

Sheep and Goat Health Business Plan

Fiscal Year 2017

Animal and Plant Health Inspection Service Veterinary Services

I. Program Description

a. Overview of the sheep and goat sectors

There are approximately 88,000 sheep operations and 128,000 goat operations in the U.S.¹ The sheep industry has a direct annual economic effect of approximately \$785 million.² The direct economic impact for the goat industry has not been reported, but is likely about half that of sheep. Based on these impacts, maintaining the health of sheep and goats is important economically and for maintaining a safe and available food supply. In 2006, it was estimated that U.S. producers lose \$10.8 million in revenue each year due to scrapie-related disposal costs, production losses and lost marketing opportunities.³ Since 2003, the Animal and Plant Health Inspection Service (APHIS), in collaboration with States, Tribes and Industry, has reduced the prevalence of this disease in cull sheep by 99 percent, from 0.15 percent to 0.001 percent in Fiscal Year (FY) 2016 with an upper 95 percent confidence limit of 0.009 percent. Based on all goats sampled at slaughter since 2002, the prevalence of scrapie in U.S. cull goats is 0.002 percent with an upper 95 percent confidence limit of 0.004 percent. This progress has resulted in significant benefit to the industry. APHIS continues to protect the sheep and goat sectors from economic loss by preventing the introduction of foreign animal diseases and by being prepared to rapidly detect and respond to such incursions, should they occur. APHIS facilitates the export of sheep and goats, their germplasm, and products through negotiating trade protocols with foreign governments and by assisting producers to meet import requirements.

¹ National Agricultural Statistics Service (NASS) "2012 Census of Agriculture."

² For more information see the American Sheep Industry's "Sheep and Lamb Industry Economic Impact Analysis, April 2008-revised March 2011," available at https://www.sheepusa.org/ResearchEducation_Publications_EconomicImpactAnalysis. Also, for additional information about the sheep and goat industries visit the National Agriculture Statistics Service website at <http://www.nass.usda.gov>.

³ Seitzinger AH, Paarlberg PL, and Lee JG, 2006. Economic Impacts of Eradication of Scrapie, Ovine Progressive Pneumonia, and Johne's Disease on US Sheep, Lamb, Sheep Meat and Lamb Meat Markets. In *The Economics of Livestock Disease Insurance*. SR Koontz, DL Hoag, DD Thilmany, JW Green and JL Grannis, eds. Cambridge: CABI, pp. 193-206

b. Core program objectives

- **Objective 1:** Prevent the introduction of foreign animal disease and facilitate trade.
- Objective 2:** Eradicate classical scrapie from the United States.
- Objective 3:** Conduct comprehensive and integrated disease surveillance and national sheep and goat health studies.
- Objective 4:** Prepare for and respond to foreign, emerging, and zoonotic diseases that threaten the herd, industry or public health.
- Objective 5:** Conduct education and outreach to provide sheep and goat health and disease information to decision makers and stakeholders.

c. Program components

The VS Sheep and Goat Health Business Plan summarizes the priority and projected activities of the Surveillance Preparedness and Response Services (SPRS), the National Import and Export Services (NIES), and the Science, Technology and Analysis Services (STAS). The activities highlighted here cannot be accomplished without the significant resources and infrastructure that exist within VS, the larger APHIS and USDA, and other U.S. governmental departments.

Disease Surveillance, Preparedness and Response Activities (SPRS)

SPRS implements national-level surveillance and coordinates response among States, and provides disease-specific technical guidance, epidemiological expertise, and national-level situation reporting for the Sheep and Goat Health Program with a focus on:

The National Scrapie Eradication Program (NSEP). The NSEP is a State-Federal cooperative program to eradicate classical scrapie from the U.S. Principal activities include producer/industry education; mandatory official identification (ID) of certain classes of sheep and goats; distribution of APHIS provided official ear tags directly to producers, markets and dealers; monitoring ID compliance; surveillance; trace investigations; infected/source flock cleanup (including indemnity); and managing the Scrapie Free Flock Certification Program (SFCP).

