

NAHMS Goat 2019 VS Manual



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**NAHMS-
Date**



Contents of VS Manual

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Training Agenda

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GOAT 2019 VS TRAINING AGENDA

VS QUESTIONNAIRE TRAINING



Study Background and Contacts

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October 2018

NAHMS Goat 2019 Study

From July 1 through December 2019, the USDA's National Animal Health Monitoring System (NAHMS), in collaboration with the National Agricultural Statistics Service (NASS), will conduct its second national study of the U.S. goat industry. The NAHMS Goat 2019 study will take an in-depth look at the priority issues facing U.S. goat operations and provide new and valuable information regarding animal health and management practices in this growing industry. Approximately 4,700 goat producers from 25 of the Nation's major goat-producing States (see map) will have the opportunity to participate in the study, if they have an inventory of at least five adult goats.

Background

A program within the USDA's Animal Plant Health Inspection Service (APHIS), NAHMS collects scientifically accurate data for U.S. livestock, poultry, and aquaculture industries on a rotating basis.

For the goat study, priority issues facing the industry were identified from 1,272 responses via a needs-assessment questionnaire and from input from meetings with representatives from various segments of the goat industry, including stakeholders and government agencies.

"Through studies such as this one, we can evaluate the needs of our goat populations. We can be proactive and progressive in addressing the pressing needs we face using the most current data to support innovative ideas in improving the ways we care for our goats."

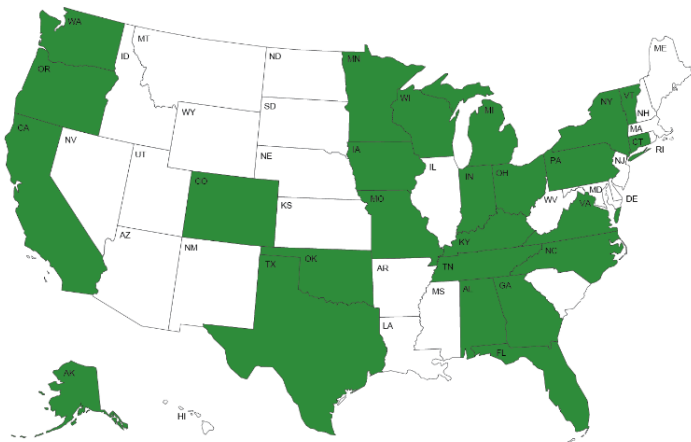
—Susan Myers, DVM, AASRP President

Study Focus

The NAHMS Goat 2019 study is designed to provide individual participants and stakeholders with valuable information on the U.S. goat industry. The NAHMS Goat 2019 study will

- Describe changes in animal health, nutrition, and management practices from 2009 to 2019,
- Describe practices producers use to control internal parasites and reduce anthelmintic resistance,
- Describe antimicrobial stewardship on goat operations and estimate the prevalence of enteric pathogens and antimicrobial resistance patterns,
- Describe management practices associated with, and producer-reported occurrence of, economically important goat diseases, and
- Provide a serologic bank for future research.

States participating in the Goat 2019 study



"The 2019 Goat study is an opportunity for U.S. goat producers to have your voices heard. What are the issues that matter most to you? How can cooperative extension services, especially from extension veterinarians, help you with these issues? The information provided from the results of this study will guide the priorities for future goat research and program opportunities."

—Dr. Patty Scharko, President
American Association of Extension Veterinarians

When is the study and how is it conducted?

As previously mentioned, goat producers with an inventory of at least 5 adult goats in 25 of the major goat-producing States will be asked to participate. Producers that choose to complete both phase I and phase II of the study will be offered free biologic testing.

Phase I—In July 2019, NASS representatives will contact potential participants. Producers that choose to participate will be administered a questionnaire and asked if they would like to continue to phase II.

Phase II—Beginning in September 2019, goat producers who agreed to continue in the study will be contacted by APHIS or State veterinary health professionals to schedule an in-person interview and collect biologics. Free biologic testing will include pre- and postdeworming fecal parasite egg counts, scrapie resistant genotyping, and *Salmonella*, *E. coli*, and *Campylobacter* culture results. Data collection will end in December 2019.

“Data collection, management practices, research direction, and marketing strategies are all vital for the well being of our goat industry. This NAHMS study is a critical part of the future development and advancement of our industry. Please take the time to accurately complete the study which will provide each participant specific information about the health of their flock as well as providing a quantum leap forward for our entire industry.”

—Tom Boyer
Producer and Past President of the American Goat Federation

Benefits to participating

Producers that fully participate in the NAHMS Goat 2019 study will receive free

- Fecal-egg count reduction test results for gastrointestinal parasites,
- Scrapie-resistant genotyping, and
- *Salmonella*, *E. coli*, and *Campylobacter* fecal culture results.

The industry will benefit from

- Current and scientifically valid estimates of management practices and disease prevalence,
- Important information regarding trade and the overall health of the goat industry; and
- Data that will help policymakers and industry to make informed decisions, while at the same time helping researchers and others identify vital issues related to goat health and productivity.

Confidentiality

Because NAHMS relies on voluntary participation, the privacy of every participant is protected. Only those collecting the data know the identity of respondents. No name or contact information will be associated with individual data, and no data will be reported in a way that could reveal the identity of a participant. Data are presented only in an aggregate manner.

“...in addition to providing useful feedback to participants about the health status of their goats, the information from this study will play a critical role in prioritizing [goat] research needs and justifying research dollars...”

—Joan Dean Rowe, DVM
American Dairy Goat Association member and breeder

A scientific approach

NAHMS collects and reports accurate and useful information on animal health and management in the United States. Since 1990, NAHMS has developed national estimates on disease prevalence and other factors related to the health of U.S. beef cattle, sheep, goats, dairy cattle, swine, equine, poultry, and catfish populations.

The science-based results produced by NAHMS have proven to be of considerable value to the U.S. livestock, poultry, and aquaculture industries as well as to other animal health stakeholders.

NAHMS studies are:

- National in scope,
- Science based,
- Statistically valid,
- Collaborative,
- Voluntary, and
- Confidential.

For more information, contact:

USDA-APHIS-VS-CEAH-NAHMS
NRRRC Building B, M.S. 2E7
2150 Centre Avenue
Fort Collins, CO 80526-8117
970.494.7000
Or visit NAHMS at <http://www.aphis.usda.gov/nahms>
#786.1018

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National Animal Health Monitoring System (NAHMS) 2019 Goat Study Timeline

July - August 2019

NASS¹ Visit

- **General Goat Management Questionnaire**
- **Consent Form²**

September - December 2019

Veterinary Services (VS) Visit

- **Producer Agreement³**
- **VS Questionnaire**
- **Agritourism Questionnaire (if applicable)**
- **Biologic Testing:**

Internal Parasite Test: Pre- and post-deworming fecal egg counts and egg count reduction tests will give you information about dewormer resistance on your operation. Do not deworm 60 days prior to VS Visit.

Scrapie Genetic Test: DNA based blood test to identify genetic resistance/susceptibility to scrapie.

Enteric Microbe Test: Detection of *E. coli*, *Salmonella*, *Campylobacter*, *Giardia*, and *Cryptosporidium* in your goats.

***Mycoplasma ovipneumoniae* (M. ovi) Test:** Nasal swab to test for the bacterium *M. ovi*.

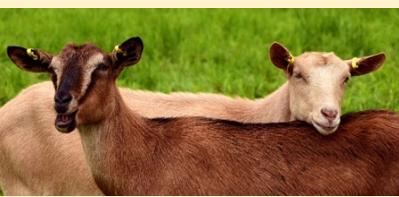
December 2019 -
onwards

Reports

- **Producer Reports:** Operation specific biologic results mailed to the producers approximately 3 months post-collection
- **Data Analysis**
- **Descriptive Reports**



To learn more and access reports, visit www.aphis.usda.gov/naahms or scan the QR code above.



¹National Agricultural Statistics Service (NASS)

²Producer consent for contact from Veterinary Services (VS)

³Producer agrees to participate in questionnaires and biologic testing

NAHMS 2019 Goat Study



Free Biological Testing Total Savings of up to \$2,467



Internal Parasite Test*

You Save: \$532

Test includes:

Pre- and post-deworming fecal egg counts and egg count reduction tests will give you information about dewormer resistance on your operation. **Do not deworm 60 days prior to VS Visit.**

Scrapie Genetic Test*

You Save: \$450

Test includes:

DNA based blood test to identify genetic resistance/susceptibility to scrapie.

Enteric Microbe Test*

You Save: \$1,485

Test includes:

Detection of *E. coli*, *Salmonella*, *Campylobacter*, *Giardia*, and *Cryptosporidium* in your goats.

* Biological testing costs includes: Diagnostic testing and an interpretive report of results
* Values based on estimated national average cost at diagnostic laboratories for the sampling of 15 goats
* Results are confidential



National Animal Health Monitoring System (NAHMS)



United States Department of Agriculture

Animal and Plant Health
Inspection Services

Veterinary Services

2019 GOAT STUDY

Did You KNOW?

Every 10 years, the U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services' National Animal Health Monitoring System (NAHMS) conducts a National Goat Survey. This is NAHMS' second National Study of the U.S. goat industry. The first NAHMS goat study occurred in 2009, and another study will not occur for at least 10 years.

Why PARTICIPATE?

Your participation in the NAHMS 2019 Goat Study will provide the goat industry—and fellow producers—with new and valuable information regarding goat health and management.

Information from the study will be used to help develop

- new treatments, control, and prevention mechanisms for common goat diseases, and

- help guide future research and education efforts.

How it WORKS?

Selected participants receive a 2019 Goat Study packet in the mail from the National Agricultural Statistics Service (NASS). A few weeks later, a NASS representative contacts you to set up a time to complete the questionnaire. Questionnaires are usually

completed during an in-person interview and take approximately one to two hours to complete.

Oops—Did You Lose Your PACKET?

If you accidentally lost your 2019 Goat Study packet, or if you have not heard from your NASS representative, call 866-907-8190.



Selected participants can receive FREE biological testing.

Includes pre- and post-deworming testing and scrapie genetic testing.

If you have been selected to participate and would like more information, please contact your local representative at: 866-907-8190



To learn more, visit www.aphis.usda.gov/nahms

NAHMS Doc #451.0818

For More Information...

To access reports from previous NAHMS national studies or information on upcoming studies, visit the NAHMS Web site at www.aphis.usda.gov/nahms.

For further details, contact:

USDA-APHIS Veterinary Services,
Science, Technology, and Analysis Services
Center for Epidemiology and Animal Health

Attention: NAHMS

NRRC Building B, Mailstop 2E7

2150 Centre Avenue

Fort Collins, CO 80526-8117

Phone: (970) 494-7000

E-mail: NAHMS@aphis.usda.gov

NATIONAL ANIMAL HEALTH MONITORING SYSTEM (NAHMS)

AUGUST 2018

USDA IS AN EQUAL OPPORTUNITY PROVIDER, EMPLOYER, AND LENDER.

GOAT 2019 STUDY TIMELINE

STUDY SCHEDULE

Study Process	Date
NASS Data Collection	July 1, 2019 – August 9, 2019
Coordinator/Field Training Webinar *two morning sessions, will be recorded	Early August 2019
NASS consent form and participant turnover *NAHMS Coordinators will sign an ADM-043 and a Representative Agreement with NASS during a face to face meeting	By August 23, 2019
VMO visits	September 9 – December 15, 2019
Biologics Collection	September 9 – December 15, 2019

NAHMS GOAT CONFERENCE CALL SCHEDULE

Call in number: 888-844-9904

Access Code: 1209136

Time and Topic	Date
Welcome and study overview	February 2019
NASS – turnover, consent forms, NASS training schools	April 2019
Questionnaire Review	April 2019
Biologic Review	June 2019
TBD – additional conference call if needed	July 2019

STATUS UPDATE SCHEDULE

We will be setting up Tableau Dashboards for each State that you will have access to. This should help with tracking.

- 1st status report due the end of September
- 2nd status report due the end of October
- 3rd status report due the end of November

GOAT 2019 EXPECTED WORKLOAD PROJECTIONS

December 7, 2018

State	NASS Operations	NASS Complete	Turnover	VMO Complete	Biologics Complete
AL	138	73	47	27	17
AK	50	27	18	11	7
CA	616	324	209	118	74
CO	250	132	85	48	30
CT	89	47	31	18	12
FL	126	67	44	25	16
GA	137	72	47	27	17
IA	180	95	61	35	22
IN	132	70	45	26	17
KY	145	77	50	28	18
MI	121	64	42	24	15
MN	159	84	54	31	20
MO	171	90	58	33	21
NC	137	72	47	27	17
NY	140	74	48	27	17
OH	137	72	47	27	17
OKE ¹	132	70	45	26	17
OKW ¹	233	123	79	45	28
OR	233	123	79	45	28
PA	149	79	51	29	18
TN	155	82	53	30	19
TXE ²	176	93	60	34	22
TXW ²	393	207	133	75	47
VA	135	71	46	26	17
VT	93	49	32	18	12
WA	211	111	72	41	26
WI	182	96	62	35	22

¹Eastern OK counties include: Adair, Bryan, Cherokee, Choctaw, Coal, Craig, Creek, Delaware, Haskell, Hughes, Johnston, Latimer, Le Flore, Lincoln, Marshall, Mayes, McCurtain, McIntosh, Muskogee, Nowata, Okfuskee, Okmulgee, Osage, Ottawa, Pawnee, Pittsburg, Pontotoc, Pottawatomie, Pushmataha, Rogers, Sequoyah, Tulsa, Wagoner, Washington

²Eastern TX counties include: Anderson, Angelina, Atascosa, Austin, Bastrop, Bee, Bowie, Brazoria, Brazos, Brooks, Burleson, Cameron, Cass, Cherokee, Collin, Colorado, Dallas, De Witt, Duval, Ellis, Fannin, Franklin, Galveston, Gonzales, Grayson, Gregg, Grimes, Hall, Hardin, Harris, Henderson, Hidalgo, Hopkins, Houston, Hunt, Jackson, Jasper, Jefferson, Jim Wells, Karnes, Kaufman, Kenedy, Kleberg, Lamar, Lavaca, Lee, Leon, Liberty, Limestone, Live Oak, Madison, Matagorda, Milam, Montgomery, Morris, Nacogdoches, Navarro, Nueces, Orange, Panola, Rains, Red River, Refugio, Robertson, Rusk, San Jacinto, Shelby, Smith, Starr, Titus, Tyler, Upshur, Van Zandt, Victoria, Walker, Waller, Washington, Wilson, Wood

GOAT 2019 COORDINATOR LIST

State/FIPS & district	Name	Email	Phone Number(s)
AL 01 D1	Ansley Gwyn Tramaine Creighton	Ansley.J.Gwyn@aphis.usda.gov Tramaine.Creighton@aphis.usda.gov	205-224-2085 (cell) 334-320-5393 (cell) 334-551-2180 (office)
AK 02 D3	Sarah Coburn Bob Gerlach	Sarah.coburn@alaska.gov Bob.gerlach@alaska.gov	907-375-8213 907-375-8214
CA 06 D3	Lauren England	Lauren.A.England@aphis.usda.gov	650-784-3790
CO 08 D3	Melissa Cleavinger	Melissa.K.Cleavinger@aphis.usda.gov	405-435-9558 (cell)
CT 09 D1	Natalie Cohen*	Natalie.Cohen@aphis.usda.gov	860-625-0705
FL 12 D1	Richard Austin	Richard.Austin@aphis.usda.gov	850-410-0953
GA 13 D1	Krista Surles	Krista.M.Surles@aphis.usda.gov	770-761-5423 678-215-8898 (cell)
IN 18 D2	Lynn Wachtman	Lynn.Wachtman@aphis.usda.gov	317-347-3106 317-430-6312 (cell)
IA 19 D2	Jim Lee	James.O.Lee@aphis.usda.gov	515-323-2104 774-276-7787 (cell)
KY 21 D2	Dallas Meek	Dallas.W.Meek@aphis.usda.gov	502-848-2042 502-682-5826 (cell)
MI 26 D2	Nicole McPherson	Nicole.A.McPherson@aphis.usda.gov	517.337.4700 517-375-4488 (cell)
MN 27 D2	Robyn Corcoran-Flaherty	Robyn.Corcoran-Flaherty@aphis.usda.gov	612.246.9190 612-246-9190 (cell)
MO 29 D4	Royce Wilson Kimberly Gish	Royce.A.Wilson@aphis.usda.gov Kimberly.R.Gish@aphis.usda.gov	573-680-0791 (cell) 573-658-9844
NY 36 D1	Bryan Cherry	Bryan.Cherry@aphis.usda.gov	518-429-1887
NC 37 D1	Leslie Kent	Leslie.P.Kent@aphis.usda.gov	919-855-7715
OH 39 D2	Mark Lyons	Mark.A.Lyons@aphis.usda.gov	614-856-4744 614-592-7954 (cell)
OK 40 D4	Jill Duel	Jill.M.Duel@aphis.usda.gov	405-751-1701 918-388-7960 (cell)
OR 41 D3	Aimee Hunt*	Aimee.M.Hunt@aphis.usda.gov	360-956-7907 515-686-1435 (cell)
PA 42 D1	Rebecca Ita	Rebecca.E.Ita@aphis.usda.gov	717.540.2777 717-303-7494 (cell)
TN 47 D1	Leslie Cmach Keren Rozensher	Leslie.F.Cmach@aphis.usda.gov Keren.Rozensher@aphis.usda.gov	512-383-2449 502-682-2232 (cell) 678-215-4643 (Keren cell)
TX 48 D4	Luisa Collins Amy Green	Patricia.L.Collins@aphis.usda.gov Amy.Green@aphis.usda.gov	512-383-2449 915-539-0112
VT 50 D1	Natalie Cohen*	Natalie.Cohen@aphis.usda.gov	860-625-0705
VA 51 D1	Lynn Tobias	Lynette.Tobias@aphis.usda.gov	804-343-2560 540-520-0142 (cell)
WA 53 D3	Aimee Hunt* Susan Kerr	Aimee.M.Hunt@aphis.usda.gov kerrs@wsu.edu	360-956-7907 515-686-1435 (cell) 360-848-6151 (Susan)
WI 55 D2	Doris Olander Brenda Aeschbach	Doris.Olander@aphis.usda.gov Brenda.L.Aeschbach@aphis.usda.gov	608-444-5237 (cell) 608-416-9027
25 Total States	*= coordinator for more than 1 state		

GOAT 2019 COORDINATOR SHIPPING ADDRESSES

Please confirm this is where you want study materials sent.

State/FIPS & district	Name	Shipping Address
AL 01	Ansley Gwyn Tramaine Creighton	USDA: APHIS: VS 1445 Federal Drive, Room 228 Montgomery, AL 36107
AK 02	Sarah Coburn Bob Gerlach	Office of the State Veterinarian 5251 Dr. Martin Luther King Jr. Avenue Anchorage, AK 99507
CA 06	LaurenEngland	USDA: APHIS:VS 10365 Old Placerville Road, Suite 210 Sacramento, CA 95827
CO 08	Melissa Cleavinger	USDA: APHIS:VS 755 Parfet Street, Suite 136 Lakewood, CO 80215
CT 09	Natalie Cohen*	USDA: APHIS: VS 160 Worcester Providence TPKE Sutton, MA 01590
FL 12	Richard Austin	USDA: APHIS: VS 407 S Calhoun Street, Room 331 Tallahassee, FL 32399
GA 13	Krista Surles	USDA: APHIS:VS 1506 Klondike Road, Suite 300 Conyers, GA 30094
IN 18	Lynn Wachtman	USDA: APHIS: VS 5685 Lafayette Road, Suite 400 Indianapolis, IN 46254
IA 19	Jim Lee	USDA: APHIS: VS 210 Walnut Street, Room 891 Des Moines, IA 50309
KY 21	Dallas Meek	USDA: APHIS: VS 105 Corporate Drive, Suite H Frankfort, KY 40601
MI 26	Nicole McPherson	USDA: APHIS: VS 3001 Coolidge Road, Suite 325 East Lansing, MI 48823
MN 27	Robyn Corcoran-Flaherty	USDA: APHIS: VS 251 Starkey Street, Suite 229 Saint Paul, MN 55107
MO 29	Royce Wilson Kimberly Gish	USDA: APHIS: VS 1715 Southridge Drive Jefferson City, MO 65109
NY 36	Bryan Cherry	2430 River Road Niskayuna, NY 12309
NC 37	Leslie Kent	USDA: APHIS: VS 920 Main Campus Drive, Suite 200 Raleigh, NC 27606
OH 39	Mark Lyons	USDA; APHIS: VS 12927 Stonecreek Drive Pickerington, OH 43147
OK 40	Jill Duel	USDA: APHIS: VS 12304 Market Drive, Suite A Oklahoma City, OK 73114
OR 41	Aimee Hunt*	USDA: APHIS: VS 1550 Irving Street SW, Suite 100 Tumwater, WA 98512

GOAT 2019 COORDINATOR SHIPPING ADDRESSES

Please confirm this is where you want study materials sent.

PA 42	Rebecca Ita	USDA: APHIS: VS 2300 Vartan Way, Suite 250 Harrisburg, PA 17110
TN 47	Leslie Cmach	USDA: APHIS: VS 440 Hogan Road, Jennings Bldg. Nashville, TN 37220
TX 48	Luisa Collins Amy Green	USDA: APHIS: VS 903 San Jacinto BLVD., Room 220 Austin TX, 78701
VT 50	Natalie Cohen*	USDA: APHIS: VS 160 Worcester Providence TPKE Sutton, MA 01590
VA 51	Lynn Tobias	1695 Craigs Mountain Road Christiansburg, VS 24073
WA 53	Aimee Hunt* Susan Kerr	USDA: APHIS: VS 1550 Irving Street SW, Suite 100 Tumwater, WA 98512
WI 55	Doris Olander Brenda Aeschbach	USDA: APHIS: VS 1111 Deming Way Madison, WI 53717

NAHMS CONTACTS AND SITES

CONTACTS

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Dr. Natalie Urie	Study Co-lead Vet/Epi	(970) 494-7151	natalie.j.urie@aphis.usda.gov
Dr. Alyson Wiedenheft	Biologics Coordinator	(970) 494-7290	alyson.m.wiedenheft@aphis.usda.gov
Ms. Abby Zehr	Field Liaison	(970) 494-7252	abigail.c.zehr@aphis.usda.gov

NAHMS Goat 2019 Website

Study materials, including outreach material, training videos, Tableau tracking dashboards, and questionnaires, can be found at the following web address:

https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/monitoring-and-surveillance/nahms/goat_questionnaires

NAHMS EMAIL

Abigail.C.Zehr@aphis.usda.gov

Please emails for kit requests and questions to Abby Zehr. You may also scan and email documents to Abby.

Note: Initial kit orders will be placed my NAHMS according to State turnover numbers, but additional kits can be requested by emailing Abby.

NAHMS MAILING ADDRESS

USDA: APHIS: VS: NAHMS
2150 Centre Avenue Bldg. B., Mail Stop 2E7
Fort Collins, CO 80526

Please send questionnaires, by UPS, to the attention of Abby Zehr. Please insure your shipments have a tracking number.

NAHMS FAX

(970) 494-7228

GOAT 2019 TABLEAU WORKBOOK

A Tableau workbook will be updated throughout the study to track the progress of the study. This workbook will include a Directory for field staff, State level data, farm assignments, questionnaire status, biologics status, and biologics kit orders. A link to Tableau workbook can be found at the NAHMS Goat 2019 Website (see link above).



VS Visit

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BEFORE THE VISIT

This section covers several topics regarding the VS field visit. It is important to thoroughly review this material before you make the initial call to the Producers. You should read through the Goat 2019 Launch Sheet and the Goat 2019 Timeline and Biological Benefits Sheet (Section 2) to familiarize yourself with the different aspects of the Goat 2019 Study. Also, please look through the VS Initial Questionnaire (Section 4) before you call the Producers so that you can give them an idea of the types of questions we will be asking.

- a. Coordinators will meet with NASS Regional Field Officers by 8/23/2019 to sign an ADM-043 form and a NASS Representative Agreement. During the in-person visit, the coordinators will receive the consent forms for operation wanted to participate in the VS phase.
- b. VS Veterinary Medical Officers (VMOs) and Animal Health Technicians (AHTs) should meet with NAHMS coordinators to sign the ADM-043 form and receive contact information for the assigned operations.

2019 NAHMS GENERAL GOAT MANAGEMENT QUESTIONNAIRE INFORMATION

The data from the General Goat Management Questionnaire (GGMG) completed by the NASS Enumerators is collected July-August 2019. The paper consent forms for the Producers who agreed to have their names turned over (turnover data) to VS (and who you will be contacting) is scheduled to be given to the Goat 2019 NAHMS Coordinators by August, 23, 2019.

To meet confidentiality requirements, NASS must obtain the Producer's written permission to release the Producer's name, address, telephone number, email address, and contact notes to APHIS personnel. Signing the consent form does not obligate the Producer to participate in the rest of the study. Respondents do not need to make a decision about participating in the VS phase (Phase II) of the study until the time of the visit by the VS data collector. The VS data collector can explain the purpose and scope of the VS Phase during the visit. Some Producers may need encouragement from you to participate in the VS phase. One way you can encourage participation is by discussing the benefits of the study to both the individual and the goat industry, found in the Goat 2019 Study Launch Sheet and the Goat 2019 Timeline and Biological Benefits Sheet (Section 2). It is important to promote this study with you speak to the Producers.

STUDY MATERIALS

You will receive the following materials from your NAHMS coordinator:

- **Producer Education Packet**

The material in this packet will provide the Producer with general information about this study along with other useful information related to goat industry. We encourage you to go through the packet with the Producer during your visit.

- **Producer Agreement**

The Producer Agreement is the contract between APHIS and the Producer. Both pages of the Producer Agreement must be filled out completely and signed before any farm information is obtained.

- **VS Questionnaires**

The VS Questionnaires consist of the VS Initial Questionnaire and the On-site Agritourism Questionnaire. The VS Initial Questionnaire (Section 4) will be administered during the visit by VS or State representatives between September 9 and December 6 2019. If the operation allows agritourism, then the On-site Agritourism Questionnaire should also be administered by VS or State representatives.

- **VS Reference Cards**

Reference cards contain pertinent information such as lists of vaccines, anthelmintic, and antibiotics, along with trade/brand names that can be used to help the Producer answer some of the questions. These reference cards are attached to the VS Initial Questionnaire, can be found in specific biologic kits, and are located in Section 6 of this manual.

- **Biologic Sampling Kits and Collection Forms**

Kits to collect and record biologic samples will be shipped to the NAHMS Coordinators or directly to field staff. NAHMS is going to pre-order kits for Coordinators based on the NASS turnover data. Using the turnover data should help prevent excessive kit orders. Additional kits can be ordered through NAHMS by Coordinators or field staff as needed. The kits include sample collection forms, shipping information, and necessary supplies to complete the collection. See Section 5 for more information regarding the Biologics Collection.

PREPARATION FOR THE INTERVIEW

Review Questionnaires

Familiarize yourself with the VS Questionnaires in the VS Questionnaire Manual section (Section 4) and the biological sampling collection procedures available in the Biologic Manual section (Section 5)

Watch the Training Videos

Training videos can be found on the NAHMS Goat 2019 website:

https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/monitoring-and-surveillance/nahms/goat_questionnaires

- VS training manual video (recorded from VS training sessions)
- *Mycoplasma ovipneumonia* sensitivity training video
- FAMACHA© card training video
- Blood, swab, and fecal sampling videos

Contact the Producer

Call the Producer and identify yourself. Using the phone script (Section 3 Page 6), explain you are contacting them to provide information about participation in Phase II of the NAHMS Goat 2019 Study and that their name and phone number was provided to you by NASS because they requested to be contacted regarding participation in the next phase of the

study. Please fill out the “Contact Attempt History” matrix found in the “Office Use Only” section of the VS Initial Questionnaire.

It is important to administer the questionnaire to the person that is most knowledgeable about the operation. This person needs to have the authority to participate in the study and will need to sign the Producer Agreement.

Make an appointment to complete the interview. If directions provided by NASS are not clear, get directions to the site, and then explain what will be covered and how long it will take (about 1.25 hours to review the program and complete the VS Questionnaires with additional time needed to collect the biologics). Tell the Producer that it will help to have production records available during the interview in order to answer some of the questions.

*It may be useful to **provide the Producer your name and telephone number** when you speak for the first time. This will allow the Producer to contact you with any questions or concerns prior to the interview or after the interview.*

PHONE SCRIPT FOR CONTACTING THE PRODUCER

Phone Script: Hello, I am ***(give your name and position)***. I am calling about your participation in Phase II of the National Animal Health Monitoring System Goat 2019 study. Do you have a few minutes to talk to me now, or is there a better time for me to call you back?

(If they say now is OK time to talk, continue.)

I am hoping to provide you with further information about the NAHMS Goat 2019 study. If you are willing to participate, I would like to schedule a time to meet with you to complete Phase II of the study, which includes free biological testing for parasites, scrapie genetic resistance, information on presence of selected fecal pathogens, and *Mycoplasma ovipneumoniae* testing. Just as a reminder, you would have gotten a few informational items about Phase II of the study when you met with ***(name of the NASS representative, if available)***, the National Agricultural Statistics Services representative on ***(mention the date consent form from NASS was signed)***. Do you have any questions I could answer on the phone today about the Phase II of the NAHMS goat study?

(Once you have answered their questions about Phase II then provide them with information that would be helpful to know for answering the VS questionnaire.)

Having records on hand can help reduce the time spent answering questions. The types of records you might want to have available would include:

- Inventory (births, abortions, ages)
- Vaccinations
- Disease presence and testing (including deworming)
- Death losses
- Antibiotic use
- Protocols (kidding, doe dryoff, biosecurity)
- Agritourism business/sales records ***(For agritourisms operations only)***

Are you interested in completing the following biological testing?

- Pre and post-deworming fecal testing
 - NOTE: Operation must not have dewormed in the past 60 days to be eligible
- Blood collection for Scrapie resistance genetic testing
- Fecal pathogen testing to look for *E. coli*, *Salmonella*, *Campylobacter*, *Giardia*, and *Cryptosporidium*
- Nasal swabs to test for *Mycoplasma ovipneumoniae*

When would you be available to meet with me?

Can you give me directions to where I can meet you to complete the consent form, the questionnaire, and provide any testing you are interested in? Would you like an emailed copy of the questionnaire prior to our meeting to familiarize yourself with its contents?

Thank you for your willingness to participate in the study.

MATERIAL TO BRING TO THE VS VISIT

- Goat 2019 VS Training Manual
- Goat 2019 Producer Education Packet
- Producer Agreement
- VS Questionnaires (VS Initial Questionnaire and the On-site Agritourism Questionnaire)
- Biological Sampling Kits (1 Enteric Pathogen kit, 1 Parasite Kit A and Kit B (taped together), and 1 Blood/Swab Kit)
- Gloves
- Extra Lubricant (some lubricant will be supplied in the kits)
- Alcohol Pads
- Vacutainer Needles (if you prefer different gauges or lengths than what is provided)
- Pen/Pencil
- Calculator
- Business cards

PRODUCER AGREEMENT INSTRUCTIONS

The Goat 2019 Producer Agreement is the contract between APHIS and the Producer. The first page of the agreement must be filled out completely and signed before the questionnaire can be administered.

The second page is completed after you explain the biological sampling to the Producer. On this page, the Producer will initial the appropriate blanks to indicate their interest in participating in biological sampling.

Confidentiality

Items 3 and 4 on the first page of the Producer Agreement specifically state that data collected by NAHMS will be kept confidential and will not be used for regulatory purposes. The exception to data confidentiality is the suspicion or diagnosis of a dangerously contagious, infectious, or exotic disease foreign to the United States on the Producer's premises, such as foot-and-mouth disease.

Signatures

At the bottom of the first page of the Goat 2019 Producer Agreement, the Federal or State representative signs and fills in the date on the appropriate line. The Producer or authorized representative signs and dates on the line indicated.

Biological Sampling Agreement

The Producer must initial the appropriate column for each type of biological sampling offered. Participation in any of the biological sampling is voluntary. For example, if the Producer agrees to complete all biological sampling then they must initial under "**I AGREE TO PARTICIPATE**" for each biologic sampling on page 2 of the Producer Agreement. Items 14 (nasal swabs) and 15 (vaginal swabs) can only be offered if the producer also agrees to item 13 (blood-serum collection). The Producer will be responsible for collecting and shipping Parasite Kit B, so it is important to make sure the Producer understands what is involved for this biologic sample before he/she agrees to participate.

*The **WHITE** copy of the Producer Agreement should be **mailed to your NAHMS Coordinator**. The **YELLOW** copy of the Producer Agreement is **left with the Producer**. Retain your copies of the Producer Agreement until Notified by NAHMS staff to destroy them.*



Animal and Plant Health Inspection Service

Veterinary Services

Goat 2019 General Producer Agreement

National Animal Health Monitoring System

2150 Centre Ave, Bldg B Fort Collins, CO 80526

Form Approved OMB Number 0579-0354 Expires:

The U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS), the State of _____, and the Producer hereby enter into this National Animal Health Monitoring System (NAHMS) Goat 2019 PRODUCER AGREEMENT, the terms of which are set forth below.

- 1. APHIS and/or the State of _____ will provide personnel who will be referred to as the Data Collector. The Data Collector and the Producer will participate together in implementing a statistically valid NAHMS study for determining national estimates of goat-health practices and for compiling health information to enhance goat production. The Data Collector and the Producer will complete a personal interview.
2. The Producer will assist APHIS by providing accurate information regarding goat-health and management practices related to the study objectives. The Producer retains the right to refuse any questions deemed inappropriate.
3. The Data Collector will keep the origin of the data confidential by recording the data with the Producer's unique code number only. The Data Collector will not keep any key to the code after the completion of the study. The Data Collector and all other project personnel acknowledge that the Producer is providing information and samples that he/she does not customarily share and is providing it with the expectation that it will not be made public. The one exception to data confidentiality is the suspicion or diagnosis of a dangerously contagious, infectious, or exotic disease foreign to the United States on the Producer's premises (e.g., foot-and-mouth disease), in which case further investigation and possible action may occur.
4. Data collected by the Data Collector will not be used for regulatory purposes. However, information on a Producer's animals revealed from sources unrelated to the Goat 2019 study, such as testing and inspection for movement or sale of animals or tracebacks on testing done at slaughter, may cause regulatory action to be initiated by the State or APHIS.
5. APHIS may publish, or authorize others to publish, the aggregate (summary) findings acquired from NAHMS for the benefit of the goat industry, allied private industry, and other interested groups, but will ensure that the identity of the Producer is withheld. APHIS may not publish, or authorize others to publish, individual responses. APHIS may perform additional testing, or authorize others to perform additional testing of samples collected through the study, for the benefit of the goat industry, but will ensure that the identity of the Producer is withheld.
6. After completion of data reporting by the Producer, upon request, APHIS will provide the Producer with reports containing aggregated, summary results from the study. The Producer can obtain any further information available from this study by accessing the NAHMS website or subscribing to the NAHMS goat mailing list at NAHMS@aphis.usda.gov
7. The Producer will complete a brief evaluation of the Goat 2019 study, the results of which will be used to assist APHIS in the design and implementation of future NAHMS surveys.
8. Any changes to or waivers of the terms of this PRODUCER AGREEMENT shall be binding on APHIS and the STATE of _____ and the Producer only if they are put in writing by each party.
9. The effective data collection period of this PRODUCER AGREEMENT shall begin with today's date of ___/___/___ and end no later than January 30, 2020.

Continued on next page with biological testing.

_____/date VS Employee, U.S. Department of Agriculture, APHIS OR _____ Department of Agriculture

_____/date Producer or authorized representative

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0354. The time required to complete this information collection is estimated to average 15 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

NAHMS-452 JUN 2019

	Biologic Sampling by Data Collector – Fecal Pathogens	I AGREE to participate	I DO NOT want to participate
10.	<p>Producer consents and authorizes the Data Collector to collect fecal samples from up to 25 goats. All samples will be tested for <i>Campylobacter</i>, <i>Salmonella</i>, generic <i>E. coli</i>, <i>Giardia</i>, and <i>Cryptosporidium</i>. The Producer will receive positive/negative results, usually within 3 months of collection.</p> <p>A subset of these samples will be tested for other fecal bacteria, such as <i>Enterococcus</i>. These results will not be returned to the Producer.</p> <p>(Producer to initial appropriate column.)</p>	_____	_____
	Biologic Sampling by Data Collector/Producer – Fecal Parasites		
11.	<p>Producer consents and authorizes the Data Collector to collect samples from up to 25 goats, rectally, prior to deworming. The samples will be tested for internal parasites. The Producer will be responsible for collecting post-deworming fecal samples from the same goats 10-14 days after deworming. The Producer will receive results usually within 3 months of post-deworming collection.</p> <p>(Producer to initial appropriate column.)</p>	_____	_____
	Biologic Sampling by Data Collector – Blood		
12.	<p>Producer consents and authorizes the Data Collector to collect up to 15 blood samples from does and bucks (greater than 15 months of age) to be tested for the presence of genotypes thought to be resistant to scrapie. Results will usually be sent to the Producer within 3 months of collection.</p> <p>(Producer to initial appropriate column.)</p>	_____	_____
	Biologic Sampling by Data Collector – Blood (Serum)		
13.	<p>Producer consents and authorizes the Data Collector to collect up to 25 blood samples from does (greater than 15 months of age) to be stored in a serum bank for future research into diseases of concern to the goat industry. Results will not be returned to the producer.</p> <p>(Producer to initial appropriate column.)</p>	_____	_____
Continue if the Producer agrees to number 13. Nasal and vaginal swabs samples will be collected on the same does that have blood (serum) collected.			
	Biologic Sampling by Data Collector- Nasal Swabs Sampling from the same does that were sampled in number 13.		
14.	<p>Producer consents and authorizes the Data Collector to collect up to 25 nasal swabs from does. Samples will be tested for the presence of <i>Mycoplasma ovipneumoniae</i>. Results will be sent to the Producer within 3 months of collection.</p> <p>(Producer to initial appropriate column.)</p>	_____	_____
	Biologic Sampling by Data Collector- Vaginal Swabs Sampling from the same does that were sampled in number 13.		
15.	<p>Producer consents and authorizes the Data Collector to collect up to 15 vaginal swabs from does. Samples will be tested for the presence of <i>Coxiella burnetii</i>. These results will not be returned to the Producer.</p> <p>(Producer to initial appropriate column.)</p>	_____	_____

VS QUESTIONNAIRE INFORMATION

The VS Questionnaires (the VS Initial Questionnaire and the On-site Agritourism Questionnaire) are completed during the VS in-person interview. These questionnaires include questions about herd management and sales practices, vaccination and testing practices, disease control, illness, deaths, nutrition management, and opinions on the significance of health problems. The VS Initial Questionnaire should be administered to all participating operations with 1 or more goats on the operation. The On-site Agritourism Questionnaire should be administered to operations with 1 or more goats that allowed agritourism in the last 12 months.

