NAHMS

Health Management on U.S. Feedlots 2020

Phase 2 Questionnaire Manual

Veterinary Services

PHASE 2 QUESTIONNAIRE MANUAL SECTIONS

Veterinary Services

SECTION 1. STUDY OVERVIEW

STUDY DESCRIPTION

Health Management on U.S. Feedlots 2020 is a 2-phase national study that will be conducted in 22 key cattle-producing States. The States included in both the large capacity (≥1000 head) and small capacity (50-999 head) parts of the study are CA, CO, ID, IL, IA, KS, MN, MO, ND, NE, SD, TX, and WY. The States included only in the large capacity part of the study are MT, OK, UT, and WA. The States included only in the small capacity part of the study are IN, MI, OH, PA, and WI. The Phase 1 Questionnaire will be administered by the National Agricultural Statistics Service and focus on cattle inventory, sourcing, housing, antibiotic stewardship, use of veterinarians, and preparedness for the revised Veterinary Feed Directive. The Phase 2 Questionnaire will be administered by USDA Veterinary Medical Officers and Animal Health Technicians and selected State veterinary personnel to Phase 1 participants that elect to continue in the study. The Phase 2 Questionnaire goes into more depth on preconditioning and backgrounding of cattle, processing and health management at the feedlot, disease conditions, antibiotic use, nutrition, and biosecurity. This study will not include any collection of biologic samples from cattle.

This collection of data will support the following objectives:

1. Describe health management practices on U.S. feedlots with 50 or more head.
2. Estimate the prevalence of important feedlot cattle diseases.
3. Describe antibiotic use and stewardship on U.S. feedlots.
4. Describe Producers' overall preparedness for changes to the Veterinary Feed Directive.
5. Describe trends in feedlot cattle health management practices and important feedlot cattle diseases.

United States Department of Agriculture

NAHMS Health Management on U.S. Feedlots 2020

Study Launch

From September 2020 through March 2021, the USDA's National Animal Health Monitoring System (NAHMS), in collaboration with the National Agricultural Statistics Service, will conduct a national study focusing on cattle health and management on U.S. feedlots with at least 50 head. The NAHMS Health Management on U.S. Feedlots, 2020 study is designed to provide a snapshot of current feedlot cattle health management practices. The information collected will also allow for the analysis of trends in specific topics related to cattle health, based on previous NAHMS feedlot studies.

Background

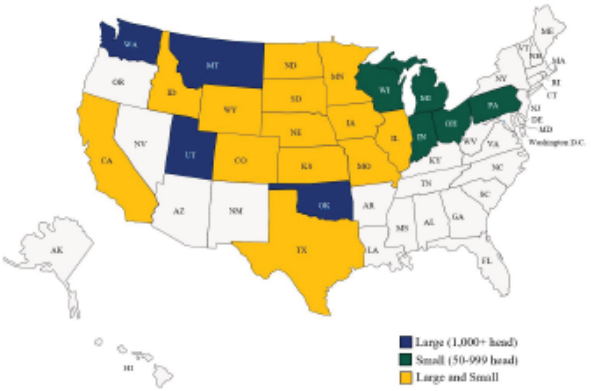
NAHMS collects scientifically accurate data for U.S. livestock, poultry, and aquaculture industries on a rotating basis. NAHMS studies are voluntary and confidential. For this feedlot study, priority issues facing the industry regarding cattle health were identified via responses to a needs assessment questionnaire and from discussions with representatives from various segments of the feedlot industry, including producer associations, feedlot veterinarians, and university and extension experts.

Study Objectives

The NAHMS Health Management on U.S. Feedlots, 2020 study is designed to provide stakeholders with valuable information about the U.S. feedlot industry. This study will

- Describe health management practices on U.S. feedlots with 50 or more head,
- Estimate the prevalence of important feedlot cattle diseases,
- Describe antibiotic use and stewardship practices on U.S feedlots,
- Describe producers' overall preparedness for changes to the Veterinary Feed Directive, and
- Describe trends in feedlot cattle health management practices and important feedlot cattle diseases.

Figure 1. States participating in the NAHMS Health Management on U.S. Feedlots 2020 study, by feedlot capacity



"The National Cattlemen's Beef Association appreciates the efforts of NAHMS to provide accurate and robust data for the U.S. beef cattle industry that can be used to detail trends in health management and antimicrobial use for feedyard cattle."

Mary Ann Kniebel, Vice- Chairman of NCBA's Cattle Health and Well-Being Committee

"The NAHMS reports for Cow/Calf and Feedlot have for decades provided solid, non-biased information to rancher and feedlot managers to help them understand how their colleagues in the beef industry manage cattle. From my long history as a veterinarian serving beef producers, I ask you to sincerely consider supporting the NAHMS survey efforts."

Dee Griffin, DVM, Director, VERO (Veterinary Education, Research & Outreach) Program,Texas A&M University College of Veterinary Medicine

Animal and Plant Health Inspection Service

Study Activities

Participating in any NAHMS study is voluntary. If you are selected to participate in the Health Management on U.S. Feedlot, 2020, study and decide to do so, your answers will statistically represent many other producers in your State.

Representatives from NASS will visit participating operations from September through December 2020 to complete a questionnaire. If participants choose to continue in the study, USDA or State veterinary health professionals will visit feedlots from February 2021 through March 2021 to complete a second questionnaire.

Benefits to Participating

Reports published from this study will benefit the U.S. feedlot industry by providing current and scientifically valid estimates to

- Aid in understanding disease preparedness strengths and vulnerabilities,
- Help policymakers and industry stakeholders make informed decisions,
- Identify research and development needs on vital issues related to feedlot cattle health,
- Enable economic analyses of the health and productivity of the U.S. feedlot industry,
- Identify educational needs and opportunities related to feedlot cattle health,
- Provide benchmark data on important feedlot cattle health management practices to inform quality assurance programs, and
- Provide transparent, credible, independent information on U.S. feedlot industry practices that is not collected by the industry itself.

NAHMS Feedlot Studies Have Impact!

- The NAHMS Feedlot 1994 and 1999 studies helped pioneer further research into injection sites, branding locations, and cattle handling practices, which led to data benchmarking for beef quality assurance programs.
- The NAHMS Feedlot 1994 study provided the industry's first look into the prevalence of *E. coli* O157:H7 shedding by feedlot cattle.
- The NAHMS Feedlot 2011 study provided data that were used to inform an economic analysis focusing on the market impacts of reducing the prevalence of bovine respiratory disease in feedlot cattle.
- Almost 1,500 scientific and industry publications have referenced NAHMS feedlot data since 1990.

"NAHMS studies provide critical information for animal science, veterinary science, and many other disciplines involving teaching and research in beef feedlot production. These data are used as a component of the Beef Checkoff's National Beef Quality Audit every 5 years, as well as a plethora of other applied research efforts. We should all support and advocate for contributing to this study!"

Keith Belk, Ph.D., Animal Sciences Department Head at Colorado State University

"NAHMS provides us with a snapshot of how our industry partners are operating their business and making decisions, serving as a benchmark and gut-check for us in making decisions on how to run our business. This helps us stay open-minded and current in today's practice of feeding cattle."

Josh Szasz, DVM, Ph.D., Five Rivers Cattle Feeding

Scientific Approach

NAHMS was established to collect accurate and valuable information on animal health and management in the United States. NAHMS studies are national in scope, science based, statistically valid, collaborative, voluntary, and anonymous.

Confidentiality

NAHMS is a recognized statistical unit by the Office of Management and Budget. All information acquired for the NAHMS "Health Management on U.S. Feedlots, 2020" study will be used for statistical purposes only and will be treated as confidential in accordance with the Confidential Information Protection and Statistical Efficiency Act (CIPSEA). Only summary estimates based on the inference population will be reported. Data collected under CIPSEA are protected from Freedom of Information requests.

For More Information

USDA–APHIS–VS–CEAH
NRRC Building B, M.S. 2E7
2150 Centre Avenue
Fort Collins, CO 80526-8117
Phone: 970.494.7000
Email: NAHMS@usda.gov
Or visit NAHMS at: http://aphis.usda.gov/nahms
#791.1219

STUDY SCHEDULE (TENTATIVE)

Study Process	Date
NASS Data Collection (Phase 1 Questionnaire)	September 28, 2020 to November 20, 2020
In-Person Coordinator/Field Training	January 12-13, 2021
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	January 15, 2021
VMO Data Collection (Phase 2 Questionnaire)	February 1, 2021 to March 31, 2021

NAHMS CONTACTS

Name	Title	Phone Number	E-mail
Dr. Amy Delgado	NAHMS Director	(970) 494-7301	amy.h.delgado@usda.gov
Dr. Chelsey Shivley	Study Lead; Veterinary Epidemiologist	(970) 494-7454	chelsey.b.shivley@usda.gov
Ms. Lynn Elliston-Gittings	Field Liaison	(970) 494-7323	lanora.l.elliston-gittings@usda.gov

NAHMS E-MAIL

xxxxx@usda.gov

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 Lynn Elliston-Gittings. Please ensure that your shipments have a tracking number.

Veterinary Services

SECTION 2. THE VETERINARY SERVICES VISIT

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 Producer. You should read through the Launch Sheet and Timeline (Section 1) to familiarize yourself with the NAHMS Health Management on U.S. Feedlots 2020 Study. Also, please look through the Phase 2 Questionnaire and the Phase 2 Questionnaire Guide (Section 3) so that you can give them an idea of the types of questions we will be asking.

- Coordinators will meet with NASS Regional Field Officers by January 15, 2021, to sign an ADM-043 form and a NASS Representative Agreement. During this in-person visit, the coordinators will receive the consent forms from Producers that agreed to be contacted to learn more about the VS phase.
- 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.

HEALTH MANAGEMENT ON U.S. FEEDLOTS 2020 PHASE 1 QUESTIONNAIRE INFORMATION

The data from the Phase 1 Questionnaire completed by the NASS enumerators will be collected September 28 to November 20, 2020. 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 given to the NAHMS Health Management on U.S. Feedlots 2020 NAHMS Coordinators by January 15, 2021.

NAHMS is a recognized statistical unit by the Office of Management and Budget. All information acquired for the NAHMS Health Management on U.S. Feedlots 2020 study will be used for statistical purposes only and will be treated as confidential in accordance with the Confidential Information Protection and Statistical Efficiency Act (CIPSEA). Only summary estimates based on the inference population will be reported. Data collected under CIPSEA are protected from Freedom of Information requests.

CIPSEA allows agents to collect data that are limited to statistical use only. All information collected during the NAHMS Health Management on U.S. Feedlots 2020 study is protected from disclosure in identifiable form (i.e., the identity of the Respondent will not be disclosed). All identifiable information must be secured when not in use. All publications will use statistical aggregates and must clear a disclosure review process prior to distribution. No individual-level responses will be published.

Please note that the protection provided by CIPSEA only applies to this feedlot health study. Activities initiated by the Producer unrelated to this feedlot health study, such as testing for movement or sale, may cause unrelated regulatory action.

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 Phase 2 (VS phase) of the study until the time of the visit by the

VS data collector. The VS data collector will explain the purpose and scope of the Phase 2 Questionnaire at the beginning of their 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 the feedlot industry, found in the Launch Sheet and the Promotional Video. It is important to promote the study when you speak to Producers as they may not intuitively recognize the benefits of the study to the industry.

STUDY MATERIALS

You will receive the following materials from your NAHMS coordinator:

- **Producer Education Packet**
  The materials in this packet will provide the Producer with general information about this study along with other useful information related to the feedlot industry and feedlot cattle health. We encourage you to go through the packet with the Producer during your visit.
- **Confidentiality Pledge**
  The Confidentiality Pledge is the contract between APHIS and the Producer. The Confidentiality Pledge must be filled out completely and signed before any operation information is obtained.
- **Phase 2 Questionnaire**
  The Phase 2 Questionnaire (see Section 3) will be administered during the visit by VS or State representatives between February 1 and March 31, 2021.
- **VS Reference Cards**
  Reference cards contain pertinent information to help the Producer answer questions about vaccinations, disease conditions, and antibiotic use. The VS data collector will have copies of the reference cards, and they will also be attached to the Phase 2 Questionnaire.
- **Informed Consent for Feedlots in the State of California**
  Only for operations in California
  This is a paper form that the VS data collector will administer to California producers to obtain consent to release California state level aggregate data obtained from the Phase 2 questionnaire to the California Department of Food and Agriculture for the purposes of fulfilling California Food and Agricultural Codes 13300-14408.
- **Study Participant Survey**
  A paper form provided by the VS data collector to participants who complete Phase 2 to provide feedback on the study. Participants who choose to complete this questionnaire will return to APHIS using a stamped business reply envelope.

PREPARATION FOR THE INTERVIEW

Review the Launch Sheet, Timeline, Promotional Video, and Questionnaire
Familiarize yourself with the Launch Sheet (pages 4-5) and Study Schedule (page 6), the Promotional Video (follow link on NAHMS website), and the Phase 2 Questionnaire in Section 3.

Contact the Producer
Call the Producer and introduce yourself. Using the phone script below (Page 10), explain that their name and contact information was provided to you by NASS per their request during Phase 1 of the NAHMS Health Management on U.S. Feedlots 2020 study, and you are contacting them to provide information about participation in Phase 2. Please fill out the "Contact Attempt History" found in Section E (Office Use Only) of the Phase 2 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 Confidentiality Pledge.

Make an appointment to complete the interview. Confirm the directions to the site, and then explain what will be covered and how lot it will take (about 1 hour to review the program and complete the Phase 2 Questionnaire). Let the Producer know that it will be helpful to have production records available during the interview in order to answer some of the questions. You may email the questionnaire to the Producer prior to the visit (additional information will be provided about confidentiality rules for emailing Producers in training) so that they will be able to answer the questionnaire more easily during your in-person interview. The questionnaire will also be available to the Producer on the public-facing NAHMS website: (https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/monitoring-and-surveillance/nahms).
It may be useful to provide the Producer with your name, phone number, and e-mail when you speak for the first time. This will allow the Producer to contact you with any questions or concerns prior to or after the interview.

PHONE SCRIPT FOR CONTACTING THE PRODUCER

Hello, I am (your name and position). I am calling about the NAHMS Health Management on U.S. Feedlots 2020 study. Do you have a few minutes to talk now, or is there a better time for me to call back?

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

Thank you very much for participating in Phase 1 of this study in (month when NASS consent form was signed). The data that you provided will be very useful to the national feedlot industry. The National Agricultural Statistics Services representative, (name of NASS representative if available), who worked with you on that first questionnaire let us know that you indicated you may be interested in participating in Phase 2 of the study. Phase 2 consists of completing another questionnaire that gathers additional information about health management of cattle on feedlots in the U.S. Do you have any questions about Phase 2 that I can answer today?

(Answer any questions they have about Phase 2)

If you are willing to participate in Phase 2, I would like to schedule a time to meet with you to complete the questionnaire. I expect that it will take about an hour to fill out the questionnaire. Are you interested in participating?

(If yes, continue. If no, thank them for their time and say good-bye).

When would you be available to meet? (Establish date and time of appointment). Where would you like to meet? It is not necessary to meet on the site of your operation, and I am happy to meet you wherever it is convenient for you. (Establish location and make sure you have accurate directions).

Having cattle health records on hand about disease and treatments of disease will help to make the process smoother. I can also send you a copy of the questionnaire ahead of time so you can familiarize yourself with the types of questions that are asked, if you like. Are you interested in receiving a copy of the questionnaire? (If yes) What would be the best way to send it, by post or email? (Get appropriate addresses to which to send the questionnaire). If necessary, you can always access the questionnaire on the NAHMS website.

Thank you very much for your willingness to participate in the study! It is much appreciated. See you soon!

MATERIAL TO BRING TO THE VS VISIT

- Health Management on U.S. Feedlots 2020 Phase 2 Manual
- Health Management on U.S. Feedlots 2020 Producer Education Packet
- Confidentiality Pledge
- Phase 2 Questionnaire paper copy
- Tablet (if doing electronic data collection)
- Informed Consent for Feedlots in the State of California (if in California)
- Study Participant Survey with stamped, addressed envelope
- Calculator or a smart phone with a calculator app
- Pens
- Business cards

CONFIDENTIALITY PLEDGE

The NAHMS Health Management on U.S. Feedlots 2020 Confidentiality Pledge is the contract between APHIS and the Producer. This form is designed to increase the participant's understanding of the study focus, highlight confidentiality safeguards, and explain participation requirements and benefits. After reviewing the form with the participant, the VS data collector will sign it on behalf of APHIS. One copy of this agreement will be left with the participant, one copy will be retained by the VS data collector, and one copy will be mailed to NAHMS in Fort Collins, CO.

