



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

Management Practices on U.S. Dairy Goat Operations

NAHMS Goat 2019 Study

Information Brief

March 2023

INTRODUCTION

Goat milk production in the United States has experienced continuous expansion over the last decade. Specifically, the dairy goat inventory increased by 60.7 percent from 334,754 head in 2007 to 537,799 head in 2017.¹ Furthermore, the number of farms raising dairy goats has grown from 27,481 in 2007 to 35,682 farms in 2017.

Management and biosecurity practices are typically more rigorous on dairy goat operations than meat or other goat operations due to the more intensive management required for milk production. Enhanced management and biosecurity practices help ensure milk quality and goat health. Additionally, operation size and location may directly impact production and management of the goats. The location of the operation may change the general requirements of management practices due to weather throughout the year and large operations may choose to implement different management practices to condense labor requirements.

NAHMS GOAT 2019 STUDY

In collaboration with the National Agricultural Statistics Service, the U.S. Department of Agriculture's National Animal Health Monitoring System (NAHMS) conducted its second national study of the U.S. goat industry in 2019. The NAHMS Goat 2019 study gathered information on goat health and management practices on U.S. goat operations. The study occurred in 24 of the nation's major goat-producing states on selected operations with five or more adult goats (figure 1).

As part of the effort to collect information on goat management, NAHMS requested producers who milked any dairy does in the previous 12 months and had five or more dry or in-milk dairy does on September 1, 2019, complete a supplementary dairy questionnaire.² This information brief covers the inventory, general management, and kidding management practices on these dairy goat operations.

KEY TERMS

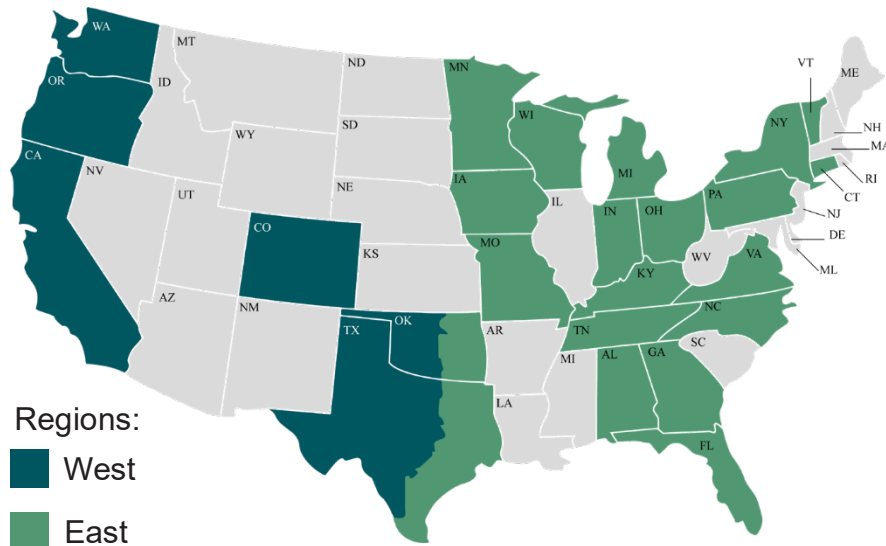


This information brief applies to the 14.3 percent of operations that milked any dairy does in the previous 12 months and had five or more dairy does, whether dry or in-milk, on September 1, 2019.

Herd Size
(by dairy doe inventory)



Figure 1. States/regions that participated in the NAHMS Goat 2019 study

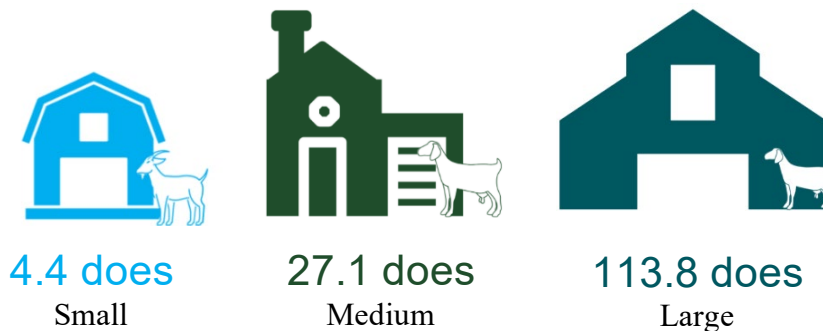


**Texas and Oklahoma were divided on a line corresponding to north-south Interstate 35. The western halves of the States were included in the West region, and the eastern halves were included in the East region.*

