2.43	2.03	0.00	0.63	0.25	1.88	6.49	3.73
MO	0.28	2.03	1.09	0.02	0.00	0.01	0.70	4.33	2.38
NE	1.72	1.20	1.41	0.08	0.33	0.23	0.08	2.19	1.34
New England ²	0.99	1.08	1.03	*	0.00	*	2.01	4.84	3.41
NM	0.49	1.37	0.90	0.06	0.00	0.03	0.68	3.02	1.76
NY	0.58	0.65	0.62	0.00	0.15	0.09	2.54	8.12	5.74
NC	1.54	5.95	3.57	0.04	0.08	0.06	0.94	3.79	2.25
OH	0.53	1.20	0.80	0.58	0.04	0.36	0.48	1.61	0.94
OK	0.62	1.94	1.21	1.10	1.73	1.38	1.02	2.00	1.46
OR	0.89	1.74	1.31	0.00	1.01	0.50	1.96	6.89	4.43
PA	0.50	7.88	3.51	0.00	0.07	0.03	0.63	2.99	1.59
SC	0.63	2.72	1.13	0.04	0.25	0.09	1.60	3.83	2.14
TN	0.92	2.24	1.51	0.03	0.19	0.10	2.31	2.32	2.32
TX	0.40	0.74	0.55	0.97	2.54	1.67	0.62	0.93	0.76
VA	0.39	4.53	2.08	0.00	0.08	0.03	1.07	3.40	2.02
WA	0.17	2.94	1.15	0.00	0.00	0.00	1.59	2.08	1.77
WV	0.45	0.43	0.44	0.00	0.26	0.11	3.74	3.25	3.53
WI	1.40	1.19	1.29	0.00	0.00	0.00	0.71	3.88	2.39
Other states ³	0.68	1.58	1.17	0.06	0.07	0.06	0.58	2.03	1.36
U.S.	0.64	1.63	1.10	0.38	0.95	0.64	1.07	2.39	1.68

¹ With cause undetermined.

² New England includes CT, ME, MA, NH, RI, and VT.

³ Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

* Estimate was less than or equal to 5.

Confirmations of losses to nonpredator causes included producer-reported submissions to laboratories for testing or necropsy (post-mortem examination) for any of the nonpredator losses incurred during 2020.

For example, a producer might want to investigate unknown causes of death loss in their herd because, along with the assistance of a veterinarian, information from testing or necropsy could provide direction to management decisions to avoid further losses due to particular diseases or conditions witnessed in their goats.

Overall, 5.9 percent of operations reported performing this type of confirmation for nonpredator losses.

B.25. For the 38.2 percent of operations that had any nonpredator-related losses in 2020 (Table A.3.a.), percentage of operations that confirmed any of the nonpredator-related losses by laboratory testing or necropsy, by herd size:

Percent Operations									
Herd Size (number of adult and kid goats)									
Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error
5.1	(1.4)	3.8	(1.0)	7.3	(1.2)	10.2	(1.6)	5.9	(0.7)

B.26. For the 38.2 percent of operations that had any nonpredator-related losses in 2020 (Table A.3.a.), percentage of operations that confirmed any of the nonpredator-related losses by laboratory testing or necropsy, by state:

State	Percent Operations	
	Percent	Std. error
AL	7.0	(3.6)
AZ	(D)	(D)
AR	6.1	(4.4)
CA	10.3	(3.8)
CO	9.1	(6.0)
FL	15.4	(7.6)
GA	(D)	(D)
ID	10.5	(7.8)
IL	0.7	(0.4)
IN	5.1	(4.9)
IA	14.6	(5.9)
KS	4.6	(3.5)
KY	2.0	(1.3)
LA	7.4	(6.0)
MI	11.4	(7.6)
MN	12.9	(4.9)
MS	15.5	(7.0)
MO	2.7	(1.7)
NE	1.6	(1.0)
New England ¹	5.4	(3.2)
NM	3.0	(1.6)
NY	2.3	(1.4)
NC	7.6	(3.8)
OH	6.9	(5.4)
OK	6.7	(2.6)
OR	11.7	(6.8)
PA	0.8	(0.4)
SC	10.9	(6.4)
TN	1.1	(0.7)
TX	5.5	(1.9)
VA	5.2	(2.6)
WA	1.0	(0.5)
WV	0.0	(—)
WI	7.0	(3.3)
Other states ²	9.5	(3.0)
U.S.	5.9	(0.7)

¹ New England includes CT, ME, MA, NH, RI, and VT.

² Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

(D) Values suppressed to avoid potential disclosure.

In 2015, 24.6 percent of operations with any bred does had does abort and 4.4 percent of bred does on those operations aborted.

In 2020, the question wording was changed to align with how this question is asked in other NAHMS Goat studies. Regardless of wording, this metric is difficult to assess, especially for operations with animals that are on range or not monitored because, for example, predators may eat the fetuses on range before a producer observes them.

With the new question wording, on operations on which any kids were born, 33.0 percent had any kids born dead, including stillborn, aborted, and mummified fetuses and 4.5 percent of kids were estimated to have been born dead in 2020.

The percentage of bred does that aborted and the percentage of kids born dead were both lower for very large operations compared to small, medium, or large operations. Some of the differences could be because it is more difficult to observe aborting does or kids born dead on very large operations.

B.27. For operations on which any kids were born in 2020, percentage of operations with any kids that were born dead* (stillborn, aborted, mummified fetuses) in 2020, by herd size:

Percent Operations									
Herd Size (number of adult and kid goats)									
Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error
20.0	(3.9)	27.2	(3.0)	49.2	(2.4)	57.4	(2.3)	33.0	(1.9)

* Note that in 2015, the questionnaire asked about the percentage of bred does that aborted. In contrast, in 2020, the questionnaire asked about the percentage of kids that were born dead.

B.28. For operations on which any kids were born in 2020, percentage of operations with any kids that were born dead¹ (stillborn, aborted, mummified fetuses) in 2020, by state:

State	Percent Operations	
	Percent	Std. error
AL	32.2	(6.8)
AZ	14.0	(8.9)
AR	23.9	(9.1)
CA	42.3	(5.2)
CO	31.8	(6.4)
FL	26.1	(7.1)
GA	33.9	(5.7)
ID	36.8	(7.6)
IL	18.7	(7.9)
IN	19.1	(6.4)
IA	55.2	(5.8)
KS	46.8	(6.4)
KY	22.9	(4.1)
LA	37.5	(11.3)
MI	14.0	(6.8)
MN	29.9	(10.1)
MS	27.1	(6.9)
MO	42.3	(8.7)
NE	17.5	(6.3)
New England ²	28.6	(11.8)
NM	16.8	(5.7)
NY	53.2	(22.6)
NC	27.5	(6.5)
OH	58.6	(9.0)
OK	38.1	(8.6)
OR	42.7	(10.9)
PA	38.6	(11.2)
SC	45.7	(7.6)
TN	25.8	(5.3)
TX	36.1	(3.6)
VA	24.2	(7.2)
WA	17.0	(7.8)
WV	53.9	(12.5)
WI	38.7	(22.9)
Other states ³	43.4	(6.8)
U.S.	33.0	(1.9)

¹ Note that in 2015, the questionnaire asked about the percentage of bred does that aborted. In contrast, in 2020, the questionnaire asked about the percentage of kids that were born dead.

² New England includes CT, ME, MA, NH, RI, and VT.

³ Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

B.29. For operations on which any kids were born in 2020, percentage of kids that were born dead* (stillborn, aborted, mummified fetuses) as a percentage of 2020 kid crop, by herd size:

Percent Kids									
Herd Size (number of adult and kid goats)									
Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error
5.5	(1.1)	6.0	(0.8)	5.8	(0.3)	2.6	(0.1)	4.5	(0.2)

* Note that in 2015, the questionnaire asked about the percentage of bred does that aborted. In contrast, in 2020, the questionnaire asked about the percentage of kids that were born dead.

B.30. For operations on which any kids were born in 2020, percentage of kids that were born dead¹ (stillborn, aborted, mummified fetuses) as a percentage of 2020 kid crop, by state:

State	Percent Kids	
	Percent	Std. error
AL	6.2	(0.8)
AZ	2.3	(1.2)
AR	3.9	(1.7)
CA	5.6	(0.7)
CO	5.5	(1.4)
FL	5.1	(1.5)
GA	5.5	(0.9)
ID	4.8	(1.0)
IL	4.1	(1.2)
IN	4.8	(1.1)
IA	5.3	(0.5)
KS	4.6	(0.7)
KY	3.8	(0.6)
LA	5.3	(2.1)
MI	4.2	(1.1)
MN	4.3	(0.8)
MS	5.6	(1.6)
MO	5.9	(1.7)
NE	3.9	(1.0)
New England ²	3.7	(0.7)
NM	4.9	(1.3)
NY	5.9	(1.5)
NC	5.5	(1.2)
OH	7.7	(0.9)
OK	5.0	(0.8)
OR	4.8	(1.2)
PA	4.9	(1.4)
SC	8.1	(1.6)
TN	3.7	(0.6)
TX	2.9	(0.3)
VA	4.9	(0.8)
WA	3.8	(1.2)
WV	6.0	(1.9)
WI	5.7	(1.9)
Other states ³	5.6	(0.7)
U.S.	4.5	(0.2)

¹ Note that in 2015, the questionnaire asked about the percentage of bred does that aborted. In contrast, in 2020, the questionnaire asked about the percentage of kids that were born dead.

² New England includes CT, ME, MA, NH, RI, and VT.

³ Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

C. Predator Loss

The major causes of predator loss in adult and kid goats have not changed. Coyotes and dogs remain the primary predators, accounting for more than 60 percent of predator losses for both adult and kid goats each study year. In 2015, this amounted to almost 80,000 adult and kid goats lost and almost 100,000 lost in 2020.

Aside from coyotes and dogs, the highest percentage of losses of adult goats were attributed to mountain lions (cougars/pumas) and, for total kids, bobcats/lynx in 2015 and feral pigs in 2020.

In 2020, "Other predatory birds" included hawks, buzzards, owls, and turkey vultures. "Other known predator causes" included snakes, insects, and feral cats.

C.1. Number and percentage of adult goat death losses in 2020, by predator cause and by herd size:

Number and Percent Loss										
Predator cause	Herd Size (number of adult and kid goats)									
	Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Coyotes	1,780	33.0	2,710	56.3	8,210	61.9	3,450	43.9	16,150	51.6
Dogs	1,950	36.2	1,360	28.3	3,260	24.6	690	8.8	7,260	23.2
Foxes	*	0.1	20	0.5	10	0.0	50	0.6	80	0.2
Wolves	0	0.0	0	0.0	*	0.0	0	0.0	*	0.0
Bobcats or lynx	10	0.2	*	0.0	560	4.2	210	2.7	780	2.5
Mountain lions (cougars/pumas)	1,330	24.6	330	6.8	220	1.7	500	6.4	2,380	7.6
Bears	120	2.3	20	0.4	10	0.1	30	0.4	180	0.6
Black vultures	0	0.0	0	0.0	20	0.1	180	2.4	200	0.6
Ravens	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Eagles	0	0.0	90	2.0	160	1.2	10	0.0	260	0.8
Mexican eagles (Caracara)	0	0.0	0	0.0	0	0.0	280	3.6	280	0.9
Other predatory birds	0	0.0	0	0.0	80	0.6	0	0.0	80	0.3
Feral pigs	0	0.0	0	0.0	80	0.6	960	12.2	1,040	3.3
Other known predator causes	80	1.5	60	1.3	150	1.1	480	6.2	770	2.5
Other unknown predator causes	120	2.2	220	4.4	490	3.7	1,020	12.9	1,850	5.9
Total	5,390	100.0	4,810	100.0	13,250	100.0	7,860	100.0	31,310	100.0

* Estimate was less than or equal to 5.

C.2. Number and percentage of preweaned kid goat death losses in 2020, by predator cause and by herd size:

Number and Percent Loss										
Predator cause	Herd Size (number of adult and kid goats)									
	Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Coyotes	2,790	62.1	4,040	44.4	15,630	64.6	24,570	51.0	47,030	54.7
Dogs	430	9.6	3,240	35.6	3,830	15.8	1,360	2.8	8,860	10.3
Foxes	100	2.4	170	1.8	680	2.8	1,040	2.2	1,990	2.3
Wolves	0	0.0	0	0.0	10	0.0	10	0.0	20	0.0
Bobcats or lynx	130	2.9	100	1.2	580	2.4	1,610	3.3	2,420	2.8
Mountain lions (cougars/pumas)	550	12.3	40	0.5	40	0.2	710	1.5	1,340	1.6
Bears	20	0.4	10	0.1	10	0.1	90	0.2	130	0.2
Black vultures	0	0.0	130	1.4	340	1.4	2,120	4.4	2,590	3.0
Ravens	30	0.7	10	0.1	70	0.3	360	0.8	470	0.5
Eagles	120	2.6	40	0.4	400	1.7	2,970	6.2	3,530	4.1
Mexican eagles (Caracara)	0	0.0	0	0.0	520	2.1	2,310	4.8	2,830	3.3
Other predatory birds	0	0.0	550	6.0	70	0.3	110	0.2	730	0.8
Feral pigs	0	0.0	0	0.0	340	1.4	8,040	16.7	8,380	9.7
Other known predator causes	30	0.6	80	0.8	650	2.7	160	0.3	920	1.1
Other unknown predator causes	290	6.5	700	7.6	1,040	4.3	2,710	5.6	4,740	5.5
Total	4,490	100.0	9,110	100.0	24,210	100.0	48,170	100.0	85,980	100.0

C.3. Number and percentage of postweaned kid goat death losses in 2020, by predator cause and by herd size:

Number and Percent Loss										
Predator cause	Herd Size (number of adult and kid goats)									
	Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Coyotes	1,270	47.3	2,390	62.4	6,010	75.0	4,290	65.5	13,960	66.2
Dogs	490	18.1	990	26.0	1,540	19.2	310	4.8	3,330	15.8
Foxes	60	2.1	30	0.7	20	0.3	230	3.5	340	1.6
Wolves	0	0.0	0	0.0	0	0.0	40	0.6	40	0.2
Bobcats or lynx	10	0.4	50	1.3	130	1.7	310	4.7	500	2.4
Mountain lions (cougars/pumas)	440	16.2	310	8.2	70	0.8	290	4.5	1,110	5.3
Bears	*	0.1	0	0.0	10	0.1	0	0.0	10	0.0
Black vultures	0	0.0	10	0.1	60	0.7	210	3.2	280	1.3
Ravens	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Eagles	40	1.7	*	0.1	50	0.6	10	0.1	100	0.5
Mexican eagles (Caracara)	0	0.0	0	0.0	0	0.0	140	2.2	140	0.7
Other predatory birds	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Feral pigs	0	0.0	0	0.0	0	0.0	170	2.6	170	0.8
Other known predator causes	30	1.2	0	0.0	10	0.1	160	2.3	200	0.9
Other unknown predator causes	350	13.0	50	1.3	120	1.5	400	6.1	920	4.3
Total	2,690	100.0	3,830	100.0	8,020	100.0	6,560	100.0	21,100	100.0

* Estimate was less than or equal to 5.

C.4. Number and percentage of total kid goat death losses in 2020, by predator cause and by herd size:

Number and Percent Loss										
Predator cause	Herd Size (number of adult and kid goats)									
	Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Coyotes	4,060	56.5	6,430	49.7	21,640	67.2	28,860	52.7	60,990	57.0
Dogs	920	12.8	4,230	32.7	5,370	16.6	1,670	3.1	12,190	11.4
Foxes	160	2.3	200	1.5	700	2.2	1,270	2.3	2,330	2.2
Wolves	0	0.0	0	0.0	10	0.0	50	0.1	60	0.1
Bobcats or lynx	140	1.9	150	1.2	710	2.2	1,920	3.5	2,920	2.7
Mountain lions (cougars/pumas)	990	13.8	350	2.8	110	0.3	1,000	1.8	2,450	2.3
Bears	20	0.3	10	0.1	20	0.1	90	0.2	140	0.1
Black vultures	0	0.0	140	1.1	400	1.2	2,330	4.3	2,870	2.7
Ravens	30	0.4	10	0.1	70	0.2	360	0.7	470	0.4
Eagles	160	2.3	40	0.3	450	1.4	2,980	5.4	3,630	3.4
Mexican eagles (Caracara)	0	0.0	0	0.0	520	1.6	2,450	4.5	2,970	2.8
Other predatory birds	0	0.0	550	4.2	70	0.2	110	0.2	730	0.7
Feral pigs	0	0.0	0	0.0	340	1.1	8,210	15.0	8,550	8.0
Other known predator causes	60	0.8	80	0.6	660	2.0	320	0.6	1,120	1.0
Other unknown predator causes	640	8.9	750	5.8	1,160	3.6	3,110	5.7	5,660	5.3
Total	7,180	100.0	12,940	100.0	32,230	100.0	54,730	100.0	107,080	100.0

C.5. Number and percentage of adult and kid goat death losses in 2020, by predator cause and by herd size:

Number and Percent Loss										
Predator cause	Herd Size (number of adult and kid goats)									
	Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Coyotes	5,840	46.4	9,140	51.5	29,850	65.6	32,310	51.6	77,140	55.7
Dogs	2,870	22.8	5,590	31.5	8,630	19.0	2,360	3.8	19,450	14.1
Foxes	160	1.3	220	1.2	710	1.6	1,320	2.1	2,410	1.7
Wolves	0	0.0	0	0.0	10	0.0	50	0.1	60	0.0
Bobcats or lynx	150	1.2	150	0.9	1,270	2.8	2,130	3.4	3,700	2.7
Mountain lions (cougars/pumas)	2,320	18.4	680	3.9	330	0.7	1,500	2.4	4,830	3.5
Bears	140	1.1	30	0.2	30	0.1	120	0.2	320	0.2
Black vultures	0	0.0	140	0.8	420	0.9	2,510	4.0	3,070	2.2
Ravens	30	0.3	10	0.1	70	0.1	360	0.6	470	0.3
Eagles	160	1.3	130	0.7	610	1.4	2,990	4.8	3,890	2.8
Mexican eagles (Caracara)	0	0.0	0	0.0	520	1.1	2,730	4.4	3,250	2.3
Other predatory birds	0	0.0	550	3.1	150	0.3	110	0.2	810	0.6
Feral pigs	0	0.0	0	0.0	420	0.9	9,170	14.7	9,590	6.9
Other known predator causes	140	1.1	140	0.8	810	1.8	800	1.3	1,890	1.4
Other unknown predator causes	760	6.0	970	5.4	1,650	3.6	4,130	6.6	7,510	5.4
Total	12,570	100.0	17,750	100.0	45,480	100.0	62,590	100.0	138,390	100.0

C.6. Number and percentage of adult goat death losses, by predator cause and by year:

Predator cause	Number and Percent Loss			
	Year			
	2015		2020	
	No.	Pct.	No.	Pct.
Coyotes	12,581	32.4	16,150	51.6
Dogs	12,605	32.4	7,260	23.2
Foxes	208	0.5	80	0.2
Wolves	338	0.9	*	0.0
Bobcats or lynx	694	1.8	780	2.5
Mountain lions (cougars/pumas)	1,633	4.2	2,380	7.6
Bears	336	0.9	180	0.6
Black vultures ¹	NA	NA	200	0.6
Vultures (unspecified species) ¹	104	0.3	NA	NA
Ravens	72	0.2	0	0.0
Eagles	573	1.5	260	0.8
Mexican eagles (Caracara)	NA	NA	280	0.9
Other predatory birds	NA	NA	80	0.3
Feral pigs	478	1.2	1,040	3.3
Other known predator causes ²	1,082	2.8	770	2.5
Other unknown predator causes	8,176	21.0	1,850	5.9
Total	38,880	100.0	31,310	100.0

¹ "Black vultures" were a separate report category in 2020 only and replaced the generic "Vultures" category from 2015.