Confidentiality

The Confidentiality Pledge specifically states 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 form, the VS data collector signs and fills in the date on the appropriate line.

- One copy of the Confidentiality Pledge shall be kept by the VS data collector. Retain this copy until notified by NAHMS staff to destroy it.
- One copy of the Confidentiality Pledge should be mailed to your NAHMS coordinator.
- One copy of the Confidentiality Pledge is left with the Producer.

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 0579-0079. The time required to complete this information collection is estimated to average 10 minutes per response, including the time to review instructions, search existing data resources, gather the data needed, and complete and review the information collected.

OMB Approved
0579-0079
EXP: XX/20XX

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
VETERINARY SERVICES
NATIONAL ANIMAL HEALTH MONITORING SYSTEM
2150 CENTRE AVE, BLDG B
FORT COLLINS, CO 80526

HEALTH MANAGEMENT ON U.S. FEEDLOTS 2020 CONFIDENTIALITY PLEDGE

Instructions:
Review this page with the producer, answering any questions. Make sure the producer understands that participation is voluntary. Sign below, give the top copy to the Producer, keep one copy, and send the final copy to your NAHMS Coordinator.

Background
USDA's Animal and Plant Health Inspection Service (APHIS) is collecting information on cattle health and management on feedlots through the National Animal Health Monitoring System (NAHMS). This information will be used to describe current cattle health and management practices, help policymakers and stakeholders make informed decisions, assist researchers and private enterprises in identifying and focusing on vital issues related to cattle health on feedlots, and direct educational programs for producers and veterinarians.

Participation is voluntary and you may decline to participate. Your participation is vital and will help develop national estimates of cattle health and management practices. We ask that you provide accurate information regarding your operation; however, you retain the right to refuse to answer any or all questions.

Confidentiality
The information you provide will be used for statistical purposes only. Your responses will be kept confidential, and any person who willfully discloses ANY identifiable information about you or your operation is subject to a jail term, a fine, or both. This survey is conducted in accordance with the Confidential Information Protection provisions of Title V, Subtitle A, Public Law 107-347 and other applicable Federal laws. For more information on how we protect your information please visit: https://www.aphis.usda.gov/animal_health/nahms/general/downloads/NAHMS_CIPSEA.pdf. Response to this survey is voluntary.

Only authorized APHIS employees or those acting on APHIS's behalf (NAHMS agents) will have access to your individual record data. By law to be an authorized APHIS employee or NAHMS agent, individuals must take an oath which states that no confidential information will be released, and that the individual is subject to a jail term of up to 5 years, a fine of up to $250,000, or both, if he or she discloses ANY identifiable information about you or your operation.

Your data's security is vitally important to APHIS. Every person working for or in cooperation with APHIS on this study has signed a confidentiality form which stipulates the requirements for keeping data confidential, and the penalties individuals are subject to if identifiable information is released. Further, data are protected from cybersecurity threats. Under the Cybersecurity Enhancement Act of 2015, your data will be protected by US Department of Homeland Security (DHS) cybersecurity monitoring. In the event of a cybersecurity incident, and pursuant to any required legal processes, information from these sources may be used to help identify and mitigate the incident.

APHIS may publish, or authorize others to publish, the aggregate (summary) findings acquired from NAHMS for the benefit of the feedlot industry, allied private industries, 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.

Data collected by the Data Collector will not be used for regulatory purposes. Please note that information on a producer's animals revealed from sources unrelated to this study, such as testing and inspection for movement or sale of animals or tracebacks on testing done at slaughter, may cause unrelated regulatory action. In addition, if a federally accredited or federal veterinarian conducting this interview on the Producer's premises observes an animal with signs suspicious of a dangerously contagious, infectious, or exotic disease foreign to the United States (e.g., foot-and-mouth disease), they are obligated to report this disease to appropriate authorities, in which case further investigation and possible action may occur.

The Producer will be invited to complete a brief evaluation of the Health Management on U.S. Feedlots 2020 study when the study is complete, the results of which will be used to assist APHIS in the design and implementation of future NAHMS surveys.

You can obtain these reports and further information from this study by accessing the NAHMS Web site at: https://www.aphis.usda.gov/nahms

By signing below, the NAHMS Agent is pledging APHIS to protect the confidentiality of the participants information

NAHMS Agent _____ Date _____

VS Form 21-300
September 2020

INFORMED CONSENT FOR FEEDLOTS IN THE STATE OF CALIFORNIA

Only for operations in California

Once you have completed the Health Management on U.S. Feedlots 2020 Phase 2 Questionnaire, you will ask the Producer to sign the "California VS Informed Consent" form. The "California VS Informed Consent" form provides written consent from the producer to release California state level aggregate data obtained from the Phase 2 questionnaire to the California Department of Food and Agriculture for the purposes of fulfilling California Food and Agricultural Codes 13300-14408.

Review the form with the Producer and answer any questions he or she may have regarding the California VS Informed Consent form.

Completing the California VS Informed Consent Form

Signature of USDA or California Department of Food and Agriculture Employee: The VS data collector signs and dates in the appropriate boxes.

Signature of Producer or authorized representative: If the Producer consents, ask them to sign the "California VS Informed Consent" form and date.

What to do with the California VS Informed Consent Form

Submit the signed California VS Informed Consent form to your Coordinator.

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 0579-0079. The time required to complete this information collection is estimated to average 5 minutes per response, including the time to review instructions, search existing data resources, gather the data needed, and complete and review the information collected.	OMB Approved 0579-0079 EXP: XX/20XX

UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE VETERINARY SERVICES NATIONAL ANIMAL HEALTH MONITORING SYSTEM 2150 CENTRE AVE, BLDG B FORT COLLINS, CO 80526	**HEALTH MANAGEMENT ON U.S. FEEDLOTS 2020 INFORMED CONSENT FOR FEEDLOTS IN THE STATE OF CALIFORNIA**

The U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS), the California Department of Food and Agriculture and the State of California, and the Producer hereby enter into this National Animal Health Monitoring System (NAHMS) Health Management on U.S. Feedlots 2020 INFORMED CONSENT, the terms of which are set forth below.

1. The California Department of Food and Agriculture (CDFA) is mandated by California Food and Agricultural Codes 14400-14408 to monitor antimicrobial use and management practices in livestock. The California Law furthermore directs that, when applicable, this information be gathered in coordination with NAHMS. The California Law stipulates that these data are collected in a voluntary manner. The collected data will be used for monitoring and educational, not regulatory, purposes.

2. Since the NAHMS Health Management on U.S. Feedlots 2020 study will include collection of data regarding antimicrobial use and health management in feedlot cattle in California, CDFA has requested that NAHMS share aggregate data collected in the NAHMS Health Management on U.S. Feedlots 2020 study from California cattle feedlots with them for the purposes of fulfilling California Food and Agricultural Codes 14400-14408.

3. Only aggregate (summary) data, not individual data, will be shared with CDFA. The identity of the Producer will be withheld. No individual responses will be shared or published.

Signature of U.S. Department of Agriculture or California Department of Food and Agriculture Employee :	Date:
Signature of Producer or authorized representative:	Date:

VS Form 21-305
September 2020

STUDY PARTICIPANT SURVEY

The Study Participant Survey will be left behind with producers who complete the Phase 2 questionnaire. This is an opportunity for producers to provide feedback about the study. The responses are anonymous and will only be used for planning purposes.

Submitting the Completed Study Participant Survey

Participants who choose to complete the Study Participant Survey will return the completed survey to NAHMS using a stamped business reply envelope (included with survey left with producer at the conclusion of the interview).

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 0579-0079. The time required to complete this information collection is estimated to average 10 minutes per response, including the time to review instructions, search existing data resources, gather the data needed, and complete and review the information collected.

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ANIMAL AND PLANT HEALTH INSPECTION SERVICE
VETERINARY SERVICES
NATIONAL ANIMAL HEALTH MONITORING SYSTEM
2150 CENTRE AVE, BLDG B
FORT COLLINS, CO 80526

HEALTH MANAGEMENT ON U.S. FEEDLOTS 2020 STUDY PARTICIPANT SURVEY

Thank you for participating in the National Animal Health Monitoring System (NAHMS) Health Management on U.S. Feedlots 2020 study. The NAHMS staff would like to receive input from you regarding your participation in the study.

Please return this survey in the enclosed business-reply envelope (or to NRRC Building B, 2150 Centre Ave., Fort Collins, CO, 80526-8117) within 10 days. **We value your opinion**, so please take a few minutes to complete this evaluation.

ABOUT THE HEALTH MANAGEMENT ON U.S. FEEDLOTS 2020 STUDY

1. Before your participation in the Health Management on U.S. Feedlots 2020 Study, had you ever heard of the USDA's National Animal Health Monitoring System (NAHMS)? ☐1 Yes ☐3 No

2. Had you heard about the NAHMS Health Management on U.S. Feedlots 2020 Study prior to receiving the invitation to participate? *[Check all that apply.]*
   - ☐1 Yes, from a magazine (specify: _____)
   - ☐2 Yes, at a conference (specify: _____)
   - ☐3 Yes, on a website (specify: _____)
   - ☐5 Word of mouth (friend, veterinarian, etc.)
   - ☐6 Radio/TV
   - ☐7 Other (specify: _____)
   - ☐8 Had not heard of this study

3. Why did you participate in the Health Management on U.S. Feedlots 2020 study? *[Check all that apply.]*
   - ☐1 To help the feedlot industry in general
   - ☐2 To be able to compare my responses to national estimates
   - ☐3 Encouraged by industry leaders
   - ☐4 Other (specify: _____)

Please indicate your level of agreement with the following statements:

4. The lengths of the questionnaires were acceptable to me.
   ☐1 Strongly Disagree ☐2 Disagree ☐3 Neither Agree or Disagree ☐4 Agree ☐5 Strongly Agree

5. The questionnaires in my opinion covered information important to the feedlot industry.
   ☐1 Strongly Disagree ☐2 Disagree ☐3 Neither Agree or Disagree ☐4 Agree ☐5 Strongly Agree

6. It was easy and convenient to make an appointment with the NASS representative to complete the Phase I Questionnaire.
   ☐1 Strongly Disagree ☐2 Disagree ☐3 Neither Agree or Disagree ☐4 Agree ☐5 Strongly Agree

7. The NASS representative clearly explained the expectations and benefits of participation in the study and effectively helped me complete the first questionnaire.
   ☐1 Strongly Disagree ☐2 Disagree ☐3 Neither Agree or Disagree ☐4 Agree ☐5 Strongly Agree

8. For the Phase 2 questionnaire, it was easy and convenient to make an appointment with the representative from USDA VS
   ☐1 Strongly Disagree ☐2 Disagree ☐3 Neither Agree or Disagree ☐4 Agree ☐5 Strongly Agree

9. The representative from VS or CDFA effectively helped me complete the second questionnaire.
☐1 Strongly Disagree ☐2 Disagree ☐3 Neither Agree or Disagree ☐4 Agree ☐5 Strongly Agree

10. Were there questions in the questionnaires that you felt were not useful? If so, what topics did they cover?

11. Were there topics not in the questionnaires that you felt should have been included? If so, what topics would you like to see added to future studies?

12. Would you participate in another NAHMS study if asked?..... ☐1 Yes ☐3 No
Why or why not?

13. Are there any incentives to participate that USDA could provide that would increase the likelihood of your participation in future studies? Please list:

ABOUT YOU

1. In what State is your feedlot operation located? _____

2. Indicate the number of cattle currently in your herd:
☐1 50-999
☐2 1000 or more

Please provide any additional comments or suggestions:

To view the results of the Health Management on U.S. Feedlots 2020 study and all past NAHMS studies, please visit the NAHMS website at: https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/monitoring-and-surveillance/nahms

Thank you very much for sharing your feedback! It is much appreciated.

SECTION 3. PHASE 2 QUESTIONNAIRE AND GUIDE

PHASE 2 QUESTIONNAIRE

OMB Approved
0579-0079
EXP: XX/20XX

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
VETERINARY SERVICES
NATIONAL ANIMAL HEALTH MONITORING SYSTEM
2150 CENTRE AVE, BLDG B
FORT COLLINS, CO 80526

Health Management on U.S. Feedlots 2020 Phase 2 Questionnaire

Beginning time (military)..... _____

Ending time (military)..... _____

State FIPS:_____ Operation #:_____ Interviewer:_____ Date: ____/____/____
2 digits 4 digits initials mm/dd/yy

The information you provide will be used for statistical purposes only. In accordance with the Confidential Information Protection provisions of Title V, Subtitle A, Public Law 107–347 and other applicable Federal laws, your responses will be kept **confidential** and will not be disclosed in identifiable form to anyone other than employees or agents. By law, every employee and agent has taken an oath and is subject to a jail term, a fine, or both, if he or she willfully discloses ANY identifiable information about you or your feedlot. Response is **voluntary**.

General Instructions

Unless otherwise noted, questions refer to the time period from **September 1, 2019, to August 31, 2020.**

We would like to know about all cattle and calves on feed for the slaughter market, regardless of ownership, on this particular feedlot.

- Include cattle being fed by you for others.
- Exclude any of your cattle being custom fed in feedlots operated by others.
- Exclude cattle being "backgrounded only" for sale as feeders, for later placement on feed on another feedlot, or to be returned to pasture.
- Exclude cows and bulls being fed by you for the slaughter market

If "Don't Know" is provided as an answer option, it is abbreviated as "DK."
If "Not Applicable" is provided as an answer option, it is abbreviated as "NA."
The following 4-point scale is utilized in many questions when possible instead of asking specifically for percentages. This is done because we recognize that in many cases percentages supplied are approximations and we would like the reponse to reflect that.
"None" (0%)
"Some (50% or less)
"Most" (51% or more)
"All" (100%)

If a different scale is used it is specified in the question.

NAHMS ID: _____

Section A—Cattle Health and Health Practices

Preconditioning and Backgrounding

1. Preconditioning and backgrounding comprises procedures such as acclimatization to feed bunks, vaccinations, implants, antibiotic use, weaning, deworming, castration, and dehorning that occur before cattle arrive at the feedlot. For this question, **reliable** information about preconditioning and backgrounding is defined as information that is trusted, but not necessarily documented.
For each of the following arrival weight and breed classes, answer yes or no for whether they were placed on this feedlot. If yes, for what proportion of these cattle did you have **reliable** information about pre-conditioning/backgrounding they received prior to arrival at this feedlot?

			Reliable information?			
	Weight class and breed placed on the feedlot?		**None**	**Some**	**Most**	**All**
a. Beef breed cattle (less than 400 lb at arrival)	☐1 Yes ☐3 No	If No, SKIP to 2b If Yes →	☐1	☐2	☐3	☐4
b. Beef breed cattle (400-699 lb at arrival)	☐1 Yes ☐3 No	If No, SKIP to 2c If Yes →	☐1	☐2	☐3	☐4
c. Beef breed cattle (700 lb or greater at arrival)	☐1 Yes ☐3 No	If No, SKIP to 2d If Yes →	☐1	☐2	☐3	☐4
d. Dairy or dairy cross breed cattle (less than 400 lb at arrival)	☐1 Yes ☐3 No	If No, SKIP to 2e If Yes →	☐1	☐2	☐3	☐4
e. Dairy or dairy cross breed cattle (less than 400-699 lb at arrival)	☐1 Yes ☐3 No	If No, SKIP to 2f If Yes →	☐1	☐2	☐3	☐4
f. Dairy or dairy cross breed cattle (700 lb or greater at arrival)	☐1 Yes ☐3 No	If No, SKIP to 3 If Yes →	☐1	☐2	☐3	☐4

2.Between September 1, 2019 and August 31, 2020, were **all** cattle placed on this feedlot bred and raised by this operation?	☐1 Yes ☐3 No ☐4 DK

[If Question 2 = Yes, then SKIP to Question 6]

3. How important is it to have reliable information on the preconditioning and backgrounding that cattle received prior to arrival? *[Choose one only]*

Not important	Slightly important	Moderately important	Very important	Extremely important
☐1	☐2	☐3	☐4	☐5

[If Question 3 = Not Important, SKIP to Question 6]

4. Are you able to access all the reliable information that you want?	☐1 Yes ☐3 No

[If Question 4 = Yes, SKIP to Question 6]

5. Why can't you access the reliable information that you want?

a. Finding cattle to purchase for which this information is known is inconvenient.	☐1 Yes ☐3 No
b. Cattle are purchased at a sale barn where this information is not available.	☐1 Yes ☐3 No
c. Cattle for which this information is known are too expensive.	☐1 Yes ☐3 No
d. There is no practical mechanism for transfer of this information.	☐1 Yes ☐3 No
e. Other (specify:_____)	☐1 Yes ☐3 No

NAHMS ID: _____

6. When you were aware of the history of cattle you purchased, or in calves you raised yourself, what proportion of the cattle had the following pre-conditioning and backgrounding procedures performed?