During the administration of the VS Questionnaires, read all questions to the Producer and follow instructions carefully. **DO NOT LEAVE ANY QUESTIONS BLANK** unless instructed to skip. Questions left blank hinder data validation and analysis because it is not known if the question was missed accidentally or if the Producer did not have an answer. We may request you re-contact the Producer for missing data or clarification.

*If the response is zero (0), enter the number 0; **do not leave the response blank**. If the Producer does not know, work with him or her to try to estimate the answer. If the Producer does not have an answer, use DK or NA (described below) to indicate why the question was not answered. **Please write in the margins to explain unusual circumstances or answers.***

If the Producer doesn't know, circle "DK" in the response line or write in "DK" and explain in the margin the problem the Producer had with the question. If a question is not applicable to the Producer, circle "NA" in the response line or write in "NA" and again explain in the margin.

If the answer is unusual or quality of the data is questionable, record the answer and write notes next to the question explaining the abnormal data. Do not hesitate to write comments directly on the questionnaire. We would rather have a lengthy explanation for a strange answer than no explanation at all. If an answer does not make sense and has no explanation, we may have your coordinator ask you to explain the answer.

At times during the interview, a Producer may feel uncomfortable providing the requested data without consulting records. Producers should be given additional time to look up the information or report it by telephone to you later as long as the timeliness of data submission is not adversely affected. Also, some Producers may be reluctant to provide estimates where records are not available. In this case, the Producer should be encouraged to respond, and the circumstances for the response should be noted in the margin next to the pertinent question. We will take these notes into account when assessing overall data quality for the site.

*NAHMS is a voluntary program. **If the Producer doesn't want to answer a question, respect this request, make a note on the questionnaire, and move on to the next question.***

Return the completed questionnaire to your NAHMS Coordinator within 3 working days of the visit.

Nonrespondent Documentation

We must account for all operations turned over by NASS. If a Producer declines to participate or could not be reached, complete the "Office Use Only" section of the questionnaire. Include the State, operation number, interviewer's initials, date, time spent talking with the Producer, travel time (if any), data collector information, contact attempt history, and the Producer's reason for declining in the "Office Use Only" section. Send this page to the coordinator within 3 days.

You may copy the final page of the questionnaire to complete for non-respondents.



VS Questionnaire Manual

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Animal and Plant Health Inspection Service

Veterinary Services

Goat 2019 VS Initial Questionnaire



National Animal Health Monitoring System

2150 Centre Ave Bldg B
Fort Collins, CO 80526

Form Approved
OMB Number 0579-0354
Expiration date:

State FIPS: _____ Operation #: _____ Interviewer: _____ Date: _____

Arrival time at operation: _____

Section A—Inventory

1. How many kids and goats do you have on this operation today?

- a. Preweaned Kidsg101 _____ head
- b. Weaned Kids (less than 1 year old)g102 _____ head
- c. Adult does (1 year old or older).....g103 _____ head
- d. Adult bucks and wethers (1 year old or older)g104 _____ head
- e. Total [Add 1a to 1d.].....g105 _____ head

[IF no kids or goats, then go to Section O.]

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0354. The time required to complete this information collection is estimated to average 1 hour and 15 minutes per response, including the time to review instructions, search existing data resources, gather the data needed, and complete and review the information collected.

NAHMS-453
Date

Section B—Preventive Practices

1. Do you have a written herd health management plan for your operation?g201 1 Yes 3 No
- If Yes, were any of the following resources used in the development of the plan?**
- a. Veterinariang202 1 Yes 3 No
- b. Extension (university)g203 1 Yes 3 No
- c. Other producersg204 1 Yes 3 No
- d. Reference materials (online or book)g205 1 Yes 3 No
- e. Other (specify: _____) g206othg206 1 Yes 3 No

2. In the last 12 months, did this operation normally require or perform individual animal testing for any of the following diseases:

	Resident goats in herd	New additions <small>[SKIP if no new additions.]</small>
a. Caprine arthritis encephalitis (CAE)?g207/g215	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 3 No	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 3 No
b. Johne's (paratuberculosis)?g208/g216	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 3 No	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 3 No
c. Brucellosis?g209/g217	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 3 No	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 3 No
d. Q fever (coxiellosis)?g210/g218	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 3 No	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 3 No
e. Caseous lymphadenitis (boils, CL, abscesses)?g211/g219	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 3 No	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 3 No
f. Scrapie?g212/g220	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 3 No	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 3 No
g. Tuberculosis?g213/g221	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 3 No	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 3 No
h. Other? (specify: _____) g214othg214/g222	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 3 No	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 3 No

3. During the previous 12 months, how many of your goats had abscesses, boils, or lumps (typically on the head, neck, shoulder, or upper rear legs)?g223 _____ #

[If question 3 = 0, SKIP to question 5.]

4. Were any of the following actions taken for animals with abscesses, boils, or lumps?

a. Call the veterinariang224	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 3 No	
b. Cull the animal to market or slaughterg225	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 3 No	
c. Isolate the goatsg226	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 3 No	
i. If Yes, how many days was the goat isolated?g227		_____ (d)
d. Drain or lance the lumpsg228	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 3 No	
i. If Yes, was the drainage disposed of away from the goat raising areas?g229		<input type="checkbox"/> 1 Yes <input type="checkbox"/> 3 No
e. Lab tests for caseous lymphadenitis (CL)/abscesses (e.g., culture, SHI test)g230	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 3 No	
f. Treat with antibioticsg231	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 3 No	
g. Inject a substance into the abscess/lumpg232	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 3 No	
h. Other (specify: _____) g233othg233	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 3 No	

5. During the previous 12 months, did **any** adult or kid goats on your operation receive any vaccines?g240
g240 1 Yes 3 No

[If question 5 = No, SKIP to question 9.]

6. Which of the following vaccines were used during the previous 12 months for [read column heading]:
 [Enter **product code** in appropriate columns for each vaccine used for the age groups listed. Use the **Vaccine Reference Card** attached to the back of the questionnaire. IF don't know product, write '99' in space for vaccine]



	Nursing kids	Weaned kids	Adult does	Adult bucks/ wethers	
CHECK box if you didn't have this class of goat →	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁	g241/g265/g281/g297
CLOSTRIDIAL vaccines?	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	g242/g266g282/g298
[If column = Yes, enter product code for vaccine used.]					
a. Clostridium type C and D for enterotoxemia (overeating disease, bloody scours, pulpy kidney disease) [Not as part of a 7/8 way.]					g244/g268/g284/g300
b. Tetanus (<i>Cl. tetani</i>) [Not as part of a 7/8 way.]					g245/g269g285/g301
c. 7- or 8 way vaccine (Blackleg, malignant edema, <i>Clostridium chauvoei</i> and/or <i>Cl. septicum</i>) and/or <i>Cl. novyi</i> and/or <i>Cl. Sordellii</i> and C D and T)					g246/g270/g286/g302
RESPIRATORY vaccines?	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	g247/g271/g287/g303
d. Pneumonia (<i>Pasteurella/Mannheimia</i>)					g248/g272/g288/g304
e. BRSV					g249/g273/g289/g305
f. Other respiratory vaccines					g250/g274/g290/g306
MASTITIS vaccines?			<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No		g251
g. <i>Staph. aureus</i>					g252
h. Gram negative (<i>E. coli</i> , J5)					g253
i. Other mastitis vaccines					g254
ANTI-ABORTION vaccines?			<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No		g255
j. EAE (<i>Chlamydiophila abortus</i>)					g256
k. Leptospirosis					g257
l. <i>Campylobacter fetus/jejuni</i> (<i>vibrio</i>)					g258
OTHER vaccines?	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	g259/g275/g291/g307
m. CL (Abscesses, caseous lymphadenitis)					g260/g276/g292/g308
n. Sore mouth (contagious ecthyma)					g261/g277/g293/g309
o. Rabies					g262/g278/g294/g310
p. Scour control					g263/g279/g295/g311
q. Other vaccines					g264/g280/g296/g312

[If question 6a (*Clostridium C* and *D*) and question 6c = missing for adult does, SKIP to question 8.]

7. How frequently were adult does vaccinated for *Clostridium C* and *D*? [Check one only.]

g313

- ₁ 3 to 4 times a year
- ₂ Twice a year
- ₃ Annually
- ₄ Less often than annually

8. Who vaccinated goats for sore mouth during the previous 12 months and did they wear gloves when administering the vaccine?

₁ NA (sore mouth vaccine not used) **SKIP to question 9.**

	Gave vaccine	If Yes, were gloves worn?		
	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₂ DK	<input type="checkbox"/> ₃ No
a. Veterinarian.....g314/g318	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₂ DK	<input type="checkbox"/> ₃ No
b. Farm worker(s).....g315/g319	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₂ DK	<input type="checkbox"/> ₃ No
c. Owner/operatorg316/g320	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₂ DK	<input type="checkbox"/> ₃ No
d. Other (specify: _____) g317oth.....g317/g321	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₂ DK	<input type="checkbox"/> ₃ No

[If question 8 is answered, SKIP to question 10.]

9. How important were the following reasons for **not** using sore mouth vaccine in your herd?

a. High costg322	<input type="checkbox"/> ₁ Very	<input type="checkbox"/> ₂ Somewhat	<input type="checkbox"/> ₃ Not
b. Not easily obtainable.....g323	<input type="checkbox"/> ₁ Very	<input type="checkbox"/> ₂ Somewhat	<input type="checkbox"/> ₃ Not
c. Mode of administration not convenientg324	<input type="checkbox"/> ₁ Very	<input type="checkbox"/> ₂ Somewhat	<input type="checkbox"/> ₃ Not
d. Vaccine is liveg325	<input type="checkbox"/> ₁ Very	<input type="checkbox"/> ₂ Somewhat	<input type="checkbox"/> ₃ Not
e. Other goat owner/producer recommended against itg326	<input type="checkbox"/> ₁ Very	<input type="checkbox"/> ₂ Somewhat	<input type="checkbox"/> ₃ Not
f. Veterinarian recommended against itg327	<input type="checkbox"/> ₁ Very	<input type="checkbox"/> ₂ Somewhat	<input type="checkbox"/> ₃ Not
g. No history of sore mouthg328	<input type="checkbox"/> ₁ Very	<input type="checkbox"/> ₂ Somewhat	<input type="checkbox"/> ₃ Not
h. Did not know it was availableg329	<input type="checkbox"/> ₁ Very	<input type="checkbox"/> ₂ Somewhat	<input type="checkbox"/> ₃ Not

10. Do you currently have any of the following type(s) of herd health management or certification program(s) **specifically** to control or prevent Johne's disease in your herd?

a. A unique program developed specifically for this operation g330	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No
b. A State-sponsored certification program..... g331	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No
c. Other (specify: _____) g332oth..... g332	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No

11. Which of the following measures do you practice to prevent Johne's disease in your herd?

- a. Obtain newly acquired breeding does and bucks from Johne's-negative herds.....g333 ₁ Yes ₃ No ₄ NA (no breeding does/bucks acquired)
- b. Use known, reputable source(s) of goats (not sale barn)g334 ₁ Yes ₃ No ₄ NA (no goats added)
- c. Prohibit contact with goats from other operationsg335 ₁ Yes ₃ No
- d. Do not expose kids to feces of infected or unknown status doesg336 ₁ Yes ₃ No ₄ NA (no kids or no does)
- e. Conduct definitive tests for Johne's at necropsy.....g337 ₁ Yes ₃ No ₄ Don't know
- f. Other measures (specify: _____) g338oth ..g338 ₁ Yes ₃ No
- g. Test any goats, sheep, or cows for Johne's g339 ₁ Yes ₃ No

If 11g =Yes, do you test:

What type of test(s) are used:

a. The goat herd annually	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No g340	Fecal <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No _{345b} Blood <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No _{345f} Other <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No _{345o} (specify: _____) g345oth
b. Any goats with clinical signs (chronic weight loss despite a good appetite)	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No <input type="checkbox"/> ₄ NA (no goats with clinical signs) g341	Fecal <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No g346f Blood <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No g346b Other <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No g346o (specify: _____) g346oth
c. All incoming goats	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No <input type="checkbox"/> ₄ NA (no goats added) g342	Fecal <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No g347f Blood <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No g347b Other <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No g347o (specify: _____) g347oth
d. All incoming sheep	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No <input type="checkbox"/> ₄ NA (no sheep added) g343	Fecal <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No g348f Blood <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No g348b Other <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No g348o (specify: _____) g348oth
e. All incoming cows	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No <input type="checkbox"/> ₄ NA (no cows added) g344	Fecal <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No g349f Blood <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No g349b Other <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No g349o (specify: _____) g349oth

12. In the previous 12 months, were any paid or unpaid personnel, including owners and family members, who had duties directly related to raising goats trained in the following procedures?

If Yes, enter the code indicating the **primary** person responsible for providing each type of training.

Training Personnel Codes	
1 = Owner	4 = Veterinarian
2 = Manager/herdsman	5 = University/extension personnel
3 = Other employees	6 = Other (specify: _____) g356OTH

Procedure	Training provided?	Training personnel code
a. Identifying sick or injured animals	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	G357/G366
b. Animal handling	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	G358/G367
c. Euthanasia	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₂ NA <input type="checkbox"/> ₃ No	G359/G368
d. Kid rearing practices	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₂ NA <input type="checkbox"/> ₃ No	G360/G369
e. Husbandry procedures (e.g., disbudding, castration, tattooing)	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₂ NA <input type="checkbox"/> ₃ No	G361/G370
f. Transportation of goats	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	G362/G371
g. Milking routines	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₂ NA <input type="checkbox"/> ₃ No	G363/G372
h. Feeding and nutrition	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	G364/G373
i. Goat behavior	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	G365/G374
j. Other (Specify.....)	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	G375OTH

Section C—Kidding Management

1. During the previous 12 months, were any kids born on this operation? g401 ₁ Yes ₃ No

Note: All remaining questions refer to the last completed kidding period.

[If question 1 = No, SKIP to section D.]

2. During the most recently completed kidding period:

a. How many kids were born alive: g402 _____ #

b. How many kids were born dead: g403 _____ #

c. Total kids born (2a+2b)..... g404 _____ #

3. During the most recently completed kidding period:

a. How frequently (in hours) were kidding areas checked for newborns?..... g405 _____ h

b. How often were navels dipped on newborn kids with a chlorhexidine or iodine solution?.....g413 ₁ Always ₂ Sometimes ₃ Never

c. Were kids physically separated from their dams prior to weaning off milk?..... g406 ₁ Yes ₃ No

[If question 3c = No, SKIP to question 5.]

4. During the most recently completed kidding period, How many hours or days following birth were buck and doe kids separated from their dams? *[If <1 hour, enter closest quarter hour.]*
- a. Doe kids g407/g409/g411 ₁ Removed immediately **OR** _____ h **OR** _____ d
- b. Buck kids g408/g410/g412 ₁ Removed immediately **OR** _____ h **OR** _____ d

Note: For the purposes of the next three questions, kidding areas are specific areas to which does are moved to kid.

5. During the most recently completed kidding period, did this operation use a separate area, specifically for kidding? g414 ₁ Yes ₃ No

[If question 5 = No, SKIP to question 8.]

6. On average, how many hours or days are does in the separate kidding area/pen? *[Answer to nearest quarter hour if <1 h.]*
- a. Prior to kidding *[Enter 0 if moved during kidding.]* g415/g417 _____ h **OR** _____ d
- b. After kidding *[Enter 0 if removed immediately after kidding.]* g416/g418 _____ h **OR** _____ d

7. During the most recently completed kidding period, how frequently were the kidding areas cleaned and disinfected? *[Check one only for each column]*
 Note: Cleaning is defined as removing all bedding and fecal material and replacing with clean bedding material.

Note: A chemical disinfectant includes: 1:10 bleach dilution, phenolic product (1 Stroke Environ® or SynPhenol-3®) or an accelerated hydrogen peroxide product (Intervention®) or lime.
[Check one only for each column.]

Cleaning	Disinfection
<input type="checkbox"/> ₁ Never cleaned	<input type="checkbox"/> ₁ Never disinfected
<input type="checkbox"/> ₂ Cleaned once at the end of the kidding season	<input type="checkbox"/> ₂ Disinfected once at the end of the kidding season
<input type="checkbox"/> ₃ Cleaned multiple times throughout the kidding season	<input type="checkbox"/> ₃ Disinfected multiple times throughout the kidding season
<input type="checkbox"/> ₄ Cleaned after each kidding	<input type="checkbox"/> ₄ Disinfected after each kidding
<input type="checkbox"/> ₅ Other (specify: _____) g419oth g419	<input type="checkbox"/> ₅ Other (specify: _____) g420oth g420

8. What percentage of newborn does and bucks received colostrum by:
- | | Doe kids | Buck kids |
|--|----------|-----------|
| a. Hand feeding only; kids were separated from the mothers immediately after birth and hand fed (e.g., teat feeder/bottle/tube feeder) g430/g433 | _____ | _____ % |
| b. Both nursing the doe and hand feeding g431/g434 | _____ | _____ % |
| c. Nursing only g432/g435 | _____ | _____ % |
| | 100% | 100% |

[If questions 8c does and bucks = 100% (nursing only), SKIP to question 14.]

9. During the most recently completed kidding period, how many hours following birth did the majority of newborn does and bucks get their first hand-feeding of colostrum? *[If <1 hour, enter closest quarter hour.]*
- a. Doe kids g436/g438 ₁ Fed immediately **OR** _____ h
- b. Buck kids g437/g439 ₁ Fed immediately **OR** _____ h

10. How were the newborn doe and buck kids that were hand fed colostrum (question 8) normally fed?

	Doe kids	Buck kids
	<i>[Check one only.] [Check one only.]</i>	
a. Bottle	<input type="checkbox"/> ₁	<input type="checkbox"/> ₁
b. Tube feeder (esophageal feeder)	<input type="checkbox"/> ₂	<input type="checkbox"/> ₂
c. Bucket	<input type="checkbox"/> ₃	<input type="checkbox"/> ₃

11. How many ounces of colostrum was normally fed by hand to newborn doe and buck kids

	Doe kids	Buck kids
a. At the first feeding? <i>[If allowed to nurse prior to hand feeding, enter 0.]</i>	_____	_____ OZ
b. Total for all subsequent feedings in the first 24 h?	_____	_____ OZ
c. Total in the first 24 h (should equal a + b)?	_____	_____ OZ

12. During the most recently completed kidding period, for the **first** colostrum feeding, what percentage of doe and buck kids on this operation consumed colostrum from the following sources (for kids that nursed at first feeding) enter % kids in option 12a)?

	Doe kids	Buck kids
a. Individual doe unpasteurized colostrum	_____	_____ %
b. Individual doe pasteurized colostrum	_____	_____ %
c. Pooled (mixed from multiple does) unpasteurized colostrum	_____	_____ %
d. Pooled (mixed from multiple does) pasteurized colostrum.....	_____	_____ %
e. Commercial colostrum replacer or supplements.....	_____	_____ %
f. Cow colostrum	_____	_____ %
g. Other (specify: _____)	_____	_____ %
	100%	100%

13. What was the primary method used to store colostrum?
[Check one only.]

g466

₁ Do not store colostrum

₂ Stored without refrigeration

₃ Stored in a refrigerator

₄ Stored in a freezer

₅ Other (specify: _____)

14. For the most recent kid crop, what percentage of doe and buck kids received the following liquid diet types:

	Doe kids	Buck kids
a. Nursing only	_____	_____ %
b. Nursed plus other liquid diet.....	_____	_____ %
c. Other liquid diet only	_____	_____ %
d. Total	100%	100%

[IF 14a = 100% for both does and bucks, SKIP to section D.]

15. What percent of doe and buck kids received the following liquid diet types:

	Doe kids	Buck kids
a. Unpasteurized goat milk.....g468/g479	_____	_____ %
b. Pasteurized goat milkg469/g480	_____	_____ %
c. Unpasteurized waste goat milkg470/g481	_____	_____ %
d. Pasteurized waste goat milkg471/g482	_____	_____ %
e. Cow milk.....g472/g483	_____	_____ %
f. Nonmedicated goat milk replacerg473/g484	_____	_____ %
g. Medicated goat milk replacerg474/g485	_____	_____ %
h. Nonmedicated cow milk replacerg475/g486	_____	_____ %
i. Medicated cow milk replacer.....g476/g487	_____	_____ %
j. Other (specify: _____) g477othg477/g488	_____	_____ %

[Total can be >100% if kids are fed multiple liquid diet types.]

[If questions 15i both bucks and doe kids = 0 (no medicated cow milk replacer fed), SKIP to question 17.]

16. Of those kids that received medicated cow milk replacer, which of the following medications were in the milk replacer?

a. CTC (chlortetracycline)	g489	<input type="checkbox"/> 1 Yes	<input type="checkbox"/> 2 DK	<input type="checkbox"/> 3 No
b. OTC (oxytetracycline)	g490	<input type="checkbox"/> 1 Yes	<input type="checkbox"/> 2 DK	<input type="checkbox"/> 3 No
c. NT, Neo-Terramycin®, Neo-Oxy (neomycin and oxytetracycline).....	g491	<input type="checkbox"/> 1 Yes	<input type="checkbox"/> 2 DK	<input type="checkbox"/> 3 No
d. Deccox® (decoquinat).....	g492	<input type="checkbox"/> 1 Yes	<input type="checkbox"/> 2 DK	<input type="checkbox"/> 3 No
e. Bovatec® (lasalocid)	g493	<input type="checkbox"/> 1 Yes	<input type="checkbox"/> 2 DK	<input type="checkbox"/> 3 No
f. Other (specify: _____) g494oth.....	g494	<input type="checkbox"/> 1 Yes	<input type="checkbox"/> 2 DK	<input type="checkbox"/> 3 No

17. Excluding kids that nursed **only**, what percentage of doe and buck kids were fed milk or milk replacer using the following equipment:

	Doe kids	Buck kids
a. Bottle	g495/g500	_____ %
b. Bucket	g496/g501	_____ %
c. Trough or mob feeder (e.g., milk bar)	g497/g502	_____ %
d. In-line milk feeding system (free choice).....	g498/g503	_____ %
e. Other (specify: _____) g499oth.....	g499/g504	_____ %

[Total can be >100% if kids are fed with multiple methods.]

18. For the most recent kid crop, how frequently was milk feeding equipment cleaned and disinfected? [Check one only for each column.]

A chemical disinfectant includes: 1:10 bleach dilution, phenolic product (1 Stroke Environ® or SynPhenol-3®) or an accelerated hydrogen peroxide product (Intervention®)

Cleaning (rinsed with water ± soap)	Disinfection
<input type="checkbox"/> 1 Never cleaned	<input type="checkbox"/> 1 Never disinfected
<input type="checkbox"/> 2 After the kids were weaned and moved	<input type="checkbox"/> 2 After the kids were weaned and moved
<input type="checkbox"/> 3 Less than once a day	<input type="checkbox"/> 3 Less than once a day
<input type="checkbox"/> 4 Once a day	<input type="checkbox"/> 4 Once a day
<input type="checkbox"/> 5 After each feeding	<input type="checkbox"/> 5 After each feeding
<input type="checkbox"/> 6 Other (specify: _____) g505oth g505	<input type="checkbox"/> 6 Other (specify: _____) g506oth g506

Section D—Parasite Control

1. Which of the following categories best describes your use of the FAMACHA© card/eye color score? *[Check one only.]*

g601

- ₁ Had not heard of the FAMACHA© card before this study
- ₂ Have seen or heard about the FAMACHA© card, but do not use
- ₃ Have used the FAMACHA© card some
- ₄ Regularly use the FAMACHA© card as management tool

[If question 1 = 1 or 2, SKIP to question 3.]

2. Do you use the FAMACHA© card to:

- a. Identify or cull worm-susceptible goats or kids? g602 ₁ Yes ₃ No
- b. Selectively deworm goats or kids (e.g., only goats with certain scores are dewormed)? g603 ₁ Yes ₃ No
- c. Other? (specify: _____) g604oth..... g604 ₁ Yes ₃ No

3. During the previous 12 months, how many **goats** were **tested** for internal parasites by any fecal test method listed in question 4 below? g605 _____ #

[If question 3 = 0, SKIP to question 6.]

4. During the previous 12 months, how many of the following **tests** were performed on goats in your herd? (Count each test separately. For example, if you have 20 goats and each one was tested twice by fecal flotation, put "40" in 4.a. below)

- a. Fecal flotation or fecal egg count (not as part of a fecal egg count reduction test) g606 _____ #
- b. Fecal egg count reduction test (fecal egg count both before and after deworming) *[Count pre- and post-deworming as one.]* g607 _____ #
- c. DrenchRite® (lab test for resistance to dewormers)..... g608 _____ #
- d. Other (specify: _____) g609oth..... g609 _____ #

[If 4a and 4b = 0 skip to question 6.]

5. During the previous 12 months who completed the majority of the fecal flotations or fecal egg counts? *[Check one only.]*

g610

- ₁ Self or employee on the operation
- ₂ Private veterinarian
- ₃ State/university laboratory
- ₄ Private laboratory
- ₄ Other (specify: _____) g610oth

6. During the **previous 3 years**, did you **deworm** any goats with medications or natural/alternative dewormers? g611 ₁ Yes ₃ No

[If question 6 = No, SKIP to question 11.]

7. During the previous **12 months**, how many kids and adult goats on this operation were:

	Kids	Adults
a. Never dewormed.....g612/g615	_____	_____ #
b. Dewormed onceg613/g616	_____	_____ #
c. Dewormed twice.....g614/g617	_____	_____ #
d. Dewormed three or more times.....g618/g619	_____	_____ #

[If question 7b-7d for both kids and adults=0 (never dewormed), SKIP to question 11.]

8. Did you use any of the following products to treat for **worms** (do not include treatment for *Coccidia*) during the previous 12 months?

*[For help categorizing specific products into anthelmintic class use the **Anthelmintic Reference Card.**]*

- a. High tannin concentrate plants (e.g., lespedeza, birdsfoot trefoil).....g620 1 Yes 3 No 4 DK
- b. Natural or alternative substances
 - i. Diatomaceous earthg621 1 Yes 3 No 4 DK
 - ii. Botanicals/herbs/cayenne pepperg622 1 Yes 3 No 4 DK
 - iii. Copper oxide particles.....g623 1 Yes 3 No 4 DK
 - iv. Other (specify: _____) g624othg624 1 Yes 3 No 4 DK
- c. Avermectins (e.g., Ivomec® Cydectin® Dectomax®).....g625 1 Yes 3 No 4 DK
 If Yes, check route(s) of administration.....g626 1 Drench/paste 2 Injection 3 Pour-on
- d. Benzimidazoles (e.g., Panacur®/Safeguard®/Valbazen®) g627 1 Yes 3 No 4 DK
 If Yes, check route(s) of administration.....g628 1 Drench/paste 2 In feed 3 Other (specify_____)
- e. Imidazothiazoles (e.g., Levasole®--levamisole) g629 1 Yes 3 No 4 DK
 If Yes, check route(s) of administration..... g630 1 Oral 2 Injection
- f. Benzenesulphonamides (e.g., Curatrem®, Ivomec Plus®) g631 1 Yes 3 No 4 DK
- g. Tetrahydropyrimidines (e.g., Rumatel®) g632 1 Yes 3 No 4 DK
- i. Other (specify: _____) g633oth..... g633 1 Yes 3 No 4 DK

9. What was the total amount spent on deworming products administered to goats on your operation during the previous 12 months (include those administered by a veterinarian)? g634 \$ _____

Deworming reason list for question 10	
1	All goats treated on a regular schedule as a preventative measure (e.g., seasonally, annually)
2	Worms were seen
3	When the goat's hair coat or body condition are poor
4	Fecal consistency (diarrhea)
5	Based on fecal tests (e.g., fecal floats, FECRT)
6	Based on FAMACHA card system/eye anemia score
7	Bottlejaw
8	Other (specify: _____) g635oth

10. Of the reasons in the deworming reason list, choose the top three reasons, in order of importance, that you use to decide which goats to deworm.

Code

- a. Most important reason g636 _____
- b. Second most important reason g637 _____
- c. Third most important reason g638 _____

11. During the previous 12 months, did you do any of the following as part of your internal parasite control program?

- a. Rotate pastures g639 ₁ Yes ₃ No ₄ NA (goats not on pasture)
- b. Select for parasite-resistant goats or cull worm-susceptible goats g640 ₁ Yes ₃ No
- c. Use a higher dose of dewormer in goats than the labeled dose recommended for sheep g641 ₁ Yes ₃ No
- d. Give a combination of two or more dewormer drugs at once g642 ₁ Yes ₃ No
- e. Rotate dewormers g643 ₁ Yes ₃ No
- f. Graze multiple species on the same pasture g644 ₁ Yes ₃ No ₄ NA (goats not on pasture)
- g. Leave animals in a dry lot after deworming for 24 to 48 h g645 ₁ Yes ₃ No
- h. Change kidding season to reduce the risk of high parasite exposure g646 ₁ Yes ₃ No
- i. Provide additional protein supplement to increase resistance g647 ₁ Yes ₃ No
- j. Feed a biological control product such as BioWorma® (*Duddingtonia flarigrans*) g648 ₁ Yes ₃ No
- k. Other (specify: _____) g649oth g649 ₁ Yes ₃ No

12. During the previous 12 months, have you observed any of the following external parasites on your goats:

- a. Lice? g650 ₁ Yes ₃ No
- b. Mites? g651 ₁ Yes ₃ No
- c. Ticks? g652 ₁ Yes ₃ No

Section E—Goat and Herd Health

1. How many of your operation's does were in milk during the previous 12 months?
[Include all does whether nursing kids or being milked. Count each doe only once, even if she kidded twice in the 12-month period.]g701 _____ head

[If question 1 = zero, SKIP to question 4.]

2. How many of the does in milk (question 1), had clinical mastitis (abnormal milk or swollen udder) in the previous 12 months? g702 D/K _____ head

[If question 2 = 0 or Don't know, SKIP to question 4.]

3. How was mastitis **most often** diagnosed on this operation during the previous 12 months? *[Check one only.]* g703

- 1 Visual observation of udder and/or milk
- 2 California mastitis test (CMT) or somatic cell count (SCC)
- 3 Culture of milk
- 4 Other (specify: _____) g703oth

4. Did any bred does abort during the previous 12 months? g704 1 Yes 3 No 4 NA (no bred does)

[If question 4 = No or NA, SKIP to question 7.]

5. Were any of the following steps taken for aborting does?
- a. Removed placentas or fetuses as soon as possible..... g705 1 Yes 3 No
 - b. Cleaned the area by removing bedding and/or dirt..... g706 1 Yes 3 No
 - c. Disinfected the area g707 1 Yes 3 No
 - d. Physically separated does that aborted from other does..... g708 1 Yes 3 No

If Yes, were they: *[Check one only.]* g709

- 1 Permanently removed from the herd *[SKIP to question 6.]*
- 2 Not returned to the herd for the rest of the kidding season *[SKIP to question 6.]*
- 3 Separated and then returned to the herd after **how many** days g710 _____ d

6. Were the abortions suspected to be caused by any of the following?
 If Yes, were causes diagnosed by a veterinarian or laboratory?

	Abortions suspected to be caused by the following?	If Yes, diagnosed by a vet or lab?
a. Campylobacteriosis (vibrio abortion).....g711/g719	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 DK <input type="checkbox"/> 3 No	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 3 No
b. Chlamydiosis (enzootic abortion).....g712/g720	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 DK <input type="checkbox"/> 3 No	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 3 No
c. Toxoplasmosisg713/g721	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 DK <input type="checkbox"/> 3 No	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 3 No
d. Q fever.....g714/g722	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 DK <input type="checkbox"/> 3 No	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 3 No
e. Salmonellosisg715/g723	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 DK <input type="checkbox"/> 3 No	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 3 No
f. Listeriosisg716/g724	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 DK <input type="checkbox"/> 3 No	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 3 No
g. Cache Valley virusg717/g725	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 DK <input type="checkbox"/> 3 No	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 3 No
h. Other (specify: _____) g718othg718/g726	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 DK <input type="checkbox"/> 3 No	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 3 No

7. Indicate if, during the previous **3 years**, any of the following were present (suspected or confirmed) in your herd.
[Check No if you have no reason to suspect that the disease has been in your herd.]

	Suspected to be in the herd during the previous 3 years	If Yes, diagnosed by a veterinarian or a lab?
a. Caprine arthritis encephalitis (CAE)?..... g727/g732	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No
b. Caseous lymphadenitis (boils, CL, abscesses)? g728/g733	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No
c. Johne's (paratuberculosis)? g729/g734	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No
d. Q fever (coxiellosis)? g730/g735	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No
e. Sore mouth (orf, contagious ecthyma)? g731/g736	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No

[If question 7e = No, SKIP to question 10.]

8. How many goats and kids in your herd had sore mouth (suspected or confirmed) during the previous 12 months?g737/g738 _____ head ₁DK

[If question 8 = zero or Don't know, SKIP to question 10.]

9. How many of those died? *[Should be ≤question 8.]*g739 _____ head

10. Have you or any of your family members or employees ever been infected with:

	Infected with:	IF YES, Diagnosed by a doctor?
a. Q fever?..... g740/g742	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₂ DK <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No
b. Sore mouth (orf)? g741/g743	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₂ DK <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No

11. During the previous 12 months, were any goats given any injections? g744 ₁ Yes ₃ No

[If question 11 = No, SKIP to question 14.]

12. For each goat injected, was a new needle used? g745 ₁ Yes ₃ No

[If question 12 = Yes, SKIP to question 14.]

13. Were the needles chemically disinfected between goats?..... g746 ₁ Yes ₃ No

Note: In this question disinfection refers to the use of a chemical solution (e.g., Betadine, Nolvasan, bleach) used to kill disease-causing organisms.

14. During the previous 12 months, did this operation share any equipment with other livestock owners (e.g., tractors, feeding equipment, manure spreaders, trailers, clippers, hoof trimmers, dehorner)? g747 ₁ Yes ₃ No

[If question 14 = No, SKIP to section F.]

15. Was shared equipment cleaned prior to use? g748 ₁ Yes ₃ No
- If Yes, which of the following **best** describes this operation's cleaning procedures? *[Check one only.]* g749
- ₁ Wash equipment with water (with or without soap) or steam only
- ₂ Chemically disinfect only
- ₃ Wash and chemically disinfect equipment
- ₄ Other (specify: _____) g749oth

Section F—Antimicrobial Use in Feed and Water

Note: The following questions ask about **all kids and adult goats**. Feed includes milk, milk replacer and starter.

1. During the period from September 1, 2018, through August 31, 2019, did this operation use a coccidiostat in the feed (including milk, milk replacer or starter) or water? g801 ₁ Yes ₃ No

[If question 1 = No, SKIP to question 3.]

2. Which of the following coccidiostats were used in **feed** (including milk, milk replacer, or starter) **or drinking water**?

	Feed	Water
a. Ionophores (Rumensin®, Bovatec®) g802	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	-----
b. Decoquinatate (Deccox®) g803/g810	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	-----
c. Amprolium (Corid®) g804/g811	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No
d. Sulfa drugs (Albon®, Sulmet®, etc.) g805/g812	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No
 If 2d=Yes, g806/g813	# adults treated _____	# adults treated _____
g807/g814	# kids treated _____	# kids treated _____
g808/g815	Avg # d treated _____	Avg # d treated _____
e. Other (specify: _____) g809oth g809/g816	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No

3. During the period from September 1, 2018, through August 31, 2019, did this operation use any ionophores as growth promotants **in feed**? g817 ₁ Yes ₃ No

4. From September 1, 2018, through August 31, 2019, were kids or adults given any antibiotics in drinking **water** to prevent, control or treat a disease or disorder?..... g818 ₁ Yes ₃No

[If question 4 = No, SKIP to question 6.]

5. From September 1, 2018, through August 31, 2019, what goat types were given antibiotics in drinking **water** to prevent, control or treat a disease or disorder?
For each goat type mark the reason(s) for administration, and write in the code for the primary antibiotic used (**Antibiotic Reference Card**), number of goats given antibiotics, and the average number of days used for each disease/disorder.

Goat type given antibiotics in water	Reason (Disease/disorder) for giving antibiotics	Code for primary antibiotic used in water	No. of animals	Avg. No. of days
Kids <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No g819 If No, SKIP to next goat type.	Respiratory disease <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No g821r	_____ g823r	_____ g825r	_____ g827r
	Digestive disease <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No g821d	_____ g823d	_____ g825d	_____ g827d
	Other <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No g821o (specify: _____) g821oth	_____ g823o	_____ g825o	_____ g827o
Adults <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No g820 If No, SKIP to question 6.	Respiratory disease <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No g822r	_____ g822r	_____ g824r	_____ g828r
	Digestive disease <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No g822d	_____ g822d	_____ g824d	_____ g828d
	Other <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No g822o (specify: _____) g822oth	_____ g822o	_____ g824o	_____ g828o

6. From September 1, 2018, through August 31, 2019, were **any kids or adults** given any antibiotics, other than ionophores, in **feed** (including milk, milk replacer or starter) to prevent, control, or treat a disease/disorder? g829 ₁ Yes ₃No

[If question 6 = No, SKIP to section G.]

7. From September 1, 2018, through August 31, 2019, what goat types were given antibiotics in **feed** (including milk, milk replacer or starter)?
For each goat type mark the reason(s) for administration, and write in the code for the primary antibiotic used (**Antibiotic Reference Card**), number of goats given antibiotics, and the average number of days used for each disease/disorder.

Goat type given antibiotics in feed	Reason (Disease/Disorder) for giving antibiotics	Code for primary antibiotic used in feed	No. of animals	Avg. No. of days
Preweaned kids <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No g830 If No, SKIP to next goat type.	Respiratory disease <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No g833r	_____ g836r	_____ g839r	_____ g842r
	Digestive disease <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No g833d	_____ g836d	_____ g839d	_____ g842d
	Other <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No g833o (specify: _____) g833oth	_____ g836o	_____ g839o	_____ g842o
Weaned kids <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No g831 If No, SKIP to next goat type.	Respiratory disease <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No g834r	_____ g837r	_____ g840r	_____ g843r
	Digestive disease <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No g834d	_____ g837d	_____ g840d	_____ g843d
	Other <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No g834o (specify: _____) g834oth	_____ g837o	_____ g840o	_____ g843o
Adults <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No g832 If No, SKIP to section G.	Respiratory disease <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No g835r	_____ g838r	_____ g841r	_____ g844r
	Digestive disease <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No g835d	_____ g838d	_____ g841d	_____ g844d
	Other <input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No g835o (specify: _____) g835oth	_____ g838o	_____ g841o	_____ g844o

Section G—Health Conditions and Losses

1. From September 1, 2018, through August 31, 2019, how many kids and adult goats were lost, stolen, died, or euthanized from all causes?
[Exclude kids born dead and slaughtered goats.]