² Estimate from 2020 does not include "Mexican eagles (Caracara)" or "Other predatory birds" since those causes were separate reported categories in 2020 only.

NA Information not collected in that year for those predator causes.

* Estimate was less than or equal to 5.

C.7. Percentage of adult goats lost as a percentage of adult goat inventory on January 1 of the following year, by predator cause and by year:

	Percent Inventory	
	Year	
Predator cause	2015	2020
Coyotes	0.66	0.85
Dogs	0.66	0.38
Foxes	0.01	0.00
Wolves	0.02	0.00
Bobcats or lynx	0.04	0.04
Mountain lions (cougars/pumas)	0.09	0.13
Bears	0.02	0.01
Black vultures ¹	NA	0.01
Vultures (unspecified species) ¹	0.01	NA
Ravens	0.00	0.00
Eagles	0.03	0.01
Mexican eagles (Caracara)	NA	0.01
Other predatory birds	NA	0.00
Feral pigs	0.02	0.05
Other known predator causes ²	0.06	0.04
Other unknown predator causes	0.43	0.10
Total	2.03	1.65

¹ "Black vultures" were a separate report category in 2020 only and replaced the generic "Vultures" category from 2015.

² Estimate from 2020 does not include "Mexican eagles (Caracara)" or "Other predatory birds" since those causes were separate reported categories in 2020 only.

NA Information not collected in that year for those predator causes.

C.8. Number and percentage of preweaned kid goat death losses, by predator cause and by year:

Predator cause	Number and Percent Loss			
	Year			
	2015		2020	
	No.	Pct.	No.	Pct.
Coyotes	33,165	52.0	47,030	54.7
Dogs	9,789	15.3	8,860	10.3
Foxes	1,350	2.1	1,990	2.3
Wolves	22	0.0	20	0.0
Bobcats or lynx	4,328	6.8	2,420	2.8
Mountain lions (cougars/pumas)	1,039	1.6	1,340	1.6
Bears	212	0.3	130	0.2
Black vultures ¹	NA	NA	2,590	3.0
Vultures (unspecified species) ¹	1,646	2.6	NA	NA
Ravens	275	0.4	470	0.5
Eagles	3,030	4.7	3,530	4.1
Mexican eagles (Caracara)	NA	NA	2,830	3.3
Other predatory birds	NA	NA	730	0.8
Feral pigs	947	1.5	8,380	9.7
Other known predator causes ²	3,085	4.8	920	1.1
Other unknown predator causes	4,934	7.7	4,740	5.5
Total	63,822	100.0	85,980	100.0

¹ "Black vultures" were a separate report category in 2020 only and replaced the generic "Vultures" category from 2015.

² Estimate from 2020 does not include "Mexican eagles (Caracara)" or "Other predatory birds" since those causes were separate reported categories in 2020 only.

NA Information not collected in that year for those predator causes.

C.9. Percentage of preweaned kid goats lost as a percentage of kid crop, by predator cause and by year:

Predator cause	Percent Kid Crop	
	Year	
	2015	2020
Coyotes	2.01	2.84
Dogs	0.59	0.54
Foxes	0.08	0.12
Wolves	0.00	0.00
Bobcats or lynx	0.26	0.15
Mountain lions (cougars/pumas)	0.06	0.08
Bears	0.01	0.01
Black vultures ¹	NA	0.16
Vultures (unspecified species) ¹	0.10	NA
Ravens	0.02	0.03
Eagles	0.18	0.21
Mexican eagles (Caracara)	NA	0.17
Other predatory birds	NA	0.04
Feral pigs	0.06	0.51
Other known predator causes ²	0.19	0.06
Other unknown predator causes	0.30	0.29
Total	3.87	5.20

¹ "Black vultures" were a separate report category in 2020 only and replaced the generic "Vultures" category from 2015.

² Estimate from 2020 does not include "Mexican eagles (Caracara)" or "Other predatory birds" since those causes were separate reported categories in 2020 only.

NA Information not collected in that year for those predator causes.

C.10. Number and percentage of postweaned kid goat death losses, by predator cause and by year:

Predator cause	Number and Percent Loss			
	Year			
	2015		2020	
	No.	Pct.	No.	Pct.
Coyotes	7,084	35.5	13,960	66.2
Dogs	4,536	22.8	3,330	15.8
Foxes	275	1.4	340	1.6
Wolves	33	0.2	40	0.2
Bobcats or lynx	911	4.6	500	2.4
Mountain lions (cougars/pumas)	1,035	5.2	1,110	5.3
Bears	139	0.7	10	0.0
Black vultures ¹	NA	NA	280	1.3
Vultures (unspecified species) ¹	73	0.4	NA	NA
Ravens	0	0.0	0	0.0
Eagles	555	2.8	100	0.5
Mexican eagles (Caracara)	NA	NA	140	0.7
Other predatory birds	NA	NA	0	0.0
Feral pigs	52	0.3	170	0.8
Other known predator causes ²	598	3.0	200	0.9
Other unknown predator causes	4,638	23.3	920	4.3
Total	19,929	100.0	21,100	100.0

¹ "Black vultures" were a separate report category in 2020 only and replaced the generic "Vultures" category from 2015.

² Estimate from 2020 does not include "Mexican eagles (Caracara)" or "Other predatory birds" since those causes were separate reported categories in 2020 only.

NA Information not collected in that year for those predator causes.

C.11. Percentage of postweaned kid goats lost as a percentage of kid crop, by predator cause and by year:

Predator cause	Percent Kid Crop	
	Year	
	2015	2020
Coyotes	0.43	0.84
Dogs	0.27	0.20
Foxes	0.02	0.02
Wolves	0.00	0.00
Bobcats or lynx	0.06	0.03
Mountain lions (cougars/pumas)	0.06	0.07
Bears	0.01	0.00
Black vultures ¹	NA	0.02
Vultures (unspecified species) ¹	0.00	NA
Ravens	0.00	0.00
Eagles	0.03	0.01
Mexican eagles (Caracara)	NA	0.01
Other predatory birds	NA	0.00
Feral pigs	0.00	0.01
Other known predator causes ²	0.04	0.01
Other unknown predator causes	0.28	0.06
Total	1.21	1.27

¹ "Black vultures" were a separate report category in 2020 only and replaced the generic "Vultures" category from 2015.

² Estimate from 2020 does not include "Mexican eagles (Caracara)" or "Other predatory birds" since those causes were separate reported categories in 2020 only.

NA Information not collected in that year for those predator causes.

C.12. Number and percentage of total kid goat death losses, by predator cause and by year:

Predator cause	Number and Percent Loss			
	Year			
	2015		2020	
	No.	Pct.	No.	Pct.
Coyotes	40,249	48.1	60,990	57.0
Dogs	14,326	17.1	12,190	11.4
Foxes	1,625	1.9	2,330	2.2
Wolves	55	0.1	60	0.1
Bobcats or lynx	5,239	6.3	2,920	2.7
Mountain lions (cougars/pumas)	2,074	2.5	2,450	2.3
Bears	351	0.4	140	0.1
Black vultures ¹	NA	NA	2,870	2.7
Vultures (unspecified species) ¹	1,719	2.1	NA	NA
Ravens	275	0.3	470	0.4
Eagles	3,585	4.3	3,630	3.4
Mexican eagles (Caracara)	NA	NA	2,970	2.8
Other predatory birds	NA	NA	730	0.7
Feral pigs	999	1.2	8,550	8.0
Other known predator causes ²	3,683	4.4	1,120	1.0
Other unknown predator causes	9,572	11.4	5,660	5.3
Total	83,752	100.0	107,080	100.0

¹ "Black vultures" were a separate report category in 2020 only and replaced the generic "Vultures" category from 2015.

² Estimate from 2020 does not include "Mexican eagles (Caracara)" or "Other predatory birds" since those causes were separate reported categories in 2020 only.

NA Information not collected in that year for those predator causes.

C.13. Percentage of total kid goats lost as a percentage of kid crop, by predator cause and by year:

Predator cause	Percent Kid Crop	
	Year	
	2015	2020
Coyotes	2.44	3.69
Dogs	0.87	0.74
Foxes	0.10	0.14
Wolves	0.00	0.00
Bobcats or lynx	0.32	0.18
Mountain lions (cougars/pumas)	0.13	0.15
Bears	0.02	0.01
Black vultures ¹	NA	0.17
Vultures (unspecified species) ¹	0.10	NA
Ravens	0.02	0.03
Eagles	0.22	0.22
Mexican eagles (Caracara)	NA	0.18
Other predatory birds	NA	0.04
Feral pigs	0.06	0.52
Other known predator causes ²	0.22	0.07
Other unknown predator causes	0.58	0.34
Total	5.07	6.47

¹ "Black vultures" were a separate report category in 2020 only and replaced the generic "Vultures" category from 2015.

² Estimate from 2020 does not include "Mexican eagles (Caracara)" or "Other predatory birds" since those causes were separate reported categories in 2020 only.

NA Information not collected in that year for those predator causes.

C.14. Percentage of operations that had any death losses due to predators in 2020 in goats in the following animal classes, by predator cause and by animal class:

Percent Operations										
Predator cause	Animal Class									
	Adults		Preweaned kids		Postweaned kids		Total kids		Total adult and kid goats	
	Pct.	Std. Error	Pct.	Std. Error	Pct.	Std. Error	Pct.	Std. Error	Pct.	Std. Error
Coyotes	2.5	(0.3)	3.7	(0.4)	1.8	(0.2)	4.8	(0.5)	6.2	(0.5)
Dogs	1.6	(0.3)	1.7	(0.3)	0.8	(0.1)	2.2	(0.4)	3.4	(0.4)
Foxes	0.0	(0.0)	0.2	(0.1)	0.1	(0.0)	0.3	(0.1)	0.3	(0.1)
Wolves	0.0	(0.0)	0.0	(0.0)	0.0	(0.0)	0.0	(0.0)	0.0	(0.0)
Bobcats or lynx	0.1	(0.0)	0.4	(0.1)	0.1	(0.0)	0.4	(0.1)	0.5	(0.1)
Mountain lions (cougars/pumas)	0.4	(0.1)	0.2	(0.1)	0.3	(0.1)	0.4	(0.1)	0.7	(0.2)
Bears	0.1	(0.0)	0.0	(0.0)	0.0	(0.0)	0.0	(0.0)	0.1	(0.0)
Black vultures	0.0	(0.0)	0.2	(0.0)	0.0	(0.0)	0.2	(0.0)	0.2	(0.1)
Ravens	0.0	(—)	0.1	(0.0)	0.0	(—)	0.1	(0.0)	0.1	(0.0)
Eagles	0.0	(0.0)	0.2	(0.0)	0.0	(0.0)	0.2	(0.0)	0.2	(0.1)
Mexican eagles (Caracara)	0.0	(0.0)	0.2	(0.0)	0.0	(0.0)	0.2	(0.0)	0.2	(0.0)
Other predatory birds	0.0	(0.0)	0.2	(0.1)	0.0	(—)	0.2	(0.1)	0.2	(0.1)
Feral pigs	0.1	(0.0)	0.1	(0.0)	0.0	(0.0)	0.1	(0.0)	0.1	(0.0)
Other known predator causes	0.1	(0.0)	0.1	(0.0)	0.0	(0.0)	0.2	(0.0)	0.3	(0.1)
Other unknown predator causes	0.3	(0.1)	0.6	(0.2)	0.2	(0.1)	0.7	(0.2)	0.9	(0.2)
Total	4.7	(0.4)	6.5	(0.6)	3.1	(0.3)	8.4	(0.6)	10.7	(0.7)

C.15. Number of adult and kid goats that were lost due to coyotes, dogs, foxes, or wolves in 2020, by state:

State	Number Adult and Kid Goats											
	Predator Cause											
	Coyotes			Dogs			Foxes			Wolves		
	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats
AL	780	1,600	2,380	790	620	1,410	20	50	70	0	0	0
AZ	1,730	340	2,070	1,720	2,050	3,770	0	0	0	0	0	0
AR	170	660	830	200	40	240	0	0	0	0	0	0
CA	340	1,280	1,620	240	270	510	0	100	100	0	0	0
CO	20	430	450	30	140	170	0	0	0	0	0	0
FL	150	720	870	380	220	600	0	30	30	0	0	0
GA	430	860	1,290	430	1,090	1,520	0	120	120	0	0	0
ID	150	330	480	20	60	80	0	0	0	*	0	*
IL	40	1,210	1,250	0	10	10	0	10	10	0	0	0
IN	10	90	100	60	0	60	0	0	0	0	0	0
IA	10	120	130	10	220	230	0	0	0	0	0	0
KS	600	590	1,190	30	110	140	0	160	160	0	0	0
KY	30	320	350	20	40	60	0	0	0	0	0	0
LA	100	190	290	90	100	190	0	0	0	0	0	0
MI	50	30	80	0	10	10	0	0	0	0	0	0
MN	0	0	0	0	0	0	0	0	0	0	0	0
MS	560	560	1,120	210	490	700	0	0	0	0	0	0
MO	260	1,110	1,370	90	160	250	0	310	310	0	0	0
NE	50	40	90	10	50	60	0	*	*	0	0	0
New England ¹	60	90	150	0	0	0	0	0	0	0	0	0
NM	310	790	1,100	100	50	150	0	0	0	0	0	0
NY	10	10	20	50	100	150	0	0	0	0	0	0
NC	80	290	370	100	190	290	0	0	0	0	0	0
OH	170	170	340	0	130	130	0	0	0	0	0	0
OK	440	1,040	1,480	150	570	720	0	0	0	0	0	0
OR	110	1,070	1,180	70	10	80	0	10	10	0	0	0
PA	180	90	270	0	180	180	0	0	0	0	0	0
SC	70	230	300	180	180	360	0	*	*	0	0	0
TN	370	830	1,200	1,160	910	2,070	0	20	20	0	0	0
TX	8,070	42,910	50,980	790	3,330	4,120	50	1,510	1,560	0	20 ²	20
VA	90	1,130	1,220	20	50	70	0	0	0	0	0	0
WA	330	100	430	0	50	50	0	0	0	0	0	0
WV	40	310	350	10	20	30	0	*	*	0	0	0
WI	40	80	120	0	0	0	0	0	0	0	40	40
Other states ³	300	1,370	1,670	300	740	1,040	10	10	20	0	0	0
U.S.	16,150	60,990	77,140	7,260	12,190	19,450	80	2,330	2,410	*	60	60

¹ New England includes CT, ME, MA, NH, RI, and VT.

² Since Texas is not likely to have either gray or red wolf populations, these deaths were most likely the result of coyotes, or wolf/dog hybrids.

³ Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

* Estimate was less than or equal to 5.

C.16. Number of adult and kid goats that were lost due to bobcats or lynx, mountain lions (cougars/pumas), or bears in 2020, by state:

State	Number Adult and Kid Goats Predator Cause								
	Bobcats or lynx			Mountain lions (cougars/pumas)			Bears		
	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats
AL	0	30	30	0	40	40	0	0	0
AZ	10	0	10	880	250	1,130	0	0	0
AR	0	0	0	0	*	*	0	*	*
CA	0	30	30	300	170	470	0	10	10
CO	0	0	0	0	100	100	0	20	20
FL	20	200	220	30	50	80	0	0	0
GA	0	60	60	0	0	0	0	0	0
ID	0	0	0	40	190	230	0	0	0
IL	0	110	110	0	0	0	0	0	0
IN	0	0	0	0	0	0	0	0	0
IA	0	0	0	0	0	0	0	0	0
KS	0	20	20	20	30	50	0	0	0
KY	0	10	10	0	0	0	0	0	0
LA	30	0	30	0	0	0	0	0	0
MI	0	0	0	0	0	0	0	0	0
MN	0	0	0	0	0	0	0	0	0
MS	0	10	10	0	0	0	0	0	0
MO	0	70	70	10	10	20	0	0	0
NE	*	10	10	30	20	50	0	0	0
New England ¹	0	0	0	0	0	0	80	20	100
NM	0	20	20	0	90	90	0	0	0
NY	0	0	0	0	0	0	0	0	0
NC	0	0	0	0	0	0	0	0	0
OH	0	0	0	0	0	0	0	0	0
OK	10	100	110	150	120	270	0	0	0
OR	0	20	20	340	190	530	0	0	0
PA	0	0	0	0	0	0	0	0	0
SC	0	0	0	0	0	0	0	0	0
TN	0	0	0	0	0	0	0	0	0
TX	710	2,230	2,940	390	840	1,230	0	70	70
VA	0	0	0	0	0	0	*	0	*
WA	0	0	0	20	40	60	20	0	20
WV	0	0	0	0	0	0	0	20	20
WI	0	0	0	0	0	0	0	0	0
Other states ²	0	0	0	170	310	480	80	*	80
U.S.	780	2,920	3,700	2,380	2,450	4,830	180	140	320

¹ New England includes CT, ME, MA, NH, RI, and VT.

² Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

* Estimate was less than or equal to 5.

C.17. Number of adult and kid goats that were lost due to black vultures, ravens, eagles, Mexican eagles (Caracaras), or other predatory birds in 2020, by state:

State	Number Adult and Kid Goats Predator Cause																	
	Black vultures			Ravens			Eagles			Mexican eagles (Caracaras)			Other predatory birds			Predatory birds		
	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats
AL	0	0	0	0	0	0	0	10	10	0	0	0	0	0	0	0	10	10
AZ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AR	0	50	50	0	0	0	0	10	10	0	0	0	0	0	0	0	60	60
CA	0	0	0	0	60	60	90	50	140	0	0	0	0	0	0	90	110	200
CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FL	0	0	0	0	0	0	0	50	50	0	0	0	0	0	0	0	50	50
GA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KS	0	0	0	0	10	10	80	230	310	0	40	40	80	0	80	160	280	440
KY	0	230	230	0	0	0	0	0	0	0	0	0	0	0	0	0	230	230
LA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MS	0	0	0	0	0	0	0	40	40	0	0	0	0	0	0	0	40	40
MO	0	10	10	0	0	0	0	30	30	0	0	0	0	0	0	0	40	40
NE	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	0	10	10
New England ¹	0	0	0	0	0	0	0	10	10	0	0	0	0	0	0	0	10	10
NM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NC	0	40	40	0	0	0	0	0	0	0	0	0	0	0	0	0	40	40
OH	0	40	40	0	0	0	0	0	0	0	0	0	0	0	0	0	40	40
OK	0	30	30	0	0	0	0	260	260	0	40	40	0	0	0	0	330	330
OR	0	0	0	0	0	0	90	630	720	0	0	0	0	0	0	90	630	720
PA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TN	0	110	110	0	0	0	0	0	0	0	0	0	0	0	0	0	110	110
TX	200	2,280	2,480	0	390	390	0	2,270	2,270	280	2,890	3,170	0	640	640	480	8,470	8,950
VA	0	30	30	0	0	0	0	0	0	0	0	0	0	0	0	0	30	30
WA	0	0	0	0	10	10	0	0	0	0	0	0	0	0	0	0	10	10
WV	0	50	50	0	0	0	*	10	10	0	0	0	0	0	0	*	60	60
WI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other states ²	0	*	*	0	0	0	*	30	30	0	0	0	0	80	80	*	110	110
U.S.	200	2,870	3,070	0	470	470	260	3,630	3,890	280	2,970	3,250	80	730	810	820	10,670	11,490

¹ New England includes CT, ME, MA, NH, RI, and VT.

* Estimate was less than or equal to 5.

² Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

C.18. Number of adult and kid goats that were lost due to feral pigs, other known predator causes, or other unknown predator causes in 2020, by state:

State	Number Adult and Kid Goats Predator Cause								
	Feral pigs			Other known predator causes			Other unknown predator causes		
	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats
AL	0	0	0	30	20	50	90	150	240
AZ	0	0	0	0	0	0	20	50	70
AR	0	0	0	120	0	120	140	450	590
CA	0	0	0	70	170	240	0	140	140
CO	0	0	0	0	590	590	40	630	670
FL	0	0	0	0	90	90	110	160	270
GA	0	0	0	60	*	60	0	30	30
ID	0	0	0	0	0	0	0	20	20
IL	0	0	0	0	10	10	10	30	40
IN	0	0	0	0	40	40	0	0	0
IA	0	0	0	0	0	0	20	0	20
KS	0	0	0	0	0	0	100	460	560
KY	0	0	0	0	0	0	0	0	0
LA	0	0	0	0	*	*	10	50	60
MI	0	0	0	0	0	0	0	0	0
MN	0	0	0	0	0	0	10	0	10
MS	0	0	0	10	0	10	0	90	90
MO	0	0	0	0	0	0	10	60	70
NE	0	0	0	0	0	0	10	0	10
New England ¹	0	0	0	0	0	0	10	10	20
NM	0	0	0	0	10	10	0	40	40
NY	0	0	0	0	10	10	0	10	10
NC	0	0	0	20	10	30	30	70	100
OH	0	0	0	0	0	0	0	10	10
OK	0	0	0	0	*	*	80	170	250
OR	0	0	0	0	100	100	0	0	0
PA	0	0	0	0	0	0	0	0	0
SC	0	0	0	20	0	20	10	0	10
TN	0	0	0	0	0	0	70	50	120
TX	860	8,290	9,150	440	40	480	1,010	2,960	3,970
VA	0	0	0	0	0	0	20	20	40
WA	0	0	0	0	0	0	0	0	0
WV	0	0	0	0	20	20	50	0	50
WI	0	0	0	0	0	0	0	0	0
Other states ²	180	260	440	*	10	10	0	*	*
U.S.	1,040	8,550	9,590	770	1,120	1,890	1,850	5,660	7,510

¹ New England includes CT, ME, MA, NH, RI, and VT.

² Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

* Estimate was less than or equal to 5.

C.19. Percentage of adult goats lost in 2020 as a percentage of January 1, 2021, adult goat inventory and percentage of kids lost in 2020 as a percentage of kid crop due to coyotes, dogs, foxes, or wolves in 2020, by state:

State	Percent Inventory Lost											
	Predator Cause											
	Coyotes			Dogs			Foxes			Wolves		
	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats
AL	2.38	3.75	3.15	2.41	1.45	1.87	0.06	0.12	0.09	0.00	0.00	0.00
AZ	3.66	0.76	2.25	3.64	4.57	4.09	0.00	0.00	0.00	0.00	0.00	0.00
AR	0.59	2.18	1.40	0.69	0.13	0.41	0.00	0.00	0.00	0.00	0.00	0.00
CA	0.37	1.73	0.97	0.26	0.36	0.31	0.00	0.13	0.06	0.00	0.00	0.00
CO	0.09	2.01	1.01	0.13	0.65	0.38	0.00	0.00	0.00	0.00	0.00	0.00
FL	0.35	3.77	1.41	0.89	1.15	0.97	0.00	0.16	0.05	0.00	0.00	0.00
GA	0.99	4.13	2.01	0.99	5.24	2.36	0.00	0.58	0.19	0.00	0.00	0.00
ID	0.77	2.32	1.42	0.10	0.42	0.24	0.00	0.00	0.00	*	0.00	*
IL	0.15	3.54	2.07	0.00	0.03	0.02	0.00	0.03	0.02	0.00	0.00	0.00
IN	0.02	0.19	0.11	0.15	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00
IA	0.02	0.22	0.13	0.02	0.41	0.23	0.00	0.00	0.00	0.00	0.00	0.00
KS	2.02	2.09	2.06	0.10	0.39	0.24	0.00	0.57	0.28	0.00	0.00	0.00
KY	0.08	1.40	0.56	0.05	0.18	0.10	0.00	0.00	0.00	0.00	0.00	0.00
LA	1.09	2.92	1.85	0.98	1.54	1.21	0.00	0.00	0.00	0.00	0.00	0.00
MI	0.27	0.17	0.23	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00
MN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MS	3.39	5.05	4.06	1.27	4.41	2.54	0.00	0.00	0.00	0.00	0.00	0.00
MO	0.45	2.23	1.28	0.16	0.32	0.23	0.00	0.62	0.29	0.00	0.00	0.00
NE	0.41	0.22	0.30	0.08	0.27	0.20	0.00	*	*	0.00	0.00	0.00
New England ¹	0.21	0.32	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NM	1.91	5.68	3.65	0.62	0.36	0.50	0.00	0.00	0.00	0.00	0.00	0.00
NY	0.04	0.03	0.04	0.21	0.31	0.27	0.00	0.00	0.00	0.00	0.00	0.00
NC	0.18	0.75	0.44	0.22	0.49	0.35	0.00	0.00	0.00	0.00	0.00	0.00
OH	0.43	0.62	0.51	0.00	0.47	0.19	0.00	0.00	0.00	0.00	0.00	0.00
OK	0.70	2.04	1.30	0.24	1.12	0.63	0.00	0.00	0.00	0.00	0.00	0.00
OR	0.34	3.26	1.80	0.21	0.03	0.12	0.00	0.03	0.02	0.00	0.00	0.00
PA	0.45	0.33	0.40	0.00	0.66	0.27	0.00	0.00	0.00	0.00	0.00	0.00
SC	0.27	2.84	0.89	0.70	2.22	1.07	0.00	*	*	0.00	0.00	0.00
TN	0.48	1.35	0.87	1.52	1.48	1.50	0.00	0.03	0.01	0.00	0.00	0.00
TX	1.33	8.81	4.67	0.13	0.68	0.38	0.01	0.31	0.14	0.00	0.00	0.00
VA	0.23	4.26	1.88	0.05	0.19	0.11	0.00	0.00	0.00	0.00	0.00	0.00
WA	0.92	0.51	0.77	0.00	0.25	0.09	0.00	0.00	0.00	0.00	0.00	0.00
WV	0.26	2.65	1.29	0.06	0.17	0.11	0.00	*	*	0.00	0.00	0.00
WI	0.06	0.10	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.03
Other states ²	0.35	1.34	0.88	0.35	0.72	0.55	0.01	0.01	0.01	0.00	0.00	0.00
U.S.	0.85	3.69	2.17	0.38	0.74	0.55	0.00	0.14	0.07	*	0.00	*

¹ New England includes CT, ME, MA, NH, RI, and VT.

² Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

* Estimate was less than or equal to 5.

C.20. Percentage of adult goats lost in 2020 as a percentage of January 1, 2021, adult goat inventory and percentage of kids lost in 2020 as a percentage of kid crop due to bobcats or lynx, mountain lions (cougars/pumas), or bears in 2020, by state:

State	Percent Inventory Lost Predator Cause								
	Bobcats or lynx			Mountain lions (cougars/pumas)			Bears		
	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats
AL	0.00	0.07	0.04	0.00	0.09	0.05	0.00	0.00	0.00
AZ	0.02	0.00	0.01	1.86	0.56	1.23	0.00	0.00	0.00
AR	0.00	0.00	0.00	0.00	*	*	0.00	*	*
CA	0.00	0.04	0.02	0.33	0.23	0.28	0.00	0.01	0.01
CO	0.00	0.00	0.00	0.00	0.47	0.22	0.00	0.09	0.04
FL	0.05	1.05	0.36	0.07	0.26	0.13	0.00	0.00	0.00
GA	0.00	0.29	0.09	0.00	0.00	0.00	0.00	0.00	0.00
ID	0.00	0.00	0.00	0.21	1.34	0.68	0.00	0.00	0.00
IL	0.00	0.32	0.18	0.00	0.00	0.00	0.00	0.00	0.00
IN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
KS	0.00	0.07	0.03	0.07	0.11	0.09	0.00	0.00	0.00
KY	0.00	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00
LA	0.33	0.00	0.19	0.00	0.00	0.00	0.00	0.00	0.00
MI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MS	0.00	0.09	0.04	0.00	0.00	0.00	0.00	0.00	0.00
MO	0.00	0.14	0.07	0.02	0.02	0.02	0.00	0.00	0.00
NE	*	0.05	0.03	0.25	0.11	0.16	0.00	0.00	0.00
New England ¹	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.07	0.18
NM	0.00	0.14	0.07	0.00	0.65	0.30	0.00	0.00	0.00
NY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OK	0.02	0.20	0.10	0.24	0.24	0.24	0.00	0.00	0.00
OR	0.00	0.06	0.03	1.04	0.58	0.81	0.00	0.00	0.00
PA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TX	0.12	0.46	0.27	0.06	0.17	0.11	0.00	0.01	0.01
VA	0.00	0.00	0.00	0.00	0.00	0.00	*	0.00	*
WA	0.00	0.00	0.00	0.06	0.20	0.11	0.06	0.00	0.04
WV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.07
WI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other states ²	0.00	0.00	0.00	0.20	0.30	0.25	0.09	*	0.04
U.S.	0.04	0.18	0.10	0.13	0.15	0.14	0.01	0.01	0.01

¹ New England includes CT, ME, MA, NH, RI, and VT.

² Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

* Estimate was less than or equal to 5.

C.21. Percentage of adult goats lost in 2020 as a percentage of January 1, 2021, adult goat inventory and percentage of kids lost in 2020 as a percentage of kid crop due to black vultures, ravens, eagles, Mexican eagles (Caracaras), or other predatory birds in 2020, by state:

State	Percent Inventory Lost Predator Cause																	
	Black vultures ¹			Ravens			Eagles			Mexican eagles (Caracaras)			Other predatory birds			Predatory birds ²		
	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats
AL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01
AZ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AR	0.00	0.17	0.08	0.00	0.00	0.00	0.00	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.10
CA	0.00	0.00	0.00	0.00	0.08	0.04	0.10	0.07	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.15	0.12
CO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.08
GA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ID	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
KS	0.00	0.00	0.00	0.00	0.04	0.02	0.27	0.82	0.54	0.00	0.14	0.07	0.27	0.00	0.14	0.54	0.99	0.76
KY	0.00	1.01	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.01	0.37
LA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.14
MO	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.04
NE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.03	0.00	0.05	0.03
New England ³	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.02
NM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NC	0.00	0.10	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.05
OH	0.00	0.15	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.06
OK	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.51	0.23	0.00	0.08	0.04	0.00	0.00	0.00	0.00	0.65	0.29
OR	0.00	0.00	0.00	0.00	0.00	0.00	0.28	1.92	1.10	0.00	0.00	0.00	0.00	0.00	0.00	0.28	1.92	1.10
PA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TN	0.00	0.18	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.08
TX	0.03	0.47	0.23	0.00	0.08	0.04	0.00	0.47	0.21	0.05	0.59	0.29	0.00	0.13	0.06	0.08	1.74	0.82
VA	0.00	0.11	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.05
WA	0.00	0.00	0.00	0.00	0.05	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.02
WV	0.00	0.43	0.18	0.00	0.00	0.00	*	0.09	0.04	0.00	0.00	0.00	0.00	0.00	0.00	*	0.51	0.22
WI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other states ⁴	0.00	*	*	0.00	0.00	0.00	*	0.03	0.02	0.00	0.00	0.00	0.00	0.08	0.04	*	0.11	0.06
U.S.	0.01	0.17	0.09	0.00	0.03	0.01	0.01	0.22	0.11	0.01	0.18	0.09	0.00	0.04	0.02	0.04	0.64	0.32

¹ "Black vultures" were a separate report category in 2020 only and replaced the generic "Vultures" category from 2015.

² In 2015, includes vultures, ravens, and eagles. In 2020, includes black vultures, ravens, eagles, caracaras, and other predatory birds. * Estimate was less than or equal to 5.

³ New England includes CT, ME, MA, NH, RI, and VT.

⁴ Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

C.22. Percentage of adult goats lost in 2020 as a percentage of January 1, 2021, adult goat inventory and percentage of kids lost in 2020 as a percentage of kid crop due to feral pigs, other known predator causes, or other unknown predator causes in 2020, by state:

State	Percent Inventory Lost Predator Cause								
	Feral pigs			Other known predator causes			Other unknown predator causes		
	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats	Adults	Total kids	Total adult and kid goats
AL	0.00	0.00	0.00	0.09	0.05	0.07	0.27	0.35	0.32
AZ	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.11	0.08
AR	0.00	0.00	0.00	0.42	0.00	0.20	0.49	1.49	1.00
CA	0.00	0.00	0.00	0.08	0.23	0.14	0.00	0.19	0.08
CO	0.00	0.00	0.00	0.00	2.76	1.32	0.17	2.94	1.50
FL	0.00	0.00	0.00	0.00	0.47	0.15	0.26	0.84	0.44
GA	0.00	0.00	0.00	0.14	*	0.09	0.00	0.14	0.05
ID	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.06
IL	0.00	0.00	0.00	0.00	0.03	0.02	0.04	0.09	0.07
IN	0.00	0.00	0.00	0.00	0.08	0.04	0.00	0.00	0.00
IA	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.02
KS	0.00	0.00	0.00	0.00	0.00	0.00	0.34	1.63	0.97
KY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LA	0.00	0.00	0.00	0.00	*	*	0.11	0.77	0.38
MI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MN	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.01
MS	0.00	0.00	0.00	0.06	0.00	0.04	0.00	0.81	0.33
MO	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.12	0.07
NE	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.03
New England ¹	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.04
NM	0.00	0.00	0.00	0.00	0.07	0.03	0.00	0.29	0.13
NY	0.00	0.00	0.00	0.00	0.03	0.02	0.00	0.03	0.02
NC	0.00	0.00	0.00	0.04	0.03	0.04	0.07	0.18	0.12
OH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.01
OK	0.00	0.00	0.00	0.00	*	*	0.13	0.33	0.22
OR	0.00	0.00	0.00	0.00	0.30	0.15	0.00	0.00	0.00
PA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SC	0.00	0.00	0.00	0.08	0.00	0.06	0.04	0.00	0.03
TN	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.08	0.09
TX	0.14	1.70	0.84	0.07	0.01	0.04	0.17	0.61	0.36
VA	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.08	0.06
WA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WV	0.00	0.00	0.00	0.00	0.17	0.07	0.32	0.00	0.18
WI	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other states ²	0.21	0.25	0.23	*	0.01	0.01	0.00	*	*
U.S.	0.05	0.52	0.27	0.04	0.07	0.05	0.10	0.34	0.21

¹ New England includes CT, ME, MA, NH, RI, and VT.

² Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

* Estimate was less than or equal to 5.

Questions regarding confirmations of losses due to predator causes concerned producer-reported first-hand sightings for any predator losses incurred during 2020.

First-hand sightings may help distinguish losses of goats between similar types of predators, such as between a coyote and a dog or between the active killing of livestock and the scavenging by vultures of livestock that had already died.

Overall, 40.6 percent of operations with any predator-related losses in 2020 reported performing this type of confirmation for losses.

C.23. For the 10.7 percent of operations that had any predator-related losses in 2020 (Table A.3.a.), percentage of operations that confirmed any of the predator-related losses by first-hand sightings, by herd size:

Percent Operations									
Herd Size (number of adult and kid goats)									
Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error
37.8	(6.7)	48.1	(7.1)	37.9	(4.2)	42.0	(3.5)	40.6	(3.1)

C.24. For the 10.7 percent of operations that had any predator-related losses in 2020 (Table A.3.a.), percentage of operations that confirmed any of the predator-related losses first-hand sightings, by state:

State	Percent Operations	
	Percent	Std. error
AL	17.1	(6.3)
AZ	31.6	(14.0)
AR	33.0	(12.0)
CA	44.7	(10.1)
CO	9.1	(4.1)
FL	55.7	(14.1)
GA	46.0	(10.3)
ID	39.7	(23.5)
IL	7.2	(7.5)
IN	52.5	(28.1)
IA	22.9	(11.7)
KS	40.4	(12.1)
KY	70.9	(16.8)
LA	33.5	(14.3)
MI	91.9	(8.2)
MN	(D)	(D)
MS	35.1	(17.3)
MO	39.1	(15.1)
NE	31.1	(14.2)
New England ¹	40.5	(26.4)
NM	35.9	(15.1)
NY	82.9	(15.0)
NC	46.9	(13.1)
OH	22.7	(13.7)
OK	39.2	(8.5)
OR	40.3	(15.7)
PA	47.9	(31.0)
SC	52.6	(13.7)
TN	40.0	(14.1)
TX	43.6	(5.2)
VA	66.0	(14.2)
WA	77.5	(16.9)
WV	49.0	(16.0)
WI	(D)	(D)
Other states ²	46.5	(7.6)
U.S.	40.6	(3.1)

¹ New England includes CT, ME, MA, NH, RI, and VT.

² Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

(D) Values suppressed to avoid potential disclosure.

D. Injuries by Predators

The number of adult and kid goats injured but not killed by predators has equated to approximately one-tenth of the total deaths due to predation in 2015 and 2020. Even though the total number of injuries fell from 14,448 total injuries in 2015 to 11,180 total injuries in 2020, the value of injuries rose from \$2.3 million in 2015 to \$2.5 million in 2020.

In 2015, kids accounted for approximately 70 percent of the injuries, while in 2020, kids accounted for just over one-half of the injuries.

D.1. Percentage of operations that had adult or kid goats injured, but not killed, by predators in 2020, by animal class and by herd size:

Percent Operations										
Animal class	Herd Size (number of adult and kid goats)									
	Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error
Adults	0.8	(0.3)	1.7	(0.6)	5.7	(1.2)	6.4	(1.0)	2.0	(0.3)
Preweaned kids	0.2	(0.1)	1.1	(0.4)	3.5	(1.1)	5.8	(1.0)	1.1	(0.2)
Postweaned kids	0.4	(0.1)	0.7	(0.3)	2.4	(0.6)	5.0	(1.0)	1.0	(0.2)
Total kids	0.5	(0.2)	1.5	(0.4)	5.5	(1.2)	9.2	(1.3)	1.9	(0.3)
Total adult and kid goats	1.2	(0.3)	3.1	(0.7)	8.1	(1.3)	12.7	(1.4)	3.2	(0.4)

D.2. Number and percentage of inventory of adult and kid goats injured, but not killed, by predators in 2020, by animal class and by herd size:

Number and Percent*										
Animal class	Herd Size (number of adult and kid goats)									
	Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Adults	960	0.28	510	0.21	3,070	0.43	730	0.12	5,270	0.28
Preweaned kids	370	0.18	460	0.22	1,420	0.20	990	0.18	3,250	0.20
Postweaned kids	440	0.21	190	0.09	1,360	0.20	680	0.13	2,660	0.16
Total kids	810	0.39	650	0.30	2,780	0.40	1,670	0.31	5,910	0.36
Total adult and kid goats	1,770	0.32	1,160	0.25	5,840	0.41	2,400	0.21	11,180	0.31

* Percentages of adult goats injured are taken with respect to the January 1, 2021, adult goat inventory. Percentages of kids injured are taken with respect to 2020 kid crop.

D.3. Value of adult and kid goats injured, but not killed, by predators in 2020, by animal class and by herd size:

Value ¹ (\$1,000)										
Herd Size (number of adult and kid goats)										
	Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
Animal class	No.	Std. Error	No.	Std. Error	No.	Std. Error	No.	Std. Error	No.	Std. Error
Adults	184	(45)	101	(39)	923	(345)	199	(58)	1,407	(354)
Total kids ²	159	(58)	142	(56)	504	(139)	300	(52)	1,104	(168)
Total adult and kid goats	342	(80)	243	(68)	1,427	(421)	499	(101)	2,511	(445)

¹ Values have been adjusted to reflect January 2021 dollars using the U.S. Bureau of Labor Statistics CPI Inflation Calculator https://www.bls.gov/data/inflation_calculator.htm.

² Values of kids collected only for total kids and not for preweaned and postweaned kids separately.

D.4. Percentage of operations that had any adult or kid goats injured, but not killed, by predators in 2020, by state:

State	Percent Operations	
	Pct.	Std. error
AL	11.3	(3.1)
AZ	3.2	(1.7)
AR	1.7	(1.4)
CA	1.1	(0.6)
CO	2.4	(1.9)
FL	7.0	(3.3)
GA	7.0	(3.1)
ID	8.8	(4.3)
IL	1.0	(0.9)
IN	6.3	(5.1)
IA	2.8	(1.4)
KS	2.8	(1.8)
KY	0.9	(0.5)
LA	6.2	(3.7)
MI	(D)	(D)
MN	0.0	(—)
MS	7.4	(4.0)
MO	1.3	(0.6)
NE	0.6	(0.6)
New England ¹	(D)	(D)
NM	3.1	(1.5)
NY	0.3	(0.2)
NC	1.4	(0.7)
OH	0.6	(0.4)
OK	1.9	(1.1)
OR	3.7	(2.3)
PA	0.0	(—)
SC	10.5	(3.9)
TN	3.9	(1.4)
TX	8.4	(1.4)
VA	1.5	(0.9)
WA	3.4	(2.4)
WV	3.1	(1.9)
WI	0.1	(0.1)
Other states ²	2.1	(0.4)
U.S.	3.2	(0.4)

¹ New England includes CT, ME, MA, NH, RI, and VT.

² Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

(D) Values suppressed to avoid potential disclosure.

D.5. Number and percentage of inventory of adult and kid goats injured, but not killed, by predators in 2020, by state:

State	Number and Percent ¹	
	No.	Pct.
AL	1,290	1.71
AZ	540	0.59
AR	460	0.78
CA	60	0.04
CO	50	0.11
FL	260	0.42
GA	280	0.44
ID	450	1.34
IL	40	0.07
IN	690	0.77
IA	230	0.23
KS	40	0.07
KY	30	0.05
LA	60	0.38
MI	(D)	(D)
MN	0	0.00
MS	430	1.56
MO	130	0.12
NE	20	0.07
New England ²	(D)	(D)
NM	50	0.17
NY	20	0.04
NC	130	0.16
OH	10	0.01
OK	130	0.11
OR	210	0.32
PA	0	0.00
SC	380	1.13
TN	570	0.41
TX	3,460	0.32
VA	110	0.17
WA	250	0.45
WV	40	0.15
WI	10	0.01
Other states ³	730	0.39
U.S.	11,180	0.31

¹ Percentages of adult goats injured are taken with respect to the January 1, 2021, adult goat inventory. Percentages of kids injured are taken with respect to 2020 kid crop.

² New England includes CT, ME, MA, NH, RI, and VT.

³ Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

(D) Values suppressed to avoid potential disclosure.

D.6. Value of inventory of adult and kid goats injured, but not killed, by predators in 2020, by state:

State	Value ¹ (\$1,000)	
	Number	Std. error
AL	206	(125)
AZ	83	(60)
AR	58	(56)
CA	24	(13)
CO	9	(5)
FL	63	(29)
GA	39	(23)
ID	94	(58)
IL	7	(5)
IN	286	(267)
IA	60	(46)
KS	9	(5)
KY	8	(3)
LA	13	(8)
MI	(D)	(D)
MN	0	(—)
MS	73	(46)
MO	31	(11)
NE	2	(2)
New England ²	(D)	(D)
NM	4	(2)
NY	4	(3)
NC	21	(9)
OH	6	(3)
OK	19	(13)
OR	52	(34)
PA	0	(—)
SC	45	(20)
TN	109	(36)
TX	918	(299)
VA	21	(10)
WA	43	(19)
WV	7	(4)
WI	2	(2)
Other states ³	194	(50)
U.S.	2,511	(445)

¹ Values have been adjusted to reflect January 2021 dollars using the U.S. Bureau of Labor Statistics CPI Inflation Calculator https://www.bls.gov/data/inflation_calculator.htm.

² New England includes CT, ME, MA, NH, RI, and VT.

³ Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

(D) Values suppressed to avoid potential disclosure.

D.7. For the 3.2 percent of operations that had adult or kid goats injured, but not killed, by predators in 2020 (Table D.1.), percentage of injuries that resulted in euthanization of the adult or kid goats as a result of the predator-related injuries, by animal class:

Animal class	Percent injuries	Std. error
Adults	23.6	(6.2)
Preweaned kids	22.7	(6.3)
Postweaned kids	29.2	(7.8)
Total kids	23.2	(4.7)
Total adult and kid goats	26.0	(4.7)

E. Nonlethal Predator Damage Management Methods

1. Nonlethal methods used

The percentage of operations that reported using any nonlethal predator damage management methods increased from 85.1 percent in 2015 to 91.3 in 2020.

Since 2015, all listed nonlethal methods have seen increases in the percentage of operations using those methods, except for "Other nonlethal methods."

In 2020, there were three new categories of methods included in the questionnaire not included in 2015, which were other guard animals (other than guard dogs, llamas, and donkeys), habitat management (trimming brush from perimeter of the property, barns, pens, etc.), and using camera systems.

In 2020, "Other guard animals" included alpaca, cattle, horses, mules, pigs, geese, emus, and male goats. "Other nonlethal methods" included live trapping and penning or using a barn at all times of the day. In 2015, "Other nonlethal method" write-in responses included live trapping, penning or using a barn at all times of the day, other guard animals, multispecies grazing, and camera systems.

E.1.a. Percentage of operations by nonlethal predator damage management method used and by year:

Percent Operations				
Year				
2015			2020	
Predator control method	Pct.	Std. error	Pct.	Std. error
Guard dogs ¹	30.3	(1.6)	42.5	(2.0)
Llamas ¹	3.8	(0.6)	4.9	(0.7)
Donkeys ¹	8.8	(0.7)	13.0	(1.0)
Other animals ¹	NA	NA	4.5	(0.9)
Fencing ²	40.8	(1.8)	68.5	(1.9)
Shed for kidding does ³	16.8	(1.2)	40.6	(1.9)
Herding ⁴	5.0	(0.6)	8.2	(1.1)
Night penning	21.8	(1.3)	36.9	(1.9)
Fright tactics ⁵	2.0	(0.4)	7.4	(1.0)
Removing carrion ⁶	4.6	(0.4)	22.2	(1.3)
Culling ⁷	6.4	(0.7)	19.3	(1.4)
Changing bedding grounds ⁸	5.7	(0.6)	15.1	(1.1)
Habitat management ⁹	NA	NA	29.3	(1.9)
Frequent checks ¹⁰	9.5	(0.8)	22.3	(1.4)
Camera systems	NA	NA	8.8	(0.8)
Altered breeding practices ¹¹	2.1	(0.4)	3.6	(0.4)
Other nonlethal methods	52.9	(1.8)	1.6	(0.3)
Any method	85.1	(1.2)	91.3	(1.2)

¹ For guarding adult and kid goats.

² Including predator exclusion and electric fencing.

³ Termed "kid shed" in 2015.

⁴ Herding by the operator or anyone employed or authorized by them, especially during the day.

⁵ Including sound, movement (such as flapping objects), and lights.

⁶ Including removing placentas from kidding areas.

⁷ Removing older, weak, or sick goats from the herd to prevent death loss.

⁸ Moving or rotating where goats bed down.

⁹ Including trimming brush from the perimeter of the property, barns, and pens.

¹⁰ More frequent checks in high predation areas/seasons.

¹¹ Including changing the breeding season, so kids are not born when predators such as coyotes are feeding their young.

NA Information not collected in that year for those nonlethal methods.

E.1.b. For the operations that used nonlethal predator damage management methods in the given year (Table E.1.a.), percentage of operations by nonlethal predator damage management method used and by year:

Predator control method	Percent Operations			
	Year			
	2015		2020	
	Pct.	Std. error	Pct.	Std. error
Guard dogs ¹	35.6	(1.9)	46.5	(2.1)
Llamas ¹	4.5	(0.7)	5.4	(0.8)
Donkeys ¹	10.4	(0.8)	14.2	(1.1)
Other animals ¹	NA	NA	4.9	(1.0)
Fencing ²	48.0	(2.0)	75.1	(1.8)
Shed for kidding does ³	19.7	(1.4)	44.5	(2.0)
Herding ⁴	5.9	(0.7)	9.0	(1.2)
Night penning	25.6	(1.6)	40.4	(2.0)
Fright tactics ⁵	2.3	(0.5)	8.1	(1.1)
Removing carrion ⁶	5.4	(0.5)	24.3	(1.5)
Culling ⁷	7.6	(0.8)	21.1	(1.6)
Changing bedding grounds ⁸	6.7	(0.7)	16.5	(1.2)
Habitat management ⁹	NA	NA	32.1	(2.1)
Frequent checks ¹⁰	11.1	(0.9)	24.4	(1.5)
Camera systems	NA	NA	9.6	(0.9)
Altered breeding practices ¹¹	2.4	(0.5)	3.9	(0.5)
Other nonlethal methods	62.2	(2.0)	1.8	(0.3)

¹ For guarding adult and kid goats.

² Including predator exclusion and electric fencing.

³ Termed "kid shed" in 2015.

⁴ Herding by the operator or anyone employed or authorized by them, especially during the day.

⁵ Including sound, movement (such as flapping objects), and lights.

⁶ Including removing placentas from kidding areas.

⁷ Removing older, weak, or sick goats from the herd to prevent death loss.

⁸ Moving or rotating where goats bed down.

⁹ Including trimming brush from the perimeter of the property, barns, and pens.

¹⁰ More frequent checks in high predation areas/seasons.

¹¹ Including changing the breeding season, so kids are not born when predators such as coyotes are feeding their young.

NA Information not collected in that year for those nonlethal methods.

In both 2015 and 2020, the percentage of operations using any nonlethal methods was greater for very large operations compared to small operations. There were also individual differences, with a generally higher percentage of larger operations tending to cull older goats, perform more frequent checks in high predation areas/seasons, alter breeding practices so that kids are not born when predators are feeding their young, remove carrion, and use guard dogs and donkeys compared to the smaller operations. On the other hand, a higher percentage of medium operations tended to use fencing compared to the very large operations.

E.1.c. Percentage of operations using any nonlethal predator damage management methods in 2020 and, for the 91.3 percent of operations that used any nonlethal predator damage management methods in 2020 (Table E.1.a.), percentage of operations by nonlethal method used and by herd size:

Method	Percent Operations									
	Herd Size (number of adult and kid goats)									
	Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error
Guard dogs ¹	41.2	(3.4)	50.6	(3.1)	55.2	(1.8)	57.1	(1.9)	46.5	(2.1)
Llamas ¹	4.9	(1.3)	4.8	(1.1)	6.4	(0.8)	9.6	(1.2)	5.4	(0.8)
Donkeys ¹	11.2	(1.6)	14.8	(2.2)	20.7	(1.6)	19.2	(1.6)	14.2	(1.1)
Other animals ¹	6.3	(1.7)	2.4	(0.6)	3.7	(0.7)	3.1	(0.9)	4.9	(1.0)
Fencing ²	75.4	(3.1)	79.2	(2.3)	72.5	(1.6)	66.2	(1.9)	75.1	(1.8)
Shed for kidding does ³	36.9	(3.3)	51.3	(3.1)	57.3	(1.9)	51.1	(2.0)	44.5	(2.0)
Herding ⁴	7.0	(2.0)	9.3	(2.1)	13.0	(1.2)	13.9	(1.3)	9.0	(1.2)
Night penning	40.4	(3.4)	39.9	(3.1)	41.5	(1.8)	35.4	(1.9)	40.4	(2.0)
Fright tactics ⁵	7.5	(1.9)	9.2	(1.8)	8.2	(0.9)	11.2	(1.2)	8.1	(1.1)
Removing carrion ⁶	17.5	(2.2)	30.9	(2.9)	35.2	(1.7)	31.9	(1.8)	24.3	(1.5)
Culling ⁷	13.3	(2.6)	21.9	(2.4)	35.5	(1.7)	48.7	(2.0)	21.1	(1.6)
Changing bedding grounds ⁸	12.3	(1.9)	20.1	(2.4)	23.4	(1.6)	23.8	(1.7)	16.5	(1.2)
Habitat management ⁹	31.1	(3.4)	33.1	(3.0)	33.9	(1.7)	32.7	(1.8)	32.1	(2.1)
Frequent checks ¹⁰	21.0	(2.5)	25.7	(2.6)	29.9	(1.6)	36.5	(1.9)	24.4	(1.5)
Camera systems	6.6	(1.3)	12.7	(2.3)	14.2	(1.3)	13.4	(1.3)	9.6	(0.9)
Altered breeding practices ¹¹	2.5	(0.7)	3.8	(0.7)	7.1	(1.0)	6.9	(0.9)	3.9	(0.5)
Other nonlethal methods	1.6	(0.5)	2.0	(0.8)	1.8	(0.5)	2.6	(0.6)	1.8	(0.3)
Any method	89.6	(1.9)	93.4	(1.6)	93.5	(1.4)	96.1	(0.7)	91.3	(1.2)

¹ For guarding adult and kid goats.