PEAK DOES MILKED

The peak number of does milked represents the highest number of dairy does milked at one time in the previous 12 months. The median peak number of does milked comes from ordering the peak number of does milked on each operation at any time and calculating the middle number within each herd size category. The median peak number of does milked increased as herd size increased, with a median peak of 4.4 does on small operations, 27.1 does on medium operations, and 113.8 does on large operations milked during the previous 12 months (figure 2).

Figure 2. Median peak number of does milked in the previous 12 months, by herd size

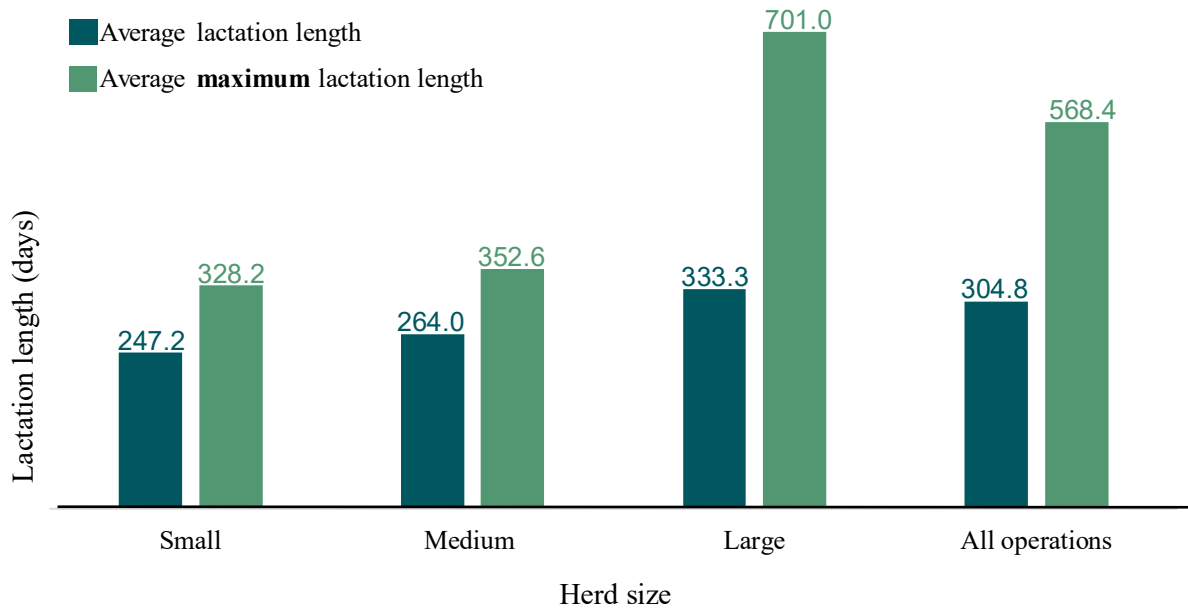


LACTATION LENGTH AND DRY-OFF

Lactation length is the period that a goat produces milk after kidding. A doe will begin lactating after kidding and produce milk until dried off, or no longer being milked, in preparation for subsequent kidding. Does were milked, on average, for 304.8 days across all operations (figure 3). Does on large operations were milked longer than does on small and medium operations (333.3, 247.2, and 264.0 days, respectively).