If total head >0, how many of the total head were:

	Total head	Lost/stolen	Predator (died/euthanized)	Nonpredator (died/euthanized)
a. Preweaned kids.....g901/g906/g911/g916	_____	_____	_____	_____ head
b. Weaned kidsg902/g907/g912/g917	_____	_____	_____	_____ head
c. Adult doesg903/g908/g913/g918	_____	_____	_____	_____ head
d. Adult bucks/wethersg904/g909/g914/g919	_____	_____	_____	_____ head
e. Total lossesg905/g910/g915/g920	_____	_____	_____	_____ head

2. How many of those adult goats and kids that died from nonpredator reasons (question 1e Nonpredator total) were necropsied to determine the cause of death?g921 _____ head

For the remainder of this section, it is possible for a single goat to have had more than one condition, such as diarrhea and an abortion. Even if a goat died having experienced two or more conditions during the previous 12 months, the death or removal (culled) should be listed as due to a single primary cause.

Use the Antibiotics Reference Card to help answer questions 4, 6, and 8.

3. During the period from September 1, 2018, through August 31, 2019, were there any **preweaned kids** on this operation? g936 1 Yes 3 No

[If question 3 = No, SKIP to question 5.]

4. How many **different preweaned kids** became affected with the following conditions? Of those affected preweaned kids, how many received an antibiotic, what was the primary antibiotic used, how many died and how many were removed (culled)?

Note: **Do not** include antibiotics administered in the feed (including milk, milk replacer or starter) or drinking water. Include intramammary antibiotics, antibiotics used topically, and antibiotics used by injection, bolus, or drench. Only answer for treatment uses, do not include prevention.

1	2	3	4	5	6
Condition	No. of different preweaned kids affected in previous 12 months? ↓ _____ g922 [Enter 0 if none.]	Of the (col 2) preweaned kids, how many received an antibiotic to treat the condition at least once during the previous 12 months? _____ g923 [Enter 0 if none.]	Code for primary antibiotic used	Of the (col 2) preweaned kids, how many died or were euthanized primarily due to this condition? [must be less than or equal to 1a nonpredator]	Of the (col 2) preweaned kids, how many were removed primarily due to this condition?
a. Digestive issues (e.g., scours, overeating/enterotoxemia, coccidia)	g937	g946	g954	g962	g972
b. Navel infection	g938	g947	g955	g963	g973
c. Kidding problems or other perinatal conditions (e.g., floppy kid syndrome, weak kids)	g939	g948	g956	g964	g974
d. Eye conditions (e.g., pinkeye, conjunctivitis)	g940	g949	g957	g965	g975
e. Respiratory problems (e.g., pneumonia, shipping fever, runny nose)	g941	g950	g958	g966	g976
f. Lameness (e.g., joint swelling, wound, trauma)	g942	g951	g959	g967	g977
g. Weather-related, starvation causes (e.g., chilling, drowning, lightning)	g943			g968	g978
h. Other known conditions, (specify: _____) g944oth	g944	g952	g960	g969	g979
i. Unknown conditions (e.g., found dead)	g945	g953	g961	g970	g980
j. Total				g971	g981

Total = 1a (nonpredator)

5. During the period from September 1, 2018, through August 31, 2019, were there any **weaned kids** on this operation?..... g982 1 Yes 3 No

[If question 5 = No, SKIP to question 7.]

6. How many **different weaned kids** became affected with the following conditions?
Of those affected weaned kids, how many received an antibiotic, what was the primary antibiotic used, how many died and how many were removed (culled)?

Note: **Do not** include antibiotics administered in the feed or drinking water. Include intramammary antibiotics, antibiotics used topically, and antibiotics used by injection, bolus, or drench.
Only answer for treatment uses, do not include prevention.

1	2	3	4	5	6
Condition	No. of different weaned kids affected in previous 12 months? ↓ _____ g924 [Enter 0 if none.]	Of the (col 2) weaned kids, how many received an antibiotic to treat the condition at least once during the previous 12 months? _____ g925 [Enter 0 if none.]	Code for PRIMARY antibiotic used	Of the (col 2) weaned kids, how many died or were euthanized primarily due to this condition? [must be less than or equal to 1b nonpredator]	Of the (col 2) weaned kids, how many were removed primarily due to this condition?
	a. Digestive: intestinal worms	g983			g1009
b. Other digestive problems (e.g., scours, overeating /enterotoxemia)	g984	g993	g1001	g1010	g1021
c. Pinkeye	g985	g994	g1002	g1011	g1022
d. Respiratory problems (e.g., pneumonia, shipping fever, runny nose)	g986	g995	g1003	g1012	g1023
e. Lameness: Footrot	g987	g996	g1004	g1013	g1024
f. Other Lameness (e.g., joint swelling, wound)	g988	g997	g1005	g1014	g1025
g. Central nervous system signs (e.g., uncoordinated, staggering, swaying, falling down, circling, blindness)	g989	g998	g1006	g1015	g1026
h. Weather-related and poisoning/toxicity causes (e.g., chilling, drowning, lightning, noxious feeds/weeds)	g990			g1016	g1027
i. Other known conditions (specify: _____) g1010th	g991	g999	g1007	g1017	g1028
j. Unknown conditions (e.g., found dead)	g992	g1000	g1008	g1018	g1029
k. Total				g1019	g1030

Total = lb
(nonpredator)

7. During the period from September 1, 2018, through August 31, 2019, were there any **adult does** on the operation?g1031 1 Yes 3 No

[If question 7 = No, SKIP to question 9.]

8. How many **different adult does** became affected with the following conditions?
Of those affected adult does, how many received an antibiotic, what was the primary antibiotic used, how many died and how many were removed (culled)?

Note: **Do not** include antibiotics administered in the feed or drinking water. Include intramammary antibiotics, antibiotics used topically, and antibiotics used by injection, bolus, or drench.
Only answer for treatment uses, do not include prevention.

1 Condition	2 No. of different adult does affected in previous 12 months? ↓ _____g926 [Enter 0 if none.]	3 Of the (col 2) adult does, how many received an antibiotic to treat the condition at least once during the previous 12 months? _____g927 [Enter 0 if none.]	4 Code for PRIMARY antibiotic used	5 Of the (col 2) adult does, how many died or were euthanized primarily due to this condition? [must be less than or equal to 1c nonpredator]	6 Of the (col 2) adult does, how many were removed primarily due to this condition?
a. Digestive: intestinal worms	_____g1032			_____g1076	_____g1092
b. Other digestive problems (e.g., scours, overeating/enterotoxemia)	_____g1033	_____g1048	_____g1062	_____g1077	_____g1093
c. Pinkeye	_____g1034	_____g1049	_____g1063	_____g1078	_____g1094
d. Central nervous system signs (e.g., uncoordinated, staggering, swaying, falling down, circling, blindness)	_____g1035	_____g1050	_____g1064	_____g1079	_____g1095
e. Respiratory problems (e.g., pneumonia, shipping fever, runny nose)	_____g1036	_____g1051	_____g1065	_____g1080	_____g1096
f. Reproductive problems: abortions	_____g1037	_____g1052	_____g1066	_____g1081	_____g1097
g. Other reproductive problems (e.g., retained placenta/uterine infection, dystocia)	_____g1038	_____g1053	_____g1067	_____g1082	_____g1098
h. Mastitis	_____g1039	_____g1054	_____g1068	_____g1083	_____g1099
i. Metabolic problems (e.g., milk fever, twin kid disease, pregnancy toxemia)	_____g1040	_____g1055	_____g1069	_____g1084	_____g1100
j. Lameness: Footrot	_____g1041	_____g1056	_____g1070	_____g1085	_____g1101
k. Other Lameness (e.g., joint swelling, wound)	_____g1042	_____g1057	_____g1071	_____g1086	_____g1102
l. Weather-related causes or poisoning/toxicity (e.g., chilling, drowning, lightning, noxious feeds/weeds)	_____g1043			_____g1087	_____g1103
m. Chronic weight loss	_____g1044	_____g1058	_____g1072	_____g1088	_____g1104
n. Other known conditions (specify: _____)g1045oth	_____g1045	_____g1059	_____g1073	_____g1089	_____g1105
o. Unknown conditions (e.g., found dead)	_____g1046	_____g1060	_____g1074	_____g1090	_____g1106
p. Total	_____g1047	_____g1061	_____g1075	_____g1091	_____g1107

Total = 1c
(nonpredator)

9. During the period from September 1, 2018, through August 31, 2019, were there any **adult bucks/wethers** on the operation? g1108 ₁ Yes ₃ No

[If question 9 = No, SKIP to Section H.]

10. How many **different adult bucks/wethers** became affected with the following conditions? Of those affected adult bucks/wethers, how many received an antibiotic, what was the primary antibiotic used, how many died and how many were removed (culled)?

Note: **Do not** include antibiotics administered in the feed or drinking water. Include intramammary antibiotics, antibiotics used topically, and antibiotics used by injection, bolus, or drench. Only answer for treatment uses, do not include prevention.

1	2	3	4	5	6
Condition	No. of different adult bucks/wethers affected in previous 12 months? ↓ _____ g926 [Enter 0 if none.]	Of the (col 2) adult bucks/wethers, how many received an antibiotic to treat the condition at least once during the previous 12 months? _____ g927 [Enter 0 if none.]	Code for PRIMARY antibiotic used	Of the (col 2) adult bucks/wethers, how many died or were euthanized primarily due to this condition? [must be less than or equal to 1d nonpredator]	Of the (col 2) adult bucks/wethers, how many were removed primarily due to this condition?
a. Digestive: intestinal worms	g1109			g1141	g1154
b. Other digestive problems (e.g., scours, overeating/enterotoxemia)	g1110	g1121	g1131	g1142	g1155
c. Pinkeye	g1111	g1122	g1132	g1143	g1156
d. Central nervous system signs (e.g., uncoordinated, staggering, swaying, falling down, circling, blindness)	g1112	g1123	g1133	g1144	g1157
e. Respiratory problems (e.g., pneumonia, shipping fever, runny nose)	g1113	g1124	g1134	g1145	g1158
f. Reproductive problems: other (e.g., penile or testicular disorders, urinary calculi)	g1114	g1125	g1135	g1146	g1159
g. Lameness: Footrot	g1115	g1126	g1136	g1147	g1160
h. Lameness (e.g., joint swelling, wound)	g1116	g1127	g1137	g1148	g1161
i. Weather-related causes and poisoning/toxicity (e.g., chilling, drowning, lightning, noxious feeds/weeds)	g1117			g1149	g1162
j. Chronic weight loss	g1118	g1128	g1138	g1150	g1163
k. Other known conditions (specify _____) g1119oth	g1119	g1129	g1139	g1151	g1164
l. Unknown conditions (e.g. found dead)	g1120	g1130	g1140	g1152	g1165
m. Total				g1153	g1166

Total = 1d
(nonpredator)



Animal and Plant Health Inspection Service

Veterinary Services

NAHMS Goat 2019 Dairy Operation Questionnaire

National Animal Health Monitoring System

2150 Centre Ave, Bldg B Fort Collins, CO 80526

Form Approved OMB Number 0579-0354 Approval expires: xxxx

Section H— Dairy Inventory

1. Did you milk any does during the previous 12 months?..... d101 1 Yes 3 No

[If question 1 = No, go to Section O]

2. How many total dairy goats (does), whether dry or in milk, were present on September 1, 2019?d102 _____ head

[If question 2 is less than 5 head, go to Section O]

3. How many total dairy goats (does) were milked on this operation on September 1, 2019?d103 _____ head

4. The number of dry dairy adult does on September 1, 2019, was: [question 2 - question 3]d104 _____ head

5. How many first-lactation does born on this operation were added to the milking herd from September 1, 2018, through August 31, 2019? [Include kid does that were born on the operation and raised off site.].....d105 _____ head

6. How many purchased/leased does were added to the milking herd from September 1, 2018, through August 31, 2019?d106 _____ head

7. How many adult dairy does were permanently removed (culled) from the herd from September 1, 2018, through August 31, 2019? [Exclude does that died.]d107 _____ head

8. How many adult dairy does died from September 1, 2018, through August 31, 2019?d108 _____ head

9. What was the peak number of does milked on this operation at any time from September 1, 2018, through August 31, 2019?d109 _____ head

10. Is the milk produced on your operation weighed: d111 [Select one only.] 1 Daily 2 Monthly 3 Less frequently than monthly 4 Never

[If Question 10=Never or milk is not weighed throughout the entire lactation then skip to section I.]

11. What is the average milk production (in pounds) per doe? ... d110a/ d110b _____lb/year OR _____lb/day [Answer in annual milk production per doe or pounds per doe per day.] [Note: One gallon = 8.6 lb.]

<p>According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0354. The time required to complete this information collection is estimated to average 45 minutes per response, including the time to review instructions, search existing data resources, gather the data needed, and complete and review the information collected.</p>	<p>NAHMS-454 Date</p>
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Section I—General Management

1. Of the total number of dairy goats on this operation on September 1, 2019, what percentage were registered with a breed association?d201 _____ %
2. During the previous 12 months, did this operation produce any certified organic dairy milk? d202 ₁ Yes ₃ No
3. During the previous 12 months, did your operation milk any dairy **cows**? .. d204 ₁ Yes ₃ No
4. What is the average number of days post kidding that does are put into the milking string?.....d205 _____ d
5. What is the average length of lactation (days milked) for the majority of your does?d206 _____ d
6. What is the maximum length of lactation (days milked) for any doe milked in the last 12 months?d207 _____ d
(Note: Some does could have been milked for more than 365 days.)
7. What is the average number of days does are dry?.....d208 _____ d

Section J—Kidding Management

1. During the previous 12 months, what was the average kidding interval (in months) for dairy does? [*Kidding interval is the time from one kidding to the next kidding for an individual doe.*].....d301 _____ mo
2. During the previous 12 months, what was the average age (in months) of dairy does at the time of first kidding?d302 _____ mo
3. During the previous 12 months, did this operation use any of the following methods to estimate colostrum quality?
 - a. Visual appearance d303 ₁ Yes ₃ No
 - b. Volume of first milking colostrum (in pounds)..... d304 ₁ Yes ₃ No
 - c. Colostrometer..... d305 ₁ Yes ₃ No
 - d. Brix refractometer (handheld measuring device)..... d306 ₁ Yes ₃ No
 - e. Other (specify: _____) d306oth..... d306 ₁ Yes ₃ No
4. What is the typical feeding protocol during the first 4 weeks of life?

Milk Consumption Record		
Kid week of life	Amount of milk offered at each feeding (ounces)	Frequency (times per day)
1 st	<input type="checkbox"/> ₁ Left with dam OR _____ oz	
2 nd	<input type="checkbox"/> ₁ Left with dam OR _____ oz	
3 rd	<input type="checkbox"/> ₁ Left with dam OR _____ oz	
4 th	<input type="checkbox"/> ₁ Left with dam OR _____ oz	

d309/d313/d317/d321
d310/d314/d318/d322
d311/d315/d319/d323
d312/d316/d320/d324

Section K—Milk Marketing

1. During the previous 12 months, what percentage of the milk produced on this operation was:
- | | | |
|---|-------|------|
| a. Fed to kids?..... d401 | _____ | % |
| b. Fed to other livestock on this operation? d402 | _____ | % |
| c. Consumed as unpasteurized/raw milk by employees or family? d403 | _____ | % |
| d. Consumed as pasteurized milk by employees or family? d404 | _____ | % |
| e. Made into cheese on the farm? d405 | _____ | % |
| f. Made into other milk products (e.g., candy, yogurt, ice cream, soap) on the farm? d406 | _____ | % |
| g. Sold, traded, or given away as liquid milk?..... d407 | _____ | % |
| | | 100% |

[If question 1g = 0, SKIP to question 3.]

2. What percentage of **liquid milk** was sold, traded, or given away for:
- | | | |
|---|-------|------|
| a. Human consumption? d408 | _____ | % |
| b. Pet consumption? d409 | _____ | % |
| c. Livestock consumption?..... d410 | _____ | % |
| d. Making into cheese? d411 | _____ | % |
| e. Making into other milk products (e.g., candy, yogurt, ice cream, soap)? d412 | _____ | % |
| | | 100% |

- | | Milk | | Cheese or other milk products | |
|--|---|--|---|--|
| 3. During the previous 12 months, were any goat milk or milk products sold, traded, or given away? d413/d414 | <input type="checkbox"/> ₁ Yes | <input type="checkbox"/> ₃ No | <input type="checkbox"/> ₁ Yes | <input type="checkbox"/> ₃ No |

[If Milk column = No and Cheese or other milk products column = No, SKIP to Question 5.]

If Yes, were the products sold, traded or given away:

- | | | | | |
|---|---|--|---|--|
| a. Directly to the public (including Internet sales, farmers' markets, etc.)? d415/d420 | <input type="checkbox"/> ₁ Yes | <input type="checkbox"/> ₃ No | <input type="checkbox"/> ₁ Yes | <input type="checkbox"/> ₃ No |
| b. To retail establishments, restaurants, or other commercial sales? d416/d421 | <input type="checkbox"/> ₁ Yes | <input type="checkbox"/> ₃ No | <input type="checkbox"/> ₁ Yes | <input type="checkbox"/> ₃ No |
| c. To a cooperative or as part of a cooperative? d417/d422 | <input type="checkbox"/> ₁ Yes | <input type="checkbox"/> ₃ No | <input type="checkbox"/> ₁ Yes | <input type="checkbox"/> ₃ No |
| d. To a wholesaler, dealer, or processor (e.g., cheese plant)? d418/d423 | <input type="checkbox"/> ₁ Yes | <input type="checkbox"/> ₃ No | <input type="checkbox"/> ₁ Yes | <input type="checkbox"/> ₃ No |
| e. Other? (specify: _____) d419oth d419/d424 | <input type="checkbox"/> ₁ Yes | <input type="checkbox"/> ₃ No | <input type="checkbox"/> ₁ Yes | <input type="checkbox"/> ₃ No |

4. During the previous 12 months, did the buyer(s) of the **goat milk or goat milk products** ever pay a premium for:
- a. High protein content? d425 ₁ Yes ₃ No
 - b. Low bacteria counts? d426 ₁ Yes ₃ No
 - c. Low somatic cell count? d427 ₁ Yes ₃ No
 - d. Out-of-season milk? d428 ₁ Yes ₃ No
 - e. Other? (specify: _____) d429oth d429 ₁ Yes ₃ No
5. During the previous 12 months, did this operation **routinely** perform **on-farm** pasteurization of goat milk intended for human consumption? [*Pasteurization means to follow the Pasteurized Milk Ordinance (PMO) time and temperature guidelines to ensure destruction of certain microorganisms.*] d430 ₁ Yes ₃ No
6. During the previous 12 months, did you market any raw (unpasteurized) goat milk or raw goat milk products intended for human consumption? [*Include direct purchase and goat shares.*] d431 ₁ Yes ₃ No
7. During the previous 12 months, did this operation participate in a:
- a. Dairy Herd Improvement Association (DHIA) program? d432 ₁ Yes ₃ No
 - b. Other Quality assurance program (a program to improve milk product quality through assessments and monitoring)? d433 ₁ Yes ₃ No

Section L—Milking Procedures

1. What is the primary method by which does are milked on this operation? [*Check one only.*] d501
- ₁ Hand
 - ₂ Machine—bucket milker
 - ₃ Machine—pipeline
- [If question 1 = 1 or 2, SKIP to question 3.]**
2. Which of the following best describes the primary milking parlor on this operation? [*Check one only.*] d502
- ₁ Side by side (parallel)
 - ₂ Herringbone (fishbone)
 - ₃ Rotary (carousel)
 - ₄ Other (specify: _____) d502oth
3. How many times per day were does **usually** milked during the previous 12 months? [*Check one only.*] d503
- ₁ Less often than once a day
 - ₂ Once a day
 - ₃ Twice a day
 - ₄ More often than twice a day

4. Who milked the majority of does on this operation during the previous 12 months?
[Check one only.] d504
- ₁ Owner(s)/operator(s)
- ₂ Family member(s) of owner
- ₃ Hired worker(s) (nonfamily member)
- ₄ Other (specify: _____) d504oth

5. During the previous 12 months, how often did milkers wear disposable gloves when milking? d505 ₁ Always ₂ Sometimes ₃ Never

6. How frequently are milkers trained on milking procedures?
[Check one only.] 506
- ₁ As new milkers only
- ₂ Less often than once a year
- ₃ Once a year
- ₄ More often than once a year
- ₅ No training for milkers

7. Does this operation clip/singe the hair on udders of milking does? d507 ₁ Yes ₃ No

Codes for question 8	
1 = At each milking	4 = Other (specify: _____) <small>d508oth</small>
2 = At least once a day	5 = Not performed
3 = At least once a week	

8. During the previous 12 months, which frequency best describes this operation's use of forestripping for:
- | | Code |
|---|-------|
| a. Fresh does <small>d508</small> | _____ |
| b. Does with mastitis <small>d509</small> | _____ |
| c. All other does <small>d510</small> | _____ |

[If questions 8a, 8b, 8c ALL = 5, SKIP to question 10.]

9. When was forestripping performed? *[Check one only.]* d511
- ₁ Before teat washing
- ₂ After teat washing
- ₃ No teat washing

[If question 9 = 3 (No teat washing), SKIP to question 11.]

10. During the previous 12 months, which of the following best describes how teats were usually **washed** prior to milking? *[Check one only.]* d512
- ₁ No washing
 - ₂ Commercial udder/ teat wipes
 - ₃ Udder/teat wash or disinfectant solution used with single-use cloth/paper towels
 - ₄ Udder/teat wash or disinfectant solution used with multiple-use cloth/paper towels
 - ₅ Washed with water only
 - ₆ Other (specify: _____) d512oth

11. During the previous 12 months, which of the following best describes how teats were usually **dried** prior to milking? *[Check one only.]* d513
- ₁ Teats not dried prior to milking
 - ₂ Single-use cloth/paper towel
 - ₃ Multiple-use cloth/paper towel
 - ₄ Other (specify: _____) d513oth

12. During the previous 12 months, were teats typically pre-dipped prior to milking? d514 ₁ Yes ₃ No

13. During the previous 12 months, which of the following best describes the primary post-milking procedure used for teat disinfection? *[Check one only.]* d515
- ₁ Dip teats with commercial postdip product
 - ₂ Dip teats with nonlabeled/homemade solution
 - ₃ Spray teats with commercial postdip product
 - ₄ Foam teats with commercial postdip
 - ₅ No post-milking teat disinfection
 - ₆ Other (specify: _____) d515oth

14. Which of the following best describes the order in which goats are milked? *[Check one only.]* d516
- ₁ No particular order
 - ₂ Based on age only
 - ₃ Based on health only
 - ₄ Based on age and health
 - ₅ Based on production level
 - ₆ Other (specify: _____) d516oth

8. During the previous 12 months, what type of does were typically selected for milk culturing?
- a. Fresh does d614 ₁ Yes ₃ No
 - b. All clinical mastitis cases d615 ₁ Yes ₃ No
 - c. Chronic clinical mastitis cases d616 ₁ Yes ₃ No
 - d. Clinical mastitis cases that did not respond to treatment..... d617 ₁ Yes ₃ No
 - e. High somatic cell count does d618 ₁ Yes ₃ No
 - f. Other (specify: _____) d619oth..... d619 ₁ Yes ₃ No

9. During the previous 12 months, were any of the milk cultures performed by:
- a. Farm personnel, done on-farm? d620 ₁ Yes ₃ No
 - b. A State or university diagnostic laboratory?..... d621 ₁ Yes ₃ No
 - c. A commercial lab?..... d622 ₁ Yes ₃ No
 - d. A private veterinary lab (veterinary clinic)? d623 ₁ Yes ₃ No

10. During the previous 12 months, were any of the following organisms identified from milk that was cultured?
- a. Coagulase neg staph (CNS) non-*aureus*.....d624 ₁ Yes ₂ DK ₃ No
 - b. *Staph. aureus*.....d625 ₁ Yes ₂ DK ₃ No
 - c. *Mannheimia* spp. (*Pasteurella*)d626 ₁ Yes ₂ DK ₃ No
 - d. *Mycoplasma* spp.d627 ₁ Yes ₂ DK ₃ No
 - e. *E. coli/Pseudomonas/Klebsiella* other gram negd628 ₁ Yes ₂ DK ₃ No
 - f. *Strep. Agalactiae*d629 ₁ Yes ₂ DK ₃ No
 - g. Environmental strep (*Strep. spp.*) non-*agalactiae*.....d630 ₁ Yes ₂ DK ₃ No
 - h. Other (specify: _____) d631othd631 ₁ Yes ₂ DK ₃ No

11. During the previous 12 months, by which method were goats with clinical mastitis usually milked? [Check one only.] d632
- ₁ No known does with mastitis in the previous 12 months
 - ₂ NA (any does with mastitis are dried off)
 - ₃ At the end of milking
 - ₄ In a separate string from healthy goats
 - ₅ Using a separate milking unit from healthy goats
 - ₆ No specific procedure followed
 - ₇ Other (specify: _____) d632oth

[If question 11 = 1 (no known mastitic does), SKIP to section N.]

12. During the previous 12 months, did the mastitis treatment protocol involve:

Treatment

- a. Intramammary (IMM) antibiotics (exclude dry doe treatment)? d633 ₁ Yes ₃ No
 - i. IF yes, number of does treated with IMM antibiotics: _____ # does
- b. Oral or injectable antibiotics? d634 ₁ Yes ₃ No
- c. Organic/homeopathic remedies? d635 ₁ Yes ₃ No
- d. Pain medications (anti-inflammatories, analgesics)?..... d636 ₁ Yes ₃ No
- e. Other? (specify: _____) d637oth d637 ₁ Yes ₃ No

Management

- f. Frequent stripping of affected udder half? d638 ₁ Yes ₃ No
- g. Early dry-off?..... d639 ₁ Yes ₃ No
- h. Moving does to a separate milking pen? d640 ₁ Yes ₃ No
- i. Other? (specify: _____) d641oth d641 ₁ Yes ₃ No

[If question 12a = No (no IMM antibiotics used), SKIP to section N.]

13. Treatment with IMM antibiotics for mastitis was based on:

- a. Veterinary recommendation d642 ₁ Yes ₃ No
- b. Recommendation from other producers d643 ₁ Yes ₃ No
- b. Previous treatment effectiveness d644 ₁ Yes ₃ No
- c. Previous culture and antimicrobial sensitivity results d645 ₁ Yes ₃ No
- d. Individual doe culture results before therapy d646 ₁ Yes ₃ No
- e. Other (specify: _____) d647oth d647 ₁ Yes ₃ No

14. Of does treated during the previous 12 months with IMM antibiotics for Mastitis (Q12 ai), what percentage were given the following antibiotics and what withdrawal time was used for each?

	Percent	Withdrawal time (d)
a. Spectramast® LC (ceftiofur hydrochloride).....d648/d657	_____	_____
b. ToDay® /Cefa-Lak® (cephapirin).....d649/d658	_____	_____
c. DariClox® (cloxacillin)..... d650/d659	_____	_____
d. Pirsue® (pirlimycin hydrochloride)d651/d660	_____	_____
e. Masti-Clear™ (penicillin)d652/d661	_____	_____
f. Polymast™ (hetacillin potassium).....d653/d662	_____	_____
g. Amoximast® (amoxicillin)d654/d663	_____	_____
h. Hetacin-K® (hetacillin potassium) d655d664	_____	_____
i. Other (specify: _____) d656oth d656/d665	_____	_____
Total	≥100%	

15. How were IMM antibiotics typically administered to mastitic does?
 [Check one only.]

d666

- ₁ The whole tube administered into one teat
- ₂ A tube split between the two teats
- ₃ Other (specify: _____) d666oth

Section N—Dry Doe Procedures

1. During the previous 12 months, what percentage of does were dried off based on the following protocols?

- a. Set schedule (e.g., so many days prior to kidding) d701 _____ %
- b. Milk production level..... d702 _____ %
- c. Presence of mastitis or high somatic cell count..... d703 _____ %
- d. Other reason (specify: _____) d704oth..... d704 _____ %
- Total 100%

2. During the previous 12 months, what percentage of does were dried off using the following methods?

- a. Abruptly stop milking d705 _____ %
- b. Skip milkings before complete dry off
 (e.g., milk once a day for a number of days)..... d706 _____ %
- c. Other (specify: _____) d707oth..... d707 _____ %
- Total 100%

3. During the previous 12 months, which of the following management practices did this operation routinely use at dry off?

- a. Perform California Mastitis Test (CMT) or other individual-doe
 SCC test..... d708 ₁ Yes ₃ No
- b. Reduce the quality/energy content of feed d709 ₁ Yes ₃ No
- c. Reduce access to feed..... d710 ₁ Yes ₃ No
- d. Reduce access to water..... d711 ₁ Yes ₃ No

4. During the previous 12 months, were intramammary antibiotics used at dry off on any does? d712 ₁ Yes ₃ No

[If question 4 = No, SKIP to question 8.]

5. During the previous 12 months, approximately what percentage of does were treated with dry-doe IMM antibiotics at dry off? d713 _____ %

[If question 5 = 100% SKIP to question 7.]

6. Were IMM antibiotics given to any does at dry off because of:
- a. High somatic cell count (SCC)? d714 ₁ Yes ₃ No
 - b. History of mastitis (clinical/chronic)? d715 ₁ Yes ₃ No
 - c. Low milk production? d716 ₁ Yes ₃ No
 - d. Adverse weather? d717 ₁ Yes ₃ No
 - e. Other? (specify: _____) d718oth d718 ₁ Yes ₃ No

7. Of does treated during the previous 12 months with dry-doe IMM antibiotics, what percentage were given the following antibiotics and what withdrawal time was used for each?

	Percent	Withdrawal time (d)
a. Spectramast® DC (ceftiofur hydrochloride)d719/d728	_____	_____
b. Tomorrow®/Cefa-Dri (cephapirin benzathine)d720/d729	_____	_____
c. Bovaclox™, Dry-Clox®, Dry-Clox® intramammary infusion, Orbenin®-DC (cloxacillin benzathine)d721/d730	_____	_____
d. Gallimycin-Dry (erythromycin).....d722/d731	_____	_____
e. Biodry® (novobiocin).....d723/d732	_____	_____
f. Vet Go Dry™/ Hanford's US (penicillin G procaine)d724/d733	_____	_____
g. Quartermaster® Dry Doe Treatment (penicillin G procaine/dihydrostreptomycin)d725/d734	_____	_____
h. Albadry Plus® Suspension (penicillin G procaine/novobiocin)d726/d735	_____	_____
i. Other (specify: _____) d727othd727/d736	_____	_____
Total [may be >100% if used more than one at dry off]	≥ 100%	

8. During the previous 12 months, were internal or external teat sealants used at dry off on any does?..... d737 ₁ Yes ₃ No

Section O: Office Use Only

State FIPS: _____ 2-digits	Operation #: _____ 4-digits	Interviewer: _____ Initials	Date: _____ (mm/dd/yy)
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1. Total time for interview (include time to discuss the program and complete the questionnaire). If more than one data collector present, enter the combined time.....gitime _____ min
2. Total travel time (round trip). If more than one data collector present, enter the combined time..... gtime _____ min
3. Data collector(s): *[Enter the number for each category.]*
 ____ Federal VMO ____ Federal AHT ____ State personnel ____ Other (specify) gvmo/gaht/gst/goth
4. Enter response code 99 if questionnaire is completed or enter one code of 00–07 that best describes the reason why the owner is not participating..... gcco _____ code

- 99 = Survey completed
- 00 = Inaccessible after five contact attempts
- 01 = Poor time of year or no time
- 02 = Does not want anyone on operation
- 03 = Bad experience with government veterinarians
- 04 = Does not want to do another survey or divulge information
- 05 = Told NASS they did not want to be contacted
- 06 = Ineligible (no goats)
- 07 = Other reason (explain below)

Contact attempt history			
Date (mm/dd)	Time (am/pm)	Action	Outcome
1/22	4:30 pm	Phone call	Left msg on machine
gdate	gtime	gaction	goutcome

5. This operation plans to complete the following biologics testing:
 Pre- and post parasite testing.....gpara 1 Yes 2 No
 Scrapie genetic resistance testing/serum banking/nasal swabs/vaginal swabsgscrap 1 Yes 2 No
 Fecal pathogen testing gfecal 1 Yes 2 No
6. Which of the following best describes the respondent's position with this operation?.....gpos _____ code
 1 = Owner
 2 = Manager
 3 = Family member (other than owner or manager)
 4 = Other hired employee
 5 = Other (specify: _____)gposoth

7. Producer data quality..... gpdq 1 Good to excellent 2 OK 3 Poor
8. Did the respondent use written or computerized records to assist in answering this survey? grec 1 Yes 3 No

Comments regarding this questionnaire or operation:

VMO or AHT signature: _____

TO BE COMPLETED BY THE COORDINATOR:

- Field data quality gfdq 1 Good to excellent 2 OK 3 Poor



Animal and Plant Health Inspection Service

Veterinary Services

NAHMS Goat 2019 On-site Agritourism Questionnaire

National Animal Health Monitoring System

2150 Centre Ave, Bldg B
Fort Collins, CO 80526

Form Approved
OMB Number 0579-0354
Approval expires: **xxxx**

Farm ID:	Collector name and phone number:	Interview Date:	Start Time:
(6 digits)		(mm/dd/yy)	(hh:mm)

1. During the previous 12 months, were members of the general public invited onto the farm other than to the home? a101 ₁ Yes ₃ No

[If question 1 = No, do not administer the questionnaire. Go to the Office Use Section and select response code 6.]

2. Did the public have access to areas or facilities on the farm that house or contain animals, feed, manure, or farm equipment? a102 ₁ Yes ₃ No

[If question 2 = No, do not administer the rest of the questionnaire. Go to the Office Use Section and select response code 6.]

<p>According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0354. The time required to complete this information collection is estimated to average 45 minutes per response, including the time to review instructions, search existing data resources, gather the data needed, and complete and review the information collected.</p>	<p>NAHMS-455 Date</p>
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For the purposes of this questionnaire, members of the general public that are invited onto this farm are considered "visitors." This includes individual visitors as well as organized groups, whether or not the visitors are charged admission.

3. How many days of the month, for each month, did visitors have access to the facilities on the farm that housed or contained animals, feed, manure, or farm equipment? What was the average number of visitors for each month?

	Number of days	Average number of visitors per month
a. September 2018..... a103/a115	_____ d	_____ #
b. October 2018 a104/a116	_____ d	_____ #
c. November 2018..... a105/a117	_____ d	_____ #
d. December 2018..... a106/a118	_____ d	_____ #
e. January 2019 a107/a119	_____ d	_____ #
f. February 2019..... a108/a120	_____ d	_____ #
g. March 2019 a109/a121	_____ d	_____ #
h. April 2019 a110/a122	_____ d	_____ #
i. May 2019 a111/a123	_____ d	_____ #
j. June 2019 a112/a124	_____ d	_____ #
k. July 2019..... a113/a125	_____ d	_____ #
l. August 2019..... a114/a126	_____ d	_____ #

4. Was there designated parking for visitors away from the regular farm traffic? a127 1 Yes 3 No

[If question 4 = No, SKIP to question 7.]

5. Was the parking area downhill from any animal facilities, manure storage areas, or crop fields that were fertilized with animal manure? a128 1 Yes 3 No

6. Did the parking area share a fence line with an animal pen or pasture? a129 1 Yes 3 No

7. During the previous 12 months, did visitors have access to the following areas of the farm?

a. Milking areas..... a130	<input type="checkbox"/> 1 Yes	<input type="checkbox"/> 3 No	<input type="checkbox"/> 4 NA
b. General goat housing areas..... a131	<input type="checkbox"/> 1 Yes	<input type="checkbox"/> 3 No	
c. Kidding areas a132	<input type="checkbox"/> 1 Yes	<input type="checkbox"/> 3 No	<input type="checkbox"/> 4 NA
d. Feed or hay storage areas..... a133	<input type="checkbox"/> 1 Yes	<input type="checkbox"/> 3 No	
e. Manure piles/storage areas a134	<input type="checkbox"/> 1 Yes	<input type="checkbox"/> 3 No	

8. Could runoff from the manure pile or goat pens have entered areas where visitors had access? a135 1 Yes 3 No

9. During the previous 12 months, what goat types, and other animals, were available for public visitation? For available animals, were visitors allowed to touch the animals, and were visitors allowed in the animal pens?

	Available for public visitation?	Visitors allowed to touch?	Visitors allowed in pens?
a. Newborn kids (≤1 day of age) <small>a136/a142/a148</small>	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No
b. Preweaned kids..... <small>a137/a143/a149</small>	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No
c. Weaned kids <small>a138/a144/a150</small>	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No
d. Does that are kidding <small>a139/a145/a151</small>	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No
e. Other adult goats..... <small>a140/a146/a152</small>	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No
f. Other animal species (specify: _____) <small>a141oth ...a141/a147/a153</small>	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No

10. During the previous 12 months, did dogs or cats have access to visitor areas?
If Yes, were they vaccinated against rabies?

	Animal Present?	If Yes, Vaccinated against rabies?
a. Dogs..... <small>a154/a156</small>	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No <input type="checkbox"/> ₄ DK
b. Cats..... <small>a155/a157</small>	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No <input type="checkbox"/> ₄ DK

11. Is there a clearly defined transition area (physical or conceptual) between animal and non-animal areas, as pictured on **reference card 1**? a158 ₁ Yes ₃ No

[If question 11 = No, SKIP to question 13.]

12. Is this transition area marked by signage visible and easily understood by visitors, including what is expected of them in the animal area?..... a159 ₁ Yes ₃ No

13. Is each visitor group escorted through goat visitor areas by a guide? a160 ₁ Yes ₃ No

[If question 13 = Yes, SKIP to question 16.]

14. Are there employees available throughout the goat visitor areas to answer animal questions and direct visitors?..... a161 ₁ Yes ₃ No

15. How do visitors typically move through the goat visitor areas?
[Check one only.] a162

- ₁ One-direction flow of visitor traffic
- ₂ Controlled movement in more than one direction (e.g., directed two-way traffic)
- ₃ Visitors move freely through the areas with no restrictions
- ₄ Other (specify: _____) a162oth

16. Does this farm require any of the following policies?
 If policies are used, are there signs present?
 Are the policies verbally communicated?

Policy	Policy used?	If Yes,			
		Signage present?		Verbally Communicated?	
a. Prohibit any food, drinks, or water bottles in the animal areasa163/a169/a175	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No
b. Prohibit strollers in the animal areasa164/a170/a176	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No
c. Prohibit smoking in the barn ..a165/a171/a177	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No
d. Require supervision of children in animal areasa166/a172/a178	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No
e. Require that hands be washed after contact with animalsa167/a173/a179	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No
f. Require use of footbathsa168/a174/a180	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No

17. Does this farm warn visitors regarding the following risks?
 If warnings are given, are there signs present and/or are the warnings verbally communicated?