² Including predator exclusion and electric fencing.

³ Termed “kid shed” in 2015.

⁴ Herding by the operator or anyone employed or authorized by them, especially during the day.

⁵ Including sound, movement (such as flapping objects), and lights.

⁶ Including removing placentas from kidding areas.

⁷ Removing older, weak, or sick goats from the herd to prevent death loss.

⁸ Moving or rotating where goats bed down.

⁹ Including trimming brush from the perimeter of the property, barns, and pens.

¹⁰ More frequent checks in high predation areas/seasons.

¹¹ Including changing the breeding season, so kids are not born when predators such as coyotes are feeding their young.

E.1.d. For the operations that used nonlethal predator damage management methods in the given year, percentage of operations by number of nonlethal methods used and by year:

Percent Operations				
Year				
2015			2020	
Number of methods	Pct.	Std. error	Pct.	Std. error
1	46.3	(2.1)	24.0	(2.0)
2	19.1	(1.3)	17.0	(1.4)
3	11.3	(0.9)	12.4	(1.1)
4	8.5	(1.0)	13.6	(1.8)
5	6.2	(0.9)	9.0	(1.1)
6	2.6	(0.4)	6.2	(0.6)
7 or more	6.1	(0.7)	17.8	(1.4)
Total	100.0	(—)	100.0	(—)

E.1.e. For the 91.3 percent of operations that used any nonlethal predator damage management methods in 2020 (Table E.1.a.), percentage of operations that used specific combinations of methods in 2020 for the 15 most used methods or combinations of methods:

Rank	Method	Percent Operations	Std. Error
1	Fencing ¹ only	10.4	(1.7)
2	Guard dogs ² only	5.9	(0.8)
3	Guard dogs and fencing	5.3	(0.8)
4	Fencing and night penning	2.1	(0.8)
5	Night penning only	1.9	(0.6)
6	Fencing and shed for kidding does ³	1.9	(0.5)
7	Guard dogs, fencing, and night penning	1.9	(0.5)
8	Guard donkeys ² only	1.7	(0.3)
9	Guard dogs, fencing, shed for kidding does, and night penning	1.6	(0.8)
10	Habitat management ⁴ only	1.6	(1.2)
11	Fencing, shed for kidding does, and night penning	1.3	(0.4)
12	Guard dogs, fencing, and shed for kidding does	1.2	(0.3)
13	Guard dogs, shed for kidding does, culling ⁵ , and habitat management	1.2	(1.2)
14	Fencing, night penning, herding ⁶ , and habitat management	1.1	(1.1)
15	Other guard animals ² only	1.0	(0.5)
	Any other nonlethal predator damage management method combination	60.0	(2.2)
	Total	100.0	(—)

¹ Including predator exclusion and electric fencing.

² For guarding adult and kid goats.

³ Termed “kid shed” in 2015.

⁴ Including trimming brush from the perimeter of the property, barns, and pens.

⁵ Removing older, weak, or sick goats from the herd to prevent death loss.

⁶ Herding by the operator or anyone employed or authorized by them, especially during the day.

E.1.f. Percentage of operations that used any nonlethal predator damage management methods in 2020, by state:

State	Percent operations	Std. error
AL	95.9	(2.0)
AZ	81.2	(7.1)
AR	99.8	(0.1)
CA	98.1	(1.1)
CO	94.2	(3.3)
FL	95.8	(3.1)
GA	97.1	(2.2)
ID	98.6	(0.7)
IL	98.0	(1.4)
IN	63.9	(12.4)
IA	92.6	(2.6)
KS	98.0	(2.0)
KY	70.8	(16.5)
LA	93.9	(3.7)
MI	92.5	(3.7)
MN	94.4	(2.6)
MS	97.7	(0.9)
MO	97.0	(2.2)
NE	98.2	(1.1)
New England ¹	95.8	(2.0)
NM	94.0	(4.3)
NY	94.9	(3.0)
NC	96.7	(1.9)
OH	88.9	(4.2)
OK	96.9	(1.5)
OR	98.1	(1.8)
PA	78.2	(10.5)
SC	97.2	(2.1)
TN	97.5	(1.2)
TX	88.3	(2.6)
VA	97.3	(1.4)
WA	95.1	(2.7)
WV	95.7	(2.4)
WI	89.5	(7.9)
Other states ²	87.5	(2.8)
U.S.	91.3	(1.2)

¹ New England includes CT, ME, MA, NH, RI, and VT.

² Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

E.1.g. For the 91.3 percent of operations that used any nonlethal predator damage management methods in 2020 (Table E.1.a.), percentage of operations that used guard dogs, llamas, donkeys, or other animals to guard adult and kid goats, or fencing, by state:

State	Percent Operations									
	Method									
	Guard dogs ¹		Llamas ¹		Donkeys ¹		Other animals ¹		Fencing ²	
	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error
AL	48.6	(6.7)	1.4	(1.4)	24.7	(6.1)	2.7	(1.7)	68.3	(6.5)
AZ	73.6	(12.2)	15.1	(11.5)	8.1	(6.0)	6.0	(5.8)	75.7	(9.0)
AR	66.3	(8.0)	(D)	(D)	20.5	(6.5)	3.8	(2.8)	57.1	(9.6)
CA	47.0	(11.6)	7.1	(2.5)	5.4	(2.1)	1.7	(1.2)	81.2	(5.3)
CO	44.3	(7.0)	8.8	(3.7)	13.0	(4.9)	5.2	(3.5)	72.0	(6.2)
FL	53.1	(7.6)	0.6	(0.6)	24.5	(6.7)	1.7	(0.9)	81.4	(5.6)
GA	31.0	(5.5)	2.0	(1.1)	29.3	(5.8)	3.3	(2.3)	85.9	(4.3)
ID	55.8	(8.2)	12.5	(4.8)	12.1	(5.3)	3.7	(3.2)	77.1	(6.9)
IL	23.6	(7.8)	0.5	(0.3)	11.3	(4.1)	1.6	(1.3)	81.3	(11.3)
IN	54.7	(9.9)	5.8	(3.0)	16.6	(5.4)	0.6	(0.3)	88.8	(3.8)
IA	37.6	(5.7)	8.7	(3.1)	10.9	(3.5)	1.3	(0.7)	77.6	(4.5)
KS	55.7	(6.0)	11.0	(3.9)	13.8	(3.4)	0.6	(0.6)	77.7	(4.9)
KY	67.4	(5.9)	1.2	(0.5)	17.0	(5.0)	6.4	(3.3)	81.3	(5.0)
LA	36.9	(8.8)	0.0	(—)	13.5	(6.4)	4.7	(3.9)	89.6	(5.4)
MI	40.3	(17.5)	3.7	(2.2)	2.2	(0.9)	28.8	(19.7)	91.9	(4.0)
MN	45.5	(16.0)	15.2	(11.8)	1.9	(1.4)	1.5	(1.3)	94.4	(2.7)
MS	46.4	(7.9)	(D)	(D)	15.9	(5.7)	(D)	(D)	84.1	(5.1)
MO	51.3	(9.1)	2.8	(2.3)	14.7	(5.0)	14.9	(9.4)	68.0	(8.2)
NE	63.0	(14.7)	(D)	(D)	5.2	(2.5)	(D)	(D)	68.1	(14.3)
New England ³	17.6	(8.2)	3.1	(1.7)	5.3	(3.1)	7.4	(5.1)	55.3	(20.3)
NM	41.2	(9.1)	1.5	(0.8)	0.9	(0.6)	16.0	(8.0)	77.4	(8.0)
NY	59.6	(13.8)	2.0	(1.8)	8.8	(4.0)	1.2	(1.3)	84.5	(6.0)
NC	43.3	(9.1)	1.3	(0.6)	17.4	(4.6)	6.6	(2.6)	80.9	(5.8)
OH	33.9	(9.0)	4.7	(2.6)	15.2	(5.0)	0.7	(0.4)	74.6	(9.2)
OK	60.7	(6.4)	5.2	(2.0)	13.6	(3.2)	3.6	(1.7)	65.5	(5.2)
OR	37.9	(7.7)	14.9	(4.4)	5.6	(2.7)	3.5	(2.4)	82.6	(4.7)
PA	34.5	(7.7)	7.6	(3.4)	6.0	(2.9)	3.4	(2.4)	69.5	(7.9)
SC	34.2	(5.5)	1.3	(0.8)	20.2	(5.1)	6.6	(3.1)	86.7	(3.6)
TN	59.7	(9.0)	1.7	(1.0)	19.4	(5.7)	1.6	(1.0)	68.8	(12.9)
TX	52.4	(3.3)	7.6	(1.6)	25.5	(2.8)	2.7	(1.0)	67.2	(3.2)
VA	42.6	(12.7)	2.8	(1.3)	20.8	(8.4)	22.4	(12.5)	55.0	(8.9)
WA	17.2	(8.1)	2.8	(1.8)	0.5	(0.3)	1.0	(1.1)	79.2	(14.6)
WV	30.4	(7.4)	(D)	(D)	12.6	(4.3)	4.7	(2.7)	80.5	(5.6)
WI	45.1	(13.5)	1.7	(0.9)	17.7	(10.6)	1.0	(0.8)	86.2	(5.6)
Other states ⁴	33.3	(4.3)	7.9	(1.8)	8.0	(1.6)	5.4	(1.6)	77.9	(3.3)
U.S.	46.5	(2.1)	5.4	(0.8)	14.2	(1.1)	4.9	(1.0)	75.1	(1.8)

¹ For guarding adult and kid goats.

² Including predator exclusion and electric fencing.

³ New England includes CT, ME, MA, NH, RI, and VT.

⁴ Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

(D) Values suppressed to avoid potential disclosure.

E.1.h. For the 91.3 percent of operations that used any nonlethal predator damage management methods in 2020 (Table E.1.a.), percentage of operations that used sheds for kidding does, herding, night penning, fright tactics, or removing carrion, by state:

State	Percent Operations									
	Method									
	Shed for kidding does ¹		Herding ²		Night penning		Fright tactics ³		Removing carrion ⁴	
	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error
AL	35.7	(5.8)	4.2	(1.8)	20.4	(4.4)	7.5	(2.6)	11.7	(3.1)
AZ	45.4	(11.7)	20.2	(7.9)	75.0	(9.4)	4.5	(4.1)	23.4	(9.1)
AR	46.1	(8.9)	6.9	(3.7)	25.6	(7.0)	9.2	(4.4)	22.1	(6.7)
CA	35.0	(8.8)	7.4	(2.5)	35.2	(8.9)	9.2	(3.0)	31.5	(9.0)
CO	53.8	(7.0)	12.1	(4.8)	53.9	(7.1)	16.3	(5.4)	30.9	(6.2)
FL	48.5	(7.6)	11.0	(4.6)	48.5	(7.6)	11.0	(4.6)	34.6	(7.2)
GA	31.5	(5.7)	5.6	(2.5)	18.2	(5.0)	8.3	(3.7)	21.9	(4.9)
ID	43.0	(7.7)	5.3	(1.4)	50.6	(7.4)	11.9	(4.8)	35.9	(7.7)
IL	50.1	(12.8)	3.3	(1.9)	45.3	(12.6)	4.3	(2.2)	18.6	(8.7)
IN	65.4	(9.8)	7.7	(3.4)	67.4	(7.6)	6.8	(3.1)	26.1	(6.5)
IA	55.2	(6.5)	3.5	(1.3)	50.1	(6.4)	3.9	(2.3)	30.7	(5.8)
KS	53.2	(6.2)	6.4	(3.0)	45.8	(6.2)	7.6	(3.0)	31.4	(5.7)
KY	59.5	(6.4)	11.9	(3.8)	26.2	(5.4)	9.1	(3.5)	37.6	(6.0)
LA	57.8	(9.3)	6.0	(4.0)	22.7	(7.9)	9.6	(5.5)	16.9	(6.4)
MI	57.5	(14.8)	4.8	(2.8)	55.3	(15.2)	2.2	(0.9)	47.5	(16.4)
MN	46.4	(16.0)	11.1	(8.6)	32.1	(13.1)	11.1	(8.6)	11.0	(4.4)
MS	42.6	(7.9)	6.1	(3.5)	33.3	(7.5)	6.8	(3.7)	33.4	(7.5)
MO	55.3	(9.1)	9.5	(4.0)	21.4	(5.6)	3.1	(2.3)	28.9	(6.6)
NE	47.4	(16.5)	18.7	(14.0)	52.9	(16.6)	18.7	(14.0)	28.0	(14.1)
New England ⁵	28.1	(11.9)	7.2	(3.2)	31.0	(12.6)	3.8	(1.9)	16.9	(6.9)
NM	33.3	(7.9)	16.0	(4.8)	59.4	(9.5)	4.7	(2.0)	22.4	(7.1)
NY	60.1	(14.4)	23.9	(15.6)	52.1	(14.8)	0.4	(0.3)	23.4	(12.5)
NC	34.0	(6.3)	5.1	(1.5)	25.6	(6.3)	3.9	(1.3)	18.4	(3.8)
OH	46.4	(8.2)	2.2	(1.2)	34.0	(7.2)	7.9	(3.3)	26.7	(6.7)
OK	41.1	(6.3)	3.8	(1.4)	32.9	(6.3)	5.7	(2.0)	17.0	(3.6)
OR	46.8	(10.1)	17.1	(4.7)	57.1	(7.9)	14.1	(4.4)	27.1	(5.6)
PA	57.3	(7.6)	2.9	(1.9)	45.3	(7.4)	10.3	(5.9)	26.7	(5.9)
SC	24.1	(5.0)	4.3	(2.6)	16.3	(4.7)	4.5	(1.9)	9.9	(3.1)
TN	48.6	(10.5)	4.5	(1.7)	23.0	(5.6)	4.5	(1.6)	27.9	(7.0)
TX	38.2	(3.1)	8.6	(1.8)	37.8	(3.4)	8.0	(1.8)	19.7	(2.5)
VA	27.2	(5.3)	6.4	(2.0)	16.3	(3.8)	7.4	(3.2)	34.5	(8.4)
WA	8.0	(3.7)	30.9	(20.9)	75.5	(9.8)	2.3	(1.7)	4.5	(2.4)
WV	69.4	(7.4)	6.1	(2.9)	36.5	(8.9)	7.2	(3.1)	36.6	(11.8)
WI	57.2	(12.4)	0.9	(0.4)	46.1	(14.3)	25.5	(13.8)	19.3	(9.8)
Other states ⁶	64.9	(5.1)	10.8	(1.7)	44.0	(5.2)	8.1	(1.9)	30.2	(4.1)
U.S.	44.5	(2.0)	9.0	(1.2)	40.4	(2.0)	8.1	(1.1)	24.3	(1.5)

¹ Termed "kid shed" in 2015.

² Herding by the operator or anyone employed or authorized by them, especially during the day.

³ Including sound, movement (such as flapping objects), and lights.

⁴ Including removing placentas from kidding areas.

⁵ New England includes CT, ME, MA, NH, RI, and VT.