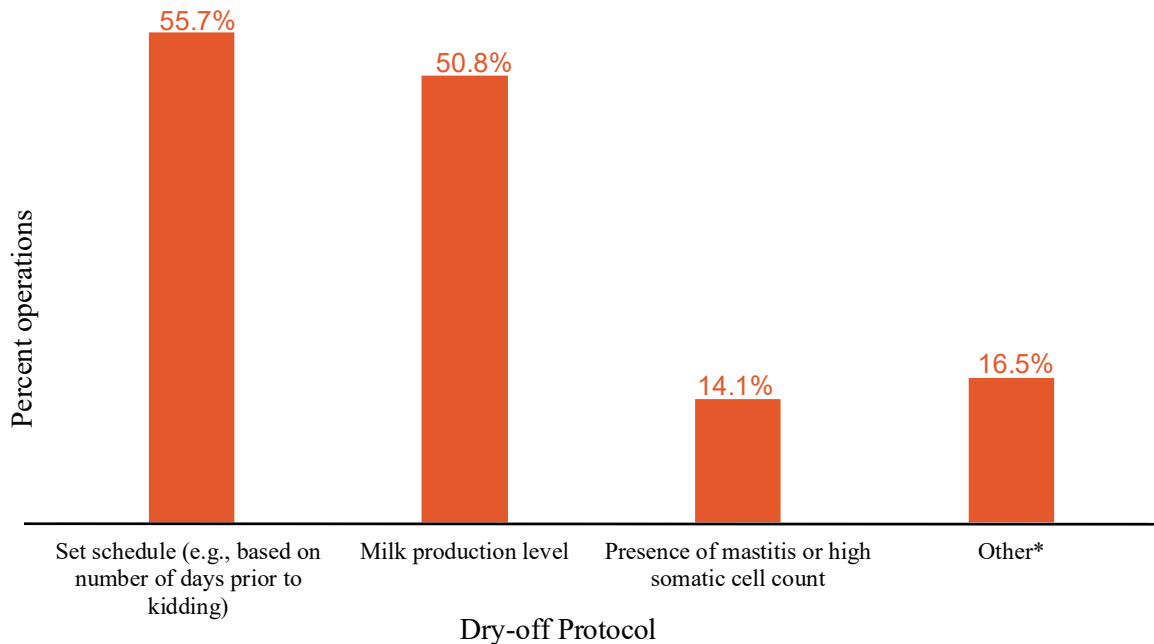
Although the average doe lactation length was about 10 months, some goats have longer lactation lengths through breeding. The study asked operations to report their maximum lactation length for any doe milked on the operation in the previous 12 months. These lactation lengths could be longer than a year. The average maximum lactation length on all operations was 568.4 days. Similar to the average lactation length, the doe average maximum lactation length was longer on large operations (701.0 days) than on small and medium operations (328.2 and 352.6 days, respectively).

Figure 3. Average lactation length of does and average maximum lactation length of does, by herd size



Drying off does, or stopping milk production, allows producers to address any udder health issues, such as mastitis. Although an insufficient dry-off period in dairy cows can result in reduced milk production, this doesn't seem to be the case in goats.³ However, operations may choose to dry-off does for multiple reasons, such as being on a set schedule due to seasonal milking, a decrease in milk production, or health reasons. Overall, a higher percentage of operations used a set schedule or milk production level (55.7 and 50.8 percent of operations, respectively) to determine when to dry-off any does compared with the presence of mastitis or high somatic cell count or other protocols (figure 4).

