

Survey on Sheep Identification & Animal Disease Traceability Systems Report

Compiled by the
American Sheep Industry Association

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Overview

The American Sheep Industry Association (ASI) supports education and outreach efforts that strengthen animal identification and enhance disease traceability systems. Animal identification is an important aspect of livestock production as it provides an opportunity through record keeping and data collection to better manage the individual performance and management of an animal. Animal identification is the primary element of any livestock traceability system. Animal disease traceability is knowing where diseased and at-risk animals are, where they have been, and when. Effective traceability systems allow state and federal animal health officials to quickly implement preventive measures that may shorten the life of a disease outbreak and minimize the impacts on the sheep industry.

According to the USDA Animal Plant Health and Inspection Service (USDA/APHIS), the agency is committed to implementing an animal disease traceability system that tracks animals from birth to slaughter utilizing technology that allows for quick tracing of animals to stop disease spread. In 2018, USDA/APHIS established four overarching goals to increase animal traceability to allow for rapid tracing to stop the spread of an animal disease. One of these goals is to “Use electronic identification tags for animals requiring individual identification in order to make the transmission of data more efficient.”¹ Many countries have implemented a national animal traceability system utilizing electronic ID such as Canada and the United Kingdom.

The adoption rate of electronic ID in the U.S. sheep industry has lagged those of the cattle and swine sectors. It has been suggested that the lack of adoption of electronic ID by sheep producers is driven mostly by cost relative to visual tags but other factors such as lack of awareness, investment, and market incentives could also be reasons. However, there is a lack of quantitative data to assess sheep producer usage of animal identification with respect to electronic ID.

As part of ASI’s education and outreach efforts, an online survey of U.S. sheep producers was conducted to generate producer insights centered around a series of animal identification and animal disease traceability questions. The survey featured over 500 sheep producers. This report provides an overview of the insights and feedback provided from the survey.

¹ USDA/APHIS Animal Disease Traceability <https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/traceability>

Demographics

The online survey featured over 500 sheep producers of various ages, experience, location, and operation types. Figure 1 (below) details the age breakdown of respondents. About two-thirds of respondents were above the age of 55 with those between the ages of 25 to 54 accounting for about 40 percent.

Figure 1. Age Groups

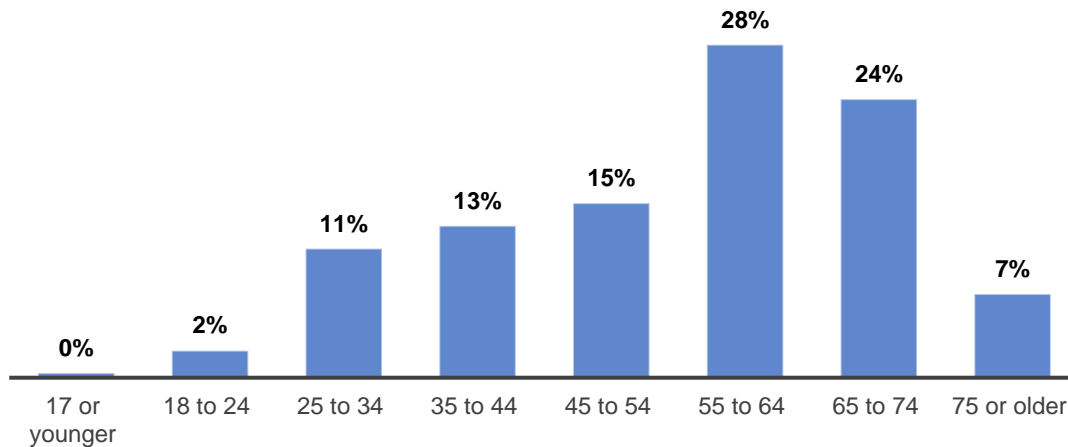
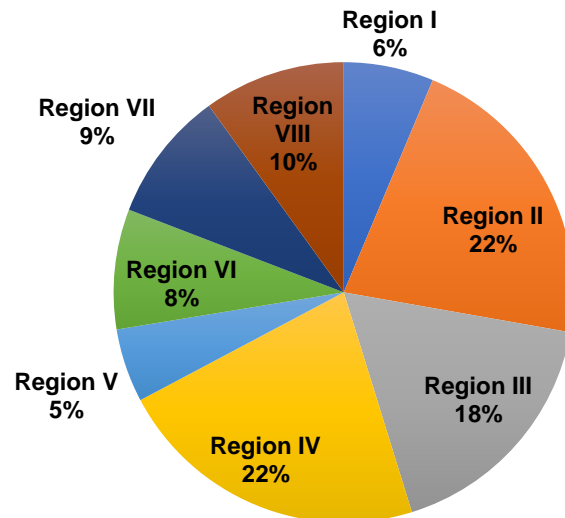


Figure 2 details respondent locations by ASI region². Slightly more than 60 percent of respondents were in ASI Regions II, III and IV, with 27 percent located in the western regions (Region VI, VII, VIII), 6 percent in Region I, and 5 percent in Region V.