Risks	Warnings given?	If Yes,			
		Signage present?		Warning verbally communicated?	
a. Risk of placing anything in the visitor's mouth once entering the animal areas?a181/a185/a189	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No
b. Health risks related to touching animals?a182/a186/a190	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No
c. Physical safety risks related to touching animals?a183/a187/a191	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No
d. Higher health risks in certain populations (e.g., children under the age of 5, adults over the age of 65, those immunocompromised, and pregnant women)a184/a188/a192	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No	<input type="checkbox"/> ₁ Yes	<input type="checkbox"/> ₃ No

18. Are visitors allowed to feed goats? a194 ₁Yes ₃No

[If question 18 = No, SKIP to question 21.]

19. Which of the following methods do visitors use to feed the goats?
- a. Hand or bottle feed from outside the pen and through the fence a201 ₁ Yes ₃ No
 - b. Hand or bottle feed inside the pen a202 ₁ Yes ₃ No
 - c. Feed placed in a one-way feeding tube a203 ₁ Yes ₃ No
 - d. Other (specify: _____) a204oth a204 ₁ Yes ₃ No
20. Are high-risk populations, such as children under the age of 5, prevented from feeding goats? a205 ₁ Yes ₃ No
21. Are hand-washing stations with soap and water available to visitors when they exit the goat visitor areas? a206 ₁ Yes ₃ No

[If question 21 = No, SKIP to question 25.]

22. Do hand-washing stations have both hot and cold water? a207 ₁ Yes ₃ No
23. On average, how frequently (times per day/per week/per month) when visitors are present are the hand-washing stations checked for availability of items such as water, soap, and paper towels? a208/a209/a210
- _____ OR _____ OR _____ times
per day per week per month
24. Is a checklist used for employees to know the frequency of inspections for hand-washing areas? a211 ₁ Yes ₃ No
25. Is hand sanitizer available to farm visitors when they exit the goat visitor areas? a212 ₁ Yes ₃ No
26. How many times per week are goat visitor areas cleaned of manure and debris? a213 _____ times

27. How often are goat visitor areas routinely disinfected?
(Disinfectant could be 1:10 bleach dilution, phenolic product (1-Stroke Environ® or SynPhenol-3™), or an accelerated hydrogen peroxide product (Intervention™) or Lime).
[Check one only.] a214
- ₁ After every cleaning
 - ₂ Several times per year
 - ₃ Once per year
 - ₄ Only when sick animals have been removed
 - ₅ Other frequency (specify: _____) a214oth
 - ₆ Never disinfected

28. Are any employees or farm personnel trained or educated on the following topics?
- a. How to communicate agricultural practices to visitors a215 ₁ Yes ₃ No
 - b. How to keep visitors safe in goat visiting areas a216 ₁ Yes ₃ No
 - c. Disease transmission risks to visitors a217 ₁ Yes ₃ No
 - d. Cleaning and disinfecting protocols a218 ₁ Yes ₃ No

29. Is there a protocol in place to make sure employees remove animals showing signs of illness (e.g., diarrhea, fever, coughing) from public visitation areas?a220 ₁ Yes ₃ No

[If question 29 = No, SKIP to question 33.]

30. Was a veterinarian involved in developing this protocol? a221 ₁ Yes ₃ No

31. Is the protocol:
- a. Written? a222 ₁ Yes ₃ No
 - b. Verbal? a223 ₁ Yes ₃ No

32. How often does the protocol require that these checks for sick animals occur?
[Check one only.] a224
- ₁ Daily
 - ₂ Weekly
 - ₃ Only on exhibit days
 - ₄ Other (specify: _____) a224oth

33. In the last 12 months, have pregnant does been included in the goat visitor area? a225 ₁ Yes ₃ No

[If question 33 = No, SKIP to question 35.]

34. In the event of an abortion in the goat visitor area, would you:
[Check one only.] a226

- ₁ Leave goats in the goat visitor area?
If Yes,
 - a. Are visitors prevented from contact with aborting does? a227 ₁ Yes ₃ No
 - b. Is there a barrier, such as glass, to prevent shared air space with aborting does ? a228 ₁ Yes ₃ No
- ₂ Remove aborting doe from the goat visitor area?
If Yes, is contaminated bedding also removed? a229 ₁ Yes ₃ No
- ₃ Close the goat visitor area
- ₄ Other (specify: _____) a226oth

35. In the event of at least one goat becoming ill in the goat visitor area with something other than abortion (for example, diarrhea), which action would be taken? Would you: [Check one only.] a230

- ₁ Leave kids or goats in the area(s) open to visitors?
 If Yes, are visitors prevented from contact with sick goats?..... a231 ₁ Yes ₃ No
- ₂ Remove sick animal(s) from the area(s) open to visitors?
- ₃ Close the goat visitor area?
- ₄ Other (specify: _____) a231oth

36. Is any food or drink available for visitors as samples or to purchase?..... a232 ₁ Yes ₃ No

[If question 36 = No, SKIP to question 44.]

37. Is food and drink served in an area where animals have ever been kept or where there is possible contact with animals? a232 ₁ Yes ₃ No

38. Are any unpasteurized products served, such as milk, cheese, yogurt, or fruit juice? a233 ₁ Yes ₃ No

39. Are hand-washing stations with soap and water available to farm visitors at the entry to the food service area?..... a234 ₁ Yes ₃ No

[If question 39 = No, SKIP to question 41.]

40. For these hand-washing stations:
- a. Are visitors **required** to wash their hands prior to eating? a236 ₁ Yes ₃ No
 - b. Are there signs reminding visitors to wash their hands prior to eating? a237 ₁ Yes ₃ No
 - c. Are there signs indicating where visitors can wash their hands? a238 ₁ Yes ₃ No

41. Is hand sanitizer available to visitors in the food service area? a239 ₁ Yes ₃ No

42. Do employees who handle the animals also serve food or drink to visitors? a240 ₁ Yes ₃ No

[If question 42 = No, SKIP to question 44.]

43. Between handling animals and serving food or drink to visitors, are employees required to:
- a. Change clothing? a241 ₁ Yes ₃ No
 - b. Change footwear? a242 ₁ Yes ₃ No
 - c. Wash hands? a243 ₁ Yes ₃ No
 - d. Wear disposable gloves? a244 ₁ Yes ₃ No

44. a. Have you met with an insurance agent about protecting your farm through policies for an agritourism operation? a245 ₁ Yes ₃ No
- b. If Yes, have you added policies specific to public visitation on your farm? a246 ₁ Yes ₃ No

Office Use Only

Farm ID:	Collector name and phone number:	Interview date:	Ending time:
(6 digits)		(mm/dd/yy)	(hh:mm)

1. Total time for interview (include time to discuss the program and complete the questionnaire). If more than one data collector present, enter the combined time tmin _____ min

2. Enter response code 99 if questionnaire is completed or enter 04 or 07 to best describe the reason why the owner is not participating..... notpart _____ code

- 99 = Survey completed
- 04 = Does not want to do another survey or divulge information
- 06 = Not eligible
- 07 = Other reason (explain below)

3. Which of the following best describes the respondent's position with this operation?.....pos _____ code

- 1 = Owner
- 2 = Manager
- 3 = Family member (other than owner or manager)
- 4 = Other hired employee
- 5 = Other (specify: _____) posoth

4. Producer data quality.....dqual 1 Good to excellent 2 OK 3 Poor

5. Did the respondent use written or computerized records to assist in answering this survey? rec 1 Yes 3 No

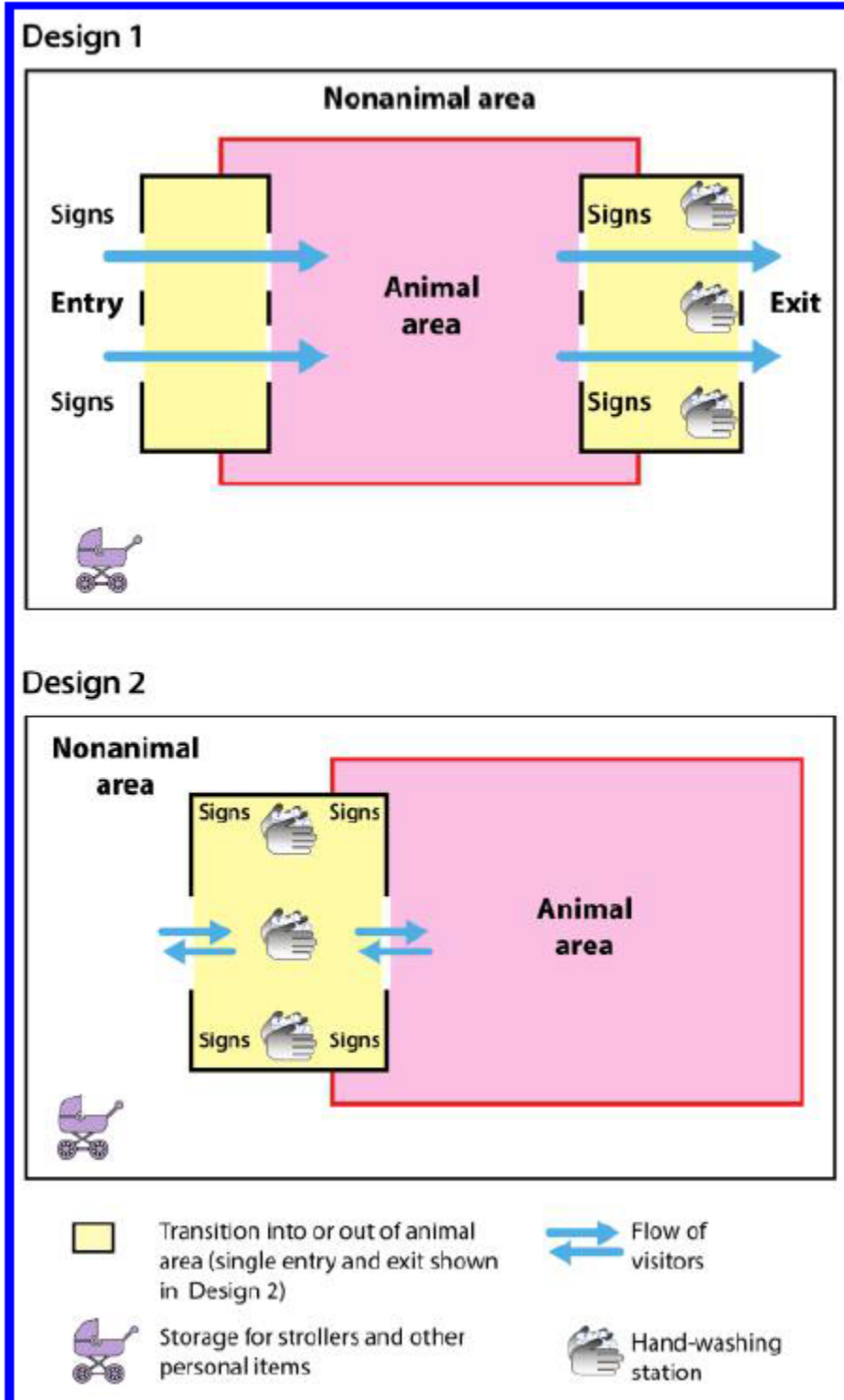
Comments regarding this questionnaire or operation:

VMO or AHT signature: _____

TO BE COMPLETED BY THE COORDINATOR:

Field data quality fqual 1 Good to excellent 2 OK 3 Poor

Agritourism Reference Card 1- Transition Area



(Adapted from NASPHV Animal Contact Compendium Committee 2013. Compendium of measures to prevent disease associated with animals in public settings, 2013. *J Am Vet Med Assoc* 2013;243:1270–1288.)

GOAT 2019 VS VISIT QUESTIONNAIRE GUIDE

Read all questions to the Producer and follow instructions carefully. **Do not leave any questions blank** unless instructed to skip. Questions left blank hinder data validation and analysis because it is not known if the question was missed accidentally or if the Producer did not have an answer. We may request you re-contact the Producer for missing data or clarification.

Do not hesitate to write comments directly on the questionnaire. We would rather have a lengthy explanation for a strange answer than no explanation at all. If an answer does not make sense and has no explanation, we might have to ask your Coordinator to ask you to explain the answer, delaying data entry.

Note: If the response is zero (0), enter the number 0; do not leave the response blank. If the Producer does not know, work with him or her to try to estimate the answer. If the Producer does not have an answer, **use DK for Don't Know or NA for Not Applicable** to indicate why the question was not answered. **Please write in the margins to explain unusual circumstances or answers.**

At times during the interview, a Producer may feel uncomfortable providing the requested data without consulting records. Producers should be given additional time to look up the information or report it by telephone to you later as long as the timeliness of data submission is not adversely affected. Also, some Producers may be reluctant to provide estimates where records are not available. In this case, the Producer should be encouraged to respond, and the circumstances for the response should be noted in the margin next to the pertinent question. We will take these notes into account when assessing overall data quality for the site.

Note: If a question is about inventory, ask the Producer to share numbers from the period between September 1, 2019 and August 31, 2019. If a question is about a practice or procedure, then refer to the previous 12 months from the date of the interview.

INITIAL INFORMATION

State FIPS

Enter the 2-digit FIPS code for the state: AL-01, AK-02, CA-06, CO-08, CT-09, FL-12, GA-13, IN-18, IA-19, KY-21, MI-26, MN-27, MO-29, NY-36, NC-37, OH-39, OK-40, OR-41, PA-42, TN-47, TX-48, VT-50, VA-51, WA-53, WI-55.

Operation Number

Enter the 4-digit ID number assigned by NASS.


Note: The 6-digit combination of the State FIPS Code and Operation numbers is referred to as the Farm ID or NAHMS ID. For example, 21 1167 would be a Farm (NAHMS) ID for the State of KY.

NASS will provide an EPAID ID (see example below) on the consent form. The EPAID ID will contain 3 extra zeroes between the State FIPS and the operation number. For example, 21 000 1167 is an EPAID ID. Please ignore the 3 middle zeroes when you record the Farm (NAHMS) ID.

EPAID Example:

NATIONAL AGRICULTURAL STATISTICS SERVICE
2017 NAHMS BEEF COW-CALF STUDY CONSENT FORM

For release of information for:



21 300045140 1 1 2643 280325 0
SURVEY CODE=21-300042201-JXWVVV

STR 2 260
20 177
0 21798 21798

(Consenting Operator: Hereafter referred to as YOU)

The USDA's Animal and Plant Health Inspection Service's (APHIS) National Animal Health Monitoring System (NAHMS) is implementing a study of U.S. beef cow-calf operations with at least 4 beef cow-calf operations.

NOTES:

The first two digits are the state FIPS code

The last four digits are the operation ID

EPAID:
210001167

This means the NAHMS ID for this operation will be the FIPS code and the operation ID, or 211167

Interviewer's Initials

Enter up to three initials.

Date

Enter the interview date in MM/DD/YY format.

Time

Enter the time you arrived at the operation in HH:MM format using military time.

SECTION A: INVENTORY

The following definitions may be useful when completing this section of the questionnaire:

Kid: A goat less than 1 year old.

Preweaned: A kid that is still nursing or being fed milk replacer.

Adult goat: A goat greater than 1 year old.

Resident goat: A goat that spends the majority of time on the operation or managed by the operation (regardless of ownership).

Item A1(a-e): Number of kids and goats on hand

Record the number of goats or kids in each age class listed that were part of this operation as of **the date of the interview**. Today's inventory of each goat class will be used as a denominator for many of the questions in this survey.

Sum the totals from each age class and report in Item A1e.

[If no kid or adult goats, Skip to Section O]

What if...

The Producer has 15 extra goats on the operation that belong to a neighbor whose barn burned down. Would these 15 goats be included in today's inventory?

Answer: Do not include these goats.

What if...

Goat are leased to graze on a separate property?

Answer: Count all those goats even though they may be off the operation for several months at a time.

What if...

Some goats were off site today? Should they be included?

Answer: Yes. We want to know the number of goats that are resident to the operation whether or not they are present on the date of the interview. So if they're part of the flock and normally housed on the operation, include them even if they were off the operation for a short time such as for shows, breeding, etc.

SECTION B: PREVENTIVE PRACTICES

The following definitions may be useful when completing this section of the questionnaire:

Caprine Arthritis Encephalitis (CAE): The CAE virus causes arthritis in adult goats and encephalitis in kids between 2 and 6 months old. Infection can also lead to hard udder or mastitis, reduced milk production, chronic pneumonia, and progressive weight loss. Some goats can be infected without showing any clinical signs, thus serving as a hidden source of infection for other goats in the herd. The virus can be transmitted through ingestion of infected goat milk or colostrum; contact with contaminated blood, saliva, respiratory secretions, or vaginal secretions; contact with contaminated equipment, such as milking equipment, needles, or tattooing equipment; and breeding of noninfected animals with infected animals. Economic losses associated with CAE include loss of milk production (may be up to 30%), early culling, and shorter lifespan and reduced growth of offspring.

Caseous Lymphadenitis (CL): CL is characterized by abscesses in the skin, lymph nodes, and internal organs, CL is caused by a bacterium, *Corynebacterium pseudotuberculosis*. Abscesses can break open to the skin surface, leading to spread of the bacteria through wounds or abraded skin and via ingestion of contaminated feed or grass. In many animals, the organism disseminates to the lungs and nearby lymph nodes, causing respiratory problems, and the bacteria also can be spread by the respiratory route. Economic losses related to CL include condemnation and trim of infected carcasses, devaluation of hides, and decreased meat yield and reproductive efficiency.

Herd Health Management Plan: A set of written protocols that directly relate to the management of animal health on the operation, including key factors such as disease control measures (e.g. vaccination and quarantine protocols), disease testing and/or necropsy protocols, feed and water resource management, or structural/enclosure management.

Isolation or Quarantine: Physical separation of an animal or group of animals from other goats on the operation, with no physical contact allowed.

Johne's Disease: A contagious disease of cattle and other ruminants, including goats, that results in weight loss despite a normal appetite and proper nutrition. Diarrhea can also occur, but is less common in goats than in cattle. The disease is caused by the bacterium *Mycobacterium avium* subspecies *paratuberculosis*, which can survive in the environment for up to a year and remain infectious to ruminants. The primary mode of transmission is fecal-oral, including ingestion of contaminated feed, water, or bedding. Kids can be infected by nursing an udder soiled with contaminated fecal material. The bacterium also can be transmitted through milk and colostrum, as well as in utero. Infected animals shed the bacteria for months or years before they develop clinical signs, resulting in heavy contamination of pastures before it is known the disease is present. Goats sharing pasture with infected cattle are susceptible to infection.

(Definitions continued)

Sore mouth (orf, contagious ecthyma): Sore mouth is caused by a pox virus and is highly contagious in goats, especially young kids. Sores caused by the virus usually occur around the mouth and teats but can also occur on the legs, vulva, and face. Scabs, which contain viable virus, can fall off the animal and remain in the environment, providing a source of infection for other animals. Although the virus is zoonotic, the sores that infected people can contract are not infective for other people. However, they may be painful and last for 2 months, but they usually heal without scarring.

Item B1: Herd health management plan

Mark “Yes” or “No” to indicate whether the Producer has an established written health management plan which was in use within in the past 12 months. If “Yes” is selected, complete Items 1a-e.

Item B1(a-e): Resources used in development of health plan

Select the corresponding “Yes” for all resources used in the development of the herd health plan, include all resources if multiple were used. Select the corresponding “No” for all resources which were not used in the development of the herd health plan. If 1b “Other” is selected, be specific and concise in describing the resource used.

Item B2(a-h): Individual animal disease testing

Select the correct box to indicate if the operation tested **resident goats (in column 1)** or **new additions (in column 2)** for each of the listed diseases. If there were no new additions to the herd in 2019, skip column 2. If Item B2h “Other” is selected, specify the disease being tested in individual animals.

A new addition is any goat that has been added to the herd in the last 12 months.

Item B3: Number of goats with abscesses, boils, or lumps

Record the number of goats and kids with any lesion consistent with caseous lymphadenitis associated abscesses, boils, or lumps within the skin or subcutaneous space and located anywhere on the body. The lesion does not need to have an official diagnosis and can simply be an observation by the Producer. Enter 0 if no goats had any abscesses, boils, or lumps.

[If Item B3 = 0, Skip to Item B5]

Item B4(a-h): Actions taken for animals with abscesses, boils, or lumps

For Items B4a – B4h, check “Yes” or “No” to indicate whether the Producer took the specified action for goats or kids that had abscesses, boils, or lumps on the head, shoulder, or upper rear legs in 2019. If the Producer usually took no action, check “No” for Items B4a – B4h. If “Yes” is selected for Item B4c, indicate in days how long the goat was isolated from the herd. For Item B4di, indicate whether the drainage was disposed of away from the goat raising areas (any place where no goats will be exposed to the drainage). If “Yes” is selected for B4h, specify the action that was taken.

Item B5: Vaccination of any goats or kids in 2019

This is a lead-in question for the next series of questions. Answer “Yes” if the Producer vaccinated **any** kid or adult for **any** diseases in the last 12 months. We want to capture the vaccination practices for this herd.

What if...

The Producer doesn’t vaccinate his goats, but brought some new additions onto the operation and they were vaccinated for Clostridium type C and D?

Answer: “No” and move on to Respiratory vaccines.

What if...

The Producer doesn’t know the vaccination status of the herd?

Answer: Ask the Producer if they have their veterinary records as those might help. If the Producer doesn’t have any veterinary records, and they have no idea, write in “DK” and Skip to Item B9.

[If Item B5 = No, Skip to Item B9]

Item B6: Vaccine products used in 2019

Notice there are 4 columns—nursing kids, weaned kids, adult does, and adult bucks/wethers. First identify if any of the goat classes were not present on the operation. Check the first cell in the column if that class of goat was **not** present on the operation in the past 12 months and move on to the next column. For example, a Producer who had dairy goats but no bucks or wethers would check the box for adult bucks/wethers. Only mark the categories in Row One which the Producer **does not have**.

If a goat class is present, then look at the shaded rows. Each of the shaded rows represents a different general group of vaccines: Clostridial, Respiratory, Mastitis, Anti-Abortion, and Other. If the goat class was present on the farm, indicate “Yes” or “No” for each goat class (columns) whether the vaccine type (rows) was used.

Enter the product code from the Vaccine Reference Card (which can be found stapled to the back of the questionnaire and in the Reference Card section of this training manual) in the non-shaded cells for the goat classes that received the vaccine type listed in the left column. If a goat class did not receive the listed vaccine, leave the cell blank. If the product is unknown, but was used for a goat class, enter “99” in the cell. Do not enter codes in the blank shaded boxes, as these are inappropriate

vaccines for the age or sex of goats. For “Other” categories, include the full name of the vaccine given by the Producer or on the label if it does not match any of those on the reference card.

What if...

The nursing kids were vaccinated for tetanus and were later weaned and revaccinated for tetanus as replacement does in 2019.

Answer: Vaccination of animals would be indicated in both ‘Nursing kids’ and ‘Adult does’.

What if...

The Producer only knows the trade name of the vaccine he/she administered?

Answer: If you have the complete trade name, then the diseases covered by the vaccine can be determined from that. However, for the trade name to be useful, you need the complete name. If all you know is the vaccine family name, like Spirovac, we cannot determine what diseases are covered because there are 3 different varieties of Spirovac. For example, “Spirovac” only covers Leptospira hardjo while “Spirovac VL5” covers Vibrio (Campylobacter fetus) and the 5 common Leptospira species (canicola, grippotyphosa, hardjo, icterohaemorrhagiae, pomona). There are also many different varieties for all of the other common goat vaccines like ScourGuard, Super Poly, Presponse, Vision, Ultrabac, and Essential. These names alone are not useful. We need the complete vaccine name, including the numbers and letters that appear after the vaccine family name. If the Producer has the label on hand, you can tell what diseases the vaccine covers by looking at the label. Looking at the label is the most reliable method of determining what diseases are covered by the vaccine. If the vaccine doesn’t match one of the listed codes, write the COMPLETE trade name of the vaccine in the margins.

What if...

The veterinarian administers the vaccinations and the Producer doesn’t know what is given?

Answer: Prompt the Producer to show you the veterinary invoice or receipt for purchased vaccine. If that is not helpful, ask the Producer to contact their veterinarian within the next day or so and ask what vaccines are typically given, and then call you back with the vaccine information.

[If Item B6a (Clostridium type C and D) and Item B6c (7- or 8-way vaccine) = Missing for adult does, Skip to Item B8]

Item B7: Frequency of Clostridium C & D vaccination in adult does

To answer this question, refer to Item 6a and 6c. Confirm that at least one vaccine was given for Clostridium C & D. Select which dosing frequency best matches the Producer’s record or recollection of vaccination for **adult does only**. Only select one answer.

Item B8(a-d): Person administering sore mouth vaccine

Sore mouth can be highly contagious to humans. This question is two-fold, who administered the sore mouth vaccine in 2019, and did that individual wear gloves during administration. More than one individual may have administered the sore mouth vaccine, ensure the responses correspond to the previous 12 months. If “Other” is selected, be specific and concise to describe the individual that administered the vaccine.

[If the soremouth vaccine is not given, check “NA” and skip to Item B9 (don’t answer 8a-d).]

Note: Compare Items B6n and B8 to be sure the use of sore mouth vaccine was answered consistently.

[If Item B8(a-d) is answered, Skip to Item B10]

Item B9(a-h): Importance of reasons to not use sore mouth vaccine

For each potential reason listed in Items B9a-9h, check the box that corresponds to the level of Importance (very, somewhat, or not important) the respondent places on that reason for not using a sore mouth (orf) vaccine. **Leave this question blank if the Producer vaccinated for Sore Mouth.**

Item B10(a-c): Johne’s disease herd health management plan

This question is asking for the operations intent to specifically control and/or prevent Johne’s disease. The management program to control or prevent Johne’s can be formal, written guidelines or a simple management practice devised by the Producer and the veterinarian. But **it must include** things such as periodic testing of the resident herd, and not sharing equipment that could possibly be contaminated. Additionally, if an operation uses milk or colostrum from other operations, it should only use products from test negative herds. A unique program for the operation and the state-sponsored certification programs are straightforward. If neither of these apply, and the Producer claims to have a Johne’s program in use, please specify in the “Other” field which certification program is used including the name and operating agency, if not state-sponsored, or what other program is used for disease control. Most operations with a Johne’s Disease control program should fall into one of the two specified categories.

What if...

The herd is closed and tested negative years ago and they do not receive milk or colostrum from other herds? Is this considered a management program?

Answer: Yes, this is considered a management program.

Item B11(a-g): Preventive practices for Johne’s disease

To answer question 11, one answer should be selected for Items B11a-11g. **If Item B11g is “Yes” then proceed** to answer the following questions for testing practices. The table works as a flow chart from left to right, then work down to answer all items (a-e). If “Other” test is selected, be specific on the type of test used which is not classified as a blood or fecal test.

What if...

All milk and colostrum provided to kids comes from test negative does and/or cows on the same operation?

Answer: Select "Yes" for Item B11f "Other," and specify milk and colostrum provided from test negative does and cows.

What if...

There are llamas, alpacas on the operation and they are tested for Johne's?

Answer: Check 'Yes' in Item B11f "Other," and explain they are testing camelids.

Item B12(a-j): Training for any personnel on goat raising activities

This question is two-fold. It first asks if a training was provided directly relating to the item in the left column of the procedure table. If "Yes" then provide the code (1-6) to specify the individual that was **primarily** responsible for providing the training to personnel. Family members should be considered owners if they are involved in trainings. "Other" may include another specialist not listed, a government official if not a veterinarian, or an online training or official certifiable training course where there may be multiple contributors providing training.

What if...

The Producer provides a meeting on pasture management once per year for the workers that rotate stock?

Answer: This would qualify for a training, and the owner would be the person providing the training. Pasture management would fall under the heading of 'Feeding and nutrition' in the procedure table.

SECTION C: KIDDING MANAGEMENT

This section includes questions about kid care and management. Please remind the Producer to answer based on what the operation usually did during the previous 12 months (September 1, 2018 – August 31, 2019). The Producer might tend to recall more of the exceptional situations, but we need to know what the usual practices were. All questions refer to the most recently completed kidding period – that is, all pregnant does have kidded.

What if...

There is no defined kidding period and does kid year round?

Answer: Provide information for all does that kidded in the last 12 month period.

The following definitions may be useful when completing this section of the questionnaire:

Colostrum: The first milk a goat produces after kidding. It contains immunoglobulins that provide some immunity to the kid(s).

Disinfectant: A chemical product used on surfaces after removal of all organic materials. Disinfectants include 1:10 bleach dilution, phenolic products, or an accelerated hydrogen peroxide product or lime.

Kidding Area: Specific areas to which does are moved to kid

Weaned Replacement: Goat kids that are retained to be used for breeding in the herd. If replacement goats are being raised with the intent of becoming dairy goats, they are called Dairy Replacement Goats.

Weaned Market: Goat kids that have been sufficiently finished to go direct to consumers rather than needing to be fed prior to marketing.

Completed Kidding Period: The period when all pregnant does have kidded or if kidding occurs year round, then refer to the last 12 months.

Item C1: Any kids born on operation

Check “Yes” or “No” to indicate whether any kids were born on the operation during the previous 12 months.

Note: this question asks about a 12 month period. All remaining questions in this section refer to the last completed kidding period.

[If Item C1 = No, Skip to Section D]

Item C2(a-c): Kids born alive or dead in recently completed kidding season

Of kids born on the operation during the most recently completed kidding season, record the total number of kids born in each category (alive or dead). Ensure the total in Item 2c is equal to the sum of 2a and 2b.

What if...

The Producer found a dead kid in the pasture but doesn't know if it was born alive?

Answer: Ask the Producer to use his or her best judgment. If the Producer is certain the kid was born alive and healthy, but died because of some cause such as suffocation in the amniotic sac or exposure to the elements, the kid should be counted as "born alive." If the Producer believes the kid was dead or if the kid was found dead and thought to have been dead at birth, the kid should be counted as "born dead." If the producer can't decide, then the kid should be counted as "born dead."

Item C3(a-c): Kidding management practices

For Item C3a, specify in hours the frequency that someone did a walk-by, monitored cameras, or used some other monitoring system for newborns. For Item C3b, select the response that most closely matches the Producer's behavior for dipping umbilicus in a chlorhexidine or iodine solution. This practice must be done immediately after birth to be considered effective, so if the Producer dips the day after kidding, indicate "Never." For Item C3c, indicate "Yes" or "No" whether the kids were separated from dams prior to weaning.

What if...

The Producer uses video cameras and the kidding area is continuously monitored?

Answer: Write in 0.1 to designate that the kidding area is continuously monitored. Also, include a note to describe the monitoring.

What if...

The producer uses a homeopathic product to dip for dipping the umbilicus?

Answer: Select "Never." This question is only asking for the use of chlorhexidine or iodine disinfecting solutions to dip the umbilicus.

[If Item C3c = No, Skip to Item C5]

Item C4(a-b): Duration of separation of kids from dams

Enter the average time, in either hours or days, for all kids in the most recently completed kidding period from birth until separation from dams. **This question may also be read as "how long were kids left with dams until they were separated."** Report doe and buck kids separately, even if the average duration was the same for both groups. If time before separation was less than one hour, report the nearest quarter hour. If kids were not allowed to nurse, select removed immediately.

Item C5: Use of a specific kidding area

For the most recent **completed kidding season**, was there a specific area designated as a kidding area? This means that does were moved to the specified area from late gestation to kidding.

[If Item C5 = No, Skip to Item C8]

Item C6(a-b): Duration of does in kidding area

Indicate the average time, in either hours or days, that does were placed in kidding areas for the last complete kidding season. Separate the total duration into a value for Item C6a, prior to kidding, and for Item C6b, after kidding. Enter “0” for C6a if the doe was moved during kidding. Enter “0” for C6b if the doe was removed from the area immediately after kidding.

Item C7: Cleaning and disinfecting of kidding area

Newborns are more vulnerable to disease (such as Johne’s and Scrapie) and keeping the kidding area clean cuts down on the risk of transmitting most infectious diseases. Check one answer for each column, and the frequency of the actions. Discuss the definitions of cleaning vs disinfecting with the Producer to best determine if the action(s) was/were used.

What if...

They remove manure only? Or just the waste bedding?

Answer: If they don’t do both, select ‘Not Cleaned’.

Item C8(a-c): Delivery of colostrum to newborn kids

To answer this question, determine with the Producer which methods were used for feeding colostrum to both doe and buck kids. Separate out the number of kids for each sex by method of colostrum delivery. Enter the percentage of the total for each sex on the corresponding line (total kids are reported in Item C2a). The total should add up to 100% between the three feeding categories among doe kids, and add up to 100% between the three feeding categories among buck kids. The percentages reported are best derived from the Producer’s records, but estimates are acceptable.

Item C8a: “Hand/bottle-fed, no nursing”: Kids were separated from their mother immediately after birth and never nursed; they were fed exclusively by hand or bottle.

Item C8b: “Nursing and hand-feeding”: Kids nursed their mother but also were hand-fed.

Item C8c: “Nursing only”: Kids nursed their mother. Kids that were hand-fed only if orphaned should go into c8a or c8b, depending on when they were orphaned.

[If Item C8c for both bucks and does = 100% (nursing only), skip to Item C14]

Item C9(a-b): Hours following birth receiving first hand-feeding of colostrum

Indicate how many hours after kidding each kid class received colostrum, on average. If hand-fed immediately following kidding, select “Fed immediately.”

Item C10(a-c): Method of hand-feeding colostrum

Check the box for the option that best describes the method which is typically used to deliver colostrum to kids on the operation. Check only one box for doe kids and one box for buck kids; if the Producer occasionally uses different practices, we want to know the one that was used for the greatest number of kids in each class.

Item C11(a-c): Ounces of colostrum fed by hand to kids

Enter the average volume of colostrum given to doe and buck kids at the two time periods listed (first feeding, all subsequent feedings within 24 hours) and sum the total volume in Item C11c. If the average volume was the same for both doe and buck kids, write the same numbers in the two columns. If kids were allowed to nurse enter 0 for the first feeding.

Item C12(a-g): Sources of first colostrum feeding

To answer this question, use numbers from the most recent completed kidding period. Indicate the percentage of the total for each group of kids that received colostrum from each of the listed sources. For kids that were allowed to nurse prior to hand-feeding then indicate the percentage of kids for which this applies in Item C12a (Unpasteurized colostrum). Each kid should only be counted once. If Item C12g "Other" is selected, specify the colostrum source. Ensure that the column totals for Items C12a-g add up to 100%.

What if...

All kids were allowed to nurse prior to being hand fed colostrum?

Answer: 12a 'Doe kids' = 100, and 'Buck kids' = 100

Item C13: Primary method used to store colostrum

Select the single answer that most closely aligns with the method the Producer uses to store colostrum. If "Other" is selected, specify the colostrum storage method.

Item C14(a-d): Liquid diet types

Report the percentage of each kid group that received the listed liquid diet type (nursing only, nursing plus other liquid diet, other liquid diet only). Ensure that the sum of Items C14a-C14c total to 100%.

What if...

Most kids were allowed to nurse colostrum but then removed from dams after their first nursing and started on milk replacer?

Answer: Item C14 is referring to the liquid diet after colostrum administration. Select "Other liquid diet only" in this scenario.

[If Item C14a (nursing only) for doe kids and buck kids= 100%, Skip to Section D]

Item C15(a-j): Liquid diet types not from nursing

Determine the percentage of doe and buck kids receiving the listed liquid diet type and report percentage in the corresponding column. Kids may be counted more than once if they received more than one type of liquid diet other than nursing. If Item C15j is greater than 0, specify the liquid diet type. The column totals may be over 100% for this question.

[If Item C15i for both buck and doe kids = 0 (no medicated cow milk replacer fed), Skip to Item C17]

Item C16(a-f): Medications in cow milk replacer

Indicate whether each of the listed medications were included in the cow milk replacer product used as a liquid diet for kids. If the Producer is unsure either way if there was a specific medication in the milk replacer, select "DK" for Don't Know. If Item C16f is selected, specify the medication that was included in the cow milk replacer. Use Producer's records or feed labels to confirm which medications were in the products used.

Item C17(a-e): Equipment used to deliver milk or milk replacer

Determine the percentage of doe and buck kids that were delivered milk or milk replacer from each of the delivery methods listed. If "Other" is selected, specify the equipment used to feed the kids. The column totals may be greater than 100% if kids are fed with multiple methods.

Item C18: Frequency of cleaning or disinfecting of milk feeding equipment

Check one answer for each column, indicating whether the equipment was either cleaned or disinfected and the frequency of the actions. Cleaning includes the removal of organic material using soap and water. Disinfectant could be 1:10 bleach dilution, phenolic product (1-Stroke Environ® or SynPhenol-3™), or an accelerated hydrogen peroxide product (intervention™). Disinfecting without cleaning is not likely to be effective. Discuss the definitions of cleaning vs disinfecting with the Producer to best determine which method was used.

SECTION D: PARASITE CONTROL

The following definition may be useful when completing this section of the questionnaire:

FAMACHA© Card: The FAMACHA© card/eye color score is a method for classifying the level of anemia in animals, which is a good indicator of the animals' internal parasite load for one particular worm (*Haemonchus*). By examining the color on the inside of the lower eyelid of a sheep or goat, it is possible to determine if it has become anemic. This is often caused by the blood sucking intestinal parasites, particularly *Haemonchus contortus*. A relatively simple test known as the FAMACHA anemia guide, has been developed by scientists in South Africa and is being increasingly used as part of integrated parasite control programs.

Item D1: Producer's use of the FAMACHA© score

Check the box that best corresponds with the Producer's use of the FAMACHA© score system.

[If Item D1 = 1 or 2, Skip to Item D3]

Item D2(a-c): Use of FAMACHA© score

Check the box for all categories that describe the Producer's current use of the FAMACHA© card/eye color score. More than one "Yes" selection may be made. If "Other" is selected, please specify the alternative use of FAMACHA© score card.

2a refers to whether a Producer is tracking individual goats for susceptibility to *Haemonchus* (barber pole worm) with the plan to selectively breed only resistant goats, or cull the ones that are always needing to be dewormed. Some goats are more susceptible to *Haemonchus* than others and this management practice can lead to a more robust herd resistant to parasitism

Item D3: Goats tested for internal parasites

Provide a sum of all goats tested for internal parasites by any fecal test method. These include fecal flotation, fecal egg count reduction test, or DrenchRite test. **Count each goat tested just once, even if they were tested several times.**

What if...

The Producer has 20 goats and each one was tested twice by fecal flotation?

Answer: Record "20" in Item D3.

[If Item D3 = 0, Skip to Item D6]

Item D4(a-d): Internal parasite testing performed

Record the number of tests performed by the methods listed. If Item D4d “Other” is selected, specify the test that was used. **Count each test separately.**

What if...

The Producer has 20 goats and each one was tested twice by fecal flotation?

Answer: Record “40” in Item D4a.

What if...

The Producer has 20 goats and each one was tested by fecal egg counts before and after deworming?

Answer: This is a fecal egg count reduction test, so record “20” in item D4b and record “0” in item D4a.