	None	Some	Most	All	DK
a. Introduction to the feed bunk	☐1	☐2	☐3	☐4	☐5
b. Given respiratory vaccines less than 2 weeks prior to or at weaning?	☐1	☐2	☐3	☐4	☐5
c. Given respiratory vaccines more than 2 weeks prior to weaning?	☐1	☐2	☐3	☐4	☐5
d. Given modified live, not killed, respiratory vaccines?	☐1	☐2	☐3	☐4	☐5
e. Weaned 4-6 weeks before arrival at feedlot?	☐1	☐2	☐3	☐4	☐5
f. Weaned more than 6 weeks before arrival at feedlot?	☐1	☐2	☐3	☐4	☐5
g. Bull calves and/or bulls castrated at least 3 weeks prior to arrival at feedlot ?	☐1	☐2	☐3	☐4	☐5
h. Non-polled cattle dehorned at least 3 weeks prior to arrival at feedlot? (write N/A in margin if only naturally polled cattle placed)	☐1	☐2	☐3	☐4	☐5
i. Treated for external or internal parasites?	☐1	☐2	☐3	☐4	☐5
j. Given antibiotics within 4 weeks of arrival at feedlot?	☐1	☐2	☐3	☐4	☐5

Initial Processing and Management at the Feedlot

7. Were cattle assessed for their risk for bovine respiratory disease when they arrived at this feedlot and initial processing protocols modified based on this assessment?	☐1 Yes ☐3 No

[If Question 7 = No, SKIP to Question 9]

8. How important were the following factors when making this risk assessment?

	Not Important	Slightly Important	Moderately Important	Very Important	Extremely Important
a. Long shipping distance	☐1	☐2	☐3	☐4	☐5
b. Arrival weight class	☐1	☐2	☐3	☐4	☐5
c. Appearance of cattle at arrival	☐1	☐2	☐3	☐4	☐5
d. Respiratory disease in cattle previously received from same source	☐1	☐2	☐3	☐4	☐5
e. Presence of respiratory disease in some cattle in group	☐1	☐2	☐3	☐4	☐5
f. Whether cattle were commingled with other cattle prior to arrival	☐1	☐2	☐3	☐4	☐5
g. Geographic origin of the cattle	☐1	☐2	☐3	☐4	☐5
h. Lack of previous respiratory vaccination	☐1	☐2	☐3	☐4	☐5
i. Lack of preconditioning/backgrounding	☐1	☐2	☐3	☐4	☐5
j. Season of the year	☐1	☐2	☐3	☐4	☐5
k. Weather at time of arrival at the feedlot	☐1	☐2	☐3	☐4	☐5
l. Experience of receiving crew	☐1	☐2	☐3	☐4	☐5
m. Breed of cattle	☐1	☐2	☐3	☐4	☐5
n. History of prior antibiotic treatment	☐1	☐2	☐3	☐4	☐5
o. Other (specify:_____)	☐1	☐2	☐3	☐4	☐5

NAHMS ID: _____

6. When you were aware of the history of cattle you purchased, or in calves you raised yourself, what proportion of the cattle had the following pre-conditioning and backgrounding procedures performed?

	None	Some	Most	All	DK
a. Introduction to the feed bunk	☐1	☐2	☐3	☐4	☐5
b. Given respiratory vaccines less than 2 weeks prior to or at weaning?	☐1	☐2	☐3	☐4	☐5
c. Given respiratory vaccines more than 2 weeks prior to weaning?	☐1	☐2	☐3	☐4	☐5
d. Given modified live, not killed, respiratory vaccines?	☐1	☐2	☐3	☐4	☐5
e. Weaned 4-6 weeks before arrival at feedlot?	☐1	☐2	☐3	☐4	☐5
f. Weaned more than 6 weeks before arrival at feedlot?	☐1	☐2	☐3	☐4	☐5
g. Bull calves and/or bulls castrated at least 3 weeks prior to arrival at feedlot ?	☐1	☐2	☐3	☐4	☐5
h. Non-polled cattle dehorned at least 3 weeks prior to arrival at feedlot? (write N/A in margin if only naturally polled cattle placed)	☐1	☐2	☐3	☐4	☐5
i. Treated for external or internal parasites?	☐1	☐2	☐3	☐4	☐5
j. Given antibiotics within 4 weeks of arrival at feedlot?	☐1	☐2	☐3	☐4	☐5

Initial Processing and Management at the Feedlot

7. Were cattle assessed for their risk for bovine respiratory disease when they arrived at this feedlot and initial processing protocols modified based on this assessment?	☐1 Yes ☐3 No

[If Question 7 = No, SKIP to Question 9]

8. How important were the following factors when making this risk assessment?

	Not Important	Slightly Important	Moderately Important	Very Important	Extremely Important
a. Long shipping distance	☐1	☐2	☐3	☐4	☐5
b. Arrival weight class	☐1	☐2	☐3	☐4	☐5
c. Appearance of cattle at arrival	☐1	☐2	☐3	☐4	☐5
d. Respiratory disease in cattle previously received from same source	☐1	☐2	☐3	☐4	☐5
e. Presence of respiratory disease in some cattle in group	☐1	☐2	☐3	☐4	☐5
f. Whether cattle were commingled with other cattle prior to arrival	☐1	☐2	☐3	☐4	☐5
g. Geographic origin of the cattle	☐1	☐2	☐3	☐4	☐5
h. Lack of previous respiratory vaccination	☐1	☐2	☐3	☐4	☐5
i. Lack of preconditioning/backgrounding	☐1	☐2	☐3	☐4	☐5
j. Season of the year	☐1	☐2	☐3	☐4	☐5
k. Weather at time of arrival at the feedlot	☐1	☐2	☐3	☐4	☐5
l. Experience of receiving crew	☐1	☐2	☐3	☐4	☐5
m. Breed of cattle	☐1	☐2	☐3	☐4	☐5
n. History of prior antibiotic treatment	☐1	☐2	☐3	☐4	☐5
o. Other (specify:_____)	☐1	☐2	☐3	☐4	☐5

NAHMS ID: _____

9. Processing includes procedures such as vaccinations, tagging, implants, deworming, mineral or vitamin supplementation, castration, dehorning, and antibiotic administrations. Excluding cattle processed separately for treating illness, were any cattle processed as a group at, or within 4 weeks, of placement?	☐1 Yes ☐3 No

[If Question 9 = NO, then SKIP to Question 13]

10. What proportion of cattle were initially processed as a group during the following time periods?

	None	Some	Most	All	DK
a. 24 hours or less after arrival	☐1	☐2	☐3	☐4	☐5
b. 25 to 72 hours after arrival	☐1	☐2	☐3	☐4	☐5
c. 73 hours to 2 weeks after arrival	☐1	☐2	☐3	☐4	☐5
d. 2 to 4 weeks after arrival	☐1	☐2	☐3	☐4	☐5
e. Not processed as a group at placement	☐1	☐2	☐3		☐5

11. When cattle were initially processed as a group at placement, what proportion of the cattle had the following procedures performed? Answer 1 for "None" or 0% of cattle, 2 for "Some" for 50% or less, 3 for "Most" or 51% or more, 4 for "All" or 100%, or DK for "Don't Know." Answer for all cattle of all weight classes at arrival. If the answer is 2 or 3, "Some" or "Most," then also answer by arrival weight class if possible. *[Refer to Reference Card 2 (Vaccine Examples) for examples of common trade names of vaccines. For combination products, enter information into all relevant rows]*

	All Cattle		Weights at arrival		
			Cattle <400 lb	Cattle 400-699 lb	Cattle ≥700 lb
Vaccinations					
a. Vaccination against bovine viral diarrhea (BVD)?					
b. Vaccination against clostridial diseases (e.g., blackleg)?					
c. Vaccination against tetanus specifically?					
d. Vaccination against *Moraxella* (pinkeye)?					
e. Vaccination against any respiratory diseases?					
[If Question 11e = 0% for all, SKIP to Other Procedures 11i]					
f. Injectable vaccination against viral respiratory disease?					
g. Intranasal vaccination against viral respiratory disease?					
h. Vaccination against bacterial respiratory disease due to *Mannheimia* and/or *Pasteurella*?					
Other procedures					
i. Testing for bovine viral diarrhea (BVD) infection					
j. Implantation?					
k. Administration of a parasiticide?					
l. Administration of an immunostimulant (e.g., Zelnate™)?					
m. Individual weighing of the animal?					
n. Taking the temperature of the animal?					
o. Listening to lungs with stethoscope?					
p. Administration of injectable antibiotic?					
q. Administration of vitamin and/or mineral injection?					
r. Other procedure? (specify:_____)					

NAHMS ID: _____

12. Continue to enter 1 for None, 2 for Some, 3 for Most, 4 for All, and DK for Don't Know for these questions about subgroups of cattle.

	Heifers
a. For heifers, what proportion had a pregnancy check at arrival?	
b. For heifers, what proportion were administered an abortifacient such as prostaglandin at arrival?	
	Bulls or bull calves
c. For bulls and bull calves, what proportion arrived at the feedlot uncastrated?	
	Non-polled cattle
d. For non-polled cattle, what proportion arrived at the feedlot with horns?	
[If Question 12d = None or DK, SKIP to Question 13]	
e. What proportion of non-polled cattle were dehorned at the feedlot?	
f. What proportion of non-polled cattle were tipped at the feedlot?	

13. How frequently did you conduct pen-riding or walking procedures for:
[Enter one code for each line: 1. Once a day; 2. Twice a day; 3. More than twice a day; 4. Less than once a day; 5. No standard procedure]

a. New arrivals (at feedlot less than 15 days)?	
b. Animals at feedlot 15 to 30 days?	
c. Animals at feedlot 30 days or more?	

14. Were the following used to mitigate weather-related stress on this feedlot?

a. Shade/shelter	☐1 Yes ☐3 No ☐4 DK
b. Sprinklers, misters, and/or water trucks	☐1 Yes ☐3 No ☐4 DK
c. Wind breaks	☐1 Yes ☐3 No ☐4 DK
d. Building mounds	☐1 Yes ☐3 No ☐4 DK
e. Feed additives, such as yeast, essential oils, or pepper extract	☐1 Yes ☐3 No ☐4 DK
f. Other (specify: _____)	☐1 Yes

Disease Conditions

15. What percentage of all placed cattle of the following arrival weight classes were **affected** with bovine respiratory disease (BRD) from September 1, 2019 to August 31, 2020? What percentage of all placed cattle of the following arrival weight classes **died** due to bovine respiratory disease during this time period?
[If it is not possible to estimate these percentages stratified by weight classes, enter DK for Don't Know and complete the cattle of all arrival weight classes row. If it is not possible to estimate the percentage for all arrival weight classes, enter DK for Don't Know]

	Affected	Died
a. Cattle less than 400 lb at arrival	%	%
b. Cattle 400 to 699 lb at arrival	%	%
c. Cattle 700 lb or greater at arrival	%	%
OR		
d. Cattle of all arrival weight classes	%	%

[If Question 15 all = 0 or DK, SKIP to Question 19]

NAHMS ID: _____

16. The occurrence of BRD on feedlots can vary throughout the year for many reasons, particularly seasonal factors. What percentage of cattle were affected with BRD on this feedlot during the fall/winter months compared to the spring/summer months? If this is unknown, enter "DK" for Don't Know.	Percentage of cattle affected with BRD
a. Cattle affected with BRD in fall/winter months	
b. Cattle affected with BRD in spring/summer months	
c. Total (Cattle affected with BRD all year)	100%

17. How did the overall percentage of cattle on this feedlot affected with BRD seasonally compare to the expected or "normal" percentages on this feedlot for: *[Check one only]*	Lower	Similar	Higher
a. BRD in fall/winter months	☐1	☐2	☐3
b. BRD in spring/summer months	☐1	☐2	☐3

[If Question 17.a and 17.b = Similar, SKIP to Question 19]

18. If the percentage of cattle affected with BRD was higher or lower than expected, describe reasons why you think this occurred in the space at the end of the questionnaire.

19. What percentage of cattle developed the following conditions from September 1, 2019 to August 31, 2020? If you are not familiar with the condition or do not think you can provide an accurate estimate of the percentage of cattle that developed it, answer DK.
[Refer to Reference Card 3 (Disease Conditions) for descriptions of these disease conditions]

a. Acute interstitial pneumonia (i.e., AIP, dust pneumonia, atypical pneumonia)	%	☐4 DK
b. Bloat	%	☐4 DK
c. Other digestive disorders excluding bloat (e.g., coccidiosis, diarrhea)	%	☐4 DK
d. Footrot (infectious pododermatitis)	%	☐4 DK
e. Hairy heel wart (papillomatous digital dermatitis)	%	☐4 DK
f. Central nervous system (CNS) disease (e.g., polio, listeriosis, "brainers")	%	☐4 DK
g. Pinkeye	%	☐4 DK
h. Cardiovascular disease (e.g., heart failure, brisket disease)	%	☐4 DK
i. Fatigued cattle syndrome	%	☐4 DK
j. Other (specify:_____)	%	

[If Question 19.e. Hairy heel wart = 0% or DK, skip to Question 22]

20. Were the following used for therapy of hairy heel wart?

a. Cattle footbaths	☐1 Yes ☐3 No
b. Topical sprays	☐1 Yes ☐3 No

[If both 20.a and 20.b = No, SKIP to Question 22]

21. What was the active ingredient in the footbaths or sprays? *[Check one only]*

☐1 Copper sulfate
☐2 Formalin/formaldehyde
☐3 Hydrogen peroxide
☐4 Oxytetracycline
☐5 Other (specify: _____)

NAHMS ID: _____

	None	Some	Most	All	DK
22. When cattle died on this feedlot, what proportion of cattle had a post-mortem examination (i.e., necropsy) performed?	☐1	☐2	☐3	☐4	☐5

23. Are the following given to sick cattle as part of the **initial course** of treatment for:

Treatment	Bovine respiratory disease	Digestive disorders other than bloat (e.g., coccidiosis, diarrhea)	Footrot	Pinkeye
If no disease, SKIP column	☐ No BRD	☐ No digestive disorders	☐ No footrot	☐ No pinkeye
a. Injectable antibiotic?	☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK
b. Bolus-dosed oral antibiotic?	☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK
c. In feed antibiotic?	☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK		
d. Topical antibiotic?			☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK
e. Respiratory vaccine?	☐1 Yes ☐3 No ☐4 DK			
f. Corticosteroid (e.g., Azium®)?	☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK
g. Nonsteroidal anti-inflammatory (e.g., Banamine®, aspirin)?	☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK
h. Antihistamine?	☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK
i. Vitamin B injection?	☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK
j. Vitamin C injection?	☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK
k. Immunostimulant (e.g., Zelnate™)?	☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK
l. Injectable mineral supplement (e.g., MultiMin®)?	☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK
m. Probiotic paste	☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK
n. Other? (specify:_____)	☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK	☐1 Yes ☐3 No ☐4 DK

NAHMS ID: _____

24. Were there separate pens to house sick cattle (e.g., hospital pens)?	☐1 Yes ☐3 No ☐4 DK

[If question 24 = No or DK, SKIP to Question 26]

25. Were the following resources provided to cattle in the hospital pen? Answer none of the time, some of the time (as needed), or all of the time.

	None of the time	Some of the time	All of the time	DK
a. Wind breaks	☐1	☐2	☐3	☐4
b. Shade	☐1	☐2	☐3	☐4
c. Sprinklers/misters to keep cattle cool	☐1	☐2	☐3	☐4
d. Additional bedding (e.g., straw) compared to home pen	☐1	☐2	☐3	☐4
e. Additional hay to eat compared to home pen	☐1	☐2	☐3	☐4
f. Increased waterer/bunk space per animal compared to home pen	☐1	☐2	☐3	☐4
g. Increased observation/surveillance compared to home pen	☐1	☐2	☐3	☐4
h. Dust control	☐1	☐2	☐3	☐4
i. Other (specify: _____)	☐1	☐2	☐3	☐4

26. Did you receive information from slaughter facilities about the percentage of cattle from this feedlot affected with liver abscesses resulting in condemnation of livers?	☐1 Yes ☐3 No ☐4 DK

[If Question 26 = No or DK, SKIP to Question 28]

27. Approximately what percentage of slaughtered cattle of the following types had liver condemnations due to liver abscesses?