Stakeholder Communication, Outreach, and Education. The Sheep and Goat Health Program actively engages representatives of the sheep and goat industries to receive input on the program, provide information on current and upcoming activities, and provide education to stakeholders. These activities are performed at both the national and local levels.

National Import and Export Services (NIES)

NIES is committed increasing international trade opportunities for the sheep and goat industries and to prevent the introduction of foreign animal diseases into the United States. APHIS negotiates trade protocols with foreign governments and assists U.S. producers in meeting the receiving country's import requirements.

Science, Technology and Analysis Services (STAS)

STAS assists the Sheep and Goat Health Program in conducting activities and building capacity in several secondary components: 1) evaluation and design of comprehensive integrated disease surveillance components; 2) conducting sheep and goat health and management studies through the National Animal Health Monitoring System (NAHMS) and providing this information to interested stakeholders; and 3) monitoring global animal health for foreign, emerging, and zoonotic disease prevention, preparedness, and response.

d. Funding source(s)

The Sheep and Goat Health Program is funded through the Equine, Cervid, and Small Ruminant (ECSR) budget line item. The FY 2017 ECSR funding is \$20 million. Other VS activities such as licensing veterinary biologics, facilitating trade, and import/export activities, laboratory support and sheep and goat health studies are funded in whole or in part through other line items and/or user fees.

II. FY 2016 Key Accomplishments

- Observed a decrease in the percentage of cull sheep found positive for scrapie at slaughter compared to 2015.
- Drafted a Final Rule to amend and streamline the National Scrapie Eradication Program. The amendment would allow a more flexible approach to disease investigations and affected flock management, and would make animal identification and recordkeeping requirements for goats consistent with those for sheep. Drafted accompanying revised program standards to reflect the changes in the rule.
- Collaborated with the USDA Agricultural Research Service (ARS) on priorities for sheep- and goat-related research and on sample collection from pack goats for a study looking for pathogens associated with pneumonia.
- Completed scrapie Consistent State reviews (CSRs) in Delaware, Hawaii, Kansas, Nebraska, and Wisconsin. All states are currently Consistent States. APHIS typically reviews 4-6 states each year so that all states are reviewed at least once every 10 years.
- Provided draft frameworks for the Emerging Animal Disease Preparedness and Response Plan and the U.S. National List of Reportable Animal Diseases for stakeholder comment.

III. FY 2017 Priority Activities and Overview of FY 2018 - FY 2020 Goals

Objective 1: Prevent the introduction of foreign animal disease and facilitate trade.

FY 2017 Goals and Priority Activities

Activity 1.1: Propose to publish a Final Rule to describe the conditions for the importation of live sheep, goats, and certain other non-bovine ruminants, as well as products derived from sheep and goats, with regard to TSEs such as Bovine Spongiform Encephalopathy and scrapie.

Future Goals and Activities (FY 2018 – FY 2020)

Future Goal 1.1: Engage trading partners to increase international trade opportunities for the sheep and goat industries.

Objective 2: Eradicate classical scrapie from the United States

FY 2017 Goals and Priority Activities

Activity 2.1: Propose to publish a Final Rule to amend 9 *Code of Federal Regulations* (CFR) Parts 54 and 79 and revised Program Standards.

Activity 2.2: Test at least 40,000 sheep and goats that meet the targeting criteria for scrapie and achieve State-of-origin surveillance minimums, with an emphasis on expanding surveillance to include flocks that are not currently being sampled.

- **Slaughter surveillance:** Integrate and analyze scrapie surveillance and financial data to improve consistency, efficiency, and surveillance value of sampling agreements. Evaluate what collection sites and collection strategies offer the best surveillance value relative to cost. Use any cost-savings gained through this evaluation to collect samples at the highest value sites or to implement new high-value surveillance strategies which may include support for sampling as part of the NY pilot project.
- **On-farm surveillance:** Complete the pilot project in NY to evaluate options for conducting surveillance in flocks that are not currently being sampled. Encourage increased participation of under-sampled flocks in on-farm flock surveillance including through enrollment in the Select category of the SFCP. Continue outreach to encouraging reporting and sampling of suspect animals.