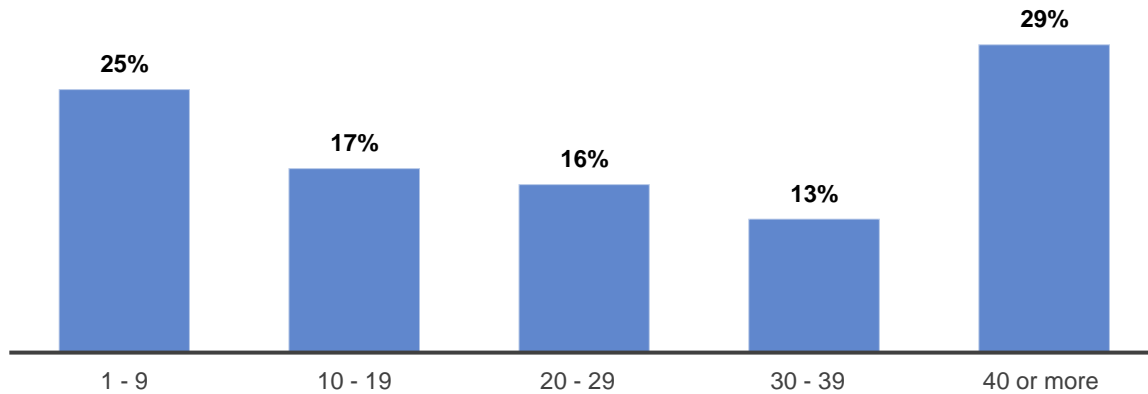
Figure 2. Location by ASI Region²



² Region 1: CT, MA, ME, NH, NJ, NY, PA, RI, VT
 Region 2: AL, AR, DE, GA, FL, KY, LA, MD, MS, NC, SC, TN, VA, WV
 Region 3: IL, IN, MI, MN, OH, WI
 Region 4: IA, KS, MO, NE, ND, OK, SD
 Region 5: TX
 Region 6: AZ, CO, NM, NV, UT
 Region 7: ID, MT, WY
 Region 8: AK, CA, HI, OR, WA

Survey respondents represented both ends of the experience spectrum, with 29 percent having more than 40 years' experience raising sheep and 25 percent having 1 to 9 years' experience (Figure 3).

Figure 3. Experience Raising Sheep (in Years)



In breaking down experience raising sheep by ASI region, respondents with 1 to 19 years of experience were more prevalent in Regions I, II, and IV accounting for two-thirds of respondents (Figure 4). More than half of respondents in Regions III, VI, VII and VIII have more than 30 years' experience raising sheep.

Figure 4. Experience Raising Sheep by ASI Region (in Years)

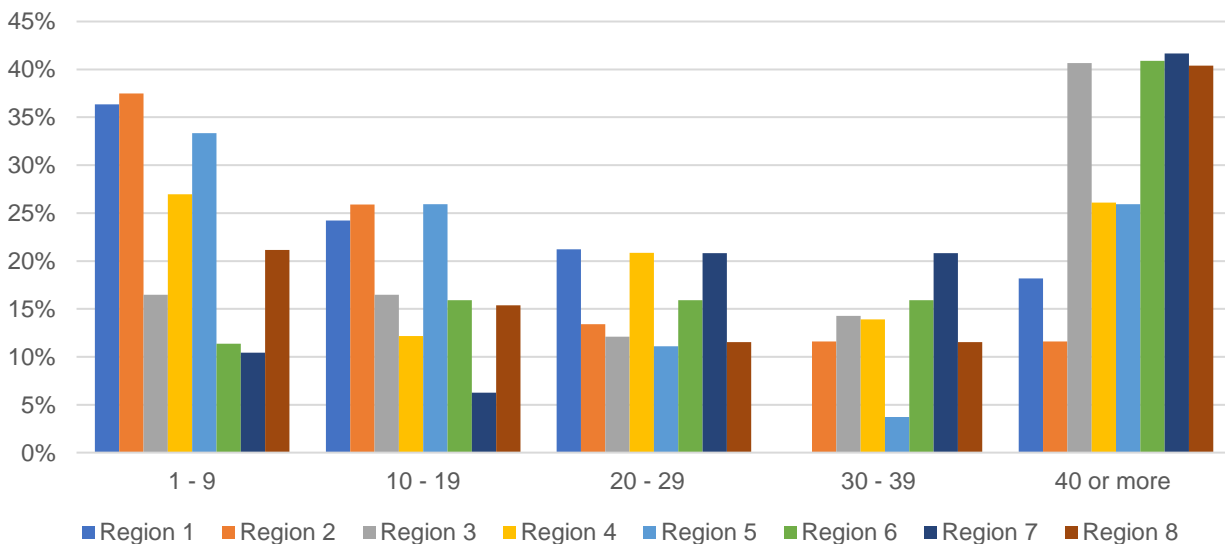