[If Items D4a and D4b = 0, Skip to Item D6]

Item D5: Person completing fecal flotation or fecal egg count

Select a single response to indicate the individual that performed the majority, if not all, fecal flotation or fecal egg count tests for internal parasites in the last 12 months. If “Other” is selected, be specific in recording the individual that performed these tests.

Item D6: Deworming history with medication or alternative products

Select “Yes” if any deworming product was used for goats in the **past 3 years** (September 1, 2016-August 31, 2019). Not all Producers deworm every year and we want to capture the % of operations that have used anthelmintics in recent years.

Note: Item D6 refers to the past 3 years. Whereas the next group of questions (D7-D10) refer to the previous 12 months.

[If Item D6 = No, Skip to Item D11]

Item D7(a-d): Frequency of deworming goats in last 12 months

Of the goat classes listed, record the number of animals that were or were not dewormed in in the last 12 months next to the appropriate response regarding how often the operation usually dewormed.

What if...

A goat was dewormed as a kid but during those 12 months it became an adult and was not dewormed again?

Answer: This kid would be counted in the Item D7b (dewormed once) kid column and would be counted in the item D7a (never dewormed) adult column.

Note: Deworming for this question can include herbal, natural, or alternative dewormers. The **Anthelmintic Reference Card**, which lists common dewormers, will be stapled to the back of the questionnaire and can be found in the reference card section of this training manual. The names may be helpful for the Producer to recognize the product.

[If Item 7b-d (for kids and goats)= 0 then, Skip to Item 11]

Item D8(a-i): Products used to treat worms in the last 12 months

For the animals that were dewormed in the last 12 months, check the appropriate response for each of the listed dewormers. If a product not listed was used, be sure to write in the specific product in the “Other” category. Use the **Anthelmintic Reference Card**, that is stapled to the back of this questionnaire and can be found in the Reference Card section of this training manual, to categorize specific products into anthelmintic classes. Do not include dewormers used to treat *Coccidia*, coccidiostats will be discussed in the following sections. If “Yes” is selected for Item D8i, specify the dewormer product used.

Item D9: Total dollar amount spent on deworming products

Write in the total amount, in US Dollars, that was spent on deworming products that were administered to goats only on the operation in the last 12 months.

Item D10(a-c): Top three reasons used to determine goats to deworm

For operations that used a dewormer in the last 12 months, write in three reason codes (1-8), in the order of importance, that were used to decide which goats to deworm. If code 8 is used, specify the deworming reason.

What if...

The Producer only has one reason for deworming?

Answer: Write “NA” for D10b and D10c. Also, please make a note in the margin that the producer only has one reason for deworming.

Item D11(a-k): Management activities for parasite control

Indicate for each activity listed, whether it was used as part of an internal parasite control plan in 2019. Select “NA” for Items D11a and D11f if the operation did not have goats on pasture during 2019. If Item D11k is selected, specify the additional component(s) of your internal parasite control program.

Item D12(a-c): Observation of external parasites

Indicate “Yes” or “No” whether the Producer observed lice, mites, or ticks on goats in the previous 12 months. Answer “Yes” even if the Producer only observed one louse, mite, or tick, on one goat in the previous 12 months.

SECTION E: GOAT AND HERD HEALTH

The following definitions may be useful when completing this section of the questionnaire:

Mastitis: Inflammation of the udder, usually caused by bacteria, that reduces milk production and reduces milk quality. Depending on the infectious agent, severe cases can lead to systemic disease and death. **Clinical mastitis** is detected by visible abnormalities in the milk or udder, such as clots in milk or udder swelling. **Subclinical mastitis**, which is much more common, is usually detected by increased numbers of somatic cells in milk (a high SCC, or high somatic cell count). Economic losses caused by mastitis include decreased milk production and meat production (because of treatments).

Somatic Cell Count (SCC): A measure of the number of white blood cells and secretory cells per milliliter of milk. Each bulk tank of milk is usually tested for SCC as an indication of milk quality. Individual goats can be tested for SCC, usually through routine Dairy Herd Improvement Association (DHIA) monitoring.

Item E1: Number of does milked

Record the number of does that were in milk on the operation between September 1, 2018 and August 31, 2019. Count each doe only once, even if she kidded twice in the 12 month period. Include all does whether nursing kids or being milked.

[If Item E1 = 0, Skip to Item E4]

Item E2: Number of milked does with clinical mastitis

Of the total does in milk from Item E1, record the number of does that had clinical mastitis in 2019. Count each doe only once, even if she kidded twice in the previous 12 months.

[If Item E2 = 0 or DK, Skip to Item E4]

What if...

The Producer thought a doe was producing less milk so he did a California mastitis test (CMT) that was positive, but she did not have any visual changes to her udder and/or milk?

Answer: This doe has subclinical mastitis and should not be counted in the total number of does with clinical mastitis. In order to be counted as clinical mastitis, the doe must have visual changes to her udder and/or milk, such as a hard and swollen udder, or clumping in the milk.

Item E3: Method of diagnosing mastitis

Select the single method that was used most commonly to diagnose mastitis on the operation in the previous 12 months. If "Other" is selected, specify the method that was most commonly used to diagnose mastitis on the operation.

What if...

The Producer changed methods mid-way through the year, such as they previously relied on visual observation until a veterinarian came out and demonstrated the CMT, then the Producer started using CMT?

Answer: Use the 12 month period from the date of the interview. Select which ever method was used for the majority of the year, so if the Producer switched to the CMT the previous 6 months then select "Visual observation" to answer this question.

Item E4: Abortion of bred does

This is a lead in/skip question about does that aborted during the previous 12 months. Select "NA" if no bred does were present on the operation during the past 12 months. Note that does could have been bred greater than 12 months ago, but were pregnant and aborted during the last 12 months.

What if...

Early abortions are not observed; it is unknown if the does aborted or never took?

Answer: Use the Producer's best information he/she can provide and indicate in the margin any indications that unobserved abortions may have occurred.

[If Item E4 = No or NA, Skip to Item E7]

Item E5(a-d): Steps taken for aborting does

Abortng does and the resulting placentas can be a risk factor for disease. Check "Yes" if any of the listed steps were taken while does (of any age) aborted during the last 12 months.

Note: Disinfect the area means to remove all organic material and then apply a disinfecting solution to, at least, the area where the placenta landed. Obviously, this would be answered only when kidding takes place on solid flooring because disinfecting the pasture isn't possible. If E5d = Yes (separate aborted does from other does), check the box for Item E5d that describes what happens with the majority of those separated does. If returned to the flock during the same kidding season, write in the average number of days separated.

Item E6(a-h): Causes and diagnosis of abortion in does

For the abortions that took place in the past 12 months, ask the Producer if any cause for the abortion was determined or suspected and, if yes, did a veterinarian or laboratory make the diagnosis. If Item E6h "Other" is selected, specify the suspected cause of the abortion.

What if...

They had abortions due to Toxoplasmosis diagnosed by a veterinarian last year so they suspect that this year's abortions were due to Toxoplasmosis as well?

Answer: Select "Yes" for item E6d for abortions suspected to be caused by Toxoplasmosis and select "No" for the second column, diagnosed by a vet or lab.

Item E7(a-e): Disease occurrence in goat herd

Determine if the herd had any problems with the disease conditions listed in the **last 3 years**. For “Yes” responses, determine if the disease was diagnosed by a veterinarian or by laboratory test. The 2nd column is answered “No” if it was Producer diagnosed.

What if...

The herd has an ongoing problem with CAE that was diagnosed by 5 years ago?

Answer: Since the problem has been ongoing for 5 years, then the first column is checked Yes for CAE and you would check diagnosed by the vet in the second column.

[If Item E7e = No, Skip to Item E10]

Item E8: Number of goats and kids with sore mouth

Record the number of goats which had sore mouth (Orf) in 2019. Include both suspected and confirmed cases. (See sore mouth definition in Section B).

[If Item E8 = 0 or DK, Skip to Item E10]

Item E9: Number of goats and kids with sore mouth that died

Record the number of goats which **had sore mouth in 2019 and died**. Include goats that died due to causes related to sore mouth, such as anorexia and starvation. **The number should be less than or equal to the total for Item E8.**

Item E10(a-b): Producer and employee infection with Q fever or sore mouth

Check “Yes” or “No” to indicate whether the Producer thinks he or she has ever been infected with *Coxiella burnetii* (which causes Q fever) for Item E10a or with the Orf virus (which causes sore mouth, or contagious ecthyma) for Item E10b. If the Producer thinks he or she has been infected with either of the two diseases, ask if it was diagnosed by a doctor and check the appropriate box, accordingly.

Clinical signs of sore mouth: Lesions confined to the epidermis of the skin on fingers, hands, or forearms. Lesions begin as small papules but then become ulcerative. Size of lesions typically range from 2-3 cm, may be painful or associated with regional lymphadenopathy. Refer to the **Orf Information Sheet** included in the Producer packet for more detailed information on human infections.

Clinical signs of Q fever: High fever, fatigue, chills or sweats, headache, muscle aches, cough, nausea, vomiting, or diarrhea, and chest pain. The symptoms of Q fever can be subtle. A person may not have all possible symptoms.

Item E11: Goats given injections

Indicate whether any goats on the operation were given any injection in 2019.

[If Item E11 = No, Skip to Item E14]

Item E12: Needle use for goats given injections

Indicate whether a new needle was typically used for every goat injected.

[If Item E12 = Yes, Skip to Item E14]

Item E13: Chemical disinfection of needles

Indicate whether the needles used for goat injections were disinfected between goats. The use of a chemical solution includes betadine, nolvasan, or bleach to kill disease-causing organisms.

What if...

They chemically disinfect when giving IM injections, but not when giving SQ injections?

Answer: Mark "No" we want to know if it is a general practice to chemically disinfect between injections.

What if...

They try to always chemically disinfect, but sometimes they miss one or two?

Answer: Mark "Yes" we want to know if it is a general practice to chemically disinfect between injections.

Item E14: Equipment shared with other livestock owners

Indicate whether the operation shared any equipment with other livestock owners. Include any farm equipment like tractors, feeding equipment, manure spreaders, trailers, clippers, hoof trimmers, or dehorner.

[If Item E14 = No, Skip to Section F]

Item E15: Cleaning of shared equipment

Indicate "Yes" or "No" if the shared equipment was cleaned prior to use on another operation. If yes, select the best answer that describes the operation's cleaning procedures for shared equipment. If "Other" is selected, specify the operation's cleaning procedure for the shared equipment. Select only one response.

SECTION F: ANTIMICROBIAL USE IN FEED AND WATER

The questions in this section refer to all kids and adult goats. Feed includes milk, milk replacer and starter.

Note: The reference period for this section is September 1, 2018 through August 31, 2019.

The following definitions may be useful when completing this section of the questionnaire:

Coccidiostat: Coccidiostats are any of a group of chemical agents mixed in feed or drinking water to control parasitic coccidiosis in animals. Coccidiostats inhibit the growth but does not kill the coccidia (*Eimeria* spp).

Ionophore: An antibiotic for disease prevention or growth promotion. Ionophores are unique antibiotics that are particularly successful at targeting protozoan lifecycles and inhibiting growth. Their use is confined to production animals and are primarily used to control coccidiosis in animals.

Item F1: Use of coccidiostat in feed or water

Check "Yes" if a coccidiostat was used in either feed or water for any goat class between September 1, 2018 and August 31, 2019.

[If Item F1 = No, Skip to Item F3]

Item F2(a-d): Specific coccidiostat products used in feed or water

Check "Yes" or "No" if any of the listed coccidiostats were used in **feed** (column 1) or **water** (column 2) in 2019. **If Item F2d (sulfa drugs) = Yes**, record the number of goats, kids and adults separately, that were treated and the average number of days they were treated for coccidiosis. If "Other" is selected, be specific in recording the product used for both feed and water.

Ionophores and Deconquinatate are coccidiostats which are not formulated for use in water. There should be no answers for these two products in the second column.

Item F3: Use of ionophores as growth promotants in feed

Check "Yes" or "No" for whether the operation used any ionophores as a growth promotant in feed between September 1, 2018 and August 31, 2019.

Item F4: Use of any antibiotics in drinking water as disease preventive

Check "Yes" or "No" for whether the operation used any **antibiotics in water** to prevent, control or treat a disease or disorder (other than coccidiosis) in 2019.

[If Item F4 = No, Skip to Item F6]

For Items F5 and F7 below, use the antibiotic code on page 1 of the Antibiotic Reference Card stapled to the end of the questionnaire and in the Reference Card section of this training manual. If "Other" is selected, provide the specific trade name and antibiotic class for the drug that was used.

Item F5: Use of antibiotics in drinking water as disease preventive

Record in the table, for both kids and adults separately, information on use of antibiotics in drinking water to prevent, control, or treat a disease or disorder (other than coccidiosis). If the operation did not provide antibiotics in the water to kids or adults, skip the corresponding section of the table and complete the section for the age group present on the operation. Indicate the reason(s) for administering the antibiotic in the water in the second column. Then record the antibiotic code, number of animals treated, and average number of days the treatment was given for each respective disease. The codes for the antibiotics can be found on the Antibiotic Reference Card which will be stapled to the back of the questionnaire and is located in the Reference Card section of this training manual.

In **columns 3-5** the first row should be used if Respiratory Disease is checked “Yes.” The second row should be used if Digestive disease is checked “Yes.” **Do not include parasitic diseases, such as coccidiosis.** The third row third row should be used only if “Other” is checked “Yes” and a specific reason is given. For example, if the Producer treated a group of goats for foot rot, or joint ill, this should be included in the “Other” row.

Item F6: Use of any antibiotics in feed as disease preventive

Check “Yes” or “No” for whether the operation used any **antibiotics in feed** to prevent, control or treat a disease or disorder (other than coccidiosis) in 2019.

[If Item F6 = No, Skip to Section G]

Item F7: Use of antibiotics in feed as disease preventive

Follow the instructions written for Item F5 but answer **only for antibiotics used in feed** to prevent, control or treat a disease or disorder (other than coccidiosis). If “Other” is selected, please specify the reason. For example, if the Producer treated a group of goats for foot rot, or joint ill, this should be included in the “Other” row. Use the Antibiotic Reference Card that is stapled to the back of the questionnaire and located in the Reference Card section of this training manual to find the antibiotic codes.

SECTION G: HEALTH CONDITIONS AND LOSSES

The following definitions may be useful when completing this section of the questionnaire:

Antibiotic: These pages also contain questions about the number of goats that received an antibiotic for a condition at least once during the previous 12 months. An antibiotic is a drug used to treat bacterial infection. It can be given by multiple methods, including feed, water, oral bolus (directly into the mouth), intramammary, or topically in the uterus or eye, or injected into a muscle or vein. These questions refer to ALL antibiotic usage except for use in feed or water.

Preweaned kid: A kid still nursing a doe or otherwise consuming milk.

Weaned kid: A kid that is no longer nursing a doe or otherwise drinking milk.

Wether: A castrated male goat.

Item G1(a-e): Number of goats which were lost, stolen, died or euthanized from all causes

Record the total number of animals which were lost, stolen, died or euthanized **from all causes** between September 1, 2018 and August 31, 2019. In the first column, record the total number of losses for each goat class, then sum them for Item G1e. **Exclude kids born dead and slaughtered/marketed goats.** If the total for each goat class is greater than zero, complete the remaining columns. Divide the total from column 1 into three primary cause categories: lost/stolen, predator, and nonpredator. Record the total number of animals that were lost by each cause and sum them in the last row for Item G1e. Predator losses include dog attacks, coyotes and other wildlife.

Item G2: Number of goats dead from nonpredator causes necropsied

Record the number on animals which died of all nonpredator causes and were necropsied to determine the cause of death. If there are no nonpredator losses, write in "NA."

Note: The remainder of this section asks about health conditions among goat classes. It is possible for a single goat to have had more than one condition, such as diarrhea and abortion. **Even if a goat died having experienced two or more conditions during the previous 12 months, the death or removal (culled) should be listed as due to a single primary cause.**

Each goat class has a table of health conditions associated. Indicate the total number of animals that experienced each condition in column 2. Use the values in column 2 as the total for the row and ensure the numbers entered into columns 3, 5, and 6 are less than or equal to the value in column 2.

The number of animals entered in column 5 should not exceed the inventory number that died, reported in Item G1. Ensure that these numbers are less than or equal to the number reported for the corresponding goat class in Item G1(a-d) for “Total Head.”

For column 4 use the antibiotic codes on page 2 of the Antibiotic Reference Card that is stapled to the back of the questionnaire and can be found in the Reference Card section of this training manual. If “Other” is selected, provide the specific trade name and antibiotic class of the drug that was used.

Items G3-G10: Health conditions and antibiotic

Complete the tables for each goat class for which the Producer has on the operation. Skip any classes that were not present on the operation between September 1, 2018 and August 31, 2019.

In the column 2 header in these tables, provide the total number of different animals affected by all listed conditions. In Col 3 header, provide the total number of different animals treated with Ab for listed conditions.

For example in G4, if Kid A had both scours and lameness, and Kid B had scours. The total number of kids affected with all listed conditions would be 2. You should FILL IN the actual column header with ‘2’. In G4a, Col2, you should fill in ‘2’, and in G4f, you should fill in ‘1’. If no antibiotics were given to Kid B, but Kid A was treated for scours, and also for lameness, you should fill in Col3 header with ‘1’.

Item G3: Preweaned kids

[If Item G3 = No, skip to Item G5]

Item G4: Preweaned kids table

[If Item G3 = "Yes," complete the table for preweaned kids.]

Note for Line G4c:

Perinatal refers to the period of 2-4 weeks before and after parturition. Kids that experienced perinatal conditions are likely to demise within 3 days or less following delivery. Neonatal weakness can be considered a primary factor in perinatal conditions for preweaned kids. This would include kids that initially thrive but then become weak. Symptoms that commonly accompany a 'failure to thrive' kid include non-responsiveness, abdominal distention and acidemia. Reproductive disorders related to the dam could also be included in this category, such as dystocia leading to nerve damage or respiratory distress of the kid.

What if...

63 kids were affected with respiratory problems, 22 were treated with antibiotics, and the rest treated with an herbal rub?

Answer: This question is asking for antibiotics only. Include all 63 as affected, but enter only the 22 as treated in the chart.

What if...

All had diarrhea and the antibiotics were put in feed?

Answer: Enter the total number of animals affected with diarrhea, but the number treated with an antibiotic is "0." Make sure these were counted in the antibiotics in feed category (Section F).

What if...

A kid had scours when it was 3 days old, then developed lameness at 2 weeks of age, received antibiotics at both times, and was euthanized at 3 weeks of age due to joint infection?

Answer: Account for this kid in column 2 and 3 of the table in Line A and Line F, fill out column 4 for both Line A and Line F, but only account for this kid in column 5 in Line F.

What if...

What if...a goat had scours twice in the year and was treated once?

Answer: Count the goat once in Col 2, and once in Col 3.

Item G5: Weaned kids

[If Item G5 = No, Skip to Item G7]

Item G6: Weaned kids table

[If Item G5 = “Yes,” complete the table for weaned kids]

What if...

A kid was born on September 1, 2018 and weaned on December 1, 2018?

Answer: Count this kid in both the preweaned and weaned categories, i.e. this kid would be accounted for in G3 and G5. If the kid had a health condition as a preweaned and/or weaned kid, account for this in the appropriate table.

Item G7: Adult does

[If Item G7 = “No,” Skip to Item G9]

Item G8: Adult does table

[If Item G7 = “Yes,” complete the table for adult does]

What if...

A doe experienced dystocia and this also resulted in a perinatal health condition of the kid?

Answer: Account for the doe in the doe table on Line G and account for the preweaned kid in the preweaned kid table on Line C.

Item G9: Adult bucks/wethers

[If Item G9 = No, Skip to Section H]

Item G10: Adult bucks/wethers table

[If Item G9 = “Yes,” complete the table for adult does.]

What if...

A buck was castrated on January 1, 2019?

Answer: Only count this animal once in Item G10.

DAIRY OPERATION QUESTIONNAIRE GUIDE

INITIAL INFORMATION

This part of questionnaire is only to be completed by operations that milked goats in the previous 12 months and had at least 5 adult dairy goats (does > 1 year of age) on the operation on September 1, 2019. It includes questions about milk quality and milking procedures, personnel, drug use and residues, disease, health, death, and permanent removals.

All questions refer to the previous 12 months of operation, unless otherwise indicated. To be consistent for inventory numbers, ask the Producer to share numbers from the period between September 1, 2018 and August 31, 2019.

Note: All questions, except where noted, refer to the goat operation on site.

SECTION H: DAIRY INVENTORY

The following definition may be helpful in completing this section of the questionnaire:

Dry doe: An adult doe that has had a least one kid and is not lactating.

Note: For all questions in this section record “0” for any categories for which the Producer did not have animals. **There should be no blank responses for the number of head for any question.**

Item H1: Milking does

Select “Yes” or “No” to establish whether the operation milked any does in the previous 12 months. **If no does were milked, do not complete the Dairy Questionnaire.**

[If Item H1 = No, Skip to Section O of VS Visit Questionnaire]

Item H2: Dairy Inventory

Record the number of adult does (greater than 1 year of age), including those dry and in milk, that were present on the operation on September 1, 2019.

[If Item H2 < 5 head, Skip to Section O of VS Visit Questionnaire]

Item H3: Does milked

Record the number of does that were milked on the operation on September 1, 2019. This question is asking for a snapshot of data, to establish on an average day, how many does were milked. Confirm with the Producer by asking how many does will go through the parlor on the day of the interview and ask if there have been any changes in the system. If there are records from September 1, 2019, use those to answer this question.

Item H4: Dry does

Record the number of dry does present on the operation on September 1, 2019. You can calculate this number by subtracting the answer for Item H3 (does milked) from the answer for Item H2 (adult does).

Item H5: First-lactation does

Record the number of first-lactation does born on this operation **and** were added to the milking herd between September 1, 2018 and August 31, 2019. Include does that were born on the operations and raised off site.

Item H6: Purchased does

Record the number of purchased or leased does from other operations that were added to the milking herd between September 1, 2018 and August 31, 2019.

Item H7: Adult does removed

Record the number of adult does (>1 year old) that were permanently removed (culled) from the milking herd between September 1, 2018 and August 31, 2019. Do not include does which died on the operation.

Item H8: Does died

Record the number of milking does which died between September 1, 2018 and August 31, 2019.

Item H9: Peak inventory

Record the highest number of goats milked on the operation at any time point between September 1, 2018 and August 31, 2019.

Item H10: Weighing milk

Select the frequency that best matches how often the milk produced on the operation is weighed

[If “Never” is checked or if milk is not weighed throughout entire lactation, Skip to Section I.]

What if...

The milk was weighed weekly?

Answer: Check “Monthly.”

Item H11: Average milk production

To answer this question, either use the Producer’s records or calculate the answer from the weight of the milk. Answer only in one form, either annual milk production per doe or pounds per doe per day. Calculate the total weight of milk produced either in one calendar year or in one day, then divide by the number of does milked on the operation (answer for Item H3). If the production is recorded in gallons per doe, multiply the gallons by 8.6 to convert to pounds.

SECTION I: GENERAL MANAGEMENT

The following definitions may be helpful in completing this section of the questionnaire:

Certified organic milk: An official label for dairy products which indicates a product that is produced under requirements set by USDA. The label implies specific regulations of feed and treatment protocols used for organic livestock as well as land management, pasture requirements and housing.

Milking string: A group of animals that are being milked regularly.

Item I1: Registered dairy goats

Record the percentage of all does on the operation that are registered with a breed association as of September 1, 2019. If no animals are registered, enter "0."

Item I2: Certified organic milk

Select "Yes" or "No" for whether the operation produced any certified organic dairy milk between September 1, 2018 and August 31, 2019.

Item I3: Dairy cows

Select "Yes" or "No" for whether the operation milked any dairy **cows** between September 1, 2018 and August 31, 2019.

Item I4: Days post kidding

Record the average number of days between kidding and entry into the milking string for the dairy does on the operation. Use records or the Producer's best judgment to identify the average number of days. Do not leave blank; if the Producer does not have any estimate, enter "DK."

Item I5: Length of lactation

Record the average number of days for a typical lactation for dairy goats on this operation. We want to know the duration of a typical lactation for this operation. Use records or the Producer's best judgment to identify the average number of days. Do not leave blank; if the Producer does not have any estimate, enter "DK."

Item I6: Maximum length of lactation

Record the longest lactation period for any one doe on the operation that completed her lactation (was dried off) in the last 12 months. Use records or the Producer's best judgment to identify the average number of days. Do not leave blank; if the Producer does not have any estimate, enter "DK."

What if...

The longest lactating doe started her lactation in March 2018 and she finished on October 15, 2019?

Answer: Include the length of her lactation period, even if greater than 365 days as long as it has been completed by the date of the interview.

Item 17: Average days dry

Record the average number of days that does are dry between lactation periods. Use records or the Producer's best judgment to identify the average number of days. Do not leave blank; if the Producer does not have any estimate, enter "DK."

SECTION J: KIDDING MANAGEMENT

The following definitions may be helpful in completing this section of the questionnaire:

Colostrometer: A hydrometer that uses the correlation between **colostrum** density and IgG concentration to provide a measure of **colostrum** quality. It has a scale on it that will relate the **colostrum** density to the IgG concentration and gives you an exact value.

Brix refractometer: Used to evaluate milk being fed to kids to ensure consistent quality. The Brix refractometer measures the amount of sugar which helps estimate the total solids in milk.

Item J1: Kidding interval

Record the average time from one kidding to the next kidding for the does on the operation. Use records or the Producer's best judgment to identify the average number of months. Do not leave blank; if the Producer does not have any estimate, enter "DK."

Item J2: Age of does at first kidding

Record the average age of dairy does at the time of first kidding. Use records or the Producer's best judgment to identify the average age. Do not leave blank; if the Producer does not have any estimate, enter "DK."

Item J3(a-e): Colostrum quality

Select "Yes" or "No" whether each of the methods listed were used to evaluate colostrum quality from the does on the operation. If "Other" is selected, be specific and concise to describe which alternative method was employed.

Item J4: Kid feeding protocol

Please note: milk refers to both goat milk and any milk replacer products.

Record the amount of milk and frequency at which milk was offered to kids for each of the first four weeks of life. If the kids were left with the dam for one or more weeks following kidding, check the box for the appropriate weeks. If kids were typically removed from dams and hand-fed milk (bottle, bucket, or group feeder), record the number of ounces each received per feeding and the number of feedings given per day for each week of life. If the kids were left with dams, you do not need to report frequency of feedings.

What if...

Kids typically nursed for over a month and were not hand fed?

Answer: Check "Left with dam" for each of the 4 weeks. Don't enter anything in the "Frequency" column.

What if...

A producer does a combination of allowing kids to nurse and handfeeding?

Answer: Check "Left with dam" AND fill in the "oz" fed, and the "Frequency" column. Then provide an explanation in the margins.

SECTION K: MILK MARKETING

The following definitions may be helpful in completing this section of the questionnaire:

Dairy Herd Improvement Association: A national association that helps dairy producers create and manage records and data about their goats for use in making management decisions.

Quality assurance program: A dairy quality assurance program plays a critical role in production of high quality milk. An organized program can help dairy producers manage their operations in ways that will ensure quality milk as well as produce other products that will meet consumer expectations.

Pasteurization: A process, named after scientist Louis Pasteur, that applies heat to destroy pathogens in foods. For the dairy industry, the terms "pasteurization," "pasteurized" and similar terms mean the process of heating every particle of milk or milk product, in properly designed and operated equipment, to a specific temperature and held continuously at or above that temperature for at least the corresponding specified time. The most common method of pasteurization in the United States today is High Temperature Short Time (HTST) pasteurization, which uses metal plates and hot water to raise milk temperatures to at least 161° F for not less than 15 seconds, followed by rapid cooling.

Item K1(a-g): Outcomes for produced milk

The milk produced on the operation may be used for a variety of purposes to support the operation or to market a product. Record the percentage of milk from the overall yield from the previous year that was used for each listed outcomes. Ensure that the total of all percentages sums to 100%. Some items may have 0%; do not leave any items blank.

[If Item K1g = 0, Skip to Item K3]

Item K2(a-e): Liquid milk sold, traded or given away

For this question, consider only the milk recorded in Item K1g above. Record the percentage of all milk sold, traded, or given away that was intended for each listed purpose. Ensure that all recorded values for milk sum to 100%. Some items may have 0%; do not leave any items blank.

Item K3(a-e): Goat milk and products sold

This question has two columns, one for milk and one for milk products. Even if the Producer does not sell, trade, or give away any milk, move to column 2 and ask if the producer sells, trades, or gives away any other milk products. Select “Yes” or “No” for both “Milk” and “Cheese or other milk products” whether these products were sold, traded, or given away. Generally, any product leaving the operation permanently should be considered “Yes” for this question.

[If K1g=0, then mark “No” in the milk column and ask if cheese or other milk products were sold, traded, or given away.]

[If K3e “Other” is selected “Yes” for either column, specify how the products were sold, traded or given away.]

[If Item K3 Milk and Cheese and Other Products column BOTH equal “No,” Skip to Item K5.]

Item K4(a-e): Goat milk premium

Indicate “Yes” or “No” whether buyers of either goat milk or goat milk products were willing to spend a premium for the guarantees listed. A premium is a price to pay above market price to receive a product that has a higher standard in some aspect. If 4e “Other” is selected “Yes,” specify what the buyer paid a premium for.

Item K5: On-farm pasteurization

Select “Yes” or “No” to indicate whether the operation performed on-farm pasteurization for products intended for **human consumption** prior to marketing or selling to buyers. Pasteurization for human consumption must follow the Pasteurized Milk Ordinance (PMO) time and temperature guidelines to guarantee destruction of certain microorganisms.

Item K6: Raw milk products

Select “Yes” or “No” to indicate whether the operation marketed **any raw goat milk or raw goat milk products for human consumption**. Raw means the products were not pasteurized and did not meet PMO requirements prior to marketing or selling to buyers. This includes doe shares (e.g., in those States where it is legal to buy a share of a doe and thus allowing access to raw milk from that doe) or direct purchase of fluid milk (e.g., in those States where sales of raw fluid milk is legal).

What if...

An operation says they do sell raw milk or milk products, but they are in a state where it is illegal to do so?

Answer: Write down the producer’s response as reported. NAHMS reports are summarized to the regional level.

Item K7: Operation participation in quality programs

Select “Yes” or “No” to indicate whether the operation participated in a Dairy Herd Improvement Association program or a Quality assurance program for milk quality.

SECTION L: MILKING PROCEDURES

Item L1: Method of milking

Select the one method by which the majority of the time does are milked on the operation. A machine—pipeline refers to both a portable milker with a pipeline and a stationary milker in a parlor.

[If Item L1 = 1 or 2, SKIP to Item L3.]

Item L2: Milking parlor

Select the best description of the parlor system used on the operation. If “Other” is selected, specify the description of the primary milking parlor on the operation.

Item L3: Frequency of daily milking

Select the number of times most does are **usually** milked each day on the operation.

Item L4: Personnel milking

Select the single group that best describes the individual(s) who milked the does the majority of the time. If “Other” is selected, specify who milked the does the majority of the time.

What if...

Most of the milking is done by a hired worker who is also a family member?

Answer: Select box 2 ‘family member(s)’. All family members of the owner/operator belong in this category, whether paid or unpaid.

Item L5: Use of disposable gloves

Select the choice that best describes the frequency at which milkers wore disposable gloves while milking does.

What if...

The milkers usually wear gloves when milking all does but have run out and are currently not wearing them?

Answer: If the operation’s usual practice is to wear gloves for all does, then select ‘always’. If the operation’s usual practice is to wear gloves for some does, such as those with mastitis, then select ‘sometimes’.

What if...

One milker chooses to wear gloves but the other milkers do not and the operation does not require gloves?

Answer: Select ‘sometimes’ one milker chooses to wear gloves.

Item L6: Training milkers

Select the choice that best describes the time intervals at which milkers are trained on milking procedures specific to the operation.

Item L7: Clipping udders

Select “Yes” or “No” to indicate whether the operation either clips or singes hair on udders prior to milking. Singeing hairs is used on some operations to avoid the irritation of clippers and is a quick way to remove hair with a low heat flame.

Item L8(a-c): Forestripping

To forestrip is to pull 2-3 streams of foremilk from each quarter of the udder. This stimulates the doe to let the milk down and removes residual bacteria. Using the codes provided above for Item L8, indicate the frequency of forestripping for fresh does, does with mastitis, and all other does. If Code 4 “Other” is used, specify this operation’s use of forestripping.

What if...

They usually forestrip but every now and then don’t because of time constraints?

Answer: Enter the code that best corresponds to the operation’s usual practice.

[If Items L8a, L8b, and L8c are ALL = 5, Skip to Item L10]

Item L9: Forestripping order

Select the single choice that describes the order in which forestripping was performed in regards to teat washing. Teat washing refers to use of a teat wipe or a process involving water with or without a disinfectant solution, as listed in Item L10.

[If Item L9 = 3 (no teat washing), Skip to Item L11]

Item L10: Teat washing

Select the single choice that best describes the method used for teat washing, if it was done for regular milkings, on the operation. If “Other” is selected, specify the method used for teat washing prior to milking.

Item L11: Teat drying

Select the single choice that best describes the method used for teat drying, if it was done prior to milking, on the operation. If “Other” is selected, specify how teats were usually dried prior to milking.

Item L12: Pre-dipping teats

Select “Yes” or “No” to indicate whether the operation typically pre-dipped teats in a disinfecting solution (such as betadine or iodine) prior to milking.

Item L13: Post-milk teat disinfection procedure

Post-dipping is typically done to prevent mastitis from ascending infection of the teat and udder. Select the single best choice to describe the primary method used to disinfect teats **after** milking. If “Other” is selected, specify the primary method used to disinfect teats after milking.

Item L14: Order of milking goats

Select the single best choice to describe the primary order in which goats are milked, if there is a system in place to milk them in a given order. If no specific order is used, select the box for Item L14-1. If "Other" is selected, specify the primary order in which goats are milked.

SECTION M: MILK QUALITY

Item M1: Somatic cell count practices

Somatic cell count is an indication of milk quality and udder health. Counts are reported in thousands of cells per milliliter. Select “Yes” or “No” to indicate whether the operation routinely performed somatic cell count testing on the milk produced from the operation.

[If Item M1 = No, Skip to Item M3]

Item M2: Somatic cell count

Record the average SCC for the operation from records over the past 12 months. The units used should be thousands of cells/mL. The threshold for acceptable SCC in goats is <1.5 million cells/mL.

Item M3: Antibiotic residues

Select “Yes” if this operation tested ANY milk on-farm for antibiotic residues in the previous 12 months. .

[If Item M3 = No or NA, Skip to Item M6]

Item M4: Use of antibiotic residue testing kit

Select the single item listed that represents the antibiotic residue testing kit used on the operation. If “Other” is selected, be specific with name and brand of the testing kit used.

Item M5(a-e): Source of samples for antibiotic residue testing

Select “Yes” for all sources listed where sampling was conducted to perform antibiotic residue testing. Select “No” or “NA” where sampling was not done or did not apply to the operation. If 5e “Other” is selected “Yes,” specify the source from which samples were tested for antibiotic residue.

Item M6: Milk culturing

Select “Yes” or “No” to indicate whether any culturing of milk was done on milk produced on the operation.

[If Item M6 = No, Skip to Item M11]

Item M7(a-c): Sources for milk cultures

Select “Yes” or “No” to indicate whether the operation performed milk cultures on milk from each of the listed sources.

[If Item M7a = No, Skip to Item M9]

Item M8(a-f): Does selected for milk culturing

If milk from individual does was used for culturing, select the appropriate response to indicate which subset of does were used. More than one item may be checked “Yes.” If 8f “Other” is selected “Yes,” specify the other type of does that were typically selected for milking culture. Fresh does are does that have kidded in the past 2 weeks. High somatic cell count does may also be referred to as does with subclinical mastitis.

Item M9(a-d): Personnel performing milk culturing

Select “Yes” for all of the groups listed that performed milk culturing during the previous 12 months. Select “No” for groups that did not perform any milk cultures from samples on the operation. This question applies to cultures performed on individual does, bulk-tank milk, or string samples.

Item M10(a-h): Organisms identified in milk culturing

Indicate whether any of the listed organisms were identified in any of the cultured milk samples (i.e. bulk tank, string, group, pen, or individual composite or mammary gland sample). Please utilize records and reports that the Producer is willing to share to help reduce recall bias and ensure the accuracy of reporting. Select “Yes” for all organisms that were reported from any milk cultures. Select “No” for organisms that were not identified, but evaluated for. Select “DK” if the producer doesn’t know and was unable to locate records or the culture methods used would be unexpected to yield isolates of the specific organism.

For example, some labs may not include culturing for one or more of the organisms listed. If these organisms were not tested for, it cannot be said that the organism was not present in the milk, in which case, please select “DK” for these situations as well.

Item M11: Milking goats with mastitis

Select the single best response that matches the Producer’s primary method of milking goats with mastitis. If “Other” is selected, specify the Producer’s primary method of milking goats with mastitis.

[If Item M11 = 1 (no known mastitic does), Skip to Section N]

Item M12(a-i): Mastitis treatment and management

Items M12a-12e refer to **treatment protocols** while Items M12f-12i refer to **management protocols** for goats with mastitis. Indicate which of the listed actions were taken for the majority of or all goats with mastitis in the previous 12 months. **If 12a is selected “Yes,” record the number of does treated with intramammary (IMM) antibiotics in 12ai.** If “Other” is selected “Yes,” specify the treatment or management protocols used.

[If Item M12a = No (no IMM antibiotics used), Skip to Section N]

Item M13(a-e): Treatment with intramammary (IMM) antibiotics

Select each listed reason which corresponds with the Producer’s reasoning for treating mastitis with IMM antibiotics. Select all reasons which apply to the operation’s practices. If 13e “Other” is selected “Yes,” specify the reasons for treating mastitis with IMM antibiotics.

Item M14(a-i): Intramammary antibiotic drugs used

This question refers to does that received IMM antibiotics in question M12ai. For each of the listed drug names, indicate the percentage of mastitic goats given the drug and the withdrawal time (in days) used for each corresponding drug. Refer to the Producer’s records or have them show you the drug labels on hand that are used for mastitis cases. Ensure the total of all percentages is equal to or greater than 100%. Some does may be treated with more than one drug, so we expect that some of the

responses may exceed 100%. If 14i "Other" IMM antibiotics where used, specify the full name of the product.

Item M15: Administration method for IMM antibiotics

Select the best answer for the method of which the Producer used IMM antibiotics in mastitic goats. If "Other" is selected, specify how IMM antibiotics are typically administered to mastitic does.

SECTION N: DRY DOE PROCEDURES

Item N1(a-d): Protocols for dry does

Record the percentage of does that were “dried off” due to the listed reasons. Indicate a **single primary reason** for “drying off” for each individual, so the sum of responses should equal 100%. Enter a percentage value for every line, even if the value is “0.” This ensures that no data is missed. If 1d “Other reason” is greater than 0, specify the reason the does were dried off.