	Placed on this feedlot?		Percentage with liver condemnations?	
a. Beef breed cattle given in-feed antibiotics	☐1 Yes ☐3 No	If No, SKIP to 27b If Yes →	%	☐4 DK
b. Dairy or dairy cross breed cattle given in-feed antibiotics	☐1 Yes ☐3 No	If No, SKIP to 27c If Yes →	%	☐4 DK
c. Beef breed cattle NOT given in-feed antibiotics	☐1 Yes ☐3 No	If No, SKIP to 27d If Yes →	%	☐4 DK
d. Dairy or dairy cross breed cattle NOT given in-feed antibiotics	☐1 Yes ☐3 No	If No, SKIP to 28 If Yes →	%	☐4 DK

28. Over the past 5 years, has there been an increase in death loss in late-fed cattle on this feedlot (i.e., cattle fed 100 days or more)?	☐1 Yes ☐3 No ☐4 DK

[If Question 28 = No or DK, SKIP to Section B]

29. Were the following associated with this increased late-fed death loss?

a. Bovine respiratory disease, excluding acute interstitial pneumonia	☐1 Yes ☐3 No ☐4 DK
b. Acute interstitial pneumonia (i.e., dust pneumonia, atypical pneumonia)	☐1 Yes ☐3 No ☐4 DK
c. Injury	☐1 Yes ☐3 No ☐4 DK
d. Fatigued cattle syndrome	☐1 Yes ☐3 No ☐4 DK
e. Heart failure	☐1 Yes ☐3 No ☐4 DK
f. Other (specify: _____)	☐1 Yes

NAHMS ID: _____

Section B—Antibiotic Use

1. Were **any** antibiotics used in cattle on this feedlot (all forms; e.g., injectable, bolus-dosed, in feed, and/or in water) from September 1, 2019 to August 31, 2020?	☐1 Yes ☐3 No ☐4 DK

[If Question 1 = No or DK, SKIP to Section C]

Injectable and Bolus-Dosed Antibiotic Use

2. Were injectable or bolus-dosed antibiotics used on this feedlot?	☐1 Yes ☐3 No ☐4 DK

[If Question 2 = No or DK, SKIP to Question 12]

3. How important are the following factors in the selection of injectable and bolus-dosed antibiotics?

	Not Important	Slightly Important	Moderately Important	Very Important	Extremely Important
a. Veterinarian recommendations	☐1	☐2	☐3	☐4	☐5
b. Other producers' recommendations	☐1	☐2	☐3	☐4	☐5
c. Laboratory test results	☐1	☐2	☐3	☐4	☐5
d. Drug company advertisement	☐1	☐2	☐3	☐4	☐5
e. Personal experience (past response rates)	☐1	☐2	☐3	☐4	☐5
f. Cost of antibiotic	☐1	☐2	☐3	☐4	☐5
g. Approved route by which antibiotic is given	☐1	☐2	☐3	☐4	☐5
h. Duration of action (e.g., only needs to be given once)	☐1	☐2	☐3	☐4	☐5
i. Drug withdrawal time	☐1	☐2	☐3	☐4	☐5
j. Over the counter availability	☐1	☐2	☐3	☐4	☐5
k. Other (specify _____)	☐1	☐2	☐3	☐4	☐5

4. For this question, **individual treatment** is defined as the administration of antibiotics only to those cattle identified to be sick. Were cattle administered **injectable or bolus-dosed antibiotics** for the **individual treatment** of **bovine respiratory disease (BRD)?**	☐1 Yes ☐3 No ☐4 DK

[If Question 4 = No or DK, SKIP to Question 8]

NAHMS ID: _____

5. For this question, consider only the cattle that you identified in Section A, Question 15; Page 5, to be **affected with BRD**. For each of the following **injectable or bolus-dosed antibiotics**, what percentage of these cattle were **individually treated for BRD** with this antibiotic for their initial treatment?
[Answer by weight class at arrival if possible. Otherwise, answer by % all sick cattle Write in DK if the estimate is unknown. Refer to Reference Card 4 (Antibiotics Given via Injection or Bolus)]

Active ingredient name (Trade name examples)	Arrival Weight				% all sick cattle
	% sick cattle <400 lb	% sick cattle 400 - 699 lb	% sick cattle ≥700 lb		
a. Tilmicosin (Micotil®)					
b. Gamithromycin (Zactran®)					
c. Tulathromycin (Draxxin®)					
d. Tylosin (Tylan® 200)					
e. Tildipirosin (Zuprevo®)					
f. Florfenicol (Nuflor®)					
g. Florfenicol w/ flunixin meglumine (Resflor Gold®)				OR	
h. Enrofloxacin (Baytril®)					
i. Danofloxacin (Advocin™)					
j. Ceftiofur (Naxcel®, Excenel®, Excede®)					
k. Oxytetracycline (LA-200®, Oxytet 100, BioMycin®)					
l. Penicillin (Aquacillin™, Penicillin G Procaine)					
m. Ampicillin (Polyflex®)					
n. Sulfadimethoxine (Albon® Injection)					
o. Sulfadimethoxine (Albon® Bolus)					
p. Sulfamethazine (Sustain III® Bolus, Supra Sulfa® III)					

6. Of the sick cattle described in Question B5 that were initially treated for BRD, what percentage:
[Answer by weight class at arrival if Question B5 was answered by weight class. If Question B5 was answered for all cattle, answer by % all sick cattle. Write DK if unknown]

	Arrival Weight				% all sick cattle
	% sick cattle <400 lb	% sick cattle 400-699 lb	% sick cattle ≥700 lb		
a. Responded and recovered?				OR	%
b. Died or were euthanized?					%
c. Were considered chronics and marketed early?					%
d. Did not respond and were re-treated?					%

7. For this question, **GROUP** administration of antibiotics means that the majority of the pen was given an antibiotic at one time. Were cattle on your feedlot administered **injectable or bolus-dosed** antibiotics **as a GROUP** for the prevention, control, or treatment of **BRD?**	☐1 Yes ☐3 No ☐4 DK

[If Question 7= No or DK, SKIP to Question 9]

NAHMS ID: _____

8. For each of the following injectable or bolus-dosed antibiotics, what percentage of cattle were given this antibiotic **as a GROUP** for the prevention, control, or treatment of **BRD**?
[Answer by weight class at arrival if possible. If not, answer for all cattle overall. Write in DK if the estimate is unknown. Refer to Reference Card 4 (Antibiotics Given via Injection or Bolus)]

Active ingredient name (Trade name examples)	Arrival Weight				% all cattle
	% cattle <400 lb	% cattle 400 - 699 lb	% cattle ≥700 lb		
a. Tilmicosin (Micotil®)					
b. Gamithromycin (Zactran®)					
c. Tulathromycin (Draxxin®)					
d. Tylosin (Tylan® 200)					
e. Tildipirosin (Zuprevo®)					
f. Florfenicol (Nuflor®)					
g. Florfenicol w/ flunixin meglumine (Resflor Gold®)				OR	
h. Enrofloxacin (Baytril®)					
i. Danofloxacin (Advocin™)					
j. Ceftiofur (Naxcel®, Excenel®, Excede®)					
k. Oxytetracycline (LA-200®, Oxytet 100, BioMycin®)					
l. Penicillin (Aquacillin™, Penicillin G Procaine)					
m. Ampicillin (Polyflex®)					
n. Sulfadimethoxine (Albon® Injection)					
o. Sulfadimethoxine (Albon® Bolus)					
p. Sulfamethazine (Sustain III® Bolus, Supra Sulfa® III)					

9. Were sick cattle on your feedlot administered **injectable or bolus-dosed antibiotics** for the **individual treatment** of conditions **other than BRD?**	☐$_1$ Yes ☐$_3$ No ☐$_4$ DK

[If Question 9 = No or DK, SKIP to Question 11]

10. For this question, consider only the cattle that you identified in Section A, Question 19; Page 6 to have developed the conditions in that question, also listed in the reason codes below. If an injectable or bolus-dosed antibiotic in the list below was used to individually treat cattle with these conditions, enter the reason code corresponding to the **most common reason** (primary reason) in the list that this antibiotic was used. *[Refer to Reference Card 4 (Antibiotics Given via Injection or Bolus)]*

Active ingredient name (Trade name examples)	Reason Code
a. Tilmicosin (Micotil®)	
b. Gamithromycin (Zactran®)	
c. Tulathromycin (Draxxin®)	
d. Tylosin (Tylan® 200)	
e. Tildipirosin (Zuprevo®)	
f. Florfenicol (Nuflor®)	
g. Florfenicol with flunixin meglumine (Resflor Gold®)	
h. Ceftiofur (Naxcel®, Excenel®, Excede®)	
i. Oxytetracycline (LA-200®, Oxytet 100, BioMycin®)	
j. Penicillin (Aquacillin™, Penicillin G Procaine)	
k. Ampicillin (Polyflex®)	
l. Sulfadimethoxine (Albon® Injection)	
m. Sulfadimethoxine (Albon® Bolus)	
n. Sulfamethazine (Sustain III® Bolus, Supra Sulfa® III)	

Reason Codes for Question 10	
1	Acute Interstitial Pneumonia
2	Bloat
3	Other digestive disorders
4	Footrot
5	Hairy heel wart
6	CNS disease
7	Pinkeye
8	Cardiovascular disease
9	Fatigued cattle syndrome
10	Other (specify:_____)

NAHMS ID: _____

Antibiotic Use in Feed

11. Were **any** antibiotics used in **feed** on this feedlot? Include antibiotics that DO require a veterinary feed directive such as chlortetracycline and tylosin, and antibiotics that DO NOT require a veterinary feed directive (VFD), such as ionophores (e.g., Rumensin®, Monovet®, Bovatec®, and Cattlyst®), bambermycin, and bacitracin.	☐1 Yes ☐3 No ☐4 DK

If Question 11 = No or DK, SKIP to Question 16]

12. For each of the following antibiotics that DO NOT require a VFD, what percentage of cattle overall received it in feed for any reason? If the antibiotic was used, designate up to 2 reason codes from the box below and the percentage of cattle that received it specifically for the reason(s).
[Refer to Reference Card 5 (Antibiotics Given via Feed or Water)]

Reason codes for Question 12	
1	Coccidiosis
2	Growth promotion/improved feed efficiency
3	Reduction in the number of liver condemnations due to abscesses
4	Other (specify:_____)

Active ingredient name (Trade name examples)	% cattle overall	Reason Code I	% cattle for Reason Code I	Reason Code II	% cattle for Reason Code II
a. Any ionophore (e.g., Rumensin®, Bovatec®)					
b. Bambermycin (Gainpro® 10)					
c. Bacitracin (BMD®, Baciferm®)					

13. This question asks about in-feed antibiotics that DO require a VFD used in cattle that were **less than 700 lb** at arrival. For each of the following antibiotics, what percentage of cattle **less than 700 lb** at arrival overall received it in feed for any reason? If the antibiotic was used, designate up to 2 reason codes from the box below and the percentage of cattle that received it specifically for the reason(s).
[Refer to Reference Card 5 (Antibiotics Given via Feed or Water)]

Reason codes for Question 13	
1	Liver abscesses
2	Respiratory disease (e.g., bacterial pneumonia, shipping fever)
3	Gastrointestinal disease (e.g., bacterial enteritis [diarrhea])
4	Anaplasmosis
5	Other (specify:_____)

Active ingredient name (Trade name examples)	% cattle overall	Reason Code I	% cattle for Reason Code I	Reason Code II	% cattle for Reason Code II
a. Chlortetracycline (Aureomycin®, Aureomix®, CTC)					
b. Oxytetracycline (Terramycin®, OTC)					
c. Sulfamethazine/sulfadimethoxine (Aureomix®)					
d. Neomycin (Neomix)					
e. Tylosin (Tylan, Tylovet)					
f. Virginiamycin (Vmax)					
g. Tilmicosin (Pulmotil®, Tilmovet®)					

NAHMS ID: _____

14. This question asks about in-feed antibiotics that DO require a VFD used in cattle that were **700 lb or greater** at arrival. For each of the following antibiotics, what percentage of cattle **700 lb or greater** at arrival overall received it in feed for any reason? If the antibiotic was used, designate up to 2 reason codes from the box below and the percentage of cattle that received it specifically for the reason(s).
[Refer to Reference Card 5 (Antibiotics Given via Feed or Water)]

Reason codes for Question 14	
1	Liver abscesses
2	Respiratory disease (e.g., bacterial pneumonia, shipping fever)
3	Gastrointestinal disease (e.g., bacterial enteritis [diarrhea])
4	Anaplasmosis
5	Other (specify:_____)

Active ingredient name (Trade name examples)	% cattle overall	Reason Code I	% cattle for Reason Code I	Reason Code II	% cattle for Reason Code II
a. Chlortetracycline (Aureomycin®, Aureomix®, CTC)					
b. Oxytetracycline (Terramycin®, OTC)					
c. Sulfamethazine/sulfadimethoxine (Aureomix®)					
d. Neomycin (Neomix)					
e. Tylosin (Tylan, Tylovet)					
f. Virginiamycin (Vmax)					
g. Tilmicosin (Pulmotil®, Tilmovet®)					

[If Question B13.a and B14.a = 0, i.e. no chlortetracycline was used in feed, SKIP to Question 16. If chlortetracycline was used but reason code was NOT 2, SKIP to Question 16]

15. In-feed chlortetracycline (10 mg/lb/day) is currently approved for use in cattle for 5 days to treat respiratory disease. If cattle do not respond to this pulse treatment, producers have the option to obtain a second VFD from a veterinarian to administer a second pulse, and so on.

	None	Some	Most	All	DK
When chlortetracycline was used in feed for the **treatment** of respiratory disease, what proportion of pen groups treated with chlortetracycline required more than one pulse treatment? Answer None (0%), Some (50% or less), Most (more than 50%), or All (100%).	☐0	☐1	☐2	☐3	☐4

Antibiotic Use in Water

16. Were any antibiotics used **in water** on this feedlot?	☐1 Yes ☐3 No ☐4 DK

[If Question 16 = No or DK, SKIP to Section C]

NAHMS ID: _____

17. For each of the following **in-water antibiotics,** what percentage of cattle overall received it in water for any reason? If the antibiotic was used, designate up to 2 reason codes from the box below and the percentage of cattle that received it specifically for the reason(s).
[Refer to Reference Card 5 (Antibiotics Given via Feed or Water)]

Reason codes for Question 16	
1	Respiratory disease (e.g., bacterial pneumonia, shipping fever)
2	Gastrointestinal disease (e.g., bacterial enteritis [diarrhea])
3	Pinkeye
4	Footrot
5	Other (specify:_____)

Active ingredient name	% cattle overall	Reason Code I	% cattle for Reason Code I	Reason Code II	% cattle for Reason Code II
a. Chlortetracycline (Aureomycin®, Aureomix®, CTC)					
b. Oxytetracycline (Terramycin®, OTC)					
c. Tetracycline (Duramycin, Tet-Sol)					
d. Sulfamethazine/sulfadimethoxine (Sulfasol)					
e. Neomycin (Neosol)					
f. Spectinomycin (Spectam, SpectoGard)					

NAHMS ID: _____

Section C—Nutrition

1. Of all cattle placed on feed, what percentage were ever given the following during the feeding period?

a. A coccidiostat other than an ionophore, such as amprolium (e.g., Corid®) or decoquinate (e.g., Deccox®)?	%	☐4 DK
b. A beta-agonist (e.g., ractopamine)	%	☐4 DK

2. Did this feedlot use the services of a nutritionist?	☐1 Yes ☐3 No ☐4 DK

3. Which of the following water sources were used for the cattle on this feedlot?

a. Ground water (well)	☐1 Yes ☐3 No ☐4 DK
b. Surface water (ponds, lakes, streams, water storage from river flows)	☐1 Yes ☐3 No ☐4 DK
c. Municipal water supply	☐1 Yes ☐3 No ☐4 DK

4. Were any of the following feed additives used on this feedlot? If yes, which of the following were reasons they were included in the ration? *[Check all that apply]*

		If used on feedlot, for what reason(s)					
	Used on feedlot?	Improve growth rate and/or feed efficiency	Antibiotic Altern-ative	Bovine respiratory disease	Hoof health	Pre-harvest food safety	Reduce liver abscesses
a. Direct-fed microbial or probiotic (e.g., *Lactobacillus acidophilus* or yeast)	☐1 Yes ☐3 No	☐1	☐2	☐3	☐4	☐5	☐6
b. Yeast fermentation products	☐1 Yes ☐3 No	☐1	☐2	☐3	☐4	☐5	☐6
c. Prebiotics (e.g., mannan-oligosaccharides)	☐1 Yes ☐3 No	☐1	☐2	☐3	☐4	☐5	☐6
d. Vitamin supplements	☐1 Yes ☐3 No	☐1	☐2	☐3	☐4	☐5	☐6
e. Organic mineral supplements	☐1 Yes ☐3 No	☐1	☐2	☐3	☐4	☐5	☐6
f. Inorganic mineral supplements	☐1 Yes ☐3 No	☐1	☐2	☐3	☐4	☐5	☐6
g. Enzymes	☐1 Yes ☐3 No	☐1	☐2	☐3	☐4	☐5	☐6
h. Essential oils and plant-derived products (e.g., yucca extract)	☐1 Yes ☐3 No	☐1	☐2	☐3	☐4	☐5	☐6
i. Other (specify:_____)	☐1 Yes ☐3 No	☐1	☐2	☐3	☐4	☐5	☐6

NAHMS ID: _____

Section D—Biosecurity

1. Were the following practices used on this feedot?

a.	Control access for visitors entering animal areas	☐1 Yes ☐3 No ☐4 No visitors
b.	Disposable or clean boots for visitors entering animal areas	☐1 Yes ☐3 No ☐4 No visitors
c.	Footbaths for visitors entering animal areas	☐1 Yes ☐3 No ☐4 No visitors
d.	Restrictions on vehicles entering animal area	☐1 Yes ☐3 No ☐4 No vehicles
e.	Restrict movement of horses onto the feedlot premises	☐1 Yes ☐3 No ☐4 No horses
f.	Insect control	☐1 Yes ☐3 No
g.	Rodent control	☐1 Yes ☐3 No
h.	Bird control	☐1 Yes ☐3 No
i.	Have dead cattle picked up at edge of property	☐1 Yes ☐3 No
j.	Compost deads on site	☐1 Yes ☐3 No

2. Did this feedlot have a written or electronic biosecurity plan?	☐1 Yes ☐3 No ☐4 DK

3. Does this feedlot have a shared fenceline with another operation such that there could be nose to nose contact with other cattle, bison or other ruminants?	☐1 Yes ☐3 No ☐4 DK

[If Question 3 = YES, then SKIP to Question 5]

4. How close, to the nearest ½ mile, is this feedlot to another operation with cattle, bison, or other ruminants?	**miles**

	Number of employees
5. How many employees directly involved in cattle care did this feedlot have on average from September 1, 2019 to August 31, 2020?	