Activity 2.3: Maintain traceability of scrapie-positive animals identified through slaughter surveillance to their flock-of-origin at $\geq 95\%$. Identify States that are not meeting identification compliance goals, and work with local VS employees, State personnel, and industry organizations to develop action plans to improve compliance.

Activity 2.4: Evaluate options to reduce VS expenditures on eartags and applicators for the scrapie eradication program. Develop a plan and associated policy to implement the selected changes beginning in FY2018.

Activity 2.5: Rapidly and efficiently identify scrapie-infected animals and flocks by conducting epidemiological investigations of suspect and positive animals, depopulating with indemnity when appropriate, and completing flocks plans within 60 days of detection.

Activity 2.6: Ensure that scrapie program data are collected, and analyzed to maximize program efficiency and efficacy while protecting the security of the information. Develop a dashboard-style report available to the public to replace current monthly and annual PowerPoint reports to provide greater transparency for stakeholders.

Activity 2.7: Manage an effective SFCP to facilitate the export of sheep and goats, provide scrapie-free seed stock, and increase on-farm surveillance.

Activity 2.8: Monitor Consistent State status for scrapie, correct inconsistencies with 9 CFR 79.6, and identify ways to improve program implementation.

Activity 2.9: Provide the American Sheep Industry (ASI) with data and information to support their project to review the Scrapie Eradication Program from the industry's perspective, as requested. ASI will provide APHIS with feedback on areas of excellence and recommendations for improvement.

Future Goals and Activities (FY 2018 – FY 2020)

Future Goal 2.1: Strategically increase on-farm and slaughter surveillance of sheep and goats (*as resources allow*).

Future Goal 2.2: Revise/update State-level surveillance goals as appropriate based on revisions to the National Scrapie Surveillance Plan.

Objective 3: Conduct comprehensive and integrated disease surveillance and national sheep and goat health studies

FY 2017 Priority Activities

Activity 3.1: Obtain stakeholder input and finalize the DRAFT Comprehensive and Integrated Surveillance: Sheep and Goat Plan.

Activity 3.2: Evaluate and update the National Scrapie Surveillance Plan.

Activity 3.3: Develop a policy for testing, surveillance, and classification and management of sheep and goats that respond to a TB caudal fold test.

Activity 3.4: Publish “Goat and Kid Predator and Nonpredator Loss in the United States.”

Activity 3.5: Conduct needs assessment survey for the next NAHMS Goat study (tentatively scheduled to start FY 2019).⁴

Future Goals (FY 2018 – FY 2020)

Future Goal 3.1: Implement the Comprehensive and Integrated Surveillance: Sheep and Goat Plan (*as resources allow*).

Future Goal 3.2: Develop a policy, as appropriate, for testing, surveillance, and classification and management of sheep and goats that test nonnegative or suspect on a brucellosis test.

Future Goal 3.3: Conduct and publish the next NAHMS Goat study (tentatively scheduled to start in FY 2019).⁴

Future Goal 3.4: Prepare for the next NAHMS Sheep study (tentatively scheduled for FY 2021 – FY 2022).⁵

Objective 4: Prepare for and respond to foreign, emerging, and zoonotic diseases that threaten the herd, industry or public health.

FY 2017 Priority Activities

Activity 4.1: Collaborate with State and Federal animal health officials, public health officials and other stakeholders to develop a policy for the VS response in the event of an outbreak of coxiellosis in sheep or goats, including our coordination with public health partners.

Activity 4.2: Contribute to VS’ implementation of the Emerging Animal Disease Preparedness and Response Plan and the U.S. National List of Reportable Animal Diseases (NLRAD) Framework.

Activity 4.3: Monitor and oversee APHIS’ FY2016 cooperative agreement that funds Minor Use Animal Drug Program (NRSP-7) projects. This agreement supports research to increase the availability of drugs and therapeutics for minor species while ensuring the judicious use of antibiotics in food and fiber animals.

⁴ The most recent NAHMS Goat Study was completed in 2009.

⁵ The most recent NAHMS Sheep Study was in completed 2011.