Item N2(a-c): Method of drying off does

Record the percentage of does that were “dried off” using the listed methods. Indicate a **single primary method** of “drying off” for each individual, so the sum of responses should equal 100%. Enter a percentage value for every line, even if the value is “0.” This ensures that no data is missed. If 2c “Other” is greater than 0, specify the method the does were dried off.

Item N3(a-d): Management practices at dry off

Select “Yes” or “No” for each of the listed management practices to indicate whether they were used in the process of drying off does in the previous 12 months.

Item N4: IMM antibiotic use in dry does

Select “Yes” or “No” to indicate whether the operation typically used IMM antibiotics in the process of drying off **any does**.

[If Item N4 = No, Skip to Item N8]

Item N5: Percentage of dry does treated with IMM antibiotics

Record the percentage of all dry does that were treated with IMM antibiotics at the time of drying off.

[If Item N5 = 100%, Skip to Item N7]

Item N6(a-e): Reason for IMM antibiotics at dry off

Select “Yes” or “No” for each reason listed to indicate how the Producer determined which does to administer IMM antibiotics to during dry off period. If 6e “Other” is selected “Yes,” specify the alternate reason IMM antibiotics were given to does at dry off.

Item N7(a-i): Specific IMM antibiotic drugs at dry off

For each of the listed IMM drugs, indicate both the percentage of **dry does** that received the drug **and** the withdrawal time used for each corresponding drug. Some does may receive more than one drug at dry off, so the total may be equal to or greater than 100%. If 7i “Other” percentage is greater than 0, specify the IMM antibiotics used for dry does. **Do not include does given IMM antibiotics only while in milk or does that did not receive IMM antibiotics at dry off**

Item N8: Teat sealant use

Select “Yes” or “No” to indicate whether the Producer employed teat sealants at dry off **for any does**.

SECTION O: FOR OFFICE USE ONLY

Section O is the conclusion of the interview. The purpose of this section is to provide NAHMS with information about the time and people spent completing the study. Additionally, this section provides a bit more information regarding data quality, which is taken into consideration when entering the data.

Top Box: Operation Information

In the box at the top of the Office Use Only Section enter the State FIPS ID, the operation number, your initials, and the date the interview was completed.

Item O1: Total Interview Time

Enter the total time it took to complete the interview. Be sure to include the time it took to discuss the program and complete the questionnaire. If more than one data collector was present, such as a VMO and AHT, enter the time combined for both people.

Item O2: Total Trip Time

Record the total round trip travel time for all data collectors present at the visit.

Item O3: Number and Type of Data Collectors

Enter the number of each type of data collector present for the interview. If an "Other" type of person was present, please specify that person's title.

Item O4: Questionnaire Status

Enter the response code that best describes the status of the questionnaire for this operation. If the operation completed the questionnaire enter '99'. If the operation did not complete the questionnaire, choose the response code that best fits the Producer's reason for not completing the questionnaire. If the operation was not eligible to complete the questionnaire enter response code '06'.

Item O5: Plans to Complete Biologics Testing

Indicate if the Producer plans to complete biologics testing for each of the tests listed. This is for planning purposes only. The Producer can decline at a later date if he/she changes their mind.

Item O6: Respondent's Position

Select the code that best describes the respondent's position with the operation. If 'Other' is selected, please succinctly describe that person's role on the operation.

Item O7: Data Quality

Select the option that best described the data quality of this questionnaire. If a large majority of the data is missing or large sections were skipped and records were not consulted, then data quality should be considered poor. If the whole questionnaire was completed and records were consulted, then data quality should be considered good to excellent.

Item O8: Use of Records

Mark "yes" or "no" to indicate if the Producer consulted any written or computerized records while answering this survey.

Comments

Please use this section to provide any more insight that you believe will be valuable for NAHMS when reviewing the questionnaire.

Signature

Please sign that you have reviewed and completed this questionnaire.

ON-SITE AGRITOURISM QUESTIONNAIRE GUIDE

INITIAL INFORMATION

This questionnaire is only to be completed by operations for which the general public (visitors) had access to areas or facilities on the operation that house or contain animals, feed, manure, or farm equipment.

As with the previous questionnaire, read all questions to the Producer and follow instructions carefully. **Please do not leave any questions blank** unless instructed to skip.

NOTE: If the response is zero (0), enter the number 0; do not leave the response blank. If the Producer does not know, work with him or her to try to estimate the answer. If the Producer does not have an answer, **use DK for Don't Know or NA for Not Applicable** to indicate why the question was not answered. Please write in the margins to explain unusual circumstances or answers.

Explain to the Producer, again, that their responses are confidential, and that we recognize the importance of agritourism for many farms. The purpose of this questionnaire is to better understand the extent of agritourism in the U.S. and the precautions goat operations take to ensure they have reduced the risks posed by inviting the public onto their farm. It is possible that by answering these questions, Producers will identify areas where they can reduce their risks.

Do not hesitate to write comments directly on the questionnaire. We would rather have a lengthy explanation for a complex or unusual answer than no explanation at all. If explanations are lacking, we might have to ask your Coordinator to ask you to explain the answer or to call the Producer, delaying data entry.

The questions typically refer to management practices that have been used in the 12 months prior to the interview.

Farm ID (6 digits): State FIPS code followed by operation number

State FIPS

Enter the 2-digit FIPS code for the State: AL-01, AK-02, CA-06, CO-08, CT-09, FL-12, GA-13, IN-18, IA-19, KY-21, MI-26, MN-27, MO-29, NY-36, NC-37, OH-39, OK-40, OR-41, PA-42, TN-47, TX-48, VT-50, VA-51, WA-53, WI-55.

Operation Number

4 digit number: ID number assigned by NASS

The 6-digit combination of the State FIPS Code and Operation numbers is referred to as the Farm ID or NAHMS ID. For example, 02 0123 would be a Farm (NAHMS) ID for the State of AK.

NASS will provide an EPAID ID on the consent form. The EPAID ID will contain 3 extra zeroes between the State FIPS and the operation number. For example, 02 000 0123 is an EPAID ID. Please ignore the 3 middle zeroes when you record the Farm (NAHMS) ID

Collector name and phone number

Legibly, enter your name and phone number

Interview Date

Enter the interview date in MM/DD/YY format.

Start Time

Enter the time you arrived at the operation in HH:MM format **using military time.**

All questions, except where noted, refer to the goat operation on site.

ON-SITE AGRITOURISM QUESTIONNAIRE GUIDE

Note: “Goat visitor area” is referred to throughout this questionnaire. This represents any area where animals are available for public visitation.

Item 1: General public invited onto the farm

The term “general public” in Item 1 refers to anyone outside of the Producer’s friends, family, veterinarians, officials/inspectors, or employees. The general public includes individual visitors as well as organized groups, (ie 4-H), whether or not admission is charged. “Invited” means allowed access to the operation. Some farms have uninvited visitors who stop by but are not expected. Do not include unexpected visitors as a reason to select “Yes.”

[If Item 1 = No, do not administer the questionnaire. Proceed to Office Use Only page.]

Item 2: Public access to animals, feed, manure, or farm equipment

“Public” in Item 2 refers to the term “general public” in Item 1. Select “No” if the public did not have access to areas or facilities on the farm that house animals or contain, feed, manure, or farm equipment.

What if...

The operation sells products and visitors only have access to the store, but the animals have fence line contact with areas where the general public has access?

Answer “Yes” and continue with the questionnaire. However, questions referring to the “goat visitor areas” will likely not apply to these types of operations. For any questions that do not seem applicable, please leave a note in the margins explaining that operations specific situation.

[If Item 2 = No, do not administer the questionnaire. Proceed to Office Use Only page]

The “general public” will now be considered “visitors” throughout this questionnaire. This includes individual visitors as well as organized groups, whether or not the visitors are charged admission.

Item 3(a-l): Number of visitor days/month and number of visitors/month.

In the “Number of days” column, list the number days in each month that visitors had access to the facilities on the farm that housed animals or contained, feed, manure, or farm equipment. The number of days cannot be greater than the number of days in each of the months listed. If the number of days is greater than 0, be sure to include the Producer’s best estimate for the “Average number of visitors per month” column. If there were no visitors during a month, write “0” days in the “Number of days” column and “NA” in the “Average number of visitors per month” column.

What if...

The farm sells eggs in all months of the year except for the winter when the hens don't lay eggs? Visitors buy eggs and can pet goats through the fence. Typically about 4 groups stop by each weekend and sometimes there are 2 people while at other times there is only one person per car.

*Answer: For December, January, and February (winter months), enter 0 for column 1 “Number of days” and NA for column 2 “Average number of visitors per month.” Enter 8 days in column 1 for the approximate weekends in the non-winter months. Of the 4 visiting groups, consider that about half have 2 people and half have 1 person per car. That would be 6 people for the 4 groups that stop by each weekend (6 people * 4 weekends = 24 average visitors/month), so enter 24 visitors in column 2 for the non-winter months.*

Item 4: Visitor parking area

Select “Yes” or “No” to indicate whether the operation has a designated parking for visitors away from the regular farm traffic. Regular farm traffic would include farm equipment and other vehicles operated by owners and staff of the operation. This also includes any animal movements on the operation.

[If Item 4 = No, Skip to Item 7]

Item 5: Location of visitor parking area

Select “Yes” or “No” to indicate whether the visitor parking area was downhill from animal facilities, manure, storage areas, or crop fields that were fertilized with animal manure. **This is especially important in areas that receive a lot of rain where runoff water is accessible to visitors.**

Item 6: Visitor parking area fence line

Select “Yes” or “No” to indicate whether the visitor parking area shared a fence line with an animal pen or pasture.

Item 7(a-e): Visitor access to areas

Select “Yes,” “No,” or “NA” to indicate whether the visitors had access to the areas listed in a-e. “NA” should be selected if the operation does not have that area on the farm.

Item 8: Manure runoff

Select “Yes” or “No” to indicate whether runoff from the manure pile or goat pens could enter areas where visitors had access.

Item 9(a-f): Animals available for visitors

For a-f, select “Yes” or “No” if the goat types or other animals were available for public visitation. If the Producer selects “Yes” in a-f, be sure to answer both the second and third columns (whether or not the visitors were allowed to touch the animals and if the visitors were allowed in the animal pens).

What if...

A llama is kept out with the goats, but the llama never comes close enough for people to touch it. People are allowed in the pen with the goats where the llama is located.

Answer: Check “Yes” for column 1, the llama is available for public visitation. Then for the next two columns, mark “No” the visitors are not allowed to touch the llama, and mark “Yes,” the visitors are allowed in the pen where the llama is housed.

Item 10: Dog or cat access to visitor areas

In the “Animal Present” column, select “Yes” or “No” to indicate if dogs or cats have access to the visitor area. These dogs or cats may not be the farm’s animals, but could include stray cats or neighbor dogs, etc. If the Producer selects “Yes,” have the Producer answer whether or not the dog(s) or cat(s) are vaccinated against **rabies**. Check “DK” if the Producer does not know the animal(s) rabies vaccination history.

For Items 11 and 12, please refer to the reference card stapled to the back of the questionnaire.

Item 11: Transition area

Use the reference card attached to the back of this questionnaire help answer this question. Select “Yes” or “No” to indicate if there is a clearly defined transition area between animal and non-animal area(s). The transition area(s) can be physical or conceptual (space with no defined barriers that separates animal areas from non-animal areas) that differentiates where animals are available to visitors and where animals are no longer available to visitors. There could be multiple transition areas, one into and one out of the animal area, or there could be a single transition area into and out of an animal area.

[If Item 11 = No, Skip to Item 13]

Item 12: Signs in transition area

Select “Yes” or “No” to indicate if the transition area(s) included sign(s) that clearly indicate what is expected of visitors in the animal area. For example, “No food or strollers in the barn,” “Wash hands,” etc.

Item 13: Visitor area guide

Select “Yes” or “No” to indicate if each visitor group is escorted through the goat visitor area(s) by a guide.

[If Item 13 = Yes, Skip to Item 16]

Item 14: Employees in visitor areas

Select “Yes” or “No” to indicate if there are employees available throughout the goat visitor area(s) to answer animal questions and direct visitors.

Item 15: Direction flow through the visitor area

Check the box that best describes how visitors typically move through the goat visitor area(s). Be sure to only check one box. If “Other” is selected, specify how the visitors typically move through the goat visitor area(s). Check only one.

What if...

The barn has 2 stations; Station 1 has boar goats and Station 2 has dairy goats. The barn’s entrance and exit is located near Station 1.

Answer: This would be considered two way traffic. In order to exit the barn after visiting Station 2, visitors would need to go back through Station 1. Select “Controlled movement in more than one direction.”

Item 16 (a-f): Farm policies

For a-f, select “Yes” or “No” to indicate if the farm requires each of the policies listed. If “Yes” is selected, complete both columns 2 and 3 to indicate whether there is a sign to communicate the policy and/or if the policy is verbally communicated to the visitors.

Item 17 (a-d): Visitor Risks

For a-d, select “Yes” or “No” to indicate if the farm warns visitors about each of the risk listed. If “Yes” is selected, complete both columns 2 and 3 to indicate whether there is a sign to communicate the warning and/or if the warning is verbally communicated.

Item 18: Visitors feeding goats

Select “Yes” or “No” to indicated if the visitors are allowed to feed the goats.

What if...

Visitors aren’t allowed to feed goats, but on occasion people will pull grass and feed it through the fence?

Answer: If visitors are instructed not to feed the goats, select “No.”

[If Item 18 = No, Skip to Item 21]

Item 19 (a-d): Visitor feeding methods

For a-d, select “Yes” or “No” to indicate if the visitors feed the goats using the methods listed. If “Other” is selected, specify the feeding method used. For Item 20c, note that a one-way feeding tube allows animal food to be placed in the tube which then is accessible to the animal without human-animal contact.

Item 20: Feeding restrictions for high-risk visitors

Select “Yes” or “No” to indicated if high-risk populations are prevented from feeding goats. High-risk populations would include children under 5, adults over the age of 65, and those individuals who are immunosuppressed, including pregnant women.

Item 21: Hand-washing stations

Select “Yes” or “No” to indicate if hand-washing stations are available to visitors when they exit the goat visitor area. **Hand-washing stations must have water and soap available. This does not include hand sanitizer.** Item 25 will ask about hand sanitizer availability.

[If Item 21 = No, Skip to Item 25]

Item 22: Water temperature at hand-washing stations

Select “Yes” or “No” to indicate if the hand-washing stations have both hot and cold water.

Item 23: Hand-washing stations supply maintenance

Enter the frequency (when visitors are present) that the hand-washing station supplies are checked for availability of items such as water, soap, and paper towels. Enter the supply maintenance frequency as the number of times “per day” OR “per week” OR “per month” the supplies are checked for availability.

What if...

The operation only check it once a day when they have visitors on the weekend?

Answer: This question looks for the frequency of checking supplies when visitors are present. Answer once a day since the operation checks daily during visiting days.

Item 24: Hand-washing area inspection checklist

Select “Yes” or “No” to indicate if a checklist is used for employees to know the frequency of inspections for hand-washing areas.

Item 25: Hand sanitizer

Select “Yes” or “No” to indicate if hand sanitizer is available to farm visitors when they exit the goat visitor areas.

Item 26: Cleaning goat visitor areas

Enter the number of times per week goat visitor areas are cleaned of manure and debris.

Item 27: Disinfecting goat visitor areas

Select how often goat visitor areas are routinely disinfected. Disinfectant could be 1:10 bleach dilution, phenolic product (1-Stroke Environ® or SynPhenol-3™), or an accelerated hydrogen peroxide product (intervention™) or Lime. Check only one. If “Other frequency” is selected, specify how frequently the goat visitor areas are routinely disinfected.

Item 28 (a-d): Employee education

For a-d, select “Yes” or “No” to indicate if employees or farm personnel are trained or educated in the topics listed.

Item 29: Protocol to check animals for signs of illness

Select “Yes” or “No” to indicate if there is a protocol to make sure employees check for signs of illness (e.g. diarrhea, fever, coughing) in animals used in public visitation areas.

[If Item 29 = No, Skip to Item 33]

Item 30: Veterinarian involvement in sick animal protocol

Select “Yes” or “No” to indicate if a veterinarian (a private veterinarian or an extension/university veterinarian) was involved in developing the protocol for checking for signs of illness in animals exhibited in the visitation areas.

Item 31(a-b): Ill Animal protocol format

For 31a and 31b, select “Yes” or “No” to indicate the format of the protocol for checking for signs of illness in animals exhibited in visitation areas.

Item 32: Frequency of checks for sick animals

Select the answer that corresponds to the frequency at which the protocol requires animals to be checked for signs of illness. Be sure to only check one box.

Item 33: Pregnant does in goat visitor areas

Select “Yes” or “No” to indicate if pregnant does have been included in the goat visitor areas at any time in the last 12 months.

[If Item 33 = No, SKIP to Item 35]

Item 34: Action for abortion in the goat visitor area

Check the box to indicate what action would usually be taken in the event of a doe abortion in the goat visitor area. Check only one. If you check the first box, “Leave the goats in the visitor area, select “Yes” or “No” for both a and b to indicate if visitors are prevented from contact with aborting does and if there is a barrier to prevent shared air space with aborting does. If you check the second box, “Remove aborting doe from the goat visitor area,” select “Yes” or “No” to indicate if the contaminated bedding is also removed. If the fourth box, “Other” is checked, specify what other action is taken if a doe aborts in the goat visitor area.

Item 35: Action for sick goat in visitor area

Check the box to indicate what action would be taken in the event of a least one goat (adult or kid) becoming ill (e.g. diarrhea) in the goat visitor area with something other than abortion. Check only one. If you check the first box, "Leave kids or goats in the area(s) open to visitors," select "Yes" or "No" to indicate if the visitors are prevented from contact with sick goats. If "Other" is checked, specify what action would be taken if a goat became ill in the goat visitor area.

Item 36: Food or drinks

Select "Yes" or "No" to indicate if food or drinks (concessions) are available for visitors as samples or to purchase anywhere on the operation.

[If Item 36 = No, SKIP to Item 44]

Item 37: Food or drinks and animal contact

Select "Yes" or "No" to indicate if food and/or drinks are served in an area where animals have ever been kept or where there is possible contact with animals.

Item 38: Unpasteurized products

Select "Yes" or "No" to indicate if there are any unpasteurized products served, such as milk, cheese, yogurt, or fruit juice.

Item 39: Hand-washing stations at food service area

Select "Yes" or "No" to indicate if there are hand-washing stations available to farm visitors at the entry to the food service area. **Hand-washing stations must include soap and water.** The presence of hand sanitizers will be asked about in Item 41.

[If item 39 = No, Skip to Item 41]

Item 40(a-c): Hand-washing safety at food service areas

For a-c, select "Yes" or "No" to indicate the specifics listed about the hand washing station(s) at food service areas.

Item 41: Hand sanitizer at food service area

Select "Yes" or "No" to indicate if there is hand sanitizer available to visitors in the food service area.

Item 42: Food or drinks service

Select "Yes" or "No" to indicate if employees who handle the animals also serve food or drinks to visitors.

[If Item 42= No, SKIP to Item 44]

Item 43(a-d): Employee requirements for handling food or drinks

For a-d, select "Yes" or "No" to indicate the requirements employees must take between handling animals and serving food or drink to visitors. This question refers to what is required for employees to do after working with animals prior to handling food.

Item 44(a-b): Insurance

For 44a, select “Yes” or “No” to indicate if the Producer has met with an insurance agent about protecting the farm through polices for an agritourism operation. If 44a is “Yes,” proceed to answer 44b to indicate if the Producer has added polices specific to public visitation on the farm.

[If 44a = “No,” End the Interview and complete the Office Use Only Section]

[This is the last question of the survey, proceed to complete the Office Use Only Section]

OFFICE USE ONLY

This is the conclusion of the On-site Agritourism interview. The purpose of this section is to provide NAHMS with information about the time and people spent completing this questionnaire. Additionally, this section provides a bit more information regarding data quality, which is taken into consideration when entering the data.

Top Box: Operation Information

In the box at the top of the Office Use Only Section enter the State FIPS ID, the operation number, your initials, and the date the interview was completed.

Item 1: Total Interview Time

Enter the total time it took to complete the interview. Be sure to include the time it took to discuss the program and complete the questionnaire. If more than one data collector was present, such as a VMO and AHT, enter the time combined for both people.

Item 2: Status of Questionnaire

Enter the response code that best describes the status of the questionnaire for this operation. If the operation completed the questionnaire enter '99'. If the operation did not complete the questionnaire, choose the response code that best fits the Producer's reason for not completing the questionnaire. If the operation was not eligible to complete the questionnaire enter response code '06'.

Item 3: Respondents Position

Select the code that best describes the respondent's position with the operation. If 'Other' is selected, please succinctly describe that person's role on the operation.

Item 4: Data Quality

Select the option that best described the data quality of this questionnaire. If a large majority of the data is missing or large sections were skipped and records were not consulted, then data quality should be considered poor. If the whole questionnaire was completed and records were consulted, then data quality should be considered good to excellent.

Item 5: Use Records

Select "Yes" or "No" to answer whether or not the respondent used written or computerized records to answer questions in the questionnaire.

Comments:

Please use this section to provide any more insight that you believe will be valuable for NAHMS when reviewing the questionnaire.

Signature:

Please sign that you have reviewed and completed this questionnaire.



Biologics Manual

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COMPONENTS OF BIOLOGICS: OVERVIEW

- 1. Fecal Enteric Pathogen Testing:** VS-collected fecal samples will be tested for *Salmonella*, *E. coli*, *Campylobacter*, *Enterococcus* (sample subset), *Cryptosporidium*, and *Giardia*. Antimicrobial susceptibility testing will be done on *Salmonella* and *E. coli* isolates. Duplicate fecal samples will be collected from up to 25 goats, with samples taken from 5 goats in each of the following goat types (using this priority order): pregnant does, nursing does, preweaned kids, weaned kids, and open does. If one goat type is not present on the operation, collect extra samples from the highest priority goat type, to up to 10 goats in each type. Producer reports containing culture results for *Salmonella*, *E. coli*, *Campylobacter*, *Cryptosporidium*, and *Giardia* will be generated, and sealed reports will be sent to Coordinators for distribution within 3 months of sample collection.
- 2. Fecal Internal Parasite Testing Pre- and Post-deworming:** VS- and Producer-collected fecal samples will be tested for internal parasites using mini-FLOTAC egg counting to determine the fecal egg counts (FECs) of *Trichostrongylus* spp. in pre- and post-deworming samples. The Pre deworming samples will also be cultured differentiate the strongyles. A fecal egg count reduction will be calculated using the pre- and post-deworming FECs to estimate anthelmintic resistance. VS will be responsible for collecting up to 25 pre-deworming fecal samples. The Producer will be responsible for collecting post-deworming fecal samples from the same goats 10-14 days after deworming. Producer reports containing the pre- and post-FECs of *Trichostrongylus* spp. and anthelmintic resistance results will be generated, and sealed reports will be sent to Coordinators for distribution within 3 months of sample collection.
- 3. Blood Scrapie Genetic Testing:** VS collected blood samples from unrelated does and bucks greater than 15 months of age will be tested for the presence of genotypes thought to be resistant to scrapie. Up to 15 blood samples will be collected in purple-top EDTA tubes. VS should sample from no more than 5 unrelated bucks and 5 unrelated does of one breed. If more than one breed is present on the operation, you may submit additional samples from unrelated does or bucks of the other breed(s) for a maximum of 15 samples per farm. Producer reports containing scrapie resistance results will be generated, and sealed reports will be sent to Coordinators for distribution within 3 months of sample collection.
- 4. Blood Serum Banking:** Blood samples from does greater than 15 months of age will be collected by VS, in red top tubes. The serum will be aliquoted into four sets at NVSL. One set will be saved for *Coxiella burnetti* (*C. burnetii*) antibody testing and the other sets will be stored in a serum bank for future research into diseases of concern to the goat industry. **Results will not be returned to the Producer.** Goats that have this blood sample taken can participate in testing for *Mycoplasma ovipneumoniae* (*M. ovi*) (Nasal Swab) and *C. burnetii* (Vaginal Swab).
- 5. Nasal Swab *Mycoplasma ovipneumoniae* Testing:** VS collected nasal samples will be tested for the detection of *M. ovi*. Up to 25 does that had blood serum samples collected can have nasal swabs collected. Producer reports containing results for the detection of *M. ovi* will be generated, and sealed reports will be sent to Coordinators for distribution within 3 months of sample collection.

6. **Vaginal Swab *Coxiella burnetii* Testing:** VS-collected vaginal swabs will be tested for *C. burnetii*, the causative agent of Q fever. Up to 15 does that had blood serum samples collected can have vaginal swabs collected. **These results will not be returned to the Producer.**

BIOLOGICS DESIGN

Fecal Collection: Enteric Pathogen Kit Fecal testing for culture and detection of antimicrobial resistance (AMR)

VS Fecal Collection

- Up to 25 goats sampled
- Collect samples from 5 goats from each of the following goat types (in this order): Pregnant does, nursing does, preweaned kids, weaned kids, and open does. If one goat type is not present on the operation, collect extra samples from the highest priority goat type, to up to 10 goats (ie, if no preweaned kids are present, collect from up to 5 more pregnant does).
- Duplicate samples/goat: At least 6 pellets in 1st bag and 4 pellets in the 2nd bag

Samples shipped to NCSU*

- Samples tested for *Salmonella*, *E.coli*, *Campylobacter*, and *Enterococcus* (subset).
- *Salmonella*, *E.coli*, *Campylobacter* Results reported to participants

Isolates shipped to NVSL

- *Salmonella* and *E. coli* isolates tested for antimicrobial susceptibility
- Results **are not** reported to participants

Samples shipped to ARS Beltsville**

- Samples tested for *Cryptosporidium* and *Giardia*
- Results reported to participants

Isolates shipped to CDC***

- *Cryptosporidium* and *Giardia* positive isolates typed.
- Results **are not** reported to participants

*NCSU: North Carolina State University
 **ARS: Agricultural Research Service
 ***CDC: Center for Disease Control and Prevention

Fecal Collection: Internal Parasite Pre- and Post-Deworming Kits (Parasite Kit A and Kit B) Internal parasite/anthelmintic resistance testing

VS and Producer Fecal Collection

- Sampling Numbers:
 - 1-19 goats on the operation.....Sample all goats
 - 20-49 goats on the operation.....Sample 20 goats
 - 50 or more goats on the operation.....Sample 25 goats
- Pre-deworming sample:
 - 60 days since last dewormer VS-collected if possible
 - 5-6 pellets collected per goat
- Post-deworming sample:
 - 10-14 days post-deworming Producer collected; same goats sampled as the pre-deworming sample
 - 5-6 pellets collected per goat placed in 1 bag

Samples shipped to LSU*

- Sample tests include *Trichostrongylus* spp Fecal Egg Count, Fecal Culture, (FEC) and Fecal Egg Count Reduction Test (FECRT)
- Evaluate resistance to anthelmintic drugs
- Results reported to participants

*LSU: Louisiana State University

Blood and swab collections: Blood/Swab Kit
 Testing for: Scrapie resistance, serum bank (future testing), *Mycoplasma ovipneumoniae*, and *Coxiella burnetii*

VS Blood Purple Top Tube Collection

- Sample from:
 - Goats at least 15 months of age
- Sampling numbers:
 - 15 unrelated goats
 - 5 unrelated bucks and 5 unrelated does from one breed
 - Additional 5 does or bucks of other breed(s)
- Fill one 10ml-purple top tube/goat

VS Blood (Serum): Red Top Tube Collection

- Sample from:
 - Does at least 15 months of age
- Sampling numbers:
 - 1-19 does on the operation.....Sample all does
 - 20-49 does on the operation.....Sample 20 does
 - 50 or more does on the operation.....Sample 25 does
- Fill one 10ml-red top tube/goat

VS Nasal Swab Collection

- Sample from:
 - Same does sampled as red top tube blood samples
- Swab each nostril (4-5 inches deep) with same swab
- Insert swab into broth and break off swab into media

VS Vaginal Swab Collection

- Sample from:
 - Same does sampled as for red-top blood samples, but only up to 15 samples.
- Swab vagina, rotating 180 degrees 4-5 times
- Insert swab into culture tube

Purple-top Blood forwarded to NVSL-DBPL**

- Purple-top tubes tested for genetic resistance to scrapie
- Results reported to participants

Blood/Swab Kit sent to NVSL* Serology

- NVSL forwards purple-top blood, nasal swabs, and vaginal swabs
- Blood (serum) is processed and serum is aliquoted (4 sets) and cataloged for serum bank
- 3 sets of each sample for serum bank
- 1 set to be forwarded to CDC
- Results **are not** reported to participants

Nasal swabs forwarded to ARS-Pullman

- Swab samples tested for *M. ovi*.
- Results reported to participants

Vaginal swabs forwarded to CDC

- Swab samples tested for *C. burnetii*
- Serum set tested for *C. burnetii*
- Results **are not** reported to participants

* NVSL National Veterinary Services Laboratory
 **DBPL: Diagnostic Bacteriology and Pathology Laboratory

SAMPLING PLAN

If an operation has 50 or more goats, the following sampling plan can be used:

Biologic Kit Type	Testing	Sample type	Goat sample number	Goat type	Sample per goat
Enteric Pathogen	Enteric pathogens	Fecal Pellets	*5	Pregnant does	10-12 pellets, divided into 2 bags
Enteric Pathogen	Enteric pathogens	Fecal Pellets	*5	Nursing does	10-12 pellets, divided into 2 bags
Enteric Pathogen	Enteric pathogens	Fecal Pellets	*5	Open does	10-12 pellets, divided into 2 bags
Enteric Pathogen	Enteric pathogens	Fecal Pellets	*5	Preweaned kids	10-12 pellets, divided into 2 bags
Enteric Pathogen	Enteric pathogens	Fecal Pellets	*5	Weaned kids	10-12 pellets, divided into 2 bags
Internal Parasite	Internal parasites	Fecal Pellets	**25	Goats and kids	5-6 pellets, 1 bag
Blood and Swab	Scrapie	Blood	5	Unrelated does of 1 breed (same breed as bucks) >15 months old	Purple top 10ml tube
Blood and Swab	Scrapie	Blood	5	Unrelated bucks of 1 breed (same breed as does) >15 months old	Purple top 10ml tube
Blood and Swab	Scrapie	Blood	5	Unrelated Does or Bucks of other breed(s) >15 months old	Purple top 10ml tube
Blood and Swab	Blood banking	Blood-serum	***25	Does >15 month old	Red top 10ml tube
Blood and Swab	M. ovi	Nasal Swab	***25	Does (same as blood-serum does)	Nasal Swab
Blood and Swab	<i>C. Burnetii</i>	Vaginal Swab	15	Does (subset of blood-serum does)	Vaginal swab

* If one goat type is not present on the operation, collect extra samples from the highest priority goat type, to up to 10 goats of each type. Sample from no more than 25 goats per operation.

**If the operation has fewer than 50 goats, use the following sampling plan for internal parasite fecal samples:

- 1-19 does on the operation Sample all goats
- 20-49 does on the operation Sample 20 goats
- 50 or more does on the operation Sample 25 goats

***If the operation has fewer than 50 does, use the following sampling plan for blood-serum and nasal swab samples:

- 1-19 does on the operation Sample all does
- 20-49 does on the operation Sample 20 does
- 50 or more does on the operation Sample 25 does

KIT ORDERS AND COLLECTION SCHEDULE

KIT ORDERS

NAHMS will place initial kit orders based on State turnover numbers. These initial kits will either be sent to coordinators for distribution or will be sent directly to the VMOs. Additional kit can be requested by email Abby Zehr at Abigail.C.Zehr@aphis.usda.gov.

BIOLOGICS COLLECTION TIMELINE

*VS Collection.....	September 9, 2019 - December 6, 2019
Producer Collection (Fecal Parasite Kit B).....	September 19, 2019 – January 31, 2020

*VMOs need to be present for VS collection. AHTs are welcome to assist VMOs with the collection.

COLLECTION AND SHIPPING DAYS

Samples	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Enteric Pathogen	Collect*	Collect	Collect	Collect**			
		Ship	Ship	Ship			
Parasite: Pre- and Post-deworming	Collect*	Collect	Collect	Collect**			
		Ship	Ship	Ship			
Blood/ Swabs	Collect***	Collect	Collect	Collect	Collect***	Collect***	Collect***
		Ship	Ship	Ship			

*Fecal Samples collected on Sunday must be kept refrigerated until they can be shipped on the following Monday. Fecal samples must be shipped within 24 hours of collection.

Fecal samples collected on Wednesday must be shipped on the **same day. Fecal samples should not be collected Thursday-Saturday.

**Blood and swab samples collected on Sunday or Thursday-Saturday must be kept refrigerated until they can be shipped on the following Monday. Red top tubes should be spun down to separate the serum. These sampling days apply only to operations that do not want fecal samples taken or will have fecal samples collected on a different day (Sunday-Wednesday).



Animal and
 Plant Health
 Inspection
 Service

Veterinary
 Services

NAHMS Goat 2019 Enteric Pathogen Collection Record

Kit contents:

50 small Whirl-Pak® bags, 25 medium Whirl-Pak® bags, lubricant, 2 ice packs, 1 liner bag, 1 medium insulated cooler, and paperwork that includes submission form, labels, and 1 UPS airbill addressed to NCSU in Raleigh, NC. You will need to provide your own gloves. Clean gloves are needed for each animal.

Collection Instructions

Collect fecal samples Sunday-Wednesday. Collect fecal samples from 5 goats from each of the following goat types: pregnant does, nursing does, preweaned kids, weaned kids, and open does. If one goat type is not present on the operation, collect extra samples from the highest priority goat type, to up to 10 goats. **The sample priority order is pregnant does, nursing does, preweaned kids, weaned kids, and open does.**

Fresh samples are a must. Collect from the rectum or immediately off the ground while samples are still warm. Rectal retrieval might not be possible on some goats (e.g. preweaned kids).

Collect AT LEAST 6 fecal pellets from each animal (plus at least 4 additional pellets for a second bag). Place 6 fecal pellets in one small Whirl-Pak® bag and any remaining fecal pellets (at least 4) in a second small Whirl-Pak® bag. On the labels provided, write the goat's name or ID and attach the labels onto to the bags.

Express air from Whirl-Pak® bags, twist down twice, and secure.

Place the 2 **small** Whirl-Pak® bags from each animal in a **medium** Whirl-Pak® bag and secure. Place all samples in 1 liner bag. Cool down samples with ice packs. Keep cool and, if necessary, replace ice packs with frozen ones before shipping.

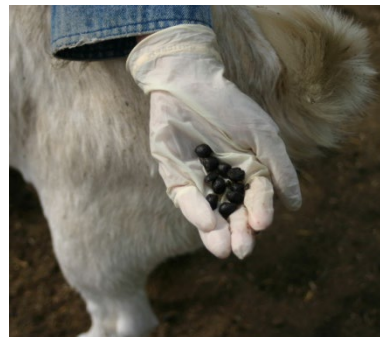
RECTAL RETRIEVAL

To avoid contamination from common organisms on the ground, rectal retrieval is best. Rectal retrieval might not be possible on some goats (e.g. preweaned kids), and fresh off the ground samples are acceptable.



1. Apply lubricating jelly to the glove before entering the rectum.

- Lightly stroking the rectum might encourage defecation.



2. Collect duplicate samples:

- Retrieve a minimum of 6-10 pellets per animal.
- 6 pellets go in one bag and 4 pellets go in the second bag

3. On each label, write the goat's name or ID and attach them on to the small Whirl-Pak® bags. Place the small duplicate bags inside the medium Whirl-Pak® bag.

4. Continue collecting samples from other goats using a clean glove for each animal.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0354. The time required to complete this information collection is estimated to average 2.0 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the information collected.

**NAHMS-460
 Jun 2019**

Collection Form Instructions

Using a **BallPoint Pen**, record samples on the appropriate lines and complete all information requested.

Send the white and yellow copies to the lab. The pink copy stays with the Producer.

Shipping Instructions

Ship on Monday-Wednesday. Keep samples cool and ship within 24 hours of collection. Wednesday collections must be shipped the same day. Do not collect or ship samples Thursday through Saturday.

Place all the samples in the liner bag and tie shut. Place an ice pack on the top and bottom of the samples. Add filler to box if necessary. Close the insulated cooler box and **place the white and yellow collection record on top of the cooler box lid. Leave the pink copy with the Producer.**

Secure the box and ship to NCSU in Raleigh, North Carolina, within 24 hours. Ship only Monday-Wednesday.

NOTE: Remove or black out all extraneous labels on outside of box.

NAHMS ID 6 digits	Primary collector: Name and phone number	Date: mm/dd/yy	Kit # on labels:
---------------------------------	--	------------------------------	-------------------------

1. Sample #	2. Goat name or ID	3. Age (months or years)	4. Goat Type 1= pregnant doe 2=nursing doe 3=preweaned kid 4=weaned kid 5=open doe	5. IF goat type =1 or 2, provide date kidded or expected date to kid (mm/dd/yy)	6. Goat housing 1= housed in individual pens 2=housed with other goats of same type (column 4) 3=housed with other goat types (column 4) 4=housed with other livestock (specify livestock) <i>[List all that apply]</i>	7. Condition(s) in past 30 days 1=diarrhea 2=fever 3=respiratory infection 4=thin 5=other (specify) <i>[List all that apply]</i>	8. Did this animal receive individual antimicrobial therapy in the last 30 days? (Yes/No) <i>[If No, SKIP column 9.]</i>	9. Which individual antibiotic(s) were given in the last 30 days? <i>[See reference card and enter code]</i>
1		__ mo OR __ yr						
2		__ mo OR __ yr						
3		__ mo OR __ yr						
4		__ mo OR __ yr						
5		__ mo OR __ yr						
6		__ mo OR __ yr						
7		__ mo OR __ yr						
8		__ mo OR __ yr						
9		__ mo OR __ yr						
10		__ mo OR __ yr						

1. Sample #	2. Goat name or ID	3. Age (months or years)	4. Goat Type 1= pregnant doe 2=nursing doe 3=preweaned kid 4=weaned kid 5=open doe	5. IF goat type =1 or 2, provide date kidded or expected date to kid. (mm/dd/yy)	6. Goat housing 1= housed in individual pens 2=housed with other goats of same type (column 4) 3=housed with other goat types (column 4) 4=housed with other livestock (specify livestock) <i>[list all that apply]</i>	7. Condition(s) in past 30 days 1=diarrhea 2=fever 3=respiratory infection 4=thin 5=other (specify) <i>[list all that apply]</i>	8. Did this animal receive individual antimicrobial therapy in the last 30 days? (Yes/No) [If No, SKIP column 9.]	9. Which individual antibiotic(s) were given in the last 30 days? <i>[see reference card and enter code]</i>
11		___ mo OR ___ yr						
12		___ mo OR ___ yr						
13		___ mo OR ___ yr						
14		___ mo OR ___ yr						
15		___ mo OR ___ yr						
16		___ mo OR ___ yr						
17		___ mo OR ___ yr						
18		___ mo OR ___ yr						
19		___ mo OR ___ yr						
20		___ mo OR ___ yr						

1. Sample #	2. Goat name or ID	3. Age (months or years)	4. Goat Type 1= pregnant doe 2=nursing doe 3=preweaned kid 4=weaned kid 5=open doe	5. IF goat type =1 or 2, provide date kidded or expected date to kid. (mm/dd/yy)	6. Goat housing 1= housed in individual pens 2=housed with other goats of same type (column 4) 3=housed with other goat types (column 4) 4=housed with other livestock (specify livestock) <i>[list all that apply]</i>	7. Condition(s) in past 30 days 1=diarrhea 2=fever 3=respiratory infection 4=thin 5=other (specify) <i>[list all that apply]</i>	8. Did this animal receive individual antimicrobial therapy in the last 30 days? (Yes/No) [If No, SKIP column 9.]	9. Which individual antibiotic(s) were given in the last 30 days? <i>[see reference card and enter code]</i>
21		___ mo OR ___ yr						
22		___ mo OR ___ yr						
23		___ mo OR ___ yr						
24		___ mo OR ___ yr						
25		___ mo OR ___ yr						

Were samples: ₁ stored overnight OR ₂ shipped the same day as collected?