[If Question 5 = 0, SKIP to Question 7]

6. Did employees of this feedlot…

a.	Have contact with cattle, bison, or other ruminants on other operations?	☐1 Yes ☐3 No ☐4 DK
b.	Own cattle, bison, or other ruminants at another location?	☐1 Yes ☐3 No ☐4 DK

7. Did cattle stay in the same pen during the entire feeding period?	☐1 Yes ☐3 No ☐4 DK

[If Question 7 = YES or DK, then SKIP to Question 9]

	Number
8. How many times were cattle re-sorted during the feeding period?	

9. How familiar are you with the Secure Beef Supply Plan? *[Check one only]*

☐1 Very familiar
☐2 Somewhat familiar
☐3 Heard of name only
☐4 Not familiar

NAHMS ID: _____

Thank you for your help in completing this survey. Please feel free to use the following space and the back of this questionnaire to communicate comments about the survey or any other information about health management on your feedlot that you think is relevant.

NAHMS ID: _____

Section E—Office Use Only

State FIPS: _____	Operation #: _____	Interviewer: _____	Date: ____/____/____
2-digits	5-digits	Initials	(mm/dd/yy)

1. Total time for interview [include time to discuss the program and complete the questionnaire] ..... _____ min

2. Total travel time [round trip] ..... _____ min

3. Data collector(s) (Enter the number for each category.)

_____ Federal VMO _____ Other (specify in margin) VFED/VOTH

_____ State VMO VST

4. Enter response code 99 if questionnaire is completed or enter one code of 00 through 07 that best describes the reason why the owner is not participating ..... _____ code

99 = Survey completed
00 = Producer not contacted by VMO
01 = Poor time of year to contact or no time available to participate
02 = Doesn't want anyone on operation
03 = Bad experience with government veterinarian(s)
04 = Doesn't want to do another survey or divulge information
05 = Told NASS they didn't want to be contacted by VS
06 = Ineligible (no longer in operation)
07 = Other (explain in the comments section below)

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

1 = Owner
2 = Manager
3 = Family member (other than owner or manager)
4 = Other hired employee (non-veterinarian)
5= Veterinarian on staff (e.g., company veterinarian)
6= Herd veterinarian or other veterinarian
7 = Other (specify: _____)

6. Producer data quality ..... ☐1 Good to excellent ☐2 OK ☐3 Poor

7. Comments regarding this questionnaire or operation:

VMO signature: _____

TO BE COMPLETED BY COORDINATOR:

8. Field data quality ..... ☐1 Good to excellent ☐2 OK ☐3 Poor

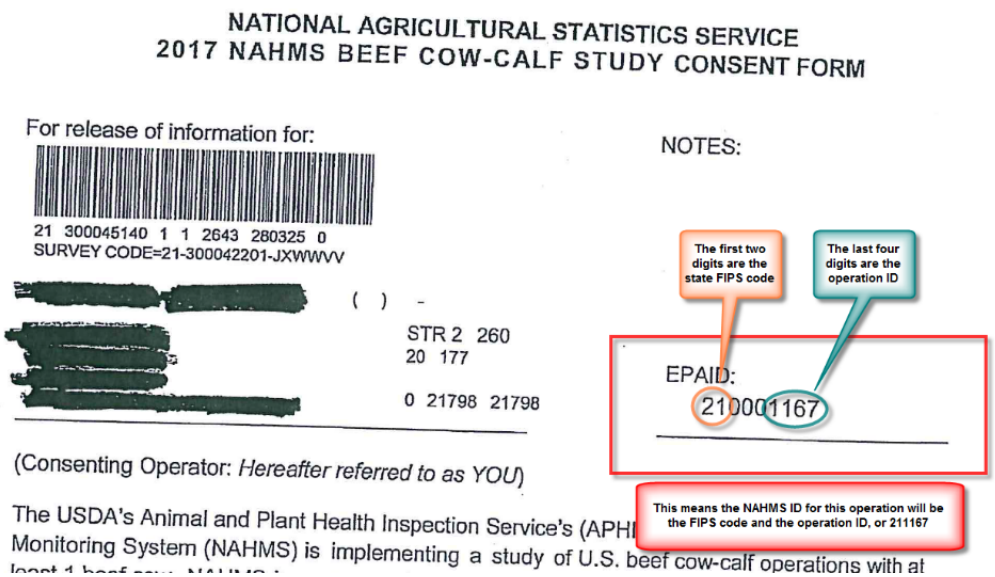
INITIAL INFORMATION

State FIPS
Enter the 2-digit FIPS code for the state: CA-06, CO-08, IA-19, ID-16, IL-17, IN-18, KS-20, MI-26, MN-27, MO-29, MT-30, ND-38, NE-31, OH-39, OK-40, PA-42, SD-46, TX-48, UT-49, WA-53, WI-55, WY-56

Operation Number
Enter the 4-digit ID number assigned by NASS.

> The 6-digit combination of the State FIPS Code and Operation numbers is referred to as the NAHMS ID. For example 06 1167 would be a NAHMS ID for the State of California.
>
> 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, 06 000 1167 is an EPAID ID. Please ignore the 3 middle zeroes when you record the NAHMS ID.

EPAID Example:



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.

GENERAL INSTRUCTIONS

During the administration of the Phase 2 Questionnaire, 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 accidentally missed or if the Producer did not have an answer or refused to answer. We may request that you re-contact the Producer if necessary for missing data or clarification.

NAHMS is a voluntary program. Reassure the Producer about the confidentiality of the data they provide, but if they don't want to answer a question, respect their wishes. Use the DA (Declines to Answer) option, and move on to the next question.

Producers should provide information about cattle from the period between **September 1, 2020, and August 31, 2021.** We are interested in information about cattle and calves on feed on this specific feedlot for the slaughter market regardless of ownership. In other words, if there are cattle on the feedlot that are not owned by the Producer, DO provide information for these cattle. If the Producer owns cattle that are being fed on another feedlot, DO NOT provide information about these cattle. We only want information for cattle on the feedlot that will be directly sent to slaughter. If there are cattle on the feedlot that are being "backgrounded" for sale as feeders for later placement on feed on another feedlot or that will be returned to pasture, DO NOT provide information for these cattle. Also, DO NOT provide information for cows or bulls being fed for the slaughter market.

If the response is zero (0), enter the number 0; do not leave the response blank. If it is not possible for the Producer to provide an accurate estimate, enter DK (Don't Know). If the Producer declines to answer, enter DA (Declines to Answer). There is a box at the end of the questionnaire provided for clarification of atypical responses. Please enter issues with the question there designated with the question section and number. We would rather have a lengthy explanation for an unusual answer than no explanation at all. If an answer doesn't make sense and has no explanation, we may have to ask your Coordinator to ask you to explain the answer, delaying data entry.

Some questions ask specifically for the percentage of cattle with certain characteristics (e.g., Section A, Question 14 & 15). For these questions, the Producer should attempt to provide an accurate estimate of the percentage of cattle that fit the description. In many other questions rating scales are used (e.g., Section A, Question 2; Question 6). This is intended to reduce burden on the respondent and reflect the fact that the respondent is often only able to provide an approximation without referring to records, which can be time-consuming. The scale is specified in the question.
For None, Some, Most, All Scales:

None corresponds to 0% of the cattle
Some corresponds to 50% or less of the cattle
Most corresponds to 51% or more of the cattle
All corresponds to 100% of the cattle.

SECTION A: CATTLE HEALTH AND HEALTH PRACTICES

Question A1-A6: Preconditioning and Backgrounding

Question A1:

Indicate whether the specific breed and weight class of cattle at arrival (such as beef breeds less than 400 lb at arrival) was placed on the feedlot. If so, then provide the proportion of cattle for which reliable information about preconditioning and backgrounding was known. Reliable information in this context is defined as information that is trusted but not necessarily documented. In other words, information can be defined as reliable without it necessarily being part of a certified preconditioning program. Include cattle purchased by the Producer as well as cattle that the Producer bred and raised themselves.

"None" indicates that reliable information about preconditioning and backgrounding was available for 0% of the placed cattle, "Some" indicates that reliable information was available for 50% or less of the placed cattle, "Most" indicates that reliable information was available for 51% or more of the placed cattle, and "All" indicates that reliable information was available for 100% of the placed cattle.

Question A2:

Indicate whether the Producer being interviewed bred and raised all cattle placed on feed between September 1, 2019 and August 31, 2020. Answer YES, NO, or DON'T KNOW (DK).

What if….the Producer breeds and raises all their own cattle, but their feedlot is in a different physical location than the place where the calves are born?

Answer "YES" to Question A2.

What if….the Producer breeds and raises most of their cattle, but does purchase some cattle from another local cow-calf operation to feed out?

Answer "NO" to Question A2.

Question A3:

Indicate the level of importance to the Producer of availability of reliable information on preconditioning and backgrounding of purchased cattle: NOT IMPORTANT, SLIGHTLY IMPORTANT, MODERATELY IMPORTANT, VERY IMPORTANT, or EXTREMELY IMPORTANT. If it is NOT important to the Producer that reliable information about preconditioning and backgrounding is available, then SKIP to Question A6.

Question A4:

This question will only be asked of Producers that believe it is either somewhat or very important to have reliable information about backgrounding or preconditioning of purchased cattle. Indicate whether these Producers are able to access all the reliable information that they want. Answer YES or NO. If the answer is YES, they can access all the information they want, then SKIP to Question A6.

Question A5:

Indicate important reasons why the Producer can't access the reliable information about preconditioning and backgrounding that they want. Answer YES or NO to each, and write in an answer if there is another unstated reason that is important to the Producer.

Question A6:

For this question, provide information about specific preconditioning or backgrounding practices performed in all cattle placed on the feedlot. Provide information for cattle for which any information about preconditioning and backgrounding is known. Consider all placed cattle, including purchased cattle and cattle bred and raised by the Producer. Provide the proportion of cattle on which the specified preconditioning and backgrounding procedures were performed. "None" indicates that the specified preconditioning and backgrounding procedure was performed on 0% of the placed cattle, "Some" indicates that the specified procedure was performed on 50% or less of the placed cattle, "Most" indicates that the specified procedure was performed on 51% or more of the placed cattle, and "All" indicates that the specified procedure was performed on 100% of the placed cattle. For Question A6.g, consider only bull calves and/or bulls. For Question A6.h consider only non-polled cattle, that is cattle that would normally naturally have horns. Write in "NA" (Not applicable) in margin if only naturally polled cattle are placed on the feedlot.

Questions A7-A14: Initial Processing and Management at the Feedlot

Question A7:

This question asks about whether cattle are assessed for their risk for bovine respiratory disease (BRD), classified according to their risk level (e.g., as high or low risk for BRD), and then managed differently based on this risk assessment. Answer YES, NO, or Don't Know (DK). If the answer is NO or DK, then SKIP to Question A9.

Question A8:

Answer this question if the answer to Question A7 = YES. This question asks about various characteristics and whether they are important in performing the risk assessment described in Question A7. Answer NOT IMPORTANT, SLIGHTLY IMPORTANT, MODERATELY IMPORTANT, VERY IMPORTANT, or EXTREMELY IMPORTANT for A8.a-n. If there is another characteristic that the Producer thinks is important for risk assessment that is not listed, please enter it into Question A8.o and specify its level of importance.

Question A9:

This question asks about whether or not cattle were processed as a group within 4 weeks of arrival at this feedlot. Processing is considered to include procedures such as vaccinations, tagging, implants, deworming, mineral or vitamin supplementation, castration, dehorning, and antibiotic administrations. Answer YES or NO. If NO, skip to Question A13.

Question A10:

This question asks about the time frame when initial processing occurred. Indicate the proportion of cattle that had initial group processing performed at each specific time interval: 24 hours or less after arrival, 25 to 72 hours after arrival, 73 hours up to 2 weeks after arrival, 2 to 4 weeks after arrival, or never (not processed as a group at placement). Do not include instances where cattle were noted to be ill on arrival and pulled out individually for treatment.

"None" indicates 0% of the placed cattle had group processing performed at that time interval, "Some" indicates 50% or less of the placed cattle had group processing performed at that time interval, "Most" indicates that 51% or more of the placed cattle had group processing performed at that time interval, and "All" indicates that 100% of the placed cattle had group processing performed at that time interval.

Question A11:

This question asks about specific procedures performed at initial group processing. . Indicate the proportion of ALL placed cattle that had each specific procedure performed at initial processing. "None" indicates 0% of the placed cattle had the specific procedure performed at initial processing, "Some" indicates 50% or less of the placed

cattle had the specific procedure performed, "Most" indicates that 51% or more of the placed cattle had the specific procedure performed, and "All" indicates that 100% of the placed cattle had the specific procedure performed. If the answer for the specific procedure for all placed cattle is "Some" or "Most" then also answer by weight class at arrival for the specific procedure. If the Producer doesn't know the proportion of cattle that had the specific procedure performed at initial processing, either for all cattle or by weight class at arrival, enter "DK." When we ask about procedures performed by weight class in this questionnaire, we are using weight class as a general proxy for risk of disease, in that younger, lighter cattle will likely be at more risk of disease than more mature, heavier cattle.

Example:
A Producer vaccinates all their cattle against respiratory disease. Intranasal viral respiratory vaccines are used on calves less than 400 lb at arrival, and injectable viral respiratory vaccines are used on cattle 400 lb or greater at arrival. About 1/3 of the Producer's cattle are 400 lb or less at arrival, 1/3 are 400 to 699 lb at arrival, and 1/3 are 700 lb or greater at arrival.
Answer 4 (All) for A11.e - Vaccination against any respiratory disease in All Cattle (it is not necessary to fill in the weights at arrival columns for this question because the answer was 4 (All).
Answer 3 (Most) for A11.f – Injectable vaccination against viral respiratory disease for All Cattle. Since the answer was not 1 (None) or 4 (All), answer by weight class. Answer 1 (None) for cattle <400 lb at arrival, 4 (All) for cattle 400-699 lb at arrival and 4 (All) for cattle ≥ 700 lb at arrival.
Answer 2 (Some) for A11.g – Intranasal vaccination against viral respiratory disease for All Cattle. Since the answer was not 1 (None) or 4 (All), answer by weight class. Answer 4 (All) for cattle <400 lb at arrival and 1 for other weight classes.

	All Cattle	Weights at arrival		
		Cattle <400	Cattle 400-699	Cattle ≥700
Vaccinations				
a. Vaccination against bovine viral diarrhea (BVD)?				
b. Vaccination against clostridial diseases (e.g., blackleg)?				
c. Vaccination against tetanus specifically?				
d. Vaccination against *Moraxella* (pinkeye)?				
e. Vaccination against any respiratory diseases?	4			
[If Question 11e = 0% for all, SKIP to Other Procedures 11i]				
f. Injectable vaccination against viral respiratory disease?	3	1	4	4
g. Intranasal vaccination against viral respiratory disease?	2	4	1	1

See the Vaccine Reference Card for assistance in matching vaccines the Producer gave with specific disease conditions.