Activity 4.4: Collaborate with State, Federal, and Tribal animal health officials and other stakeholders, including international trading partners, international and regional organizations and APHIS International Services to monitor the global animal health landscape for potential threats, assess the risk posed by a possible emerging sheep or goat disease in the United States, and gather information upon which to base the response.

Future Goals (FY 2018 – FY 2020)

Future Goal 4.1: Draft a preparedness and response plan for foreign animal diseases (FADs) and emerging diseases (EDs) in sheep and goats. Identify and prioritize materials that need to be developed specifically for the sheep and goat industries to supplement existing Foreign Animal Disease Preparedness and Response Plan (FAD PReP) documents (*as resources allow*).

Future Goal 4.2: Perform live and/or virtual response exercises, and revise the preparedness and response plan as needed (*as resources allow*).

Future Goal 4.3: Continue to collaborate with ARS to develop and license a vaccine and/or other methods to control *C. burnetii* in sheep and goats (*as resources allow*).

Future Goal 4.4: Continue to monitor the global animal health landscape for potential threats to U.S. sheep and goats.

Objective 5: Conduct education and outreach to provide sheep and goat health and disease information to decision makers and stakeholders.

FY 2017 Priority Outreach and Engagement Activities

Target Audience	Activity	Date
Sheep and goat industry representatives and producers, VS partners, and State partners	USAHA annual meeting - Sheep & Goat Health Committee, Scrapie Committee, and the National Scrapie Oversight Committee updates	October 18, 2016
Sheep and goat industry representatives and producers	Present at the annual AASRP/American Dairy Goat Association annual meetings (held jointly)	October 29, 2016
Sheep and goat industry representatives and producers	Present at Delaware Ag Week	January 10, 2017

Target Audience	Activity	Date
Sheep and goat industry representatives and producers	Present at the American Sheep Industry Association (ASI)/American Goat Federation (AGF) annual meetings (held jointly)	January 27-29, 2017
Sheep and goat industry representatives and producers	Attend “Sheep in Montana – Domestic and Wild: The State of Things and What We Know About Disease”	February 9-10, 2017
ASI representatives, AGF members, and sheep producers	Meet with industry representatives during ASI’s annual Congressional week	Week of March 27, 2017
Sheep and goat industry representatives and producers, APHIS partners, and State and Tribal Nation representatives	Annual Sheep and Goat Sector Meeting with APHIS Administrator Kevin Shea	March 30, 2017
VS and State field personnel	Annual Sheep and Goat Health District Training Course (District 2 in FY 2017)	June 20-21, 2017
VS and State field personnel	Host webinar to provide continuing education and status updates	At least 4 times per year: February 14, 2017 May 16, 2017 August 15, 2017 (tentative) November 14, 2017 (tentative)
USDA and external stakeholders	Publish and announce availability of the FY 2016 annual and FY 2017 monthly National Scrapie Eradication Program reports	Annual report to be issued by January 15, 2017; Monthly reports issued by the 15 th of every month
ARS and FS	Provide subject matter expertise, as appropriate, regarding disease control strategies at the Bighorn and domestic sheep and goat interface	Multiple dates
ARS and NIFA	Provide APHIS’ sheep and goat research priorities and follow-up information as requested	Multiple dates
USDA and State personnel	Maintain the Sheep and Goat Health SharePoint site, including the National Scrapie Reference Library	Continuous

Target Audience	Activity	Date
USDA and external stakeholders	Maintain the Sheep and Goat Health APHIS Web page	Continuous
External stakeholders	USDA personnel attended various sheep and goat industry activities and meetings	Multiple dates
USDA and external partners	Scrapie Proposed Rule outreach: stakeholder announcements; webinars for VS/State partners, State partners, and industry/producers/other interested members of the public	Multiple dates
Sheep producers, allied industries, and State and Federal animal health personnel	Support the American Sheep Industry Association Cooperative Agreement for outreach and education on the Scrapie Program	Continuous
Goat producers and allied industries	Support the American Goat Federation Cooperative Agreement for outreach and education on the Scrapie Program and coxiellosis	Continuous