How many people in each category helped with the collection of the individual fecal samples?

_____ Fed VMO _____ Fed AHT _____ State government _____ Producer _____ Other, specify:

Total sample time _____ hours

ENTERIC PATHOGEN ITEMS OF NOTE:

1. The term “goat type” is used in the collection record in columns 4 and 6. For this study, use this term to place the goats sampled into the following categories:
 - a. Pregnant doe
 - b. Nursing doe
 - c. Preweaned kid
 - d. Weaned kid
 - e. Open doe
2. Collection schedule: Unlike previous NAHMS studies, we have chosen not to include a collection schedule for enteric pathogen collection. However, the laboratory does have a maximum number of samples it can accept per week. Please schedule your farm visit and sample collection throughout the study period so we don’t overwhelm the laboratory with samples. If the laboratory does reach capacity, a collection schedule may need to be implemented. NAHMS will communicate with the Coordinators throughout the sampling period to discuss the scheduling options, if needed.
3. The sampling priority order for the goats was designed by the laboratory to best achieve our biological goals. If one goat type is not present on the operation, collect extra samples from the highest priority goat type, to up to 10 goats. Sample from no more than 25 goats per operation. Please be sure to sample goats in this order:
 - a. Pregnant does- sample 5 goats
 - b. Nursing does- sample 5 goats
 - c. Preweaned kids- sample to 5 goats
 - d. Weaned kids- sample 5 goats
 - e. Open does- sample 5 goats
4. Collect 10 pellets per animal; six pellets will go in one small bag and 4 pellets will go in the second bag. If a goat is short on fecal pellets, collect at least 6 pellets for the 1st bag. After labeling and sealing both small bags, place the set of duplicate bags in a medium size bag and seal. This will keep the set together for the lab. If you only collected one small bag because the goat was short on fecal pellets, place the single bag inside the medium size bag and seal.
5. Use a clean glove and lubricant for each animal. Rectal retrieval is best, but ground samples are acceptable if necessary (e.g. preweaned goats).
6. Please use the antibiotics reference card included with the enteric pathogen kit paperwork to fill out the column about the antimicrobial therapy found on the collection record. The reference cards can be found in the reference card tab in this manual. This reference card is the same as the one used to answer the VS questionnaire antibiotics questions.
7. A producer report with results for *Salmonella*, *E. coli*, *Campylobacter*, *Cryptosporidium*, and *Giardia* will be sent to Coordinators for distribution within 3 months of collection. Since only a subset of samples will be tested for *Enterococcus*, this microbe will not be include in the report. An example of the enteric pathogen producer report is on the following pages.

National Animal Health Monitoring System (NAHMS) Enteric Microbe Report

Date of report: 11/1/2019

Enteric Microbe test results for NAHMS ID: 999999

Date of sample collection: 10/1/2019

Dear participant,

Thank you for participating in the enteric microbe testing portion of the NAHMS Goat 2019 Study. This report contains testing results for *Salmonella*, *E. coli*, *Campylobacter*, *Giardia*, and *Cryptosporidium* performed on goats at your operation. Please consider sharing these results with your veterinarian.

If you have questions about the accuracy of your results, please contact Dr. Alyson Wiedenheft, the NAHMS biologics coordinator at (970) 494-7290 or Alyson.M.Wiedenheft@aphis.usda.gov.

Background on *Salmonella*, *E. coli*, *Campylobacter*, *Giardia*, and *Cryptosporidium*:

The bacteria *Salmonella*, *E. coli*, and *Campylobacter* and the protozoa *Giardia* and *Cryptosporidium* all can inhabit the intestinal tract of goats and can be shed in their feces. Goats that are shedding these enteric microbes can have clinical signs such as diarrhea or fever, or can appear totally healthy. *E. coli* are normal (commensal) flora of the intestines of humans and animals, and while many subtypes are harmless, others, like *E. coli* O157:H7, can cause disease by producing a toxin called Shiga toxin.

When enteric microbes are shed in goats' feces, they can cause infections in other animals and humans and can contaminate the environment. Thus, it is important to take precautions when working with goats that are known to be shedding these enteric microbes.

Overview of Enteric Microbe Testing Performed and Results Reported:

Fecal samples collected from goats on your operation were tested for the presence of *Salmonella*, Shiga toxin-producing *E. coli* (STEC), *Campylobacter*, *Giardia*, and *Cryptosporidium*.

The presence ("Positive") or absence ("Negative") of the microbes in the samples are reported for each goat sampled. For some animals, there may not be enough fecal samples to complete all the testing. If an insufficient amount of fecal sample was submitted, the column will read "Insufficient."

Enteric Microbe RESULTS:

Individual Goat Results:

Sample #	Goat name/ID	Salmonella	STEC <i>E. coli</i>	Campylobacter	Giardia	Cryptosporidium
1	Patty	Negative	Negative	Negative	Negative	Insufficient
2	Alice	Negative	Positive	Negative	Negative	Negative
3	Jackie	Negative	Negative	Negative	Negative	Negative
4	Willa	Negative	Negative	Negative	Negative	Negative
5	Jane	Negative	Negative	Negative	Negative	Negative
6	Bonnie	Negative	Negative	Negative	Negative	Negative
7	Samantha	Negative	Positive	Negative	Negative	Negative
8	Cammie	Negative	Negative	Negative	Negative	Negative
9	Jill	Positive	Positive	Negative	Negative	Negative
10	Suzy	Negative	Negative	Negative	Negative	Negative
11	Mel	Negative	Negative	Negative	Negative	Negative
12	678	Negative	Negative	Negative	Negative	Negative
13	679	Negative	Negative	Negative	Negative	Negative
14	680	Negative	Negative	Negative	Negative	Negative
15	681	Negative	Negative	Negative	Negative	Negative
16	Jasper	Negative	Negative	Negative	Negative	Negative
17	Katie	Negative	Negative	Negative	Negative	Negative
18	Fannie	Negative	Negative	Negative	Negative	Negative
19	Helen	Negative	Positive	Negative	Negative	Negative
20	Lemon	Negative	Negative	Negative	Negative	Negative
21	Rascal	Negative	Positive	Negative	Negative	Negative
22	Trisha	Negative	Negative	Negative	Negative	Negative
23	Vicki	Negative	Negative	Negative	Negative	Negative
24	Wendy	Negative	Negative	Negative	Negative	Negative
25	Apple	Negative	Negative	Negative	Negative	Negative

Enteric Microbe Results Interpretation

One or more of the goats tested from your operation were positive for *Salmonella*, Shiga toxin-producing *E. coli* (STEC), *Campylobacter*, *Giardia*, and/or *Cryptosporidium* in their feces on the day sampled. You may want to share these results with your veterinarian.

INTERNAL PARASITE TESTING

PRE-DEWORMING COLLECTION INSTRUCTIONS AND RECORDS



Animal and Plant
Health Inspection
Service

Veterinary
Services

NAHMS Goat 2019 Pre-deworming (Kit A) Collection Record

National Animal Health
Monitoring System

2150 Centre Ave, Bldg B
Fort Collins, CO 80526

Form Approved
OMB Number 0579-0354
Approval expires:

Kit contents:

25 small Whirl-Pak® bags, lubricant, 2 ice packs, 1 liner bag, 1 medium insulated cooler, and paperwork that includes submission form, labels, and 1 UPS airbill addressed to LSU in Baton Rouge, LA. You will need to provide you own gloves. Use clean gloves for each goat.

Collection Instructions

1. **Collect samples Sunday-Wednesday. Sample goats that have not been dewormed in the previous 60 days.** We recommend deworming animals at time of collection.
2. The number of samples collected is based on the number of resident goats on the operation. Goats sampled should represent the goats and kids on the operation in terms of age, sex, breed, and use. **We recommend including goats that the owner believes are likely to have worms.** Use the following chart for determining sample numbers:

Number of Goats on an Operation	Sample Number
1 to 19 goats	Sample all goats
20 to 49 goats	Sample 20 goats
50 or more goats	Sample 25 goats



3. From each goat, collect 5-6 fecal pellets. Collect samples from the rectum when possible. Rectal retrieval might not be possible on some goats (e.g. preweaned kids), and fresh off the ground samples are acceptable. On each label, write the goat's name or ID and attach the label to the sample bag.
4. Samples must be fresh (not petrified). Do not exclude diarrhea samples.
5. If the sample cannot be associated with a specific goat, write NO INDIV GOAT in column for name on ID, but complete as much of the other information as possible. However, only identified goats with a pre-deworming sample submission will be tested post-deworming.
6. If deworming at time of collection, **please include the used dewormer tube, label, or insert in the sample shipping box that is sent to the lab.**
7. Cool samples down as soon as possible (in a refrigerator or cooler).

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0354. The time required to complete this information collection is estimated to average 2.0 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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RECTAL RETRIEVAL

To avoid contamination from common organisms on the ground, rectal retrieval is best. Rectal retrieval might not be possible on some goats (e.g. preweaned kids), and fresh off the ground samples are acceptable.

	<p>1. Apply lubricating jelly to the glove before entering the rectum.</p> <p>➤ Lightly stroking the rectum might encourage defecation.</p>		<p>2. Retrieve a minimum of 5-6 pellets per animal.</p>
<p>3. Place pellets in a Whirl-Pak® bag. On each label, write the goat's name or ID and attach it on to the bag.</p>			
<p>4. Continue collecting samples from other goats using a clean glove for each.</p>			

Collection Record Form Instructions

1. **Using a ballpoint pen**, record samples on the appropriate lines and complete all information requested.
2. Send the original white collection form to the lab and leave the yellow copy with the producer. **Place the producer's yellow collection form copy in the post-deworming kit** so that the producer can reference this copy and match IDs when they collect the post-deworming samples.

Shipping Instructions

1. **Ship on Monday-Wednesday.** Keep samples cool and ship within 24 hours of collection. Wednesday collections must be shipped the same day. Do not collect or ship samples Thursday through Saturday.
2. Place all the samples in the liner bag and tie shut. Place an ice pack on the top and bottom of the samples. Add filler to box if necessary. Close the insulated cooler box and **place the white collection record on top of the cooler box lid. The yellow copy stays with the producer.**
3. Secure the box and ship to LSU, in Baton Rouge, LA, within 24 hours. A shipping airbill is provided in the kit. **Ship only Monday-Wednesday.**

NOTE: Remove or black out all extraneous labels on outside of box.

NAHMS ID #: _____

Fecal Kit A #: _____

Collection date: _____

Primary collector name/phone: _____

Number of goats on operation: _____

Total sampling time: _____

Sample #	Goat name or ID	Age (months or years)	Goat Type 1=pregnant doe 2=nursing doe 3=preweaned kid 4=weaned kid 5=open doe 6=buck 7=wether	If goat type= 1 or 2 provide date kidded or expected to kid	Breed [See codes below]	FAMACHA score	# of times dewormed in last 12 months [Not including today]	Dewormer used at last deworming prior to this study [Enter codes from reference card]	Dewormer used at time of this fecal collection [Enter codes from reference card]	Body condition score 1=thin 2=normal 3=fat
1		___ mo OR ___ yr								
2		___ mo OR ___ yr								
3		___ mo OR ___ yr								
4		___ mo OR ___ yr								
5		___ mo OR ___ yr								
6		___ mo OR ___ yr								
7		___ mo OR ___ yr								
8		___ mo OR ___ yr								
9		___ mo OR ___ yr								
10		___ mo OR ___ yr								

Breed Codes:

1=Alpine

4=Cashmere

7=LaMancha

10=Oberhasli

13=Saanen

16=Spanish

2=Angora

5=Fainting goats

8=Nigerian dwarf

11=Pygmy

14=Sable

17=Toggenburg

3=Boer

6=Kiko

9=Nubian

12=Pygora

15=Savannah

18=Crossbred (specify _____)

19=Other (specify _____)

NAHMS ID #: _____

Fecal Kit A #: _____

Collection date: _____

Primary collector name/phone: _____

Number of goats on operation: _____

Sample #	Goat name or ID	Age (months or years)	Goat Type 1=pregnant doe 2=nursing doe 3=preweaned kid 4=weaned kid 5=open doe 6=buck 7=wether	If goat type= 1 or 2 provide date kidded or expected to kid	Breed [See codes below]	FAMACHA score	# of times dewormed in last 12 months [Not including today]	Dewormer used at last deworming prior to this study [Enter codes from reference card]	Dewormer used at time of this fecal collection [Enter codes from reference card]	Body condition score 1=thin 2=normal 3=fat
11		___ mo OR ___ yr								
12		___ mo OR ___ yr								
13		___ mo OR ___ yr								
14		___ mo OR ___ yr								
15		___ mo OR ___ yr								
16		___ mo OR ___ yr								
17		___ mo OR ___ yr								
18		___ mo OR ___ yr								
19		___ mo OR ___ yr								
20		___ mo OR ___ yr								

Breed Codes:

1=Alpine

4=Cashmere

7=LaMancha

10=Oberhasli

13=Saanen

16=Spanish

2=Angora

5=Fainting goats

8=Nigerian dwarf

11=Pygmy

14=Sable

17=Toggenburg

3=Boer

6=Kiko

9=Nubian

12=Pygora

15=Savannah

18=Crossbred (specify _____)

19=Other (specify _____)

NAHMS ID #: _____

Fecal Kit A #: _____

Collection date: _____

Primary collector name/phone: _____

Number of goats on operation: _____

Sample #	Goat name or ID	Age (months or years)	Goat Type 1=pregnant doe 2=nursing doe 3=preweaned kid 4=weaned kid 5=open doe 6=buck 7=wether	If goat type= 1 or 2 provide date kidded or expected to kid	Breed [See codes below]	FAMACHA score	# of times dewormed in last 12 months [Not including today]	Dewormer used at last deworming prior to this study [Enter codes from reference card]	Dewormer used at time of this fecal collection [Enter codes from reference card]	Body condition score 1=thin 2=normal 3=fat
Continue collection if there are 50 or more does and kids on the operation.										
21		___ mo OR ___ yr								
22		___ mo OR ___ yr								
23		___ mo OR ___ yr								
24		___ mo OR ___ yr								
25		___ mo OR ___ yr								

Breed Codes:

- | | | | | | |
|----------|------------------|------------------|--------------|-------------|------------------------------|
| 1=Alpine | 4=Cashmere | 7=LaMancha | 10=Oberhasli | 13=Saanen | 16=Spanish |
| 2=Angora | 5=Fainting goats | 8=Nigerian dwarf | 11=Pygmy | 14=Sable | 17=Toggenburg |
| 3=Boer | 6=Kiko | 9=Nubian | 12=Pygora | 15=Savannah | 18=Crossbred (specify _____) |
| | | | | | 19=Other (specify _____) |

POST-DEWORMING COLLECTION INSTRUCTIONS AND RECORDS



Animal and Plant Health Inspection Service

Veterinary Services

**NAHMS Goat 2019
Post-deworming (Kit B)
Collection Record**

National Animal Health Monitoring System

2150 Centre Ave, Bldg B
Fort Collins, CO 80526



Form Approved
OMB Number 0579-0354
Approval expires:

Kit contents:

25 gloves, 25 small Whirl-Pak® bags, lubricant, 2 ice packs, 1 liner bag, 1 medium insulated cooler, and paperwork that includes submission form, labels, and UPS airbill addressed to LSU in Baton Rouge, LA.

Collection Instructions

- 1. Collect the post-deworming fecal samples Sunday-Wednesday, 10-14 days after deworming.** Select the same goats that were sampled previously, which are listed on the pre-deworming form. From each goat, collect 5-6 fecal pellets. Use clean gloves for each goat. Collect samples from the rectum when possible. Be sure to use lubricant and be careful not to damage the rectum. **Rectal retrieval might not be possible on some goats (e.g. preweaned kids), and fresh off the ground samples are acceptable.** On each label, write the goat's name or ID, and attach the label to the sample bag.
2. Samples must be fresh (not petrified). Do not exclude diarrhea samples. Goats sampled should match the goats on the pre-deworming form.
3. Cool samples down as soon as possible (in a refrigerator or cooler).

RECTAL RETRIEVAL		
To avoid contamination from common organisms on the ground, rectal retrieval is best. Rectal retrieval might not be possible on some goats (e.g. preweaned kids), and fresh off the ground samples are acceptable.		
	<p>1. Apply lubricating jelly to the glove before entering the rectum.</p> <p>➤ Lightly stroking the rectum might encourage defecation.</p>	
<p>2. Retrieve a minimum of 5-6 pellets per animal.</p>		
<p>3. Place pellets in a Whirl-Pak® bag. On each label, write the goat's name or ID and attach it on to the bag.</p> <p>4. Continue collecting samples from other goats using a clean glove for each.</p>		

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0354. The time required to complete this information collection is estimated to average 2.0 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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1. **Using a ballpoint pen**, record samples on the appropriate lines and complete all information requested. Refer to the yellow pre-deworming collection form, and list the goat name or ID in the same order.
2. Send the white copy to the lab. The yellow copy stays with you, the producer, for your records.

Shipping Instructions

1. **Ship on Monday-Wednesday.** Keep samples cool (refrigerate samples) and ship within 24 hours of collection. Wednesday collections must be shipped the same day.
2. Place all the samples in the liner bag and tie shut. Place an ice pack on the top and bottom of the samples. Add filler to box if necessary. Close the insulated cooler box and **place the white collection record on top of the cooler box lid. The yellow copy stays with you, the Producer.**
3. Secure the box and ship to LSU, in Baton Rouge, LA, within 24 hours. A shipping airbill is provided in the kit. Ship only Monday-Wednesday.

NOTE: Remove or black out all extraneous labels on outside of box.

NAHMS ID #: _____

Fecal Kit B #: _____

Collection date: _____

Sample # (same as Kit A)	Goat name or ID (same as Kit A)	Age (months or years)	Goat Type 1= pregnant doe 2=nursing doe 3=preweaned kid 4=weaned kid 5=open doe 6=buck 7=wether	Conditions in past 30 days 1=Diarrhea 2=Weight loss 3=Poor hair coat 4=Anemic (based on FAMACHA) 5=Other (specify) <i>[list all that apply]</i>	Grazing History* 1= Previous 30 days, grazing at all times 2= Previous 30 days, grazing periodically 3=No grazing in previous 30 days, but grazing in prior 12 months 4= No grazing in previous 12 months	Browsing History** 1= Previous 30 days, browsing at all times 2= Previous 30 days, browsing periodically 3=No browsing in previous 30 days, but browsing in prior 12 months 4= No browsing in previous 12 months
1		___ mo OR ___ yr				
2		___ mo OR ___ yr				
3		___ mo OR ___ yr				
4		___ mo OR ___ yr				
5		___ mo OR ___ yr				
6		___ mo OR ___ yr				
7		___ mo OR ___ yr				
8		___ mo OR ___ yr				
9		___ mo OR ___ yr				
10		___ mo OR ___ yr				

*Grazing refers to feeding on grass or other low vegetation

**Browsing refers to feeding on leaves, soft shoots, or fruits of high-growing, generally woody, plants such as shrubs

NAHMS ID #: _____

Fecal Kit B #: _____

Collection date: _____

Sample # (same as Kit A)	Goat name or ID (same as Kit A)	Age (months or years)	Goat Type 1= pregnant doe 2=nursing doe 3=preweaned kid 4=weaned kid 5=open doe 6=buck 7=wether	Conditions in past 30 days 1=Diarrhea 2=Weight loss 3=Poor hair coat 4=Anemic (based on FAMACHA) 5=Other (specify) <i>[list all that apply]</i>	Grazing History* 1= Previous 30 days, grazing at all times 2= Previous 30 days, grazing periodically 3=No grazing in previous 30 days, but grazing in prior 12 months 4= No grazing in previous 12 months	Browsing History** 1= Previous 30 days, browsing at all times 2= Previous 30 days, browsing periodically 3=No browsing in previous 30 days, but browsing in prior 12 months 4= No browsing in previous 12 months
11		___ mo OR ___ yr				
12		___ mo OR ___ yr				
13		___ mo OR ___ yr				
14		___ mo OR ___ yr				
15		___ mo OR ___ yr				
16		___ mo OR ___ yr				
17		___ mo OR ___ yr				
18		___ mo OR ___ yr				
19		___ mo OR ___ yr				
20		___ mo OR ___ yr				

*Grazing refers to feeding on grass or other low vegetation

**Browsing refers to feeding on leaves, soft shoots, or fruits of high-growing, generally woody, plants such as shrubs

NAHMS ID #: _____

Fecal Kit B #: _____

Collection date: _____

Sample # (same as Kit A)	Goat name or ID (same as Kit A)	Age (months or years)	Goat Type 1= pregnant doe 2=nursing doe 3=preweaned kid 4=weaned kid 5=open doe 6=buck 7=wether	Conditions in past 30 days 1=Diarrhea 2=Weight loss 3=Poor hair coat 4=Anemic (based on FAMACHA) 5=Other (specify) <i>[list all that apply]</i>	Grazing History* 1= Previous 30 days, grazing at all times 2= Previous 30 days, grazing periodically 3=No grazing in previous 30 days, but grazing in prior 12 months 4= No grazing in previous 12 months	Browsing History** 1= Previous 30 days, browsing at all times 2= Previous 30 days, browsing periodically 3=No browsing in previous 30 days, but browsing in prior 12 months 4= No browsing in previous 12 months
21		___ mo OR ___ yr				
22		___ mo OR ___ yr				
23		___ mo OR ___ yr				
24		___ mo OR ___ yr				
25		___ mo OR ___ yr				

*Grazing refers to feeding on grass or other low vegetation

**Browsing refers to feeding on leaves, soft shoots, or fruits of high-growing, generally woody, plants such as shrubs

INTERNAL PARASITE ITEMS OF NOTE

1. Use a clean glove and lubricant for each animal. Rectal retrieval is best, but ground samples are acceptable if necessary (e.g. preweaned goats). The lubricant used in Kit A should be placed in Kit B after sampling.
2. Deworming should occur after the VS collection of Kit A samples, or in the next 24 hours after collection. We recommend VS help the producers deworm animals at the time of collection to ensure that deworming is done correctly. Please write any notes on the collection record if there are any issues with deworming.
3. Although Kit A is a VS-collected kit, there are exceptions to this rule. Producers can collect Kit A samples if:
 - a. The goats have recently been dewormed (dewormed in the previous 60 days).
 - b. The producer does not want to deworm during or soon after the VS Visit.
 - c. The goats do not have enough fecal samples available for sample submission.
4. If Kit A will be collected by the producer at a later time, VS still has the following responsibilities:
 - a. Open Kit A and Kit B.
 - b. Go over the collection and shipping instructions in Kit A. The instructions in Kit A and Kit B are similar.
 - c. On the Kit A Collection Record, fill out the NAHMS ID, kit number, and number of goats on the operation. In blank that says "primary collector name/phone number", please write "PRODUCER COLLECTED." **The Producer should not write their name or phone number in this blank.** If the producer is not trained in FAMACHA scoring, please write N/A in this column on collection record.
 - d. On the Kit B Collection Record, fill out the NAHMS ID and kit number. Instruct the Producer that the goat name/ID column and sample number needs to match the Kit A collection record.
 - e. Instruct the Producer that Kit A collection must be completed by December 6th, 2019.
 - f. Instruct the Producer to deworm after Kit A collection. Deworming can occur immediately after the collection of Kit A samples, or within the next 24 hours after collection.
 - g. Instruct the producer to collect Kit B fecal samples 10-14 days after deworming.
5. The Producer will need to Collect Kit B samples. To help with Kit B collection, VS should:
 - a. Open Kit B for the Producer.
 - b. Go over the collection and shipping instructions in Kit B.
 - c. Fill out the NAHMS ID, kit number, and goat name/ID (based on Kit A samples)

- d. Instruct the Producer to collect Kit B fecal samples 10-14 days after deworming.
6. FAMACHA[®] card training: In order to fill out the “FAMACHA[®] Score” column in the Kit A Collection Record, the collector needs to be trained in FAMACHA[®] scoring using a FAMACHA[®] card. FAMACHA[®] cards are available to those veterinarians and animals health care professionals that watch the training video provided during the VS biologics training session.
 - a. The 30 minute video called “How and Why to do FAMACHA[®] Scoring” can be found at the following links: <https://web.uri.edu/sheepngoat/video/>
 - b. A PDF on FAMACHA[®] certifications (“Why and How To Do FAMACHA[®] Scoring”) can be found in this section and a link to the pdf can be found here: https://web.uri.edu/sheepngoat/files/FAMACHA-Scoring_Final2.pdf
 - c. If the collector for Kit A does not have a FAMACHA[®] card training at the time of collection, please write in N/A for the FAMACHA[®] score column on the Kit A Collection Record.
7. Please use the Anthelmintic Reference Card, found with the Kit A paperwork, to record the “dewormers used” on the Kit A Collection Record. The reference cards can be found in the reference card tab in this manual. This reference card is the same as the one used to answer the VS questionnaire anthelmintic questions. In addition to filling out the “dewormer used” columns in the collection record, please include the empty tube or label of the anthelmintic with the Kit A samples, if possible.
8. A Producer report with the fecal egg counts (FECs) and the fecal egg count reduction test (FECRT) percentage will be sent to Coordinators for distribution within 3 months of collection. An example of the Internal Parasite Report can be found in this section.

Why and How To Do FAMACHA® Scoring

Use of the FAMACHA® system allows small ruminant producers to make deworming decisions based on an estimate of the the level of anemia in sheep and goats associated with barber pole worm (*Haemonchus contortus*) infection.



Figure 1. Barber pole worm (*Haemonchus contortus*)

The barber pole worm (Figure 1) is the most economically important parasite affecting sheep and goat production on pasture and the most common cause of anemia during the grazing season in most of the U.S. It has a small “tooth” that lacerates the animal’s stomach (abomasum) wall, and it feeds on the blood that is released. This can result in anemia, (reduction below normal in the number of red cells in the blood) and in severe cases, death.

The FAMACHA® card, developed in South Africa, was introduced to the U.S. by the American Consortium for Small Ruminant Parasite Control (www.acsrpc.org). It is a tool that matches the color of the eye mucous membranes of small ruminants with a laminated color chart showing 5 color categories that correspond to different levels of anemia. Category 1 represents “not anemic” with category 5 representing “severely anemic.”

The FAMACHA® system uses the scores determined with the card to identify and selectively deworm sheep and goats with anemia. Selective deworming minimizes drug use and slows the development of drug resistant GIN parasites. It can also aid in selective breeding decisions by identifying those animals that are most susceptible to barber pole worm infection.

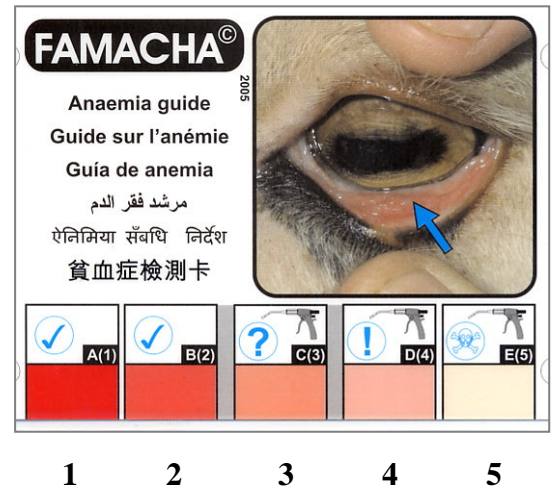


Figure 2. FAMACHA® card. www.acsrpc.org

Precautions

- FAMACHA® is only applicable where the barber pole worm (*H. contortus*) is the main GIN parasite causing clinical disease.
- Redness of the ocular membranes can be caused by eye disease, environmental irritants, and systemic disease. Though they are uncommon, these conditions can mask anemia.
- Other causes of anemia exist, but they are uncommon compared to barber pole worm infection during the grazing season.
- An elevated FAMACHA® score is not the only reason to deworm an animal. GIN can play a role in other signs of disease including:
 - Diarrhea
 - Bottle jaw
 - Poor body condition
 - Dull hair coat or abnormal fleece
 - Exercise or heat intolerance

General guidelines for using the FAMACHA® card

- Always check eyes outside in direct, natural light. If options are limited due to handling needs, an area of the barn where natural light enters directly in the morning or afternoon (such as a door or window) is acceptable. When scoring, there does not need to be bright sunshine, but it should be performed in full daylight.
- Always use the card when scoring your animals and do not try to score from memory of the colors.

How to examine your animals with the FAMACHA® card:

- Proper FAMACHA® scoring technique includes exposing the lower eye mucous membranes and matching them to the equivalent color on the FAMACHA® card (Figure 3). **COVER, PUSH, PULL, POP** is a 4-step process describing the proper technique.

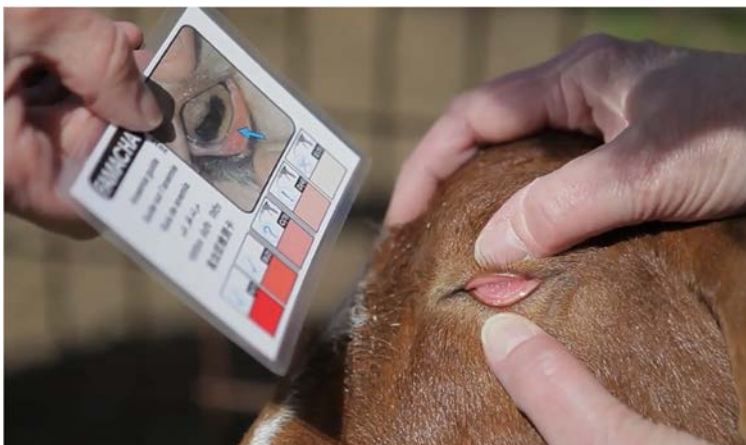


Figure 3. FAMACHA® scoring a goat. The lower eye mucous membranes are exposed and compared to the colors on the FAMACHA® card to estimate the level of anemia. Use the COVER, PUSH, PULL, POP! method described above.

1. **COVER** the eye by rolling the upper eyelid down over the eyeball.
2. **PUSH** down on the eyeball. An easy way to tell if you are using enough pressure is that you should see that the eyelashes of the upper eyelid are curling up over your thumb.
3. **PULL** down the lower eyelid.
4. **POP!** The mucous membranes will pop into view. Make sure that you do not score the inner surface of the lower eyelid, but rather score the bed of mucous membranes.

- Match the color of the pinkest portion of the mucous membranes to the FAMACHA® card.
- Make sure that you do not shade the eye with your body.
- Be quick – make your decision and move on. The longer the mucous membranes are exposed, the redder they get. Go with your first impression.
- Repeat the process and score the other eye because it may be different. Use the higher score and err on the side of caution.
- There are no half numbers!

Interpreting the FAMACHA[®] results

Animals in FAMACHA[®] category 4 & 5:

- Always deworm sheep & goats in categories 4 & 5.

Animals in FAMACHA[®] category 1 & 2:

- Don't deworm 1's & 2's unless there is other evidence of parasitic disease such as the presence of diarrhea, poor body condition, dull hair coat or abnormal fleece.

Animals in FAMACHA[®] category 3:

- Consider deworming if:
 - >10% of flock/herd scores a 4 or 5.
 - Lambs and kids (usually recommended).
 - Pregnant or lactating ewes/does (usually recommended).
 - Animals in poor body condition.
 - Concerned about an animal's general health and well being, for example, if an animal is in poor body condition, or suffering from another disease.
 - Always err on the side of caution.

How often do I monitor?

If <10% of herd/flock scores in categories 4 or 5:

- Every 2 weeks during the grazing season. Susceptible animals can go downhill rapidly when worm numbers are high (warm, moist conditions / summer months).
- During spring and fall, when temperatures are cooler and the barber pole worm may be less active, this interval could be extended to 3-4 weeks.
- During winter the interval can be extended, but remember that ewes/does may develop problems with the barber pole worm when lambing/kidding coincides with arrested parasites resuming development, and they should be checked more often.



If >10% of flock/herd scores in categories 4 or 5:

- Recheck weekly
- Treat all 3's
- Change pastures (if possible)

Anemic animals recover most quickly if they are removed from heavily infected pasture. If animals are dewormed and turned back out on the same pasture that first led to disease, they may take an extended period to return to a score of 1 or 2 since they will continue to be re-infected by the larva on pasture. It is okay to re-treat those animals based on FAMACHA[®] score.

Maintaining the FAMACHA[®] card

- Store in dark place when not in use because the card will fade with time.
- Replace card after 12 to 24 months of use (varies depending upon use and storage conditions).
- Keep a spare card in a location protected from light (compare with the card in use).
- Training is required to gain the initial card. Contact your veterinarian, your local Cooperative Extension small ruminant specialist or the American Consortium for Small Ruminant Parasite Control (www.acsrpc.org) for more information including available workshops. As part of a Northeast SARE grant, the University of Rhode Island is offering an online training program for FAMACHA[®] certification. Visit our website for more information and detailed instructions, <http://web.uri.edu/sheepngoat/famacha/>. Replacement cards can be obtained through the University of Georgia (famacha@uga.edu), your veterinarian or your FAMACHA[®] trainer.

Recordkeeping

Keep records of FAMACHA[®] scores and other parasite monitoring performed on your animals each year. FAMACHA[®] cards come with a recordkeeping template, or view our project recordkeeping sheets available on our website.

For more information, including our demonstration video on FAMACHA[®] scoring and our online training program for FAMACHA[®] certification, visit our website:


<http://web.uri.edu/sheepngoat>. The video can also be viewed directly from the URI YouTube channel page (UniversityOfRI): <https://www.youtube.com/watch?v=I5rcuvVG56Q>.

Program contact: Katherine Petersson, Ph.D., Associate Professor
Dept. Fisheries, Animal & Veterinary Sciences, University of Rhode Island
Phone: 401-874-2951; Email: kpetersson@uri.edu

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 VirginiaTech

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National Animal Health Monitoring System (NAHMS) Internal Parasite Report

Date of report: 11/1/2019

Parasite test results for NAHMS ID: 99999

Dear Participant,

Thank you for participating in the parasite portion of the NAHMS Goat 2019 Study. This report contains the results of the internal parasite testing performed on the goats at your operation. Consider sharing these results with your veterinarian so that they can assist you in determining if you a need to modify your deworming protocols.

If you have questions about the accuracy of your results, please contact Dr. Alyson Wiedenheft, the NAHMS biologics coordinator, at (970) 494-7290 or Alyson.M.Wiedenheft@aphis.usda.gov.

Overview of Parasite Testing:

Control of internal parasite infection in goats is considered an essential aspect of routine management. Internal parasite control is based both on good husbandry and the use of anthelmintics. The first step in an effective deworming program is to determine the level of infection and the type of internal parasites on the goat operation. Trichostrongyles (a family of stomach worms, including *Haemonchus contortus*- the “Barber Pole Worm”) are considered the most important internal parasites in goats industry. Specifically, *Haemonchus contortus* infections are especially dangerous to goats.

Fecal Egg Count (FEC), Egg Culture, and Interpretation:

These results describe a baseline (pre-deworming) and post-treatment (post-deworming) fecal egg count (FEC) for trichostrongyles reported as eggs per gram (EPG) at the animal level. An FEC is calculated for each individual animal, and is used to estimate the parasitic load. For this study, a low FEC is considered to be less than 300 EPG, a moderate FEC is between 300-1000 EPG, and a high FEC is greater than 1000 EPG. The pre-deworming samples were also cultured to differentiate the trichostrongyles eggs.

Fecal Egg Count Reduction Test (FECRT) and Interpretation:

A reliable method for determining the efficacy of anthelmintics on internal worm parasites in goats is the fecal egg count reduction test (FECRT). The FECRT given in this report is calculated at the operation level by comparing the average of all the goats on the operation with a moderate or high **pre-deworming** FEC and with their average post-deworming FEC. The calculated FECRT percentage reflects the effectiveness of the dewormer used at your operation.

TRICHOSTRONGYLE RESULTS:

Individual Goats Results:

Sample #	Goat name/ID	Baseline FEC (EPG)	Baseline Culture	Post treatment FEC (EPG)	Dewormer used
1	Patty	0	NA	0	Ivermectin Paste 1.87%
2	Alice	5	<i>Haemonchus contortus</i>	0	Ivermectin Paste 1.87%
3	Jackie	1000	<i>Haemonchus contortus</i>	0	Ivermectin Paste 1.87%
4	Willa	2490	<i>Haemonchus contortus</i>	0	Ivermectin Paste 1.87%
5	Jane	1435	<i>Haemonchus contortus</i>	0	Ivermectin Paste 1.87%
6	Bonnie	5	<i>Haemonchus contortus</i>	0	Ivermectin Paste 1.87%
7	Samantha	0	NA	0	Ivermectin Paste 1.87%
8	Cammie	0	NA	0	Ivermectin Paste 1.87%
9	Jill	0	NA	0	Ivermectin Paste 1.87%
10	Suzy	5	<i>Haemonchus contortus</i>	0	Ivermectin Paste 1.87%
11	Mel	2004	NA	0	Ivermectin Paste 1.87%
12	Jasper	0	NA	0	Ivermectin Paste 1.87%
13	Katie	1035	<i>Haemonchus contortus</i>	0	Ivermectin Paste 1.87%
14	Fannie	5	<i>Haemonchus contortus</i>	0	Ivermectin Paste 1.87%
15	Helen	0	NA	0	Ivermectin Paste 1.87%
16	Lemon	0	NA	0	Ivermectin Paste 1.87%
17	Rascal	0	NA	0	Ivermectin Paste 1.87%
18	Trisha	5	<i>Haemonchus contortus</i>	0	Ivermectin Paste 1.87%
19	Vicki	10	<i>Haemonchus contortus</i>	0	Ivermectin Paste 1.87%
20	Wendy	0	NA	0	Ivermectin Paste 1.87%
21	Apple	0	NA	0	Ivermectin Paste 1.87%

Operation Results:

Pre- and post-deworming FEC results were used to calculate your operation level FECRT percentage.