Question A12:

This question asks about specific subgroups of cattle (heifers, bulls and bull calves, and non-polled cattle).

For Question A12.a and b, consider only heifers when answering. These 2 sub-questions ask for the proportion of heifers that had a pregnancy check at arrival, and for the proportion of heifers that were administered an abortifacient at arrival. Pregnancy checking refers to individual palpation by rectum to evaluate for pregnancy, while an abortifacient is a substance that induces an abortion in a pregnant animal. Prostaglandin is a commonly used abortifacient on feedlots.

For Question A12.c, consider only bulls and bull calves when answering. This sub-question asks for the proportion of bulls and bull calves that arrived at the feedlot uncastrated.

For Question A12.d, e, and f, consider only non-polled cattle when answering. Non-polled cattle in this context refers to cattle that naturally have horns, and polled cattle refers to cattle that naturally do NOT have horns through selective breeding, not cattle that have been previously disbudded or dehorned. Question A12.d asks for the proportion of non-polled cattle that arrived at the feedlot with horns. For these cattle, Question A12.e and f then ask what proportion are either dehorned or tipped at the feedlot. Dehorning refers to the complete removal of attached horns by methods such as gouging, hand saws, or wires. Tipping refers to cutting only a portion of the horn off and not completely removing it.

Provide the proportion of cattle of the specific subgroup referred to in the question. "None" refers to 0% of the placed cattle of the specific subgroup, "Some" refers to 50% or less of the placed cattle, "Most" refers to 51% or more of the placed cattle, and "All" refers to 100% of the placed cattle.

Question A13:

This question asks about the frequency of pen-riding or walking occurring on the feedlot In cattle that have been at the feedlot for less than 15 days, cattle that have been at the feedlot for 15 to 30 days, and cattle that have been at the feedlot for 30 days or more. Pen-riding or walking refers to the practice of the Producer or an employee closely observing cattle to identify sick or injured animals for treatment. Answer 1 for Once a day, 2 for Twice a day, 3 for More than twice a day, 4 for Less than once a day, and 5 for No standard procedure.

Question A14:

This question asks about interventions used by the feedlot to mitigate weather-related stress. Building mounds refers to the practice of constructing small sloping hills in feedlot pens to provide a comfortable, dry resting place for cattle in muddy conditions. Wind breaks are fences constructed to block prevailing winds. Answer YES, NO, or DON'T KNOW (DK) for each intervention. If an intervention is used on the feedlot that is not listed, please write it in the Other space (Question A14.f) and check YES.

Questions A15-A29: Disease Conditions

Question A15:

This question asks about the percent of cattle that were affected by and the percent of cattle that died due to bovine respiratory disease (BRD). BRD is a general term referring to disease of the upper or lower respiratory tracts of cattle that is related to a number or different factors, including bacteria, viruses, host characteristics such as stress and immune status, and environmental risks such as poor ventilation, dust, and crowding. BRD is most prevalent within the first few weeks of arrival to the feedlot, which is why it is called shipping fever. Common signs of BRD include fever, breathing difficulties, coughing, nasal discharge, depression, and lack of appetite. Exclude cattle affected by acute interstitial pneumonia, as that will be covered in Question A19.

Provide the percentage of placed cattle affected by BRD, and the percentage of placed cattle that died due to BRD. The percentage of placed cattle affected by BRD will include the cattle that ultimately died due to the disease. Answer separately by weight class at arrival in Question A15 a, b, and c (less than 400 lb, 400 to 699 lb, and 700 lb or greater). If it is not possible to provide estimates by weight class, answer for all placed cattle in Question A15.d and leave A15 a, b, and c blank. If it is not possible to provide an estimate of cattle that were affected by and died of BRD, then answer Don't Know in Question A15.d.

What if….a steer is found dead and the death is considered to be due to BRD?

Count this steer in the column of cattle affected by BRD AND the column of cattle that died due to BRD.

Question A16:

This question asks about the percentage of cattle that were affected with BRD on this feedlot during the fall/winter months and in spring/summer months. Fall/winter refers to the period of time approximately between September 1, 2019 and February 29, 2020 and spring/summer refers to the period of time approximately between March 1, 2020, and August 31, 2020. Consider all the cattle that were affected with BRD throughout the entire year, and then indicate what percentage of these cattle were

affected during the fall/winter months and what percentage of these cattle were affected during the spring/summer months. These percentages should add up to 100%. If it is not possible for the Producer to provide these estimates, then indicate Don't Know (DK).

Question A17:

This question asks about whether the percentage of cattle affected seasonally with BRD is comparable to the percentages of cattle that the Producer expected to be affected with BRD. For fall/winter and spring/summer months, indicate whether the percentage of cattle affected with BRD was lower than, similar to, or higher than the expected percentage.

Question A18:

If the percentage of cattle affected with BRD was higher or lower than expected, the Producer can provide written reasons why they think this may be the case at the end of the questionnaire just prior to Section E.

Question A19:

This question asks about the percentage of cattle that developed one of a list of disease conditions, excluding BRD, between September 1, 2019 and August 31, 2020. The disease conditions asked about are acute interstitial pneumonia, bloat, other digestive disorders excluding bloat (coccidiosis, diarrhea), footrot, hairy heel wart, central nervous system disease, ocular disease, cardiovascular disease, and fatigued cattle syndrome. Definitions of these disease conditions are provided below. Provide an estimate of the percentage of placed cattle that developed the condition, or check "Don't Know" (DK) if the Producer is not familiar with the condition or does not feel that they can provide an accurate estimate. If there is another disease condition that is not listed that the Producer feels is a significant contributor to disease burden on this feedlot, please fill it in the Question A19.j (Other) and provide the percentage of placed cattle affected.

Definitions of disease conditions in feedlot cattle:

Acute interstitial pneumonia: A suddenly occurring respiratory distress syndrome that commonly affects cattle late in the feeding period and may be related to dust, bovine respiratory syncytial virus infection, heat, bronchopneumonia, and toxins. A post-mortem examination is required to definitively diagnose this disease. Lungs are heavy, full of fluid, and fail to collapse normally.

Bloat: Excessive accumulation of gases in the rumen due to interruption of the normal elimination of gas via eructation or belching. Bloat in cattle in confinement (not on

pasture) usually occurs secondary to acidosis and/or rumenitis. Cattle are distended on the left side, uncomfortable, and can suddenly collapse and die.

Coccidiosis: A parasitic infection of the intestine caused by *Eimeria* species. Disease is typically seen in young cattle, and clinical signs can vary from reduced weight gain, to watery feces and discomfort, to severe bloody diarrhea, straining to defecate, and death. Calves that survive severe illness may be permanently stunted. Drugs used for the prevention and/or treatment of coccidiosis include amprolium, decoquinate, and ionophores.

Diarrhea: Diarrhea in cattle can be caused by many conditions, including bacterial, viral, or parasitic infections, type of feed and feed changes, and indigestion.

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

Hairy heel wart (papillomatous digital dermatitis): A contagious bacterial infection of the foot characterized by raised red sores or erosions over the heel area. It can be confused with footrot, but is caused by a different type of bacteria and therefore does not respond to the typical treatments for footrot.

Central nervous system (CNS) disease (polio, listeriosis, "brainers"): Brain disease in cattle can result from many causes, including nutritional imbalances, infections, and toxicities. Clinical signs can include incoordination, weakness, convulsions, depression, fever, and circling.

Pinkeye (infectious bovine keratoconjunctivitis): A contagious disease of the eyes of cattle characterized by tearing, light sensitivity, squinting, swelling of the conjunctiva, and ulceration of the cornea. This can progress to further cloudiness of the cornea followed by a pink then yellow color of the eye. Permanent blindness can ultimately result. The primary infectious agent is the bacterium *Moraxella bovis.* It is transmitted by face flies and therefore is more common during warmer seasons.

Cardiovascular disease (e.g., heart failure, brisket disease): Heart disease in cattle can result from right heart failure due to pulmonary hypertension (high altitude disease), hardware disease (foreign body such as a wire in the reticulum piercing the heart lining), or infectious inflammations of the heart muscle or valves. High altitude disease or brisket disease is a complicated problem caused by narrowing of the blood vessels in the

lungs due to chronic low levels of oxygen. This increased resistance to blood flow in the lungs, or pulmonary hypertension, ultimately causes right heart failure. Pulmonary hypertension is multifactorial, involving genetic predisposition, exposure to altitude, and potentially high growth rates. Clinical signs of right heart failure include lethargy, swelling of the limbs, belly, and brisket due to fluid accumulation, distension and pulsation of the jugular veins, diarrhea, and bulging eyes.

Fatigued cattle syndrome: A recently recognized syndrome in feedlot cattle characterized by exhaustion of energy storage within the muscle. It appears to be associated with increased outweights, heat stress, and aggressive handling. Clinical signs of fatigued cattle syndrome include reluctance to move, muscle tremors, and a stiff gait.

Question A20:

Answer this question if the answer to Question A19.e is >0%, in other words if the Producer reported hairy heel wart on this feedlot. This question asks about how the Producer treated hairy heel wart. Answer YES or NO to the questions of whether cattle footbaths or topical sprays were used on cattle to treat for hairy heel wart.

Question A21:

Answer this question only if the answer to either Question A20.a or b is YES. This question asks about the active ingredient in the footbath or sprays that were used to treat hairy heel wart. Answer whether the active ingredient was copper sulfate, formalin/formaldehyde, hydrogen peroxide, oxytetracycline, or another ingredient (fill in Other space for Question A21).

Question A22:

This question asks about the proportion of cattle that died that had a post-mortem or necropsy performed. Answer “None” for 0% of cattle that died, “Some” for 50% or less of cattle that died, “Most” for 51% or more of the cattle that died, “All” for 100% of the cattle that died, and “Don’t Know” or DK if the Producer doesn’t know.

Question A23:

This question asks about the initial course of treatment given to cattle sick with bovine respiratory disease, digestive disorders other than bloat (e.g., coccidiosis, diarrhea), lameness (e.g., footrot), and ocular disease (e.g., pinkeye). Indicate YES, NO, or DON”T KNOW (DK) for each condition as to whether injectable antibiotics, bolus-dosed oral antibiotics, in-feed antibiotics, topical antibiotics, respiratory vaccines, corticosteroids, non-steroidal anti-inflammatory drugs, antihistamines, vitamin B injections, vitamin C injections, immunostimulants (e.g., Zelnate™), injectable mineral supplements (e.g., MultiMin®), probiotic paste, or another treatment (fill in Other for Question A23.n).

Question A24:

This question asks about whether there were separate pens (hospital pens) to house sick cattle. Answer YES, NO, or DON'T KNOW (DK). If the answer is NO or DK, SKIP to Question A26.

Question A25:

Answer this question if Question A24 = YES. This question asks about whether specific resources (wind breaks, shade, sprinklers/misters, additional bedding compared to home pen, additional hay to eat compared to home pen, increased waterer and bunk space per animal compared to home pen, increased observation/surveillance, dust control, or other) were provided to cattle in the hospital pen. Answer NONE OF THE TIME, SOME OF THE TIME (AS NEEDED), ALL OF THE TIME, or DON'T KNOW (DK).

Question A26:

This question asks about whether information is received from slaughter facilities about the percentage of cattle from this feedlot affected with liver abscesses that resulted in liver condemnation. Answer YES, NO, or DON'T KNOW (DK). If the answer is NO or DON'T KNOW, SKIP to Question A28.

Question A27:

Answer this question if Question A26 = YES. This question asks about the percentage of cattle that had liver condemnations due to liver abscesses, stratified by breed type (beef or dairy/dairy cross) and whether the cattle received in-feed antibiotics while on the feedlot. First, it is asked whether cattle of the type of interest (beef breed cattle given in-feed antibiotics, dairy or dairy cross-breed cattle given in-feed antibiotics, beef breed cattle NOT given in-feed antibiotics, and dairy or dairy cross-breed cattle NOT given in-feed antibiotics) were placed on the feedlot. If YES, then provide the percentage of this type of cattle that were reported to have condemned livers at slaughter. If this percentage is not known, check DON'T KNOW (DK).

Question A28:

This question asks about whether the Producer has observed an increase in death loss in late-fed cattle (i.e., cattle fed 100 days or more) on this feedlot over the past 5 years. Answer YES, NO, or DON'T KNOW (DK). If the answer is NO or DON'T KNOW, SKIP to Section B.

What if….a Producer has been in business for less than 5 years?

Answer whether the Producer has observed an increase in death loss in late-fed cattle since the business started.

Question A29:

Answer this question only if Question A28 = YES. This question lists several disease conditions and asks whether in the Producer's opinion any of these are related to this increased death loss in late-fed cattle. Answer YES, NO, or DON'T KNOW (DK). If there is another disease condition that is not in the list that the Producer feels is related to late-fed cattle death loss, then fill it in the Other space and check YES for that item.

SECTION B: ANTIBIOTIC USE

Question B1:

This question asks about whether ANY antibiotics, of any form (injectable, bolused, in feed, and/or in water), were used in cattle on this feedlot from September 1, 2019 to August 31, 2020. This refers to antibiotics that either require prescriptions OR are available over the counter, and to in-feed antibiotics whether or not they require a veterinary feed directive (VFD). Antibiotics used on feedlots that DO NOT require a VFD are ionophores such as monensin and laidlomycin, bambermycin, and bacitracin. In-feed antibiotics that DO require a VFD include macrolides and tetracyclines. "Bolus" refers to a large antibiotic tablet that is administered orally and then remains in the rumen to release medication over time. Answer YES, NO, or DON'T KNOW (DK). If the answer to this question is NO or DON'T KNOW, SKIP this section and move to Section C.

Question B2:

Answer this question only if the answer to Question B1 = YES. This question asks about whether any injectable or bolus-dosed antibiotics were used on the feedlot from September 1, 2019 to August 31, 2020. Answer YES, NO, or DON'T KNOW (DK). If the answer to this question is NO or DON'T KNOW, SKIP to Question B12.

Question B3:

Answer this question only if the answer to Question B2 = YES. This question asks about the importance of several factors in decisions that the Producer makes about the selection of specific injectable and/or bolus-dosed antibiotics. Answer NOT IMPORTANT, SLIGHTLY IMPORTANT, MODERATELY IMPORTANT, VERY IMPORTANT, and EXTREMELY IMPORTANT for each of the listed factors. If there is another factor that was important to the Producer in the selection of injectable and/or bolus-dosed antibiotics that is not listed, enter it into the Other line (Question B3.k) and specify its degree of importance.

Question B4:

This question asks about whether injectable or bolus-dosed antibiotics were administered on the feedlot for the individual treatment of animals sick with bovine respiratory disease (BRD) from September 1, 2019 to August 31, 2020. In other words, are cattle individually examined and identified to be sick with BRD and then administered injectable or bolus-dosed antibiotics for treatment of BRD? Answer YES, NO, or DON'T KNOW (DK). If answer to Question B4 is NO or DON'T KNOW then skip to Question B8.

Question B5:

Answer this question only if the answer to Question B4 = YES. This question asks about injectable and/or bolus-dosed antibiotics used to **individually treat** cattle **FOR BRD**. When answering this question, the producer should consider the use of antibiotics in cattle that the Producer identified in Question A15 on Page 5 to be affected with BRD. Provide the percentage of **these sick cattle** that were treated with each of the antibiotics listed for BRD from September 1, 2019 to August 31, 2020. If Question A15 was answered by weight class, then provide these percentages by weight class. If Question A15 was answered for all cattle, then provide these percentages for all cattle. If any of these estimates are unknown, enter "DK.".

Example: The Producer reported in Question A15 that 3% of cattle with arrival weight <400 lb and 2% of cattle with arrival weight 400-699 lb were affected with BRD. The Producer treated 80% of the cattle that were sick with BRD and <400 lb at arrival with Enrofloxacin and 20% of the cattle that were sick with BRD and <400 lb with Gamithromycin. 100% of the cattle that were sick with BRD and 400-699 lb at arrival were treated with Tulathromycin.