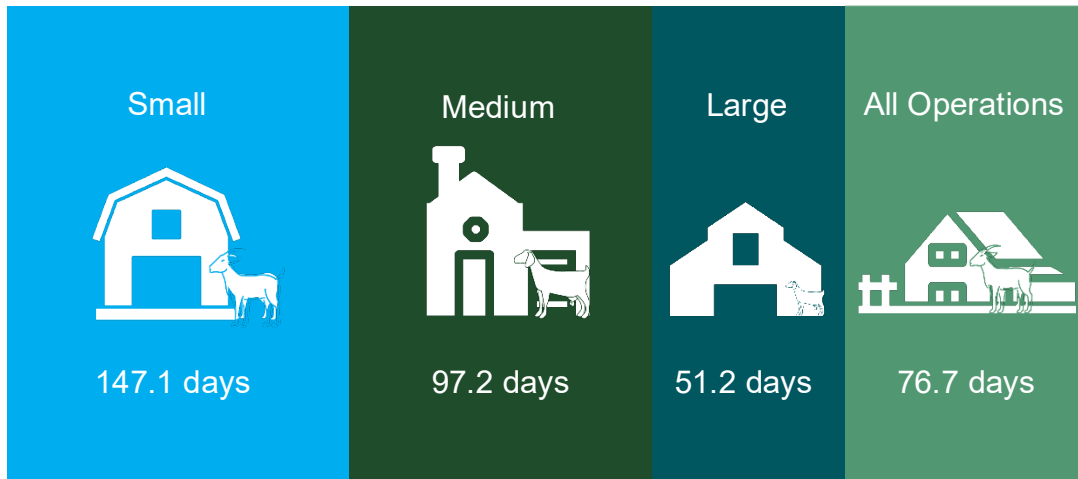
Figure 4. Percentage of operations that used the following protocols to dry-off any does in the previous 12 months



*Common 'other' responses included end of show season, producer's health, producer's preference, time of year, and no longer needing milk.

The recommended dry period for does is 28 to 60 days to allow the doe's udder to rest and prepare for kidding.³ Across all operations, the doe average dry period duration was 76.7 days (figure 5). As herd size increased, the doe average number of days dry decreased, with does being dry for an average of 147.1 days on small operations, 97.2 days on medium operations, and 51.2 days on large operations.

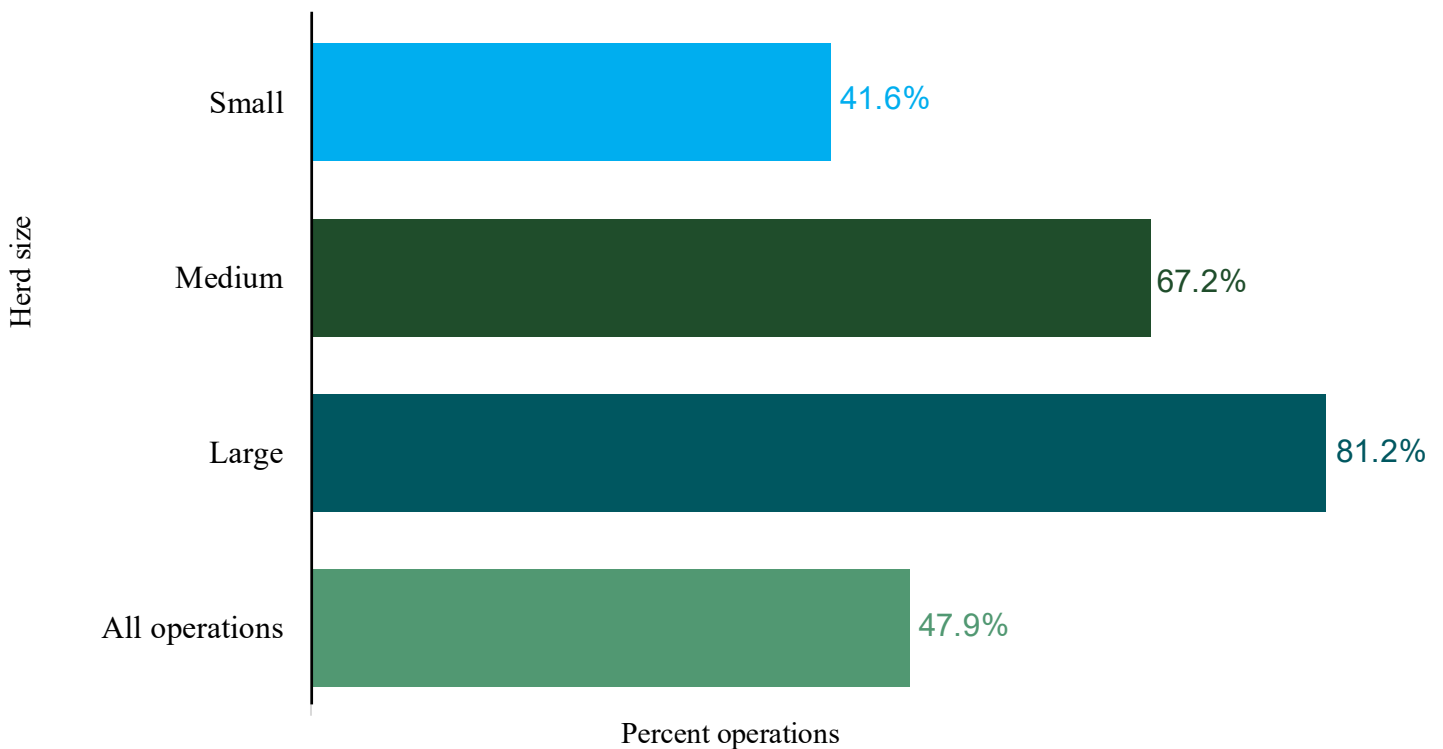
Figure 5. Doe average number of days dry, by herd size