⁶ Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

E.1.i. For the 91.3 percent of operations that used any nonlethal predator damage management methods in 2020 (Table E.1.a.), percentage of operations that used culling, changing of bedding grounds, habitat management, frequent checks, or camera systems, by state:

State	Percent Operations									
	Method									
	Culling ¹		Changing bedding grounds ²		Habitat management ³		Frequent checks ⁴		Camera systems	
	Pct.	Std.	Pct.	Std.	Pct.	Std.	Pct.	Std.	Pct.	Std.
AL	23.6	(6.9)	11.5	(3.0)	27.8	(5.2)	19.2	(3.8)	11.9	(3.5)
AZ	34.0	(12.1)	27.2	(11.6)	37.7	(11.9)	33.5	(10.7)	7.6	(5.0)
AR	8.6	(3.8)	13.7	(5.1)	28.2	(7.4)	19.7	(6.1)	5.2	(2.9)
CA	13.1	(3.7)	15.5	(4.5)	27.2	(8.4)	27.5	(8.4)	11.7	(3.7)
CO	25.1	(5.5)	18.9	(5.7)	19.6	(5.4)	25.3	(6.1)	11.1	(4.4)
FL	18.0	(6.0)	24.1	(6.6)	48.0	(7.6)	49.1	(7.6)	18.0	(6.0)
GA	13.0	(3.6)	14.9	(4.1)	32.3	(5.9)	24.0	(5.2)	4.3	(2.4)
ID	33.7	(7.4)	25.4	(5.6)	30.8	(7.7)	33.0	(7.7)	12.2	(3.8)
IL	21.8	(11.2)	18.6	(9.6)	37.0	(12.1)	33.8	(13.0)	18.2	(8.9)
IN	19.3	(5.3)	19.0	(5.6)	38.2	(9.2)	27.5	(8.5)	8.0	(2.8)
IA	39.8	(6.4)	28.5	(5.8)	33.6	(6.4)	20.5	(4.8)	8.3	(3.0)
KS	33.5	(5.8)	17.3	(4.2)	38.3	(6.1)	34.4	(6.0)	9.1	(3.8)
KY	38.6	(6.0)	21.3	(5.2)	36.1	(6.0)	24.3	(5.2)	7.8	(2.7)
LA	12.6	(5.5)	22.8	(7.9)	26.3	(7.9)	29.5	(8.8)	1.3	(1.0)
MI	15.7	(5.9)	5.4	(2.7)	52.8	(15.6)	51.8	(15.6)	6.8	(3.0)
MN	44.9	(17.3)	5.5	(2.5)	24.7	(12.1)	10.6	(8.5)	13.4	(8.8)
MS	21.9	(6.0)	13.4	(5.1)	37.8	(7.7)	33.6	(7.5)	7.1	(4.0)
MO	18.3	(4.8)	20.3	(5.8)	22.1	(5.7)	29.9	(8.3)	8.1	(3.5)
NE	12.9	(4.8)	23.2	(14.0)	36.7	(16.7)	39.7	(16.6)	1.8	(1.1)
New England ⁵	7.6	(3.0)	9.4	(4.0)	51.8	(17.7)	18.3	(9.0)	13.9	(7.7)
NM	24.1	(7.1)	15.6	(6.1)	25.6	(7.7)	36.7	(9.2)	7.0	(4.4)
NY	20.1	(12.3)	5.7	(2.9)	44.8	(15.4)	44.2	(15.5)	4.8	(2.6)
NC	13.3	(3.0)	12.4	(2.6)	24.9	(5.6)	18.5	(4.0)	4.5	(1.4)
OH	14.2	(4.2)	11.0	(3.4)	25.5	(6.1)	19.5	(5.3)	13.9	(5.7)
OK	23.2	(6.1)	20.3	(6.6)	30.2	(6.2)	24.8	(6.6)	8.4	(2.4)
OR	19.1	(4.8)	24.7	(9.7)	31.3	(7.0)	23.2	(5.3)	17.6	(4.9)
PA	22.7	(5.5)	9.4	(3.5)	35.3	(6.5)	18.9	(5.1)	14.3	(6.2)
SC	8.6	(3.1)	11.5	(3.8)	17.7	(4.7)	14.7	(4.4)	10.1	(3.3)
TN	39.9	(11.7)	13.8	(4.1)	39.6	(11.7)	20.0	(5.0)	6.2	(2.0)
TX	23.3	(2.5)	18.9	(2.6)	26.6	(2.8)	25.4	(2.7)	10.2	(1.9)
VA	18.8	(4.2)	13.1	(3.3)	23.9	(5.0)	15.3	(3.7)	7.1	(2.2)
WA	2.6	(1.5)	2.0	(1.3)	36.7	(20.1)	4.9	(2.9)	2.6	(1.8)
WV	25.4	(6.5)	36.7	(11.9)	39.7	(11.5)	20.0	(5.7)	11.9	(4.3)
WI	7.6	(2.5)	15.9	(9.7)	29.5	(11.8)	16.5	(9.7)	13.1	(9.7)
Other states ⁶	22.6	(3.0)	19.9	(3.0)	27.2	(3.6)	20.9	(3.1)	9.0	(2.0)
U.S.	21.1	(1.6)	16.5	(1.2)	32.1	(2.1)	24.4	(1.5)	9.6	(0.9)

¹ Removing older, weak, or sick goats from the herd to prevent death loss.

² Moving or rotating where goats bed down.

³ Including trimming brush from the perimeter of the property, barns, and pens.

⁴ More frequent checks in high predation areas/seasons.

⁵ New England includes CT, ME, MA, NH, RI, and VT.

⁶ Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

E.1.j. For the 91.3 percent of operations that used any nonlethal predator damage management methods in 2020 (Table E.1.a.), percentage of operations that used altered breeding practices or other nonlethal methods, by state:

Percent Operations				
Method				
State	Altered breeding practices ¹		Other nonlethal methods	
	Pct.	Std. error	Pct.	Std. error
AL	2.7	(1.2)	1.2	(0.8)
AZ	0.1	(0.1)	0.0	(—)
AR	6.6	(3.7)	(D)	(D)
CA	2.9	(1.5)	1.6	(1.2)
CO	0.6	(0.4)	3.2	(2.6)
FL	4.4	(3.3)	1.5	(1.0)
GA	3.2	(2.3)	0.3	(0.2)
ID	3.8	(1.2)	5.3	(3.5)
IL	14.8	(11.4)	11.9	(10.0)
IN	6.5	(3.0)	0.4	(0.3)
IA	5.9	(2.5)	2.4	(1.7)
KS	2.6	(1.7)	4.6	(2.8)
KY	2.1	(0.6)	0.2	(0.2)
LA	2.0	(1.0)	4.0	(3.9)
MI	1.1	(0.5)	1.8	(1.6)
MN	0.3	(0.3)	1.7	(1.4)
MS	5.9	(3.8)	0.7	(0.4)
MO	6.6	(3.3)	0.2	(0.1)
NE	18.8	(14.0)	0.0	(—)
New England ²	2.0	(1.1)	2.4	(1.4)
NM	6.3	(4.5)	0.0	(—)
NY	2.0	(1.8)	0.5	(0.3)
NC	4.2	(1.8)	0.5	(0.4)
OH	3.0	(1.5)	2.4	(1.4)
OK	3.7	(1.4)	1.4	(1.1)
OR	2.5	(1.9)	2.6	(1.9)
PA	0.2	(0.1)	5.8	(2.7)
SC	1.7	(1.4)	2.4	(1.4)
TN	3.0	(1.3)	0.1	(0.1)
TX	6.6	(1.4)	3.1	(1.2)
VA	3.6	(1.5)	0.3	(0.2)
WA	1.7	(1.2)	0.0	(—)
WV	7.1	(2.9)	(D)	(D)
WI	0.8	(0.4)	1.5	(1.0)
Other states ³	4.4	(1.2)	1.2	(0.4)
U.S.	3.9	(0.5)	1.8	(0.3)

¹ Including changing the breeding season so kids are not born when predators such as coyotes are feeding their young.

² New England includes CT, ME, MA, NH, RI, and VT.

³ Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

(D) Values suppressed to avoid potential disclosure.

2. Money spent on nonlethal methods

For operations that used any nonlethal methods, the percentage of operations that spent any money on those methods increased from 24.4 percent in 2015 to 36.1 percent in 2020. In both years, those percentages tended to increase as operation size increased. Examples of money spent on nonlethal methods listed on the questionnaire included money spent to purchase and maintain fencing, lighting, or camera systems, and guard animals or any additional money spent to feed or provide veterinary care for those guard animals.

E.2.a. For the 91.3 percent of operations that used any nonlethal predator damage management methods in 2020 (Table E.1.a.), percentage of operations that spent any money on nonlethal methods for adult and kid goats in 2020, by herd size:

Percent Operations									
Herd Size (number of adult and kid goats)									
Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error
27.6	(2.7)	42.0	(3.1)	50.6	(1.9)	52.5	(2.0)	36.1	(1.8)

E.2.b. For the 91.3 percent of operations that used any nonlethal predator damage management methods in 2020 (Table E.1.a.), percentage of operations that spent any money on nonlethal methods for adult and kid goats in 2020, by state:

State	Percent Operations	
	Percent	Std. error
AL	45.1	(6.7)
AZ	34.9	(11.9)
AR	57.0	(9.7)
CA	39.3	(9.9)
CO	51.4	(7.1)
FL	54.9	(7.6)
GA	51.8	(6.3)
ID	54.5	(8.2)
IL	28.2	(9.8)
IN	28.7	(7.0)
IA	33.9	(5.8)
KS	43.4	(6.3)
KY	32.3	(5.7)
LA	61.9	(9.3)
MI	21.7	(8.1)
MN	32.9	(14.5)
MS	53.8	(8.4)
MO	39.5	(8.0)
NE	28.7	(14.3)
New England ¹	26.9	(11.7)
NM	36.5	(9.5)
NY	18.7	(6.8)
NC	36.3	(6.8)
OH	33.5	(7.0)
OK	50.6	(6.4)
OR	33.7	(7.1)
PA	35.2	(7.9)
SC	61.5	(6.2)
TN	37.9	(8.7)
TX	41.6	(3.5)
VA	19.5	(4.2)
WA	15.5	(7.8)
WV	26.0	(6.6)
WI	35.0	(13.0)
Other states ²	29.0	(3.8)
U.S.	36.1	(1.8)

¹ New England includes CT, ME, MA, NH, RI, and VT.

² Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

The total amount spent on nonlethal methods more than doubled from 2015 to 2020, from \$24.1 million to \$50.3 million. The average and median amounts spent were \$1,547 and \$584 in 2020.

As operation size increased, the typical amount of money spent per operation on nonlethal predator damage management tended to increase. However, because there were different numbers of operations in each operation size category, total amount spent did not follow the same pattern. In 2015, the total amount spent decreased with increasing operation size, while in 2020, the total amount spent was highest for large and small operations.

E.2.c. For the operations that spent any money on nonlethal predator damage management methods in 2020 (Table E.2.a.), amount of money spent on nonlethal methods for adult and kid goats in 2020, by point estimate type and by herd size:

Amount* (\$)										
Herd Size (number of adult and kid goats)										
	Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
Point estimate type	No.	Std. error	No.	Std. error	No.	Std. error	No.	Std. error	No.	Std. error
Average	1,224	(234)	1,231	(145)	1,725	(180)	4,027	(363)	1,547	(123)
Median	489	(71)	512	(42)	664	(84)	1,403	(124)	584	(41)
Total (\$1,000)	17,101	(3,417)	8,221	(1,148)	17,102	(1,969)	7,862	(802)	50,286	(4,124)

* Values have been adjusted to reflect January 2021 dollars using the U.S. Bureau of Labor Statistics CPI Inflation Calculator https://www.bls.gov/data/inflation_calculator.htm.

E.2.d. For the operations that spent any money on nonlethal predator damage management methods in 2020 (Table E.2.a.), percentage of operations by amount of money spent on nonlethal methods for adult and kid goats in 2020, by herd size:

Percent Operations										
Herd Size (number of adult and kid goats)										
Amount spent* (\$)	Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error
1–499	40.4	(5.0)	36.2	(4.7)	29.9	(2.3)	18.5	(2.1)	35.0	(2.5)
500–999	25.9	(4.6)	29.7	(4.6)	26.1	(2.7)	19.7	(2.4)	26.4	(2.3)
1,000–4,999	29.9	(3.9)	30.0	(4.4)	36.8	(2.5)	39.8	(2.8)	32.6	(2.1)
5,000–9,999	2.5	(0.8)	2.6	(1.1)	4.0	(0.7)	9.4	(1.7)	3.4	(0.5)
10,000 or more	1.3	(0.8)	1.5	(0.7)	3.2	(1.0)	12.6	(1.9)	2.6	(0.5)
Total	100.0		100.0		100.0		100.0		100.0	

* Values have been adjusted to reflect January 2021 dollars using the U.S. Bureau of Labor Statistics CPI Inflation Calculator https://www.bls.gov/data/inflation_calculator.htm.

E.2.e. For the operations that spent any money on nonlethal predator damage management methods in 2020 (Table E.2.a.), amount of money spent on nonlethal methods for adult and kid goats in 2020, by state and by point estimate type:

Amount ¹ (\$)						
Point Estimate Type						
State	Average		Median		Total (\$1,000)	
	No.	Std. error	No.	Std. error	No.	Std. error
AL	1,046	(215)	482	(120)	920	(222)
AZ	376	(51)	285	(35)	351	(145)
AR	1,494	(430)	580	(111)	1,136	(360)
CA	1,511	(253)	729	(131)	3,524	(661)
CO	1,135	(275)	693	(233)	551	(169)
FL	1,789	(430)	666	(357)	1,576	(414)
GA	872	(124)	550	(111)	683	(132)
ID	2,239	(677)	1,232	(550)	1,833	(627)
IL	852	(213)	387	(38)	492	(132)
IN	1,286	(327)	464	(190)	854	(219)
IA	1,019	(204)	453	(114)	397	(96)
KS	1,438	(189)	1,022	(331)	598	(119)
KY	1,516	(328)	974	(394)	746	(241)
LA	2,083	(884)	643	(279)	777	(368)
MI	1,130	(427)	412	(58)	513	(189)
MN	947	(195)	770	(—)	637	(358)
MS	1,113	(311)	469	(58)	310	(98)
MO	1,005	(258)	410	(86)	1,263	(354)
NE	1,043	(119)	1,061	(—)	282	(185)
New England ²	1,111	(378)	194	(218)	917	(303)
NM	1,116	(247)	460	(199)	372	(100)
NY	1,471	(673)	490	(160)	533	(271)
NC	1,479	(305)	628	(122)	1,735	(384)
OH	1,769	(628)	538	(149)	824	(320)
OK	1,362	(225)	557	(117)	1,935	(342)
OR	1,223	(316)	488	(—)	1,310	(291)
PA	1,587	(587)	566	(582)	1,233	(657)
SC	1,283	(261)	500	(258)	552	(129)
TN	1,220	(310)	583	(152)	2,701	(826)
TX	2,891	(652)	690	(109)	14,774	(3,505)
VA	2,347	(1,006)	491	(257)	1,594	(744)
WA	1,230	(231)	557	(133)	416	(104)
WV	1,236	(241)	758	(240)	431	(115)
WI	870	(240)	596	(—)	1,771	(661)
Other states ³	1,445	(198)	736	(120)	1,745	(292)
U.S.	1,547	(123)	584	(41)	50,286	(4,124)

¹ Values have been adjusted to reflect January 2021 dollars using the U.S. Bureau of Labor Statistics CPI Inflation Calculator https://www.bls.gov/data/inflation_calculator.htm.

² New England includes CT, ME, MA, NH, RI, and VT.

³ Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

3. Time spent on nonlethal methods

Time spent on nonlethal methods totaled 6,924,000 hours, averaging to 193 hours per operation across all operations that spent any time on nonlethal methods in 2020. Very large operations (100 or more head) spent more time, on average, than any other type of operation, averaging 384 hours during the year. Small (1–9 head) operations spent more total hours on nonlethal methods compared to medium (10–19 head) and very large operations, with 3,116,000 hours spent in 2020, though small operations made up 65.9 percent of all operations.

Examples of time spent on nonlethal methods listed on the questionnaire included time spent on tasks such as building and maintaining fencing, checking on goats and kids in high predation areas and/or seasons, setting up lighting or camera systems, and removing carrion.

E.3.a. For the 91.3 percent of operations that used any nonlethal predator damage management methods in 2020 (Table E.1.a.), percentage of operations that spent any time* on nonlethal methods for adult and kid goats in 2020, by herd size:

Percent Operations									
Herd Size (number of adult and kid goats)									
Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error
37.3	(3.2)	45.9	(3.2)	54.7	(1.9)	55.4	(2.0)	43.2	(2.0)

* Time spent includes time on tasks such as building and maintaining fencing, checking on adult and kid goats in high predation areas/seasons, setting up lighting or camera systems, removing carrion, or similar.

E.3.b. For the 91.3 percent of operations that used any nonlethal predator damage management methods in 2020 (Table E.1.a.), percentage of operations that spent any time¹ on nonlethal methods for adult and kid goats in 2020, by state:

State	Percent Operations	
	Percent	Std. error
AL	46.6	(6.9)
AZ	61.8	(10.4)
AR	38.6	(8.5)
CA	33.6	(8.9)
CO	57.9	(7.0)
FL	57.4	(7.7)
GA	59.0	(6.4)
ID	54.4	(8.2)
IL	43.0	(12.7)
IN	35.3	(9.0)
IA	42.2	(6.0)
KS	67.4	(5.8)
KY	33.6	(5.8)
LA	59.7	(9.7)
MI	57.2	(15.9)
MN	44.7	(16.1)
MS	59.6	(8.3)
MO	43.8	(9.6)
NE	30.3	(14.5)
New England ²	34.8	(14.7)
NM	51.0	(10.0)
NY	34.8	(13.5)
NC	45.3	(8.1)
OH	56.4	(7.5)
OK	47.2	(6.5)
OR	58.6	(6.8)
PA	56.9	(7.4)
SC	55.4	(6.5)
TN	45.9	(10.0)
TX	41.2	(3.3)
VA	26.1	(5.2)
WA	44.8	(19.7)
WV	25.7	(6.8)
WI	27.1	(10.3)
Other states ³	34.4	(4.3)
U.S.	43.2	(2.0)

¹ Time spent includes time on tasks such as building and maintaining fencing, checking on adult and kid goats in high predation areas/seasons, setting up lighting or camera systems, removing carrion, or similar.

² New England includes CT, ME, MA, NH, RI, and VT.

³ Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

E.3.c. For the operations that spent any time on nonlethal predator damage management methods in 2020 (Table E.3.a.), amount of time spent* on nonlethal methods for adult and kid goats in 2020, by point estimate type and by herd size:

Time Spent (h)										
Herd Size (number of adult and kid goats)										
Point estimate type	Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
	No.	Std. error	No.	Std. error	No.	Std. error	No.	Std. error	No.	Std. error
Average	183	(28)	160	(26)	196	(16)	384	(48)	193	(15)
Median	49	(10)	40	(11)	72	(9)	96	(10)	51	(8)
Total (1,000 h)	3,105	(549)	1,150	(223)	1,944	(181)	726	(100)	6,924	(623)

* Time spent includes time on tasks such as building and maintaining fencing, checking on adult and kid goats in high predation areas/seasons, setting up lighting or camera systems, removing carrion, or similar.