Answer "20%" to Question B5.b (Gamithromycin) for "% sick cattle arrival weight <400 lb"
Answer "100%" to Question B5.c (Tulathromycin) for "% sick cattle arrival weight 400-699 lb"
Answer "80%" to Question B5.h (Enrofloxacin) for "% sick cattle arrival weight <400 lb"

Active ingredient name (Trade name examples)	Arrival Weight				% all sick cattle
	% sick cattle <400 lb	% sick cattle 400 - 699 lb	% sick cattle ≥700 lb		
a. Tilmicosin (Micotil®)					
b. Gamithromycin (Zactran®)	20	0			
c. Tulathromycin (Draxxin®)	0	100		OR	
d. Tylosin (Tylan® 200)					
e. Tildipirosin (Zuprevo®)					
f. Florfenicol (Nuflor®)					
g. Florfenicol w/ flunixin meglumine (Resflor Gold®)					
h. Enrofloxacin (Baytril®)	80	0			

i. Danofloxacin (Advocin™)					
j. Ceftiofur (Naxcel®, Excenel®, Excede®)					
k. Oxytetracycline (LA-200®, Oxytet 100, BioMycin®)					
l. Penicillin (Aquacillin™, Penicillin G Procaine)					
m. Ampicillin (Polyflex®)					
n. Sulfadimethoxine (Albon® Injection)					
o. Sulfadimethoxine (Albon® Bolus)					
p. Sulfamethazine (Sustain III® Bolus, Supra Sulfa® III)					

Question B6:

This question asks about the percentage of sick cattle initially treated with antibiotics for BRD (reported in Question B5) that a. Responded and recovered b. Died or were euthanized c. Were considered chronics and marketed early d. Did not respond and were re-treated. Question B6.b refers to cattle that did not recover fully from BRD and were shipped to slaughter prior to reaching normal slaughter weight. If Question B5 was answered by weight class, then provide these percentages by weight class. If Question B5 was answered for all cattle, then provide these percentages for all cattle.

Question B7:

This question asks about whether injectable or bolus-dosed antibiotics were administered on the feedlot as a group (i.e., the majority of the pen was administered the antibiotic on a population basis) for either the prevention, control, or treatment (i.e., therapy) of BRD from September 1, 2019 to August 31, 2020. Typically, this would mean that >90% of the pen was administered the antibiotic. If lesser numbers in the pen were given the antibiotic, it would generally mean that this should be counted as individual treatment (see Question B4) because animals would be individually identified as sick before treatment. Answer YES, NO, or DON'T KNOW (DK). If answer to the question is NO or DON'T KNOW then skip to Question B10.

Question B8:

Answer this question only if the answer to Question B7 = YES. This question asks about injectable, and/or bolus-dosed antibiotics given to cattle AS A GROUP for the prevention, control, or treatment of BRD from September 1, 2019 to August 31, 2020. Provide the percentages of each arrival weight class of cattle that were given each individual antibiotic listed as a group. If the Producer is unable to provide this estimate, enter "DK."

Example 1: The Producer gives about 40% of the cattle <400 lb at arrival on the feedlot Tulathromycin as a group. About 20% of the cattle 400-699 lb at arrival are given Oxytetracycline as a group, and about 20% of the cattle 700 lb or greater at arrival are given Oxytetracycline as a group.

Answer "40%" to Question 9.c for "% cattle arrival weight <400 lb"
Answer "20%" to Question 9.k for "% cattle arrival weight 400-699 lb"
Answer "20% to Question 9.k for "% cattle arrival weight 700 lb or greater

Example 2: The Producer only places cattle <400 lb at arrival on their feedlot. About 15% of the cattle are given Tulathromycin as a group and 15% of the cattle are given Gamithromycin as a group.

Answer "15%" to Question 9.b for "% cattle arrival weight <400 lb"
Answer "15%" to Question 9.c for "% cattle arrival weight <400 lb"

Question B9:

This question asks about whether injectable or bolus-dosed antibiotics were administered on the feedlot from September 1, 2019 to August 31, 2020, for the individual treatment of animals sick with the conditions other than BRD that are listed in the reason codes and were also asked about in Question A19: 1. Acute interstitial pneumonia 2. Bloat 3. Other digestive disorders excluding bloat (e.g., coccidiosis, diarrhea) 4. Footrot 5. Hairy heel wart 6. Central nervous system disease 7. Pinkeye 8. Cardiovascular disease 9. Fatigued cattle syndrome 10. Other disease specified by the Producer. In other words, are cattle individually examined and identified to be sick with any of these conditions and then administered injectable or bolus-dosed antibiotics for treatment of these conditions? Answer YES, NO, or DON'T KNOW (DK). If answer to Question B9 is NO or DON'T KNOW, SKIP to Question B12.

Question B10:

Answer this question only if the answer to Question B9 = YES. This question asks about injectable and/or bolus-dosed antibiotics used to **individually treat** cattle with **disease conditions other than BRD** from September 1, 2019 to August 31, 2020**.** When answering this question, the producer should consider the use of antibiotics in cattle that the Producer identified in Question A19 on Page 6 to be affected with the listed conditions other than BRD, or a condition that the Producer filled in on the OTHER line (Question A19.j). First, identify injectable or bolus-dosed antibiotics in the list that were used for treating any of the conditions reported in Question A19. Then, enter the code

corresponding to the most common reason (primary reason) that the antibiotic was used.

Example: The Producer reported in Question A19.d that 15% of the placed cattle developed footrot from September 1, 2019 to August 31, 2020, in Question A19.f that 1% of the placed cattle developed central nervous system disease, and in Question A19.g that 10% of the placed cattle developed pinkeye. The Producer used penicillin to treat all of these diseases, but the most common reason they used penicillin was to treat pinkeye, because all the cattle with pinkeye were treated with penicillin and only a few of the cattle with footrot were treated with penicillin. Therefore, the answer for Question A11.j is Reason Code 7 (Pinkeye). The Producer used oxytetracycline to treat most of the cattle with footrot; therefore, the answer for A11.i is Reason Code 4 (Footrot).

Question B11:

This question asks whether ANY antibiotics were administered IN FEED on this feedlot from September 1, 2019 to August 31, 2020. This question refers to any antibiotic use in feed, whether it does NOT require a VFD (ionophores, bambermycin, bacitracin), or DOES require a VFD (e.g., tylosin, tetracycline). Answer YES, NO, or DON'T KNOW (DK). If answer to Question B11 is NO or DON'T KNOW then skip to Question B16.

Question B12:

Answer this question only if the answer to Question B11 = YES. This question asks about antibiotics that DO NOT require a VFD given to cattle (ionophores, bambermycin, and bacitracin) from September 1, 2019 to August 31, 2020. Provide the percentage of cattle that received each type of antibiotic overall, the most common reason that the antibiotic was used (enter one of the reason codes from the box or fill in the Other space if none of the reason codes apply), and the percentage of cattle that received it for that reason. Space is also provided for providing the second most common reason that the antibiotic was used and the percentage of cattle on the feedlot that received it for that reason. If an antibiotic is used and the Producer is unable to provide an estimate of the percentage of catle, enter "DK" in the space given for the percentage of cattle.

Question B13:

Answer this question only if the answer to Question B11 = YES. This question asks about antibiotics that DO require a VFD (e.g., tylosin and oxytetracycline) given to cattle from September 1, 2019 to August 31, 2020 that were LESS THAN 700 LB AT ARRIVAL. Provide the percentage of these cattle that received each type of antibiotic overall, the most common reason that the antibiotic was used (enter one of the reason codes from

the box or fill in the Other space if none of the reason codes apply), and the percentage of cattle that received it for that reason. Space is also provided for providing the second most common reason that the antibiotic was used and the percentage of cattle on the feedlot that received it for that reason. If an antibiotic is used and the Producer is unable to provide an estimate of the percentage of cattle, enter "DK" in the space given for the percentage of cattle.

Question B14:

Answer this question only if the answer to Question B11 = YES. This question asks about antibiotics that DO require a VFD (e.g., tylosin and oxytetracycline) given to cattle from September 1, 2019 to August 31, 2020 that were 700 LB OR GREATER AT ARRIVAL. Provide the percentage of these cattle that received each type of antibiotic overall, the most common reason that the antibiotic was used (enter one of the reason codes from the box or fill in the Other space if none of the reason codes apply), and the percentage of cattle that received it for that reason. Space is also provided for providing the second most common reason that the antibiotic was used and the percentage of cattle on the feedlot that received it for that reason. If an antibiotic is used and the Producer is unable to provide an estimate of the percentage of cattle, enter "DK" in the space given for the percentage of cattle.

Question B15:

Answer this question only if the answer to Question B11 = YES, and either or both Question B13.a and B14.a were greater than 0% with a reason code of 2 (respiratory disease), in other words if chlortetracycline was used in feed on this feedlot for the TREATMENT of respiratory disease (at the 10 mg/lb/day dose). This question asks about the proportion of pen groups treated with chlortetracycline for respiratory disease that required more than one pulse treatment and therefore an additional VFD for this purpose. Provide the proportion of treated pen groups that required more than one pulse treatment. Answer None (0%), Some (50% or less), Most (More than 50%), or All (100%).

Example: The Producer reported in Question B13.a that 15% of pen groups less than 700 lb at arrival received chlortetracycline for reason code 2, respiratory disease. They did not use chlortetracycline for reason code 2 in cattle greater than 700 lb at arrival. If cattle do not respond to the first pulse of chlortetracycline, the Producer then gives the cattle a treatment of injectable antibiotics (they never use a second pulse of in-feed chlortetracycline for the treatment of respiratory disease). Therefore, the answer to Question B15 in this context is "None." If the Producer obtains a second VFD from their veterinarian for some (50% or less) of the pen groups for a second pulse of chlortetracycline if the cattle did not respond to the first pulse, then the answer to Question B15 would be "Some."

Question B16:

This question asks whether ANY antibiotics were administered IN WATER on this feedlot from September 1, 2019 to August 31, 2020. Answer YES, NO, or DON'T KNOW (DK). If answer to Question B16 is NO or DON'T KNOW then skip to Section C.

Question B17:

Answer this question only if the answer to Question B16 = YES. This question asks about antibiotics given to cattle in water from September 1, 2019 to August 31, 2020. Provide the percentage of these cattle that received each type of antibiotic overall, the most common reason that the antibiotic was used (enter one of the reason codes from the box or fill in the Other space if none of the reason codes apply), and the percentage of cattle that received it for that reason. Space is also provided for providing the second most common reason that the antibiotic was used and the percentage of cattle on the feedlot that received it for that reason. If an antibiotic is used and the Producer is unable to provide an estimate of the percentage of cattle, enter "DK" in the space given for the percentage of cattle.

SECTION C: NUTRITION

Question C1:

This question asks about the percentage of cattle administered specific feed additives during the feedlot period. Question C1a asks about the use of a coccidiostat (other than an ionophore, which was captured in Section B), including amprolium (e.g., Corid®) or decoquinate (e.g., Deccox®). Record the percent of cattle on this feedlot administered a coccidiostat other than an ionophore. If no coccidiostats other than ionophores are used on the feedlot, record 0% for question C1a. Question C1b asks about the use of a beta-agonist, such as ractopamine. Record the percent of cattle on this feedlot administered a beta-agonist. For either C1a or C1b, select DON'T KNOW (DK) as appropriate.

Question C2:

This question asks about the use of the services of a nutritionist on this feedlot. Select YES, NO, or DON'T KNOW (DK) as appropriate. If the feedlot has a nutritionist on staff or utilizes the services of a consulting nutritionist, select YES.

Question C3:

This question asks about water sources used for cattle on this feedlot. For each water source (ground water, surface water, municipal water), answer YES, NO, or DON'T KNOW (DK) as appropriate. Only record YES if the water source is used for watering

cattle on this feedlot. For example, if there is a pond on the property, but cattle do not have access to it, select NO.

Question C4:

This question asks about feed additives used on this feedlot. First record if each feed additive was used on this feedlot, YES or NO. If YES, check all of the reasons that apply for why that feed additive was used on the feedlot.

Direct-fed microbial or probiotic

Direct-fed microbials (DFM) are products that contain live microorganisms (bacterial [e.g., *Lactobacillus acidophilus*] and/or yeast [*Saccharomyces cerevisiae*]). DFM can also be called probiotics.

Yeast fermentation products

Contain extracts from cultures of fungi such as Saccharomyces cerevisiae, with no guarantee of containing live organisms.

Prebiotics (e.g., mannan-oligosaccharides)

Prebiotics, such as mannan-oligosaccharides, are complex carbohydrate molecules derived from the outer cell wall of yeast products.

Vitamin supplements

Vitamin supplements, such as vitamins A, D, and E, are often added to cattle diets.

Organic mineral supplements

Minerals can be combined with an amino acid or protein and fed in the organic form (referred to as complexes, proteinates, or chelates). Minerals that are sometimes fed in the organic form include copper, zinc, cobalt, and manganese with an amino acid or protein. The relative bioavailability of some minerals is higher when in the organic form compared to inorganic sources.

Inorganic mineral supplements

Minerals can be added to the diet in the inorganic form. Macrominerals include calcium, magnesium, phosphorus, potassium, sodium, and sulfur. Microminerals include chromium, cobalt, copper, iodine, iron, manganese, molybdenum, nickel, selenium, and zinc.

Enzymes

Enzymes, such as xylanase and cellulase, are specialized proteins that break down feedstuffs. They are naturally produced by microorganisms in the rumen of cattle, but can also be added to the diet.

Essential oils and plant-derived products (e.g., yucca extract)
Examples of essential oils include eugenol, thymol, vanillin, and clove essential oil. Other plant-derived products, such as yucca extract, can also be added to feedlot diets.

Other
If other feed additives are used for any of the listed reasons (improved growth rate and/or feed efficiency, antibiotic alternative, bovine respiratory disease, hoof health, pre-harvest food safety, or reduce liver abscesses), specify what feed additives are being used, and for what reasons.

SECTION D: BIOSECURITY

Question D1:

This question asks about different biosecurity practices being used on this feedlot. Select YES or NO as appropriate for each of the listed biosecurity options. Questions D1a-D1e include a "not applicable" option. For example in question D1a, if no visitors were allowed on the premise, then it would not make sense to control access for visitors entering animal areas.

Question D2:

This question asks if this feedlot has a written or electronic biosecurity plan. This means the feedlot has captured in writing about the procedures they will use on their feedlot to reduce the risk of infectious disease in their cattle. Some feedlots have posters describing their biosecurity practices while other feedlots have an electronic document; any way of capturing their biosecurity practices in writing would indicate that YES, they do have a written biosecurity plan. Select YES, NO, or DON'T KNOW (DK) as appropriate.

Question D3:

This question asks if this feedlot has a shared fenceline with another operation. A shared fenceline could allow nose-to-nose contact with other cattle, bison, or other ruminants not owned by this operation. Answer YES, NO, or DON'T KNOW (DK) as appropriate. If question D3 = YES, SKIP to question D5. In other words, if this feedlot has a shared fenceline with another livestock operation, you do not need to report the distance to another livestock operation.

Question D4:

This question asked how close this feedlot is to another operation with cattle, bison, or other ruminants. Record to the nearest ½ mile. Estimate the distance from the center of the operation to the center of the nearest operation as the crow flies.

Question D5:

This question asks about the average number of employees directly involved with the care of cattle on the feedlot from September 1, 2019, to August 31, 2020. Provide the average number of employees that directly cared for cattle at any given time during the 12 month period of interest. Include unpaid family members in this count. If question D5 = 0, SKIP to question D7. In other words, do not answer question 6 if there are no employees (paid or unpaid) on this feedlot.

Question D6:

This question asks about contact with cattle, bison, or other ruminants on other operations by any of the employees of the feedlot. Question D6.a asks if any employees have contact with cattle, bison, or other ruminants on other operations, and question D6.b asks if any employees own cattle, bison, or other ruminants at another location. Answer YES, NO, or DON'T KNOW (DK) as appropriate.

Question D7:

This question asks whether cattle stayed in the same pen during the entire feeding period (from placement to slaughter). Exclude cattle that are moved to the hospital pen for a short period and then returned to their home pen. Cattle are sometimes re-sorted based on their weight, feed intake, or for some other reason during the feeding period. Answer YES, NO, or DON'T KNOW (DK). If Question D7= YES or DK, in other words cattle are NOT re-sorted or the Producer doesn't know, SKIP to Question 9.

Question D8:

For Producers who do re-sort their cattle routinely during the feeding period, this question asks how many times cattle were re-sorted during the feeding period. Provide the average number of times that cattle were re-sorted into different pens during the entire feeding period.

Question D9:

This question asks about the Producer's familiarity with the Secure Beef Supply Plan. The Secure Beef Supply plan is a voluntary program that gives producers the resources needed to create a plan for their feedlot if it is affected by restricted movement due to a disease outbreak but not infected by the disease. Select the most appropriate level of familiarity of the producer with the Secure Beef Supply Plan.

This is the conclusion of the Phase 2 questionnaire. Thank the Producer again for completing the survey. The space provided here can be used to capture any comments about the feedlot or the questionnaire that you think could be relevant.

SECTION E: OFFICE USE ONLY

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 FIPS, operation number, interviewer's initials, and date in the box at the top of the page.

1. **Interview time**
   Include the time spent reviewing the study, answering any questions from the Producer, completing the Confidentiality Pledge, and completing the questionnaire; report in minutes. Do not include time spent discussing other topics such as the weather. Include the time for everyone who is traveling with you. For example, if an intern is shadowing you, include his/her time at the interview.