WEIGHING MILK AND POUNDS PRODUCED

On operations that regularly distribute milk or keep records of milk production for sale and show purposes, weighing milk may be an essential aspect of the business. Overall, 47.9 percent of all operations weighed any milk produced on the operation in the previous 12 months (figure 6). A higher percentage of medium and large operations (67.2 and 81.2 percent, respectively) weighed any milk produced on the operation in the previous 12 months than small operations (41.6 percent). However, there were no differences in the frequency of weighing milk by herd size (not shown).

Figure 6. Percentage of operations that weighed any milk produced on the operation in the previous 12 months, by herd size





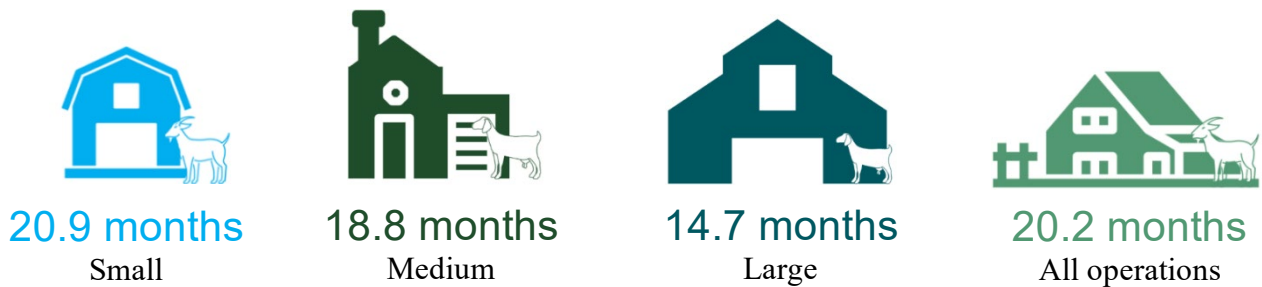
For operations that weighed milk produced on the operation, the average milk production was **6.3 pounds** per doe per day. There were no differences by herd size or region in the average milk production per doe per day.

KIDDING MANAGEMENT

Kidding management practices, such as average time to first kidding, the average kidding interval, and kid feeding protocols may depend on the operation's overall milk production and kid use goals. Examples include using doe kids as replacement does to enter the milking herd and to sell buck kids as a supplemental source of income.