Trichostrongyles FECRT: 100%

FECRT Interpretation Deworming using the product listed was **effective** in reducing trichostrongyles egg counts based on fecal egg count reduction test results across all the tested goats from which samples were submitted.



BLOOD AND SWAB SAMPLES COLLECTION INSTRUCTIONS AND RECORDS

NAHMS Goat 2019 Blood & Swab Sample Collection Record

National Animal Health
Monitoring System

2150 Centre Ave, Bldg B
Fort Collins, CO 80526

Form Approved
OMB Number 0579-0354
Approval expires:

Animal and
Plant Health
Inspection
Service

Veterinary
Services

Sample Collection Overview

The blood samples collected in the purple-top tubes will undergo genetic testing to look for genes that are known to be resistant to scrapie. Scrapie resistance results will be sent to all participants. The samples collected in the red-top serum separator tubes will be used to create a goat serum bank. The serum bank will be used for research that will benefit the goat industry. Does that have blood samples collected in the red-top tubes can also have nasal and vaginal swab samples collected. Nasal swabs will be tested for the bacterium *Mycoplasma ovipneumoniae* and these results will be sent to all participants. Vaginal swabs will be tested for the bacterium that causes Q fever, *Coxiella burnetii*. These results will not be returned to participants.

Samples can be collected any day of the week, but samples can only be shipped Monday-Wednesday. Keep samples cool in a refrigerator until the next shipping day. If possible, serum samples should be spun down once clotted.

Kit Contents

This kit contains supplies for blood collection, nasal swabs, and vaginal swabs. Please remove any extra or unused supplies before shipping samples.

- 15, 10-ml purple-top tubes in a tube divider box
- 25, 10-ml red-top, serum separator tubes in a tube divider box
- 40, 18-gauge vacutainer needles
- 3 vacutainer holders
- 25 nasal swabs and 25 Mycoplasma enrichment broth tubes in a tube divider box
- 15 vaginal swabs and culture tubes (Culture Swab™)
- 4 liner bags, 2 ice packs, 3 absorbent pads
- Sarstedt marker for tube labeling
- Ballpoint pen for filling out the Collection Record
- 1 medium insulated box
- Paperwork including Collection Record, labels, and 1 UPS airbill addressed to NVSL

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0354. The time required to complete this information collection is estimated to average 2.5 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

**NAHMS-458
JUN 2019**

Blood Collection Instructions

Purple-Top Tubes

Sample a maximum of 15 goats that are at least 15 months of age. Does can be pregnant if the Producer is comfortable with the sampling. Take samples from no more than 5 unrelated bucks and 5 unrelated does of 1 breed. If more than one breed is present on the operation, you may submit additional samples from unrelated does or bucks of the other breed(s) for a maximum of 15 samples per farm.

Use the preprinted labels numbered 1a through 15a to label the purple-top tube samples. Using the **Sarstedt marker, write the goat name/ID on the label**. Fill 1 purple-top tube per goat sampled using the provided needles and vacutainer holder. If you prefer syringes or different length needle, you will need to provide your own.

Please place tubes in the tube divider boxes in numeric order.

Red-Top Tubes (Serum Separator Tubes)

Collect from does that are at least 15 months of age. Does can be pregnant if the Producer is comfortable with the sampling. **Sample a maximum of 25 does:**

Number of Does on an Operation	Sample Number
1 to 19 does	Sample all does
20 to 49 does	Sample 20 does
50 or more does	Sample 25 does

Use one set of the preprinted triplicate labels numbered 1b through 25b to label the red-top tube samples. The red-top blood tubes, the nasal tubes, and the vaginal tubes will all use the labels numbered 1b through 25b and the sample number will be the same for each. You may sample does that were previously sampled for a purple-top tube. Using the **Sarstedt marker, write the goat name/ID on the label**.

Fill 1 red-top tube per doe using the provided needles and holder. If you prefer syringes or different length needle, you will need to provide your own.

The lab will appreciate it if you can let the samples in the red-top tubes clot and then spin them down. Please place tubes in the tube divider boxes in numeric order.

Nasal Swab Instructions

Collect one nasal swab sample from each doe that had a red-top tube collected. The sample numbers and goats need to match the samples from the red-top blood tubes.

Insert the swab **gently** and deep into each nostril. Swabs can go 4 to 5 inches deep. Insert the same swab into each nostril. Discard the swab and use a new one if the swab is dropped on the ground.

Place the swab in the broth, break off the swab at the notch so that it can be left in the media. **Secure the tube lid** ensuring that it is on straight to prevent any leaking. Use the preprinted triplicate labels numbered 1b through 25b to label each broth enrichment tube. Using the **Sarstedt marker, write the Goat name/ID on the label**. Be sure the sample numbers and goat names on the labels match sample numbers and goat names on the red-top blood tubes.

Please place the broth tube samples (with secured lids) in the tube divider box in numeric order.

Vaginal Swab Instructions

Collect one vaginal swab from **up to 15 does** that had a red-top blood tube collected. The sample numbers and goat names need to match the samples on the red-top blood tubes.

Insert the dry cotton swab gently into the vagina by spreading the vulvar lips. The swab wand should be inserted at least half way into the vagina and rotated 180 degrees 4 to 5 times. Next, insert the swab into the culture tube and secure the lid. Use the preprinted triplicate labels numbered 1b through 15b to label each culture tube. Using the **Sarstedt marker, write the goat name/ID on the label**. Be sure the sample numbers and goat names on the labels match sample numbers and goat names on the red-top blood tubes.

Place the culture tube samples in a liner bag and tie shut.

Collection Record Form Instructions

Match the label number on the tube to the appropriate lines on the collection form. **Using a ballpoint pen**, complete all information requested. **Send the white and yellow copy to the lab and leave the pink copy with the Producer.**

Shipping

Keep blood and swab samples cool.

Place both **blood boxes**, one absorbent pad, and both ice packs inside a liner bag, express air and tie shut.

Place the **nasal broth boxed samples** inside a liner bag with one absorbent pad, express air, and tie shut. Double bag the nasal broth by placing the samples in a second liner bag, and tie shut.

Place the bag of **vaginal culture tubes** inside a second liner bag (double bagging the samples) with one absorbent pad, express air, and tie shut.

Place all the bagged samples inside the insulated shipping box.

Place the white and yellow copy of the collection record on top of the insulated box. Leave the pink copy with the producer.

Secure box and ship to NVSL within 24 hours. **Ship only Monday-Wednesday.**

NOTE: Remove or black out all extraneous labels on outside of box.

Blood (Purple-Top Tubes) Collection Record

Sample a maximum of 15 goats that are at least 15 months of age. Take samples from no more than 5 unrelated bucks and 5 unrelated does. If more than one breed is present on the operation, you may submit additional samples from unrelated does or bucks of the other breed(s).

NAHMS ID: 6 digits	Date: mm/dd/yy	Kit #: Printed on labels	Total doe inventory TODAY:	Total buck inventory TODAY:
----------------------------------	------------------------------	--	-----------------------------------	------------------------------------

Label number	Goat ID	Age (years)	Goat Gender 1=Doe 2= Buck	Breed <i>[See breed codes below]</i>
1a				
2a				
3a				
4a				
5a				
6a				
7a				
8a				
9a				
10a				
Continue collection if more than one breed is present on the operation.				
11a				
12a				
13a				
14a				
15a				

Breed Codes:

- | | | | |
|------------------|------------------|-------------|------------------------------|
| 1=Alpine | 6=Kiko | 11=Pygmy | 16=Spanish |
| 2=Angora | 7=LaMancha | 12=Pygora | 17=Toggenburg |
| 3=Boer | 8=Nigerian dwarf | 13=Saanen | 18=Crossbred (specify _____) |
| 4=Cashmere | 9=Nubian | 14=Sable | 19=Other (specify _____) |
| 5=Fainting goats | 10=Oberhasli | 15=Savannah | |

Serum (Red-Top Tubes) and Swab Collection Record

For does at least 15 months of age:

NAHMS ID: 6 digits	Date: mm/dd/yy	Kit #: Printed on labels	Total doe inventory TODAY:
----------------------------------	------------------------------	--	-----------------------------------

Label number	Doe ID	Age (years)	Breed <i>[See breed codes below]</i>	Doe status 1=Nursing 2=Pregnant 3=Open	Clinical History: 1=Abortion in previous 12 months 2=Runny nose 3=Thin 4=Diarrhea 5=Other <i>[List all that apply]</i>	Comment or specify other clinical history	Nasal Swab Collected? Place a checkmark for YES	Vaginal Swab Collected? <i>[Only 15 samples]</i> Place a checkmark for YES
1b								
2b								
3b								
4b								
5b								
6b								
7b								
8b								
9b								
10b								
11b								
12b								
13b								
14b								
15b								

Breed Codes:

- | | | | |
|------------------|------------------|-------------|------------------------------|
| 1=Alpine | 6=Kiko | 11=Pygmy | 16=Spanish |
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| 4=Cashmere | 9=Nubian | 14=Sable | 19=Other (specify _____) |
| 5=Fainting goats | 10=Oberhasli | 15=Savannah | |

BLOOD AND SWAB COLLECTION ITEMS OF NOTE

1. Please review the sampling guidelines for each biologic sample for this kit. Also, please follow the collection instructions provided in the collection record for each biologic sample collected. Here is a summary of those sampling instructions:
 - a. Blood (purple-top) collection
 - Sample from 5 unrelated does and 5 unrelated bucks at least 15 months of age of one breed
 - If more than one breed is present, an additional 5 samples can be taken from unrelated does and bucks at least 15 months of age from other breeds.
 - Maximum 15 samples/operation
 - b. Serum (red-top) collection
 - Sample from does at least 15 months of age
 - If fewer than 20 does on the operation, sample all does on the operation
 - If 20-49 does on the operation, sample 20 does on the operation
 - If 50 or more does on the operation, sample 25 does on the operation
 - c. Nasal Swab
 - Sample from same does as serum (red-top) collection
 - d. Vaginal swab
 - Sample from a **subset** of the does that had serum (red-top) collection
 - Sample from only 15 does
2. Only does that have serum (red-top) collection will have the option to have the nasal or vaginal swab collection.
3. Since culture is highly insensitive for *M. ovipneumoniae*, detection of the bacterium will be performed by isolating total genomic DNA from the sample and then using PCR and sequencing, or qPCR.
4. *Mycoplasma ovipneumoniae* (*M. ovipneumoniae*, *M. ovi*) can be a sensitive topic for Producers. In the western U.S., bighorn sheep populations have experienced severe and drastic population losses (up to 75-95%) due to outbreaks of pneumonia, in some cases following interaction with domestic sheep and goats. Currently, these outbreaks are being attributed to the bacterium *M. ovi*. Some producers may be aware of this bacterium and may be hesitant to collect samples because they do not want to be labeled as having *M. ovi* on their operation. Before collecting nasal samples please be sure to assure the producer their samples and results will be kept confidential.

5. Producer reports with *Mycoplasma ovipneumoniae* results and scrapie resistance testing results will be sent to Coordinators in a sealed envelope for distribution within 3 months of collection. Examples of the *Mycoplasma ovipneumoniae* report and the Scrapie Genetic Resistance Report can be found on the following pages.

National Animal Health Monitoring System (NAHMS) *Mycoplasma ovipneumoniae* Report

Date of report: 11/1/2019

Mycoplasma ovipneumoniae test results for NAHMS ID: 99999

Date of sample collection: 10/1/2019

Dear participant,

Thank you for participating in the *Mycoplasma ovipneumoniae* (*M. ovipneumoniae*) testing portion of the NAHMS Goat 2019 Study. This report contains results of the *M. ovipneumoniae* testing performed on goats at your operation. Please consider sharing these results with your veterinarian.

If you have questions about the accuracy of your results, please contact Dr. Alyson Wiedenheft, the NAHMS biologics coordinator, at (970) 494-7290 or Alyson.M.Wiedenheft@aphis.usda.gov.

Background on *Mycoplasma ovipneumoniae*:

M. ovipneumoniae is a bacterium that colonizes the respiratory tract. By itself, *M. ovipneumoniae* is not a deadly bacterium. However, in some hosts, it will proliferate along the respiratory tract (nasal cavity, trachea, and lungs), resulting in compromised clearance of mucus and other bacteria that may be drawn into the lungs with inhalation. These opportunistic pathogens can lead to clinical pneumonia, and even death, when clearance is impaired.

***Mycoplasma ovipneumoniae* Testing and Results:**

Nasal swabs were used to collect samples from does on your operation. These samples were tested for *M. ovipneumoniae*. Testing identifies the presence of the bacterium's DNA, which is interpreted to mean the bacterium is present. The results of the testing are listed on the following page. A positive result indicates that *M. ovipneumoniae* was detected, but it does not mean your doe has pneumonia, nor does it mean she will develop pneumonia. It is common for clinically healthy goats to carry bacteria and viruses that can produce pneumonia. Pneumonia is a complicated, multifactorial process that involves the host and the environment, as well as a number of pathogens. Pathogens that can cause pneumonia, such as *M. ovipneumoniae* and other bacteria and viruses, can be carried by clinically healthy goats.

Individual Goat *Mycoplasma ovipneumoniae* Test Results:

Sample #	Goats name/ID	<i>Mycoplasma ovipneumoniae</i>
1	Patty	Negative
2	Alice	Negative
3	Jackie	Negative
4	Willa	Negative
5	Jane	Negative
6	Bonnie	Negative
7	Samantha	Negative
8	Cammie	Negative
9	Jill	Negative
10	Suzy	Negative
11	Mel	Negative
12	Jasper	Negative
13	Katie	Negative
14	Fannie	Negative
15	Helen	Negative
16	Lemon	Negative
17	Rascal	Negative
18	Trisha	Negative
19	Vicki	Negative
20	Wendy	Negative

Mycoplasma ovipneumoniae Results Interpretation:

None of the does tested on your operation tested positive for *Mycoplasma ovipneumoniae*.

National Animal Health Monitoring System (NAHMS) Scrapie Genetic Resistance Report

Date of report: 11/1/2019

Scrapie genetic resistance test results for NAHMS ID: 999999

Date of sample collection: 10/1/2019

Dear participant,

Thank you for participating in the scrapie genetic resistance testing portion of the NAHMS Goat 2019 Study. This report contains results of the scrapie genetic resistance testing performed on goats at your operation. Please consider sharing these results with your veterinarian.

If you have questions about the accuracy of your results, please contact Dr. Alyson Wiedenheft, the NAHMS biologics coordinator, at (970) 494-7290 or Alyson.M.Wiedenheft@aphis.usda.gov.

Background on Scrapie:

Classical scrapie is an infectious degenerative disease affecting the central nervous system of sheep and goats and is believed to always be fatal. Scrapie is caused by an infection with a disease-causing agent known as a prion. Prions form abnormal protein deposits in the central nervous system, which disrupt the normal nervous system structure resulting in progressive neurological degeneration. The earliest clinical sign of classical scrapie is often subtle changes in behavior, which may be followed by scratching against fixed objects, loss of coordination, weight loss despite retention of appetite, biting of own feet and limbs, lip smacking, or gait abnormalities or a combination of these. Loss of coordination is the most common sign reported.

Scrapie can be transmitted from infected does during or following kidding when herd mates or newborn kids ingest the infected placenta, birthing fluids or contaminated bedding. Once infected, the animal remains infected for life.

Genetic Resistance Testing and Reported Results:

Blood samples collected from goats on your operation were tested for the presence of the two alleles (alternative forms of the same gene) that appear to make goats more resistant to classical scrapie, Serine-146 (S146) and Lysine-222 (K222). S146 is the protective variant of the normal gene Asparagine-146 (N146). K222 is the protective variant of the normal gene Glutamine-222 (Q222). Evidence shows that goats with a single copy of either of these protective alleles have been resistant to scrapie infection during natural disease outbreaks and also direct challenge experiments but not fully resistant similar to what is seen with QR sheep. Scrapie resistance alleles in goats have not been formally recognized in the United States, so genetic testing in goats is not considered official testing for scrapie program purposes.

Genetic Resistance Interpretation Key:

Genetic Resistance Interpretation	146	222
No resistance to classical scrapie	NN	QQ
One copy of protective variant K222, increased resistance to classical scrapie	NN	QK
Two copies of protective variant K222, increased resistance to classical scrapie	NN	KK
One copy of protective variant S146, increased resistance to classical scrapie	NS	QQ
Two copies of S146 protective variant. Increased resistance to classical scrapie	SS	QQ
One copy each of S146 and K222 protective variants. Increased resistance to classical scrapie	NS	QK

Individual Goat Scrapie Genetic Resistance Test Results:

Sample #	Goat name/ID	146	222
1	Patty	NN	QQ
2	Alice	NN	QQ
3	Jackie	NS	QQ
4	Willa	SS	QQ
5	Jane	NN	KK

Interpretation of results

One or more of the goats tested on your operation were found to have either of the two alleles, S146 and K222, that appear to make goats resistant to classical scrapie. This genotyping information can be used to select breeding stock to increase the frequency of the beneficial alleles within the herd. Breeding for resistance could help prevent classical scrapie transmission.



Reference Cards

CONTENTS

Goat 2019 Vaccine Reference Card	3
Goat 2019 Anthelmintic Reference Card	7
Goat 2019 Antibiotic Reference Card	9

GOAT 2019 VACCINE REFERENCE CARD

CLOSTRIDIAL VACCINES			
Code	Trade Name	Manufacturer	Protect Against
Clostridium Perfringens Types C&D Only Vaccines			
1	BAR VAC CD	Boehringer Ingelheim	Clostridium Perfringens Types C & D Toxoid
2	CALIBER 3	Boehringer Ingelheim	Clostridium Perfringens Types C&D
3	CLOSTRI SHIELD BCD	Elanco	Clostridium Perfringens Type C & D Bacterin
4	Clostridium Perfringens Types C&D	Professional Biological	Clostridium Perfringens Types C&D Toxoid
5	ESSENTIAL 3	Colorado Serum	Clostridium Perfringens Types C&D Toxoid
6	ULTRABAC CD	Zoetis	Clostridium Perfringens Types C & D Bacterin
7	ULTRACHOICE CD	Zoetis	Clostridium Perfringens Types C & D Bacterin
8	Vision CD with SPUR	Intervet/ Merck	Clostridium Perfringens Types C&D Bacterin
Tetanus Vaccines (Not including 7/8 Ways)			
9	BAR VAC CD/T	Boehringer Ingelheim	Clostridium Perfringens Types C & D - Tetanus Toxoid
10	Clostridium Perfringens Types C&D- Tetanus Toxoid	Professional Biological	Clostridium Perfringens Types C&D- Tetanus Toxoid
11	ESSENTIAL 3+T	Colorado Serum	Clostridium Perfringens Types C & D- Tetanus
12	GoatVac C.D.-T	Durvet	Clostridium Perfringens Types C & D- Tetanus
13	Tetanus Toxoid (Concentrated or Unconcentrated)	Colorado Serum Company/ Professional Biological	Tetanus Toxoid
14	Vision CD-T with SPUR	Intervet/ Merck	Clostridium Perfringens Types C&D- Tetani Bacterin
7- and 8-Way Vaccines			
15	BAR VAC 7	Boehringer Ingelheim	Clostridium Chauvoei-Septicum-Novyi-Sordellii-Perfringens Types C & D Bacterin
16	BAR VAC 8	Boehringer Ingelheim	Clostridium Chauvoei- Septicum- Haemolyticum- Novyi-Sordellii- Perfringens Types C & D Bacterin- Toxoid
17	CALIBER 7	Boehringer Ingelheim	Clostridium Chauvoei- Septicum- Novyi-Sordellii- Perfringens C&D bacterin
18	CLOSTRI SHIELD 7	Elanco (Farm Animal)	Clostridium Chauvoei- Septicum- Novyi-Sordellii- Perfringens C&D bacterin
19	Covexin 8	Intervet/ Merck	Clostridium Chauvoei-Septicum-Haemolyticum-Novyi-Tetani-Perfringens Type C&D Bacterin
20	ESSENTIAL 1	Colorado Serum	Clostridium Haemolyticum Bacterin
21	ESSENTIAL 2	Colorado Serum	Clostridium Chauvoei-Septicum bacterin
22	ESSENTIAL 2+P	Colorado Serum	Clostridium Chauvoei- Speticum- Mannheimia Haemolytica- Pasteurella Multocida Bacterin
23	ULTRABAC 7	Zoetis	Clostridium Chauvoei- Septicum- Novyi- Sordelli- Perfringens Types C&D Bacterin
24	ULTRABAC 8	Zoetis	Clostridium Chauvoei- septicum- haemolyticum- novyi- sordellii- perfringens types C & D Bacterin
25	ULTRACHOICE 7	Zoetis	Clostridium Chauvoei- Septicum- Novyi- Sordelli- Perfringens Types C&D Bacterin
26	ULTRACHOICE 8	Zoetis	Clostridium Chauvoei- septicum- haemolyticum- novyi- sordellii- perfringens types C & D Bacterin
27	Vision 7 with SPUR	Intervet/ Merck	Clostridium Chauvoei- septicum-novyi- sordellii- perfringens types C & D Bacterin toxoid
28	Vision 8 with SPUR	Intervet/ Merck	Clostridium Chauvoei-septicum- haemolyticum- novyi- sordellii- perfringens types c & d
29	Other Clostridial Vaccine (Specify Trade Name: _____)		
99	I vaccinate for Clostridial diseases but don't know product		

RESPIRATORY VACCINES			
Code	Trade Name	Manufacturer	Protect Against
30	Mannheimia Haemolytica- Pasteurella Multocida Bacterin	Colorado Serum	Mannheimia Haemolytica- Pasteurella Multocida Bacterin
22	ESSENTIAL 2+P	Colorado Serum	Clostridium Chauvoei- Speticum- Mannheimia Haemolytica- Pasteurella Multocida Bacterin
31	NASALGEN IP	Intervet/ Merck	Bovine Rhinotracheitis- Parainfluenza 3 Vaccine
32	Pyramid 5	Boehringer Ingelheim	Bovine Rhinotracheitis- Parainfluenza 3 Vaccine- Respiratory Syncytial Virus Vaccine
33	Bovi- Sheild Gold One Shot	Zoetis	Bovine Rhinotracheitis- Virus Diarrhea-Parainfluenza3- Respiratory Syncytial Virus Vaccine
34	One Shot Cattle Vaccine	Zoetis	Mannheimia Haemolytica Toxoid
35	Presponse HM	Boehringer Ingelheim	Pasteurella Multocida Bacterial Extract- Mannheimia Haemolytica Toxoid
36	Presponse SQ	Boehringer Ingelheim	Mannheimia Haemolytica Toxoid
37	Once PMH IN	Intervet/ Merck	Mannheimia Haemolytica- Pasteurella Multocida Vaccine
38	Super Poly- Bac B Somnus	Texas Vet Lab	Haemophilus Somnus- Pasteurella Haemolytica- Multocida- Salmonella Typhimurium Bacterin- Toxoid
39	Super Poly-Bac B + IBRk & BVDk	Texas Vet Lab	Bovine Rhinotracheitis- Virus Diarrhea, Killed virus- Haemophilus somnus- Mannheimia Haemolytica- Pasterurella Multocida Bacterin- Toxoid
40	Pulmo-Guard PHM-1	AgriLabs	Mannheimia Haemolytica- Pasteurella Multocida Bacterin- Toxoid
41	Nuplura PH	Elanco (Farm Animal)	Mannheimia Haemolytica Bacterial Extract- Toxoid
42	Other Respiratory Vaccine (Specify Trade Name: _____)		
99	I vaccinate for respiratoryl diseases but don't know product		

MASTITIS VACCINES			
Code	Trade Name	Manufacturer	Protect Against
43	LYSIGIN	Boehringer Ingelheim	Staphylococcus Aureus Bacterin
44	ScourGuard 4K	Zoetis	Bovine Rotavirus-Coronavirus vaccine (killed virus) Escherichia Coli Bacterin
45	ScourGuard 4KC	Zoetis	Bovine Rotavirus- Coronavirus Vaccine (Killed Virus) Clostridium Perfringens Type C- Escherichia Coli Bacterin (Toxoid)
46	GUARDIAN	Intervet/ Merck	Bovine Rotavirus-Coronavirus vaccine, killed virus, Clostridium Perfringens types C & D- Escherichia Coli Bacterin
47	Other Mastitis Vaccine (Specify Trade Name: _____)		
99	I vaccinate for mastitis but don't know product		

OTHER VACCINES			
Code	Trade Name	Manufacturer	Protect Against
48	Ovine Ecthyma Vaccine	Colorado Serum	Ovine Ecthyma Vaccine
49	Bluetongue Vaccine	Colorado Serum	Bluetongue Vaccine Type 10
50	Anthrax Spore Vaccine	Colorado Serum	Anthrax Spore Vaccine
51	IMRAB 3	Merial	Rabies Vaccine
52	IMRAB LARGE ANIMAL	Merial	Rabies Vaccine
53	DEFENSOR 3	Zoetis	Rabies Vaccine
54	NOBIVAC 3- RABIES	Intervet/ Merck	Rabies Vaccine
55	NOVIBAC 3- RABIES CA	Intervet/ Merck	Rabies Vaccine
56	CASE-BAC	Colorado Serum	Corynebacterium Pseudotuberculosis Bacterin- Caseous Lymphadenitis
57	CASEOUS D-T	Colorado Serum	Clostridium Tetani- Perfringens Type D- Corynebacterium Pseudotuberculosis Bacterin, Caseous Lymphadenitis
58	Other Vaccine (Specify Trade Name: _____)		

ANTI- ABORTION VACCINES			
Code	Trade Name	Manufacturer	Protect Against
59	Campylobacter Fetus- Jejuni Bacterin	Hygieia	Campylobacter Fetus- Jejuni Bacterin
60	Campylobacter Fetus- Jejuni Bacterin- Ovine	Colorado Serum	Campylobacter Fetus- Jejuni Bacterin- Ovine
61	Chlamydia Psittaci Bacterin	Colorado Serum	Chlamydia Psittaci Bacterin
62	VIBRIN	Zoetis	Campylobacter Fetus Bacterin
63	LEPTO SHIELD 5	Elanco (Farm Animal)	Leptospira Canicola-Grippotyphosa-Hardjo-Icterohaemorrhagiae-Pomona Bacterin
64	BOVIB-LEPTO 5	Colorado Serum	Campylobacter Fetus-Leptospira Canicola- Grippotyphosa-Hardjo-Icterohaemorrhagiae- Pomona Bacterin
65	LEPTO-5	Colorado Serum	Leptospira Canicola- Grippotyphosa-Hardjo-Icterohaemorrhagiae-Pomona Bacterin
66	LEPTOFORM-5	Zoetis	Leptospira Canicola- Grippotyphosa-Hardjo-Icterohaemorrhagiae-Pomona Bacterin
67	SPIROVAC	Zoetis	Leptospira Hardjo Bacterin
68	SPIROVAC L5	Zoetis	Leptospira Canicola- Grippotyphosa-Hardjo-Icterohaemorrhagiae-Pomona Bacterin
69	SPIROVAC VL5	Zoetis	Campylobacter fetus- Leptospira Canicola- Grippotyphosa-Hardjo- Icterohaemorrhagiae- Pomona Bacterin
70	CITADEL VL5	Boehringer Ingelheim	Campylobacter fetus- Leptospira Canicola-Grippotyphosa-Hardjo-Icterohaemorrhagiae-Pomona Bacterin
71	Other Anti-Abortion Vaccine (Specify Trade Name: _____)		
99	I vaccinate for abortion diseases but don't know product		

GOAT 2019 ANTHELMINTIC REFERENCE CARD

POUR-ON ANTHELMINTICS			
Code	Trade Name	Active Ingredient	Class
1	Agri-Mectin	Ivermectin	Avermectins
2	Bimectin	Ivermectin	Avermectins
3	Privermectin	Ivermectin	Avermectins
4	Promectin B	Ivermectin	Avermectins
5	Dectomax	Doramectin	Avermectins
6	Eprinex	Eprinomectin	Avermectins
7	Ivermax (BM)	Ivermectin	Avermectins
8	Ivermax (FP)	Ivermectin	Avermectins
9	Ivermax (NB)	Ivermectin	Avermectins
10	Iver-On	Ivermectin	Avermectins
11	Noromectin	Ivermectin	Avermectins
12	Cydectin	Moxidectin	Avermectins

ORAL USE ANTHELMINTICS (Drench, Tube)			
Code	Trade Name	Active Ingredient	Class
13	Safe-Guard Dewormer for Goats	Fenbendazole	Benzimidazoles
14	Safe- Guard Dewormer for Beef & Dairy Cattle and Goats	Fenbendazole	Benzimidazoles
15	Valbazen	Albendazole	Benzimidazoles
16	Ivomec Drench for Sheep	Ivermectin	Avermectins
17	Privermectin Drench for Sheep	Ivermectin	Avermectins
18	Cydectin Oral Drench for Sheep	Moxidectin	Avermectins
19	Prohibit Soluble Drench Powder	Levamisole Hydrochloride	Imidazothiazoles
20	LevaMed Soluble Drench Powder	Levamisole Hydrochloride	Imidazothiazoles
21	Levasole Sheep Wormer Boluses	Levamisole Hydrochloride	Imidazothiazoles
22	Safe-Guard Beef and Dairy Cattle Dewormer (290G)	Fenbendazole	Benzimidazoles
23	Safe-Guard Horse & Cattle Dewormer 92 G Paste 10%	Fenbendazole	Benzimidazoles
24	Panacur Beef & Cattle Dewormer	Fenbendazole	Benzimidazoles
25	Panacur Equine & Cattle Dewormer (92 G) Paste 10 %	Fenbendazole	Benzimidazoles
26	Panacur Cattle Dewormer Suspension 10%	Fenbendazole	Benzimidazoles
27	Synanthic Bovine Dewormer Suspension 9.06%	Oxfendazole	Benzimidazoles
28	Synanthic Bovine Dewormer Suspension 22.5%	Oxfendazole	Benzimidazoles
29	Ivermectin Paste 1.87% Paste Dewormer	Ivermectin	Avermectin
30	Zimecterin 1.87% Paste Dewormer for equids	Ivermectin	Avermectin
31	Zimecterin Gold 1.55% Paste Dewormer for equids	Ivermectin, Praziquantel	Avermectin,
32	Quest Plus Gel Dewormer for equids	Moxidectin, Praziquantel	Avermectin,
33	Safe- Guard Paste 10% for Horses	Fenbendazole	Benzimidazoles
34	Pin-X	Pyrantel Pamoate	Tetrahydropyrimidines
35	StrongidT	Pyrantel Pamoate	Tetrahydropyrimidines

INJECTABLE USE ANTHELMINTICS			
Code	Trade Name	Active Ingredient	Class
36	Alverin Plus Injection for Cattle	Ivermectin/ clorsulon	Avermectins, Benzenesulphnamides
37	Agri-Mectin Injection for Cattle and Swine	Ivermectin	Avermectins
38	Agri-Mectin plus Clorsulon	Ivermectin/ clorsulon	Avermectins, Benzenesulphnamides
39	Bimectin	Ivermectin	Avermectins
40	Promectin Injection for Cattle and Swine	Ivermectin	Avermectins
41	Dectomax	Doramectin	Avermectins
42	Ivermax 1% Injection	Ivermectin	Avermectins
43	Ivermax Plus	Ivermectin/ clorsulon	Avermectins, Benzenesulphnamides
44	Noromectin Injection for Cattle and Swine	Ivermectin	Avermectins
45	Noromectin Plus Injection for Cattle	Ivermectin/ clorsulon	Avermectins, Benzenesulphnamides
46	Cydectin Injectable Solution	Moxidectin	Avermectins
47	Levasole Injectable Solution 13.65%	Levamisole phosphate	Imidazothiazoles
48	Ivomec 1% Subcutaneous Injection	Ivermectin	Avermectins
49	Ivomec Plus 1% Subcutaneous Injection (Ivomec+ Curatram)	Ivermectin/ clorsulon	Avermectins, Benzenesulphnamides

FEED USE ANTHELMINTICS			
Code	Trade Name	Active Ingredient	Class
50	Goat Care 2x	Morantel Tartrate	Tetrahydropyrimidines
51	Mor-Max Goat Dewormer	Morantel Tartrate	Tetrahydropyrimidines
52	Positive Pellet	Morantel Tartrate	Tetrahydropyrimidines
53	Rumatel 88	Morantel Tartrate	Tetrahydropyrimidines
54	Safe-Guard Medicated Dewormer for Beef & Dairy Cattle	Fenbendazole	Benzimidazoles
55	Safe- Guard Dewormer 20%	Fenbendazole	Benzimidazoles
56	SAFE-GUARD 20% Salt: Free-choice mineral	Fenbendazole	Benzimidazoles

OTHER ANTHELMINTICS			
Code	Trade Name	Active Ingredient	Class
57	SPECIFY TRADE NAME (BE AS SPECIFIC AS POSSIBLE) ON THE COLLECTION RECORD.		

GOAT 2019 ANTIBIOTIC REFERENCE CARD

[Use same card for CER and Questionnaire]

Antibiotics given in the drinking WATER- Section F, Question 5		
Code	Antibiotic class	Example antibiotics
1	Sulfonamides	Albon®,(Sulfadimethoxine soluble powder), Sulfadimethoxine 12.5% oral solution, Sulforal, Sulfasol soluble powder, Di-Methox 12.5% oral solution, Di-Methox 12.5% soluble powder, SMZ-Med® 454 soluble powder, Sulfa, Sulmet® solution, Sulmet® soluble powder
2	Tetracyclines	Aureomycin®, A-Mycin, Chlortetracycline, Chloronex™, Aureomycin® Soluble Powder, Pennchlor® 64 soluble powder, Terramycin® soluble powder, Oxytetracycline HCL, Agrimycin®, Oxymycin, Oxytet 343, Pennox® 343, Tetroxy® 343, Tetroxy® 25, Tetracycline soluble powder, Duramycin 10, Tetramycin, Tetrachel, Tetramed® 324, Tet-Sol® 324, Tetrasol soluble powder
3	Other (specify: _____)	

Antibiotics given in the FEED - Section F, Question 7		
Code	Antibiotic class	Example antibiotics
4	Tetracyclines	Aureomycin®, Aueromycin® 50, Aueromycin® 4G crumbles, CTC 4G Crumbles, CTC 8G Crumbles, CTC 10G Crumbles, Chlortetracycline Crumble
5	Aminoglycoside	Neomycin
7	Other (specify: _____)	
8	Other (specify: _____)	

PLEASE TURN OVER FOR OTHER ANTIBIOTICS

Antibiotics given for SPECIFIC TREATMENT Section G, Questions 6, 8, 10, 12

	Code	Antibiotic class	Example antibiotics
ORAL BOLUS	9	Sulfonamides	Supra Sulfa III bolus, Sustain III bolus, Albon
	10	Tetracyclines	5/Way calf scour bolus, Calf Scour Bolus, Oxy 500 calf bolus, Terramycin scours tablets
	11	Other (specify: _____)	
DRENCH	12	Sulfonamides	Albon®, (Sulfadimethoxine soluble powder), Sulfadimethoxine 12.5% oral solution, Sulforal, Sulfasol soluble powder, Di-Methox 12.5% oral solution, Di-Methox 12.5% soluble powder, SMZ-Med® 454 soluble powder, Sulfa, Sulmet® solution, Sulmet® soluble powder, SulfadiVed solution
	13	Tetracyclines	Aureomycin®, A-Mycin, Chlortetracycline, Chloronex™, Aureomycin® Soluble Powder, Pennchlor® 64 soluble powder, Terramycin® soluble powder, Oxytetracycline HCL, Agrimycin®, Oxymycin, Oxytet 343, Pennox® 343, Tetroxy® 343, Tetroxy® 25, Tetracycline soluble powder, Duramycin 10, Tetramycin, Tetrachel, Tetramed® 324, Tet-Sol® 324, Tetrasol soluble powder, TC Vet 324
	14	Aminoglycoside	Neomycin soluble powder, Neo-Sol® soluble, NeoMed® soluble, Neo-Sol® 50, Neo-Sol® Oral, Spectinomycin Oral, Spectam®, SpectoGard®
	15	Lincosamides	Lincomycin soluble, LS-50, Lincomycin-spectinomycin soluble
	16	Other (specify: _____)	
INJECTABLE	17	Beta-lactams	Agri-Cillin, Bactracillin G, Norocillin, Pen-Aqueous, Penicillin Injectable, Penject, PenOne Pro, PenOne RWT, Pro-Pen-G, Bactracillin G, BenzaPen 48, Combi-Pen-48, Dura-Pen, Penject+B, Aquacillin, Agri-cillin, Polyflex
	18	Macrolides	Tylan 50 or 200, TyloVed, Micotil, Draxxin, ZACTRAN, Zuprevo
	19	Cephalosporins	Ceftiflex, Excede, Excenel, Naxcel
	20	Florfenicol	Loncor, ResflorGOLD, Norfenicol, Nuflor, NuflorGOLD
	21	Sulfonamides	Di-Methox, Sulfabiotic, SulfaMed
	21	Tetracyclines	300 PRO LA, Agrimycin 100 or 200, Bio-Mycin 200, Duramycin 72-200 or 100, Hexasol, Liquamycin LA-200, Noromycin 300 LA, Oxybiotic 100 or 200, Oxytet 100 or 200, Terra-Vet 100 or 200, Vetrimycin 100 or 200
	22	Aminoglycosides	Gentamicin, , Gentocin, Gallimycin, Erythromycin
23	Other (specify _____)		
TOPICAL/ Eyes	24	Topical ointments	Triple antibiotic ointment (neomycin, polymyxin B, bacitracin), Mupirocin
	25	Eye drops/ ointments	Gentak/Genoptic eye drops, Terramycin ophthalmic ointment (oxytetracycline and polymyxin B), AKTob, Tobrasol, Tobrex (tobramycin) ophthalmic ointment or solution,
	26	Other (specify _____)	
INTRAMAMMARY USE FOR DOES ONLY	27	Lactating intramammary products	Today® (cephaparin), Cefa-Lak® (cephapirin), Dariclox® (cloxacillin), Pirsue® (pirlimycin hydrochloride), Masti-Clear™ (penicillin), Polymast™ (hetacillin potassium), Amoximast® (amoxicillin), Hetacin-K® (hetacillin potassium), Spectramast® LC (ceftiofur hydrochloride)
	28	Dry doe intramammary products	Spectramast® DC (ceftiofur hydrochloride), Tomorrow® (cephapirin benzathine), Cefa-Dri (cephapirin benzathine), Bovaclox™, Dry-Clox®, Dry-Clox® intramammary infusion, Orbenin®-DC (cloxacillin benzathine), Gallimycin-Dry (erythromycin), Biodry® (novobiocin), Vet Go Dry™/ Hanford's US (penicillin G procaine), Quartermaster® Dry Doe Treatment (penicillin G procaine/dihydrostreptomycin), Albadry Plus® Suspension (penicillin G procaine/novobiocin)
	29	Other (specify _____)	