2. **Travel time**
   Include the time it took you to travel from your office, home, or other operation, and the time to return back or go to the next operation; report in minutes. Include the time for everyone who is traveling with you. For example, if you bring an intern who is shadowing you, include his/her travel time.

3. **Data collector(s)**
   Record the number involved in the interview for each data collector category.

4. **Interview response code**
   Select one response code that best applies to this feedlot. Enter code 99 if the questionnaire is completed. If the Producer decides not to participate, select the response code 00 through 07 that best describes the reason for not participating. If response code 07 Other is selected, explain in the comments section at the bottom of the page.

5. **Respondent's position on this operation**
   Select one response code that best describes the respondent's position on this operation.

6. **Producer data quality**
   Select the response that best describes the data quality. Use of records to complete the questionnaire often improves data quality.

7. **Comments**
   Record any comments about this questionnaire or this operation.

Signature
The VS data collector should sign the appropriate line.

To be completed by Coordinator

8. **Field data quality**
   The Coordinator should record the quality of the data.

Send this page to your NAHMS Coordinator within 3 working days. You may copy the final page of the questionnaire to complete for non-respondents.

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

SECTION 5. SPECIFIC INSTRUCTIONS FOR THE ELECTRONIC VERSION

This section will include specific instructions for the electronic version including log-in instructions for the tablet, instructions for entering data and using features of the tablet, and specific skip instructions that may vary slightly from the paper version of the questionnaire.

SECTION 6. REFERENCE CARDS

NAHMS ID: _____

REFERENCE CARD 1: Paperwork Reduction Act

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 0579-0079. The time required to complete this information collection is estimated to average 1 hour per response, including the time to review instructions, search existing data resources, gather the data needed, and complete and review the information collected.	**OMB Approved** 0579-0079 EXP: XX/20XX
UNITED STATES DEPARTMENT OF AGRICULTURE **ANIMAL AND PLANT HEALTH INSPECTION SERVICE** **VETERINARY SERVICES** **NATIONAL ANIMAL HEALTH MONITORING SYSTEM** **2150 CENTRE AVE, BLDG B** **FORT COLLINS, CO 80526**	**Health Management on U.S. Feedlots 2020 Phase 2 Questionnaire**

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REFERENCE CARD 2: Vaccine Examples

[For use with Phase 2 questionnaire, Section A, Question 11]

Type of Vaccine	Example trade names
Injectable vaccines against BVD and/or viral respiratory disease (e.g., IBR, BVD, PI3, BRSV)	Boehringer Ingelheim Elite, Express, Prism, Pyramid, Triangle Colorado Serum Pre-Breed, Respira Elanco Master Guard, Titanium, Vira Shield Merck Vista Texas Vet Lab Multi-Vac 3L, Super Poly-Bac B Zoetis Bovi-Shield 4, GOLD, and IBR, Cattle Master, One Shot BVD or Ultra 7, PregGuard GOLD FP 10, Resvac 4/Somubac
Intranasal vaccines against BVD and/or viral respiratory disease (e.g., IBR, BVD, PI3, BRSV)	Zoetis Inforce 3, TSV-2 Merck Nasalgen IP
Vaccines against bacterial respiratory disease (*Mannheima haemolytica* and *Pasteurella multocida*)	AgriLabs Pulmo-Guard Boehringer Ingelheim Bar Somnus 2P, Presponse, Triangle 4 or 9 PH-K, Pyramid+Presponse, Bo-Bac 2X Colorado Serum Mannheimia Haemolytica-Pasteurella Multocida Bacterin Elanco Titanium PH-M, Nuplura PH, Vira Shield 6 +/- Somnus Durvet Durvac Past HM Immvac ENDOVAC Merck Vista Once SQ, Once PMH Texas Vet Lab Poly-Bac B or Super Poly-Bac B Zoetis Bovi-Shield GOLD One Shot, One Shot, One Shot Ultra
Vaccines against clostridial diseases	Boehringer Ingelheim Alpha 7 or CD, Bar-Vac,, Caliber 3 or 7 Colorado Serum Essential Elanco Pili Shield + C, Clostri Shield, Scour Bos 9 Merck 20/20 Vision 7 with Spur, Cavalry 9, Covexin 8, Guardian, Vision 7, 8, CD, or DC-T with Spur, Piliguard Pinkeye + 7, Super-Tet with Havlogen Professional Biological Clostridium perfringens Type C&D Toxoid and Toxoid-Tetanus Toxoid Zoetis One Shot Ultra 7 or 8, Ultrabac 7, 8, or CD, UltraChoice 7, 8, or CD, ScourGuard 4KC
Vaccines against *Moraxella* (pinkeye)	AgriLabs I-Site XP, *Moraxella bovoculi* bacterin Addison Maxi/Guard Pinkeye Bacterin Boehringer Ingelheim Ocu-Guard-MB-1, Alpha7/MB-1 Elanco Pinkeye Shield XT4 Merck 20/20 Vision 7 with Spur, Piliguard Pinkeye+7, Piliguard Pinkeye-1 Trivalent Zoetis SolidBac Pinkeye IR/PR

REFERENCE CARD 3: Disease Conditions other than BRD

Code	Disease Condition
1	Acute Interstitial Pneumonia (e.g., AIP, dust pneumonia, atypical pneumonia
2	Bloat
3	Other digestive disorders (e.g., coccidiosis, diarrhea)
4	Footrot
5	Hairy heel wart
6	Central Nervous System disease (e.g., polio, listeriosis, “brainers”)
7	Pinkeye
8	Cardiovascular disease (e.g., heart failure, brisket disease)
9	Fatigued cattle syndrome
10	Other

REFERENCE CARD 4: Antibiotics Given via Injection or Bolus

Codes are provided for use in electronic questionnaire and are not necessary for paper-administered questionnaire

ANTIBIOTICS GIVEN VIA INJECTION OR BOLUS		
Code	**Active Ingredient**	**Product Name**
1	Tilmicosin	Micotil
2	Gamithromycin	Zactran
3	Tulathromycin	Draxxin
4	Tylosin	Tylan 200
5	Tildipirosin	Zuprevo
6	Florfenicol	Nuflor
7	Florfenicol with Flunixin meglumine	Resflor Gold
8	Enrofloxacin*	Baytril
9	Danofloxacin*	Advocin
10	Ceftiofur	Naxcel, Excenel, Excede
11	Oxytetracycline	LA-200, Oxytet 100, BioMycin
12	Penicillin	Aquacillin, Penicillin G Procaine
13	Ampicillin	Polyflex
14	Sulfadimethoxine (injectable)	Albon Injection
15	Sulfadimethoxine (Bolus)	Albon Bolus
16	Sulfamethazine	Sustain III Bolus, Supra Sulfa

*These antibiotics are labeled only for the treatment of bovine respiratory disease (BRD) associated with *Mannheimia haemolytica*, *Pasteurella multocida*, *Histophilus somni* and *Mycoplasma bovis* in beef and non-lactating dairy cattle and for the control of BRD in beef and non-lactating dairy cattle at high risk of developing BRD associated with *Mannheimia haemolytica*, *Pasteurella multocida*, *Histophilus somni* and *Mycoplasma bovis,* and their extra-label use is prohibited. Therefore, these antibiotics are not presented as options for Section B, Question 10 (individual treatment of conditions other than BRD).

REFERENCE CARD 5: Antibiotics Given via Feed or Water

Codes for antibiotics that don't require a veterinary feed directive (VFD) are not necessary for either the electronic questionnaire or the paper-administered questionnaire so are not provided

ANTIBIOTICS USED IN FEED THAT DO NOT REQUIRE A VFD	
Active Ingredient	**Product Name**
Ionophore	Rumensin, Bovatec
Bambermycin	Gainpro 10
Bacitracin	BMD, Baciferm

Codes for VFD antibiotics and antibiotics used in water are provided for use in electronic questionnaire and are not necessary for paper-administered questionnaire

ANTIBIOTICS USED IN FEED THAT DO REQUIRE A VFD		
Code	**Active Ingredient**	**Product Name**
1	Chlortetracyline	Aureomycin, Aureomix
2	Oxytetracycline	Terramycin, OTC
3	Sulfamethazine / Sulfadimethoxine	Aureomix
4	Neomycin	Neomix
5	Tylosin	Tylan, Tylovet
6	Virginiamycin	Vmax
7	Tilmicosin	Pulmotil, Tilmovet

ANTIBIOTICS USED IN WATER		
Code	**Active Ingredient**	**Product Name**
1	Chlortetracyline	Aureomycin, Chloronex
2	Oxytetracycline	Terramycin, OTC
3	Tetracycline	Duramycin, Tet-Sol
4	Sulfamethazine / Sulfadimethoxine	Sulfasol
5	Neomycin	Neosol
6	Spectinomycin	Spectam, SpectoGard

SECTION 7. GLOSSARY

Antibiotic: A chemical compound generally produced by molds that inhibits and/or kills certain bacteria. Antibiotics are very effective against illnesses caused by bacteria.

Antimicrobial: Any substance of natural, semisynthetic, or synthetic origin that kills or inhibits the growth of microorganisms but causes little or no damage to the host. Technically, all antibiotics are antimicrobials, but not all antimicrobials are antibiotics. For the purposes of this questionnaire, however, the terms "antimicrobial" and "antibiotic" are considered synonymous.

Antimicrobial use definitions (excerpted from American Veterinary Medical Association (AVMA) website - https://www.avma.org/policies/avma-definitions-antimicrobial-use-treatment-control-and-prevention):

> **Antimicrobial prevention of disease (prophylaxis):** On a population basis, prevention is the administration of an antimicrobial to a group of animals, none of which have evidence of disease or infection, when transmission of existing undiagnosed infections, or the introduction of pathogens, is anticipated based on history, clinical judgement, or epidemiological knowledge.
> **Antimicrobial control of disease (metaphylaxis):** On a population basis, control is the use of antimicrobials to reduce the incidence of infectious disease in a group of animals that already has some individuals with evidence of infectious disease or evidence of infection.
> **Antimicrobial treatment of disease:** Treatment is the administration of an antimicrobial as a remedy for an individual animal with evidence of infectious disease.

Backgrounded cattle: An intermediate step in cattle production that begins after weaning, usually at a location different from the farm or ranch of origin. Producers who background cattle help the animals through the stress of weaning and get them ready for placement at their next destination, which could be a feedlot or pasture. Sometimes the terms backgrounder or stocker are used interchangeably, but cattle generally spend a longer time at a stocker operation than a backgrounder operation. In general, backgrounded cattle present a lower risk of introducing disease upon arrival at the feedlot.

Beef Quality Assurance (BQA): A national program that raises consumer confidence through offering proper management techniques and a commitment to quality within every segment of the beef industry. Nearly every U.S. State has an active BQA program. The program links all beef producers with livestock production specialists, veterinarians, nutritionists, marketers, and food purveyors interested in maintaining and improving the quality of the beef they produce. BQA principles are based on good management practices designed to meet the need of the Nation's food production system. In addition, BQA programming focuses on educating and training cattle producers, farm advisors, and veterinarians on animal husbandry practices as well as issues regarding food safety and quality.

Bolus: For the purposes of this questionnaire, this is a large antibiotic tablet that is administered orally and then remains in the rumen to release medication over time.

Bovine respiratory disease (BRD): A general term referring to disease of the upper or lower respiratory tracts of cattle that is related to a number or different factors, including bacteria, viruses, host characteristics such as stress and immune status, and environmental risks such as poor ventilation, dust, and crowding. BRD is most prevalent within the first few weeks of arrival to the feedlot, which is why it

is called shipping fever. Common signs of BRD include fever, breathing difficulties, coughing, nasal discharge, depression, and lack of appetite.

BQA Feedyard Assessment: An onsite educational tool that allows for assessing and benchmarking key indicators of animal care and welfare as well as feedyard conditions. The assessment has three main areas of focus: animal records, protocols, and facilities/ equipment. Assessments might be utilized as a self-assessment, completed by a second party, or conducted by a third-party assessor.

Cattle on feed: Cattle being fed a high-energy ration consisting of components such as grain, silage, hay, and/or protein supplement before being sent to slaughter. Operations with cattle being "backgrounded only" for later sale as feeders or for placement in another feedlot were excluded from this study. This questionnaire is restricted to steers and heifers.

Cattle placed/placement: This questionnaire is restricted to steers and heifers placed in a feedlot and fed a ration that will produce a "select or better" carcass at slaughter. Placement refers to the time that cattle entered the feedlot.

Coordinator: The NAHMS coordinator for the data collector.

Data Collector: Refers to the individual administering (i.e., asking the questions) for the Health Management on U.S. Feedlots 2020 Phase I questionnaire. Throughout this manual, the data collector is often referred to as "you."

Dehorning: Refers to the complete removal of attached horns by methods such as gouging, hand saws, or wires.

Feeding period: The time span beginning when cattle enter the feedlot and ending when cattle are marketed (i.e., shipped for slaughter).

Feedlot: An operation that feeds cattle for the slaughter market.

Feedlot capacity: The total number of cattle that could be accommodated in the feedlot at one time. For this study, feedlots were categorized as small or large:

Small: Feedlot capacity of 50 to 999 head.

Large: Feedlot capacity of 1,000 or more head.

Group administration of antibiotics: For purposes of this questionnaire, administration of an injectable antibiotic to cattle on a population basis rather than on an individual animal basis, that is to the majority of the animals in a pen. Group administration can be for prevention, control, or treatment of disease (see "Antimicrobial Use Definitions"), while individual administration is for treatment only of individual sick animals. In the 2017 Veterinary Services Antibiotic Use Questionnaire for Cattle on Feed, group administration was defined as administration of an injectable antibiotic to at least 90% of cattle in a pen for the prevention, control, or treatment of disease.

Heifer: A young female bovine that has not calved.

Ionophore: A drug administered in feed that promotes the efficient use of feedstuff s by altering the fermentation pattern in the rumen. Monensin, lasalocid, and laidlomycin are the three ionophores approved for use in cattle. All three are approved for improving feed efficiency. Monensin and lasalocid

are also approved for prevention and control of coccidiosis. Ionophores are not categorized by the FDA as medically important antimicrobials for humans.

Killed vaccine: A vaccine made by inactivating or killing the pathogen of interest during the process of making the vaccine.

Medically important antimicrobial: Any antimicrobial the FDA deems medically important with respect to the use of that class of antimicrobials for therapeutic use in human medicine. As of January 1, 2017, medically important antimicrobials are no longer approved by the FDA for use in food producing animals for growth promotion purposes, and medically important antimicrobials used in animal feed or water require veterinary oversight (i.e., a veterinary feed directive). Many injectable medically important antimicrobials already require veterinary oversight, although some are available over the counter in many States. All medications formulated for individual bolus dosing to cattle (e.g., sulfamethazine or Supra Sulfa III) are currently available over the counter in most States.

Modified live vaccine: A vaccine containing a version of the living pathogen that has been weakened so that it does not cause disease in animals with normal immune systems. In general, produces a more robust immune response than a killed vaccine because it is closer to a natural infection.

Preconditioned cattle: Preconditioning refers to a management practice designed to prepare calves to better adapt to a new location. Preconditioned calves are usually held on the operation of origin for a set period (e.g., 1-2 months) after weaning, allowing calves to recover from the stress of weaning before they leave the operation of origin. Practices typically used in a preconditioning program include vaccination, castration, dehorning (if necessary), and introduction to a feed bunk (i.e., training to eat from a feed bunk). Preconditioned calves present a lower risk of having disease upon arrival at a feedlot.

Pulse dosing: Using the same antibiotic (usually chlortetracycline for feedlot cattle) on the same group of animals multiple times during the feeding period.

Respondent: The individual who answers the questions in the Health Management on U.S. Feedlots 2020 Phase I Questionnaire. Throughout this manual, the Respondent is often referred to as the "Producer."

Steer: A male bovine castrated before sexual maturity.

Stocker cattle: Refers to cattle typically put on pasture after weaning and before being placed in a feedlot. Stocker cattle are often sent to a location other than the farm or ranch of origin and are often sold as yearlings, which have a low risk of disease upon feedlot placement.

Tipped: Refers to cutting only a portion of the horn off and not completely removing it.

Veterinary Feed Directive (VFD): A written order (paper or electronic) by a licensed veterinarian approving the use of an antimicrobial in feed, in the context of a valid veterinarian-client-patient relationship. Since the full implementation of FDA Guidance for Industry #213 on January 1, 2017, a VFD is required for use of medically important antimicrobials in feed. The use of medically important antimicrobials for production purposes (e.g., growth promotion) is illegal. Medically important antimicrobials may only legally be used for therapeutic purposes (prevention, control, or treatment of disease).