E.3.d. For the operations that spent any time on nonlethal predator damage management methods in 2020 (Table E.3.a.), percentage of operations by amount of time spent* on nonlethal methods for adult and kid goats in 2020, by herd size:

Percent Operations										
Herd Size (number of adult and kid goats)										
Time spent (h)	Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error
1–19	20.9	(3.4)	19.6	(3.9)	14.6	(2.3)	8.6	(1.5)	18.3	(1.9)
20–39	17.8	(3.5)	23.6	(4.3)	14.9	(1.7)	10.1	(1.7)	17.7	(1.9)
40–79	17.6	(3.1)	16.7	(3.0)	20.9	(2.1)	20.1	(2.2)	18.5	(1.7)
80–119	14.4	(4.8)	10.3	(3.5)	13.7	(1.9)	15.6	(2.1)	13.4	(2.4)
120–359	18.4	(5.6)	11.7	(2.5)	19.8	(2.2)	19.7	(2.3)	17.5	(2.8)
360 or more	10.9	(2.1)	18.0	(4.2)	16.1	(2.0)	26.0	(2.7)	14.6	(1.5)
Total	100.0		100.0		100.0		100.0		100.0	

* Time spent includes time on tasks such as building and maintaining fencing, checking on adult and kid goats in high predation areas/seasons, setting up lighting or camera systems, removing carrion, or similar.

E.3.e. For the operations that spent any time on nonlethal predator damage management methods in 2020 (Table E.3.a.), amount of time spent¹ on nonlethal methods for adult and kid goats in 2020, by state and by point estimate type:

Time Spent (h)						
Point Estimate Type						
State	Average		Median		Total (1,000 h)	
	No.	Std. error	No.	Std. error	No.	Std. error
AL	230	(52)	89	(35)	205	(56)
AZ	186	(63)	85	(—)	258	(111)
AR	134	(26)	87	(12)	69	(19)
CA	285	(90)	58	(20)	456	(152)
CO	102	(21)	47	(32)	58	(14)
FL	374	(107)	142	(30)	337	(109)
GA	122	(24)	51	(18)	101	(24)
ID	230	(60)	104	(35)	179	(54)
IL	285	(137)	48	(131)	248	(156)
IN	88	(24)	28	(5)	80	(21)
IA	156	(50)	35	(9)	72	(23)
KS	140	(42)	29	(10)	83	(26)
KY	164	(55)	21	(23)	80	(32)
LA	139	(47)	39	(25)	51	(20)
MI	168	(47)	95	(—)	197	(74)
MN	45	(13)	20	(14)	33	(16)
MS	178	(51)	49	(18)	57	(16)
MO	209	(42)	81	(76)	194	(56)
NE	127	(18)	114	(—)	35	(23)
New England ²	236	(100)	45	(7)	242	(97)
NM	179	(77)	57	(31)	70	(34)
NY	126	(57)	37	(—)	80	(31)
NC	492	(229)	51	(15)	734	(351)
OH	148	(42)	46	(17)	93	(31)
OK	155	(40)	39	(18)	194	(47)
OR	141	(80)	27	(11)	255	(144)
PA	134	(63)	33	(36)	157	(96)
SC	603	(418)	37	(11)	213	(152)
TN	101	(19)	29	(6)	258	(46)
TX	197	(26)	70	(11)	883	(121)
VA	136	(25)	40	(13)	131	(27)
WA	236	(24)	224	(—)	336	(281)
WV	199	(37)	101	(60)	62	(17)
WI	142	(49)	76	(15)	218	(85)
Other states ³	160	(25)	40	(5)	205	(34)
U.S.	193	(15)	51	(8)	6,924	(623)

¹ Time spent includes time on tasks such as building and maintaining fencing, checking on adult and kid goats in high predation areas/seasons, setting up lighting or camera systems, removing carrion, or similar.

² New England includes CT, ME, MA, NH, RI, and VT.

³ Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

F. Lethal Predator Damage Management Methods

1. Lethal methods used

Overall, 11.9 percent of operations used any lethal predator damage management methods in 2020. A higher percentage of large (20–99 head) operations used any lethal methods (19.8 percent) compared to small (1–9 head) or medium (10–19 head) operations. A higher percentage of very large operations (100 or more head) used any lethal methods (37.5 percent) compared to any other type of operation.

Examples of lethal predator damage management methods listed on the questionnaire included hunting, trapping, and poisons/toxicants, though no specific lethal methods were captured on the questionnaire.

F.1.a. Percentage of operations that used any lethal predator damage management methods* for adult and kid goats in 2020, by herd size:

Percent Operations									
Herd Size (number of adult and kid goats)									
Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error
7.5	(1.0)	11.9	(1.7)	19.8	(1.5)	37.5	(1.8)	11.9	(0.8)

* Lethal predator damage management methods included hunting, trapping, poisons, toxicants, etc.

F.1.b. Percentage of operations that used any lethal predator damage management methods¹ for adult and kid goats in 2020, by state:

State	Percent Operations	
	Percent	Std. error
AL	15.1	(3.5)
AZ	1.8	(1.6)
AR	16.1	(5.4)
CA	10.4	(3.1)
CO	18.8	(5.3)
FL	10.5	(4.0)
GA	18.5	(4.5)
ID	15.0	(5.3)
IL	16.2	(10.7)
IN	4.0	(1.7)
IA	7.1	(2.5)
KS	17.0	(4.5)
KY	8.9	(3.5)
LA	19.0	(7.0)
MI	4.0	(1.7)
MN	8.9	(5.0)
MS	21.7	(6.6)
MO	7.2	(2.5)
NE	8.4	(3.3)
New England ²	6.7	(3.2)
NM	20.7	(7.7)
NY	3.8	(1.3)
NC	8.5	(2.7)
OH	9.5	(3.1)
OK	23.8	(7.1)
OR	14.7	(4.2)
PA	8.6	(3.2)
SC	23.2	(5.1)
TN	5.1	(1.7)
TX	22.6	(2.4)
VA	8.7	(2.4)
WA	8.8	(5.5)
WV	17.8	(6.7)
WI	6.5	(3.4)
Other states ³	15.2	(2.9)
U.S.	11.9	(0.8)

¹ Lethal predator damage management methods included hunting, trapping, poisons, toxicants, etc.

² New England includes CT, ME, MA, NH, RI, and VT.

³ Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

2. Money spent on lethal methods

The questionnaire in 2015 only asked whether operations spent any money on lethal methods. Therefore, the percentage of all operations that spent any money on lethal methods is presented for both years so that comparisons can be made between the 2015 and 2020 estimates. In 2020, the percentage of operations that spent any money on lethal methods, out of operations that used any lethal methods, is also presented to provide comparable estimates between the lethal and nonlethal methods estimates. Examples of money spent on lethal methods listed on the questionnaire included money spent on euthanasia, guns, ammunition, and materials, such as those to make traps.

The apparent percentage of operations that spent any money on lethal methods increased from 6.9 percent in 2015 to 8.2 percent in 2020, though this increase was not significant. The percentage of operations spending any money on lethal methods tended to increase as operation size increased in both years.

The total amount spent on lethal methods increased from \$3.3 million in 2015 to \$4.5 million in 2020. The average and median amounts spent were \$552 and \$190 in 2020, signifying a right-skewed distribution in the amount spent. That is, even though half of operations spent \$190 or less, there were some operations that spent substantially more than that, resulting in a mean amount spent being more than double the median amount spent.

F.2.a. Percentage of operations that spent any money on lethal predator damage management methods* for adult and kid goats in 2020, by herd size:

Percent Operations									
Herd Size (number of adult and kid goats)									
Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error
4.9	(0.9)	7.3	(1.3)	14.5	(1.3)	27.8	(1.6)	8.2	(0.7)

* Lethal predator damage management methods included hunting, trapping, poisons, toxicants, etc. Money spent on lethal predator damage management methods included money spent on euthanasia, guns, ammo, materials such as those to make traps, etc.

F.2.a.alt. For the 11.9 percent of operations that used any lethal predator damage management methods* in 2020 (Table F.1.a.), percentage of operations that spent any money on lethal methods for adult and kid goats in 2020, by herd size:

Percent Operations									
Herd Size (number of adult and kid goats)									
Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error
67.6	(5.0)	61.3	(7.3)	74.0	(3.7)	75.4	(2.8)	69.7	(2.6)

* Lethal predator damage management methods included hunting, trapping, poisons, toxicants, etc. Money spent on lethal predator damage management methods included money spent on euthanasia, guns, ammo, materials such as those to make traps, etc.

F.2.b. For the 8.2 percent of operations that spent any money on lethal predator damage management methods¹ in 2020 (Table F.2.a.), amount of money spent on lethal methods for adult and kid goats, by point estimate type and by herd size:

Amount² (\$)										
Herd Size (number of adult and kid goats)										
Point estimate type	Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
	No.	Std. error	No.	Std. error	No.	Std. error	No.	Std. error	No.	Std. error
Average	308	(67)	237	(51)	539	(85)	1,440	(230)	552	(56)
Median	99	(35)	94	(52)	187	(41)	442	(47)	190	(24)
Total (\$1,000)	824	(196)	285	(69)	1,644	(314)	1,731	(287)	4,485	(471)

¹ Lethal predator damage management methods included hunting, trapping, poisons, toxicants, etc. Money spent on lethal predator damage management methods included money spent on euthanasia, guns, ammo, materials such as those to make traps, etc.

² Values have been adjusted to reflect January 2021 dollars using the U.S. Bureau of Labor Statistics CPI Inflation Calculator https://www.bls.gov/data/inflation_calculator.htm.

F.2.c. For the 8.2 percent of operations that spent any money on lethal predator damage management methods¹ in 2020 (Table F.2.a.), percentage of operations by amount of money spent on lethal methods for adult and kid goats, by herd size:

Percent Operations										
Herd Size (number of adult and kid goats)										
Amount spent² (\$)	Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error
1–499	84.1	(5.3)	80.3	(7.0)	65.3	(4.8)	48.2	(3.6)	71.2	(3.0)
500–999	4.9	(1.7)	15.0	(6.5)	14.8	(3.0)	16.6	(2.9)	11.9	(1.7)
1,000–4,999	10.6	(5.0)	4.6	(2.8)	18.8	(4.4)	29.2	(3.3)	15.5	(2.5)
5,000–9,999	0.0	(—)	0.0	(—)	1.1	(0.9)	4.1	(1.0)	1.0	(0.4)
10,000 or more	0.4	(0.4)	0.0	(—)	0.0	(—)	2.0	(0.6)	0.4	(0.2)
Total	100.0		100.0		100.0		100.0		100.0	

¹ Lethal predator damage management methods included hunting, trapping, poisons, toxicants, etc. Money spent on lethal predator damage management methods included money spent on euthanasia, guns, ammo, materials such as those to make traps, etc.

² Values have been adjusted to reflect January 2021 dollars using the U.S. Bureau of Labor Statistics CPI Inflation Calculator https://www.bls.gov/data/inflation_calculator.htm.

3. Time spent on lethal methods

Time spent on lethal methods totaled 717,000 hours, averaging 85 hours per operation across all operations that spent any time on lethal methods in 2020. Very large operations (100 or more head) spent more time, on average, than small (1–9 head) and medium (10–19 head) operations, averaging 151 hours during the year. Even though large (20–99 head) and small (1–9 head) operations tended to spend more total hours on nonlethal methods compared to medium (10–19 head) and very large operations, these differences were not significant.

Examples of time spent on lethal methods listed on the questionnaire included time spent on tasks such as making and monitoring traps and hunting or euthanizing predators.

F.3.a. For the 11.9 percent of operations that used any lethal predator damage management methods* in 2020 (Table F.1.a.), percentage of operations that spent any time on lethal methods for adult and kid goats in 2020, by herd size:

Percent Operations									
Herd Size (number of adult and kid goats)									
Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error
76.5	(4.3)	78.0	(6.3)	68.6	(4.0)	78.8	(2.6)	74.4	(2.4)

* Lethal predator damage management methods included hunting, trapping, poisons, toxicants, etc. Time spent on lethal predator damage management methods included time spent on tasks such as making and monitoring traps, hunting or euthanizing predators, etc.

F.3.b. For the operations that spent any time on lethal predator damage management methods* in 2020 (Table F.3.a.), amount of time spent on lethal methods for adult and kid goats, by herd size and by point estimate type:

Time Spent (h)										
Herd Size (number of adult and kid goats)										
	Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
Point estimate type	No.	Std. error	No.	Std. error	No.	Std. error	No.	Std. error	No.	Std. error
Average	69	(16)	65	(16)	86	(22)	151	(19)	85	(10)
Median	18	(7)	24	(9)	37	(6)	49	(9)	28	(4)
Total (1,000 h)	208	(50)	102	(27)	232	(61)	176	(25)	717	(87)

* Lethal predator damage management methods included hunting, trapping, poisons, toxicants, etc. Time spent on lethal predator damage management methods included time spent on tasks such as making and monitoring traps, hunting or euthanizing predators, etc.

F.3.c. For the operations that spent any time on lethal predator damage management methods in 2020 (Table F.3.a.), percentage of operations by amount of time spent on lethal methods for adult and kid goats, by herd size:

Percent Operations										
Herd Size (number of adult and kid goats)										
	Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
Time spent (h)	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error
1–19	37.4	(7.9)	36.2	(9.5)	27.7	(4.5)	14.0	(2.2)	30.8	(3.7)
20–39	23.2	(8.5)	24.6	(7.6)	20.9	(4.1)	26.9	(3.6)	23.3	(3.6)
40–79	18.8	(5.1)	15.1	(5.5)	23.6	(4.9)	15.2	(2.5)	19.1	(2.7)
80–119	6.1	(2.3)	18.2	(7.1)	16.4	(3.8)	17.8	(2.9)	13.3	(2.1)
120–359	9.4	(5.3)	1.7	(1.0)	7.9	(2.3)	14.8	(2.8)	8.2	(2.1)
360 or more	5.1	(2.2)	4.2	(2.6)	3.5	(1.6)	11.4	(2.3)	5.3	(1.1)
Total	100.0	(—)	100.0	(—)	100.0	(—)	100.0	(—)	100.0	(—)

* Lethal predator damage management methods included hunting, trapping, poisons, toxicants, etc. Time spent on lethal predator damage management methods included time spent on tasks such as making and monitoring traps, hunting or euthanizing predators, etc.

G. Government Specialists

USDA–APHIS–Wildlife Services assists producers wishing to manage predator-related damage to their livestock or operation. Producers may consult their Wildlife Services State Office (<https://www.aphis.usda.gov/wildlife-state-offices>) to explore ways to help protect their livestock from predation.

Those providing the above services are often called “government specialists,” whether at the state or federal levels. Overall, 23.3 percent of operations were aware that this type of assistance was available, and 2.4 percent of operations had the assistance of a state or federal government specialist in managing the damage caused by predators of adult and kid goats. Both of these percentages generally increased with increasing operation size. The percentage of operations that had the assistance of a government specialist was similar in both 2015 and 2020.

G.1. Percentage of operations that were aware that the assistance of a state or federal government specialist in managing the damage caused by predators of adult and kid goats was available in 2020, by herd size:

Percent Operations									
Herd Size (number of adult and kid goats)									
Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error
19.4	(1.9)	21.8	(2.2)	30.8	(1.6)	49.2	(1.9)	23.3	(1.3)

G.2. Percentage of operations that were aware that the assistance of a state or federal government specialist in managing the damage caused by predators of adult and kid goats was available in 2020, by state:

State	Percent Operations	
	Percent	Std. error
AL	22.2	(5.8)
AZ	22.8	(10.3)
AR	16.0	(5.3)
CA	31.6	(8.5)
CO	30.9	(6.8)
FL	23.4	(6.4)
GA	5.8	(2.2)
ID	40.9	(7.5)
IL	14.7	(9.5)
IN	15.1	(7.0)
IA	11.8	(4.2)
KS	17.1	(4.3)
KY	43.4	(13.6)
LA	20.3	(6.5)
MI	13.2	(4.8)
MN	18.7	(8.9)
MS	16.1	(5.3)
MO	18.1	(4.9)
NE	18.2	(6.8)
New England ¹	13.2	(5.3)
NM	14.4	(6.4)
NY	28.2	(13.7)
NC	34.0	(4.8)
OH	23.8	(5.1)
OK	49.6	(5.8)
OR	40.1	(6.9)
PA	14.2	(4.2)
SC	15.0	(4.3)
TN	8.3	(2.3)
TX	32.9	(2.7)
VA	14.7	(3.4)
WA	7.1	(3.2)
WV	26.5	(6.4)
WI	10.2	(3.6)
Other states ²	35.0	(4.1)
U.S.	23.3	(1.3)

¹ New England includes CT, ME, MA, NH, RI, and VT.

² Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

G.3. Percentage of operations that had the assistance of a state or federal government specialist in managing the damage caused by predators of adult and kid goats in 2020, by herd size:

Percent Operations									
Herd Size (number of adult and kid goats)									
Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error
1.1	(0.3)	1.7	(0.5)	4.0	(0.6)	14.4	(1.3)	2.4	(0.2)

G.4. Percentage of operations that had the assistance of a state or federal government specialist in managing the damage caused by predators of adult and kid goats in 2020, by state:

Percent Operations		
State	Percent	Std. error
AL	0.2	(0.1)
AZ	0.0	(—)
AR	2.8	(2.2)
CA	4.6	(1.6)
CO	1.0	(0.5)
FL	0.5	(0.5)
GA	0.0	(—)
ID	2.3	(0.9)
IL	1.2	(1.2)
IN	1.2	(1.1)
IA	0.0	(—)
KS	0.0	(—)
KY	0.0	(—)
LA	8.3	(4.9)
MI	0.3	(0.2)
MN	0.4	(0.3)
MS	0.0	(—)
MO	0.4	(0.2)
NE	3.5	(1.7)
New England ¹	0.6	(0.4)
NM	0.4	(0.3)
NY	1.9	(1.7)
NC	1.8	(0.9)
OH	0.0	(—)
OK	2.5	(1.2)
OR	8.8	(3.0)
PA	0.5	(0.4)
SC	(D)	(D)
TN	1.5	(0.9)
TX	6.4	(0.9)
VA	1.0	(0.8)
WA	0.9	(1.0)
WV	6.5	(2.9)
WI	(D)	(D)
Other states ²	3.8	(0.6)
U.S.	2.4	(0.2)

¹ New England includes CT, ME, MA, NH, RI, and VT.

² Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

(D) Values suppressed to avoid potential disclosure.

H. Official Identification

To eradicate scrapie from the U.S. goat herd, goats require official ID to leave the operation, with notable exceptions including kids (younger than 18 months) going to slaughter or for feeding for slaughter or wethers (castrated male animals) younger than 18 months. Other notable exceptions (with additional stipulations not stated here) include animals moved to slaughter or an approved market, at which the animals receive official ID, or animals moved off the operation to graze or feed without a change of ownership.

For more information, please visit:

<https://www.aphis.usda.gov/livestock-poultry-disease/sheep-goat/scrapie>.

H.1. Percentage of operations that had any adult or kid goats leave the operation in 2020 (not including deaths), by herd size:

Percent Operations									
Herd Size (number of adult and kid goats)									
Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error
26.0	(2.5)	47.9	(3.0)	63.6	(1.8)	74.0	(1.8)	39.2	(1.7)

H.2. Percentage of operations that had any adult or kid goats leave the operation in 2020 (not including deaths), by state:

State	Percent Operations	
	Percent	Std. error
AL	46.7	(6.2)
AZ	24.0	(10.3)
AR	50.4	(8.7)
CA	30.5	(7.5)
CO	36.4	(7.3)
FL	41.7	(7.0)
GA	42.3	(5.7)
ID	49.2	(9.3)
IL	59.4	(12.2)
IN	41.3	(9.6)
IA	61.9	(5.5)
KS	57.8	(6.1)
KY	43.0	(11.0)
LA	50.3	(9.7)
MI	27.3	(9.3)
MN	55.4	(14.3)
MS	55.0	(7.5)
MO	38.2	(7.1)
NE	67.2	(14.0)
New England ¹	54.3	(16.8)
NM	36.4	(8.1)
NY	55.3	(14.2)
NC	31.4	(7.1)
OH	43.7	(6.8)
OK	45.5	(5.5)
OR	46.7	(9.7)
PA	51.2	(9.9)
SC	48.1	(6.2)
TN	30.4	(6.5)
TX	41.8	(3.0)
VA	30.6	(11.1)
WA	7.5	(3.3)
WV	46.3	(10.0)
WI	33.1	(7.2)
Other states ²	34.2	(4.1)
U.S.	39.2	(1.7)

¹ New England includes CT, ME, MA, NH, RI, and VT.

² Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

Overall, over one-third (34.4 percent) of operations used an official ID for any goats on the operation in 2020. Over one-half (57.4 percent) of operations that had any adult or kid goats leave the operation in 2020 (excluding kids 18 months or younger going to slaughter or feeding for slaughter and excluding deaths) used official ID for any goats on the operation. Both of these percentages increased with as operation size increased.

H.3. Percentage of operations that used an official ID¹ in 2020, and for operations that had any adult or kid goats permanently leave the operation in 2020², percentage of operations that used an official ID, by herd size:

Percent Operations										
Scope	Herd Size (number of adult and kid goats)									
	Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
	Pct.	Std. Error	Pct.	Std. Error	Pct.	Std. Error	Pct.	Std. Error	Pct.	Std. Error
All operations	23.9	(2.1)	39.8	(2.7)	53.9	(1.8)	61.6	(1.9)	34.4	(1.5)
Operations with any goats that permanently left the operation in 2020 ²	45.6	(4.7)	57.8	(4.1)	67.8	(2.4)	73.6	(2.2)	57.4	(2.4)

¹ Animal identification such as an ear tag with the U.S. shield or a Scrapie tag.

² That is, operations with any goats older than 18 months and for the goats 18 months or younger (not going to slaughter or for feeding for slaughter) that permanently left the operation in 2020 (not including deaths).

H.4. Percentage of operations that used an official ID¹ in 2020, and for operations that had any adult or kid goats permanently leave the operation in 2020², percentage of operations that used an official ID, by state:

Percent Operations				
Scope				
State	All operations		Operations with any goats that permanently left the operation in 2020 ²	
	Pct.	Std. Error	Pct.	Std. Error
AL	42.2	(6.0)	66.9	(8.0)
AZ	16.7	(7.5)	35.4	(25.2)
AR	42.0	(8.2)	71.1	(10.1)
CA	35.0	(8.2)	65.3	(6.9)
CO	44.3	(8.0)	64.7	(10.2)
FL	36.2	(6.6)	44.6	(10.1)
GA	16.8	(4.3)	28.8	(8.6)
ID	51.4	(7.5)	56.9	(10.4)
IL	29.7	(7.7)	41.3	(13.5)
IN	46.3	(10.6)	59.2	(14.6)
IA	71.0	(4.9)	88.8	(4.1)
KS	60.2	(6.0)	82.3	(7.3)
KY	61.6	(6.0)	75.3	(8.3)
LA	21.3	(7.0)	25.8	(11.0)
MI	42.8	(12.7)	94.4	(2.4)
MN	41.3	(13.2)	50.2	(23.9)
MS	35.8	(7.1)	63.8	(10.5)
MO	37.7	(7.2)	71.5	(8.6)
NE	42.9	(14.0)	31.3	(15.1)
New England ³	18.6	(7.1)	60.4	(8.6)
NM	33.6	(8.1)	64.4	(15.7)
NY	42.9	(13.6)	53.0	(20.2)
NC	50.2	(5.2)	69.5	(7.1)
OH	49.0	(6.9)	82.1	(7.6)
OK	35.2	(4.5)	50.9	(9.1)
OR	41.0	(7.0)	59.9	(15.3)
PA	48.3	(9.5)	59.8	(17.3)
SC	33.3	(5.4)	55.7	(9.4)
TN	23.2	(5.2)	53.2	(7.8)
TX	21.5	(2.2)	36.1	(4.4)
VA	32.0	(11.2)	48.5	(17.5)
WA	10.7	(4.3)	45.2	(14.7)
WV	24.8	(5.9)	31.1	(12.4)
WI	52.9	(10.4)	95.4	(2.1)
Other states ⁴	34.3	(3.7)	67.8	(7.8)
U.S.	34.4	(1.5)	57.4	(2.4)

¹ Animal identification such as an ear tag with the U.S. shield or a Scrapie tag.

² That is, operations with any goats older than 18 months and for the goats 18 months or younger (not going to slaughter or for feeding for slaughter) that permanently left the operation in 2020 (not including deaths).

³ New England includes CT, ME, MA, NH, RI, and VT.

⁴ Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

H.5. For the 39.2 percent of operations that had any adult or kid goats leave the operation in 2020 (not including deaths) [Table H.1.], number and percentage of goats older than 18 months that left the operation and number and percentage of goats 18 months or younger (not going to slaughter or for feeding for slaughter) that left the operation in 2020, by herd size:

Number and Percent Animals										
Herd Size (number of adult and kid goats)										
Animal class	Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Goats older than 18 months ¹	35,700	10.3	28,480	11.7	110,050	15.4	83,950	14.2	258,180	13.6
Goats 18 months or younger ²	77,600	37.8	63,200	29.6	231,330	33.3	174,300	32.1	546,440	33.0

¹ Percentage of adult goats taken with respect to January 1, 2021, inventory of adult goats.

² Percentage of kids taken with respect to kid crop in 2020.

H.6. For the 39.2 percent of operations that had any adult or kid goats leave the operation in 2020 (not including deaths) [Table H.1.], number and percentage of goats older than 18 months that left the operation and number and percentage of goats 18 months or younger (not going to slaughter or for feeding for slaughter) that left the operation in 2020, by state:

State	Number and Percent Animals			
	Animal Class			
	Goats older than 18 months ¹		Goats 18 months or younger ²	
	No.	Pct.	No.	Pct.
AL	6,360	19.4	10,500	24.6
AZ	3,520	7.4	4,760	10.6
AR	2,170	7.5	5,460	18.0
CA	18,330	19.9	30,850	41.6
CO	2,900	12.4	6,850	32.0
FL	2,840	6.6	6,210	32.5
GA	2,010	4.6	3,570	17.2
ID	7,700	39.5	8,870	62.5
IL	7,360	28.2	16,420	48.0
IN	7,510	18.2	20,450	42.6
IA	6,190	13.8	10,130	18.8
KS	3,550	12.0	7,590	26.9
KY	3,390	8.5	9,860	43.2
LA	1,360	14.8	2,940	45.2
MI	3,070	16.8	8,900	51.7
MN	20,860	70.0	31,950	63.1
MS	1,910	11.6	4,040	36.4
MO	14,220	24.8	33,950	68.3
NE	1,830	15.0	4,040	22.1
New England ³	8,550	30.1	16,580	59.4
NM	2,990	18.5	4,270	30.7
NY	6,210	25.9	15,470	47.7
NC	8,220	18.3	20,660	53.7
OH	2,790	7.0	7,950	29.0
OK	6,590	10.5	16,080	31.6
OR	4,800	14.7	19,370	59.1
PA	3,670	9.2	8,620	31.5
SC	1,680	6.6	2,480	30.6
TN	8,120	10.6	28,370	46.1
TX	59,520	9.8	103,300	21.2
VA	5,500	14.3	15,390	58.1
WA	730	2.0	8,080	41.0
WV	980	6.3	3,690	31.5
WI	9,400	13.6	17,460	22.4
Other states ⁴	11,360	13.1	31,300	30.5
U.S.	258,180	13.6	546,440	33.0

¹ Percentage of adult goats taken with respect to January 1, 2021, inventory of adult goats.

² Percentage of kids taken with respect to kid crop in 2020.

³ New England includes CT, ME, MA, NH, RI, and VT.

⁴ Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

For goats permanently leaving the operation in 2020 (not including deaths), 75.9 percent of goats 18 months or younger (not going to slaughter or feeding for slaughter) and 76.4 percent of goats older than 18 months left the operation with official ID.

H.7. For the goats older than 18 months and for the goats 18 months or younger (not going to slaughter or for feeding for slaughter) that permanently left the operation in 2020 (not including deaths), percentage of goats with an official ID* on them when they left the operation, by herd size:

Percent Animals										
Herd Size (number of adult and kid goats)										
Animal class	Small (1–9)		Medium (10–19)		Large (20–99)		Very large (100 or more)		All operations	
	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error	Pct.	Std. error
Goats older than 18 months	68.8	(5.0)	75.6	(4.4)	77.9	(3.1)	78.1	(3.5)	76.4	(1.9)
Goats 18 months or younger	67.7	(7.3)	71.5	(4.8)	71.1	(2.8)	86.0	(2.4)	75.9	(2.0)

* Animal identification such as an ear tag with the U.S. shield or a Scrapie tag.

H.8. For the goats older than 18 months and for the goats 18 months or younger (not going to slaughter or for feeding for slaughter) that permanently left the operation in 2020 (not including deaths), percentage of goats with an official ID¹ on them when they left the operation, by state:

Percent Animals				
Animal Class				
State	Goats older than 18 months		Goats 18 months or younger	
	Pct.	Std. error	Pct.	Std. error
AL	82.3	(7.5)	79.5	(7.1)
AZ	33.2	(24.1)	21.6	(15.6)
AR	87.5	(8.4)	87.2	(6.8)
CA	73.0	(7.4)	80.8	(6.5)
CO	60.3	(15.6)	70.2	(10.7)
FL	64.8	(13.5)	54.9	(13.4)
GA	29.7	(13.8)	42.2	(10.6)
ID	93.2	(4.1)	70.5	(7.3)
IL	96.0	(2.7)	63.8	(22.3)
IN	95.8	(2.2)	94.4	(2.5)
IA	83.1	(9.3)	76.6	(7.5)
KS	95.5	(2.8)	97.9	(1.6)
KY	94.3	(3.6)	85.4	(7.1)
LA	16.3	(15.8)	62.9	(19.6)
MI	99.3	(0.5)	99.0	(0.7)
MN	74.7	(11.8)	68.0	(8.2)
MS	93.7	(5.5)	93.3	(4.0)
MO	98.5	(0.9)	92.3	(4.5)
NE	59.4	(24.9)	65.1	(21.4)
New England ²	58.6	(6.9)	43.2	(9.6)
NM	82.7	(11.1)	82.3	(11.9)
NY	78.4	(11.5)	39.5	(11.1)
NC	85.6	(7.8)	78.7	(6.0)
OH	85.2	(12.8)	83.2	(8.1)
OK	81.8	(5.8)	72.9	(6.3)
OR	94.3	(3.2)	90.2	(6.8)
PA	93.2	(5.0)	94.1	(3.6)
SC	74.9	(10.4)	78.4	(8.3)
TN	97.2	(1.8)	83.8	(5.4)
TX	39.2	(5.0)	56.2	(5.7)
VA	88.2	(7.8)	92.1	(3.9)
WA	100.0	(—)	68.0	(21.0)
WV	63.1	(19.7)	94.6	(3.8)
WI	98.7	(0.9)	96.2	(2.7)
Other states ³	86.6	(4.4)	79.5	(3.9)
U.S.	76.4	(1.9)	75.9	(2.0)

¹ Animal identification such as an ear tag with the U.S. shield or a Scrapie tag.

² New England includes CT, ME, MA, NH, RI, and VT.

³ Other states include AK, DE, HI, MD, MT, NV, NJ, ND, SD, UT, and WY.

Section III: Methodology

A. Survey Procedures

Each year, NASS surveys a random sample of U.S. goat producers to provide data for these estimates. Survey procedures ensure that all goat producers have an opportunity to be included in the survey. The sample is stratified so that large operations are sampled more heavily than small operations to help ensure they are accounted for in the sample. In January of each study year, operators are contacted by mail, telephone, and face-to-face interviews. Approximately 21,000–23,000 operators are contacted each year. The expanded death loss questions are asked only every five years. In 2021, approximately 62 percent of the 21,400 operators contacted returned usable reports.

B. Estimation Procedures

1. Point estimation

In each study year, death losses by cause were estimated to match NASS' total death losses published in the "Sheep and Goats" report, released on January 31 of the same study year. Estimates were generated with SUDAAN® software (Research Triangle Institute, version 11.0.4 in 2021).

The numbers of operations with adult and kid goats (Table I.A.2.a.) from 2015 and 2021 were estimated using the number of operations in the sample, weighted by the expansion weight (the number of operations in the population each sampled operation represents). Similarly, the total death numbers were estimated by expanding the number of deaths on the sampled operations by the expansion weights.

2. Validation

NASS staff entered data into a SAS data file and checked for validity. NAHMS staff independently performed data validation checks on the data set to identify consistency and statistical issues. Consistency issues include logical inconsistencies within a survey and were identified using summaries of responses to check for invalid responses (e.g., a response of '3' for a 0/1 response variable); threshold checks (e.g., identifying invalid total sums of goat inventory); and, if-then, checks (e.g., if no adult goats left the operation, then there should not be a reported number of goats leaving the operation with identification).

Statistical issues were identified by investigating summary measures of responses for variables, and data analysts and subject-matter experts investigated extreme outliers. Inconsistencies were identified using SAS software. Identified inconsistencies were addressed using item-level imputation measures if appropriate values could be logically deduced.

3. Standard error and confidence interval calculations

Where shown, standard errors account for the stratified study design and unequal selection probabilities. Summarization and estimation were performed using SUDAAN software, which accounts for the stratified sampling study design. Confidence intervals were computed for estimated proportions, means, and ratios using the methods described in detail in the SUDAAN Language Manual for SUDAAN version 11¹ and described briefly here. For percentages, a logit transformation is used to enforce the bounding of the confidence interval bounds between 0 and 1. Student's *t*-confidence interval bounds are computed on the logit scale and are then back-transformed to the percent scale. For means and ratios, standard Student's *t*-confidence intervals are computed directly on the scale of the data.

One analyst generated estimates, and a second analyst reviewed numbers and estimation codes to ensure accurate reporting of estimates.

¹Research Triangle Institute (2012). SUDAAN Language Manual, Volumes 1 and 2, Release 11. Research Triangle Park, NC: Research Triangle Institute.

4. Values of losses

Values of losses are calculated as the product of the average producer-reported values of the adult and kid goats on the operation and the number of adult and kid goats lost. Values are then aggregated to the summary level for reporting.

All values are reported in terms of January 2021 dollars using the U.S. Bureau of Labor Statistics CPI Inflation Calculator: https://www.bls.gov/data/inflation_calculator.htm.

C. Tableau Dashboard Procedures

1. Data resources

No record-level data are used to build any portion of the Goat Death Loss dashboard directly. All data on which the Goat Death Loss dashboard is built are summary-level estimates. Record-level data are summarized into tables of statistical summaries, such as percentages, counts, averages, or medians. Only those summaries and their estimates of uncertainty are used to build the dashboard. Examples of these summary tables can be found in the “Individual Tables” section, which resemble the tables printed in earlier iterations of the Goat Death Loss report (for example, in the Goat and Kid Predator and Nonpredator Death Loss in the United States 2015 report found at the following link: https://www.aphis.usda.gov/animal_health/nahms/general/downloads/goat_kid_deathloss_2015.pdf).

2. Mapping

United States choropleth maps presented in the dashboard are created using state-level estimates. The state-level estimate is used to shade the state according to that estimate in relation to the group of all state-level estimates.

Map bins are created by dividing the range between the minimum and maximum observed state-level estimates into four equal-sized bins. Each bin is assigned one of four colors, and all states with metrics within the range represented by that bin are shaded in the same color. In addition to the four bins, there is a group represented by a grey color that denotes suppressed values (denoted by the symbol “(D)”).

Certain states are collapsed into regions; the “New England” region is composed of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont, while the “Other states” region is composed of Alaska, Delaware, Hawaii, Maryland, Montana, Nevada, New Jersey, North Dakota, South Dakota, Utah, and Wyoming. These regions are used in the report to align with estimates from the NASS “Sheep and Goats” report. In addition, these regions allow for less frequent suppression of estimates because estimates from the individual states tend to be low enough that they would have been suppressed had they not been reported at the regional level.