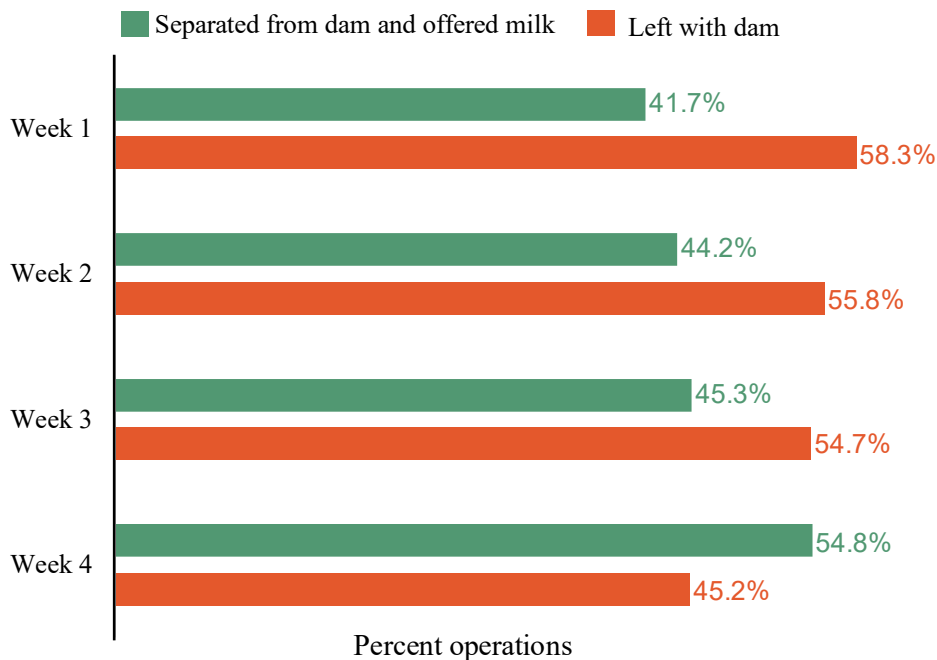
All operation's average time to first kidding was 20.2 months of age (figure 7). This time was shorter on large operations (14.7 months) than small and medium operations (20.9 and 18.8 months, respectively). The average kidding interval on all operations was 12.2 months. There were no herd size or region differences in the operation average kidding interval (not shown).

Figure 7. Operation average age of does at the time of their first kidding, by herd size



Depending on an operation's goals and strategies, they may leave kids with the dam or separate them. Overall, about one-half of all operations chose to leave kids with the dam during the first four weeks of life (figure 8). A higher percentage of large operations separated kids from the dam during the first four weeks of life.

Figure 8. Percentage of operations that left kids with the dams or separated kids from dams and offered milk at each feeding as their typical feeding protocol during the first four weeks of life



CONCLUSION

General management practices and kidding management practices on dairy goat operations depend on the operation's goals. However, the herd size of an operation tended to impact these practices. In general, as herd size increased, the number of does milked increased, the average lactation length increased, and the dry-off period decreased. Although a higher percentage of large operations weighed any milk, there was no difference in daily pounds of milk produced per doe by herd size. Lastly, large operations tended to have a shorter period to first kidding, and a higher percentage of large operations separated kids from the dam during the first four weeks of life.

REFERENCES

1. NASS. 2019. USDA National Agricultural Statistics Service, Sheep and Goat Surveys. https://www.nass.usda.gov/Surveys/Guide_to_NASS_Surveys/Sheep_and_Goat_Inventory/index.php
2. USDA. 2022. Goat 2019, "Reference of Health and Management Practices on Dairy Goat Operations in the United States, 2019." USDA-APHIS-VS-CEAH-NAHMS. Fort Collins, CO
3. Ontario Goat. 2022. "Does your dry off management ensure doe health and welfare?" <https://ontariogoat.ca/goat-gazette/dry-off-management/>

To see new and exciting publications regarding this study, please visit www.aphis.usda.gov/nahms or scan the QR code. Materials will be updated regularly as they become available.



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, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program. (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 USDA 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.

FOR MORE INFORMATION

USDA-APHIS-VS-CEAH
NRRC Building B, M.S. 2E7
2150 Centre Avenue
Fort Collins, CO 80526-8117
970.494.7000
E-mail: NAHMS@usda.gov
www.aphis.usda.gov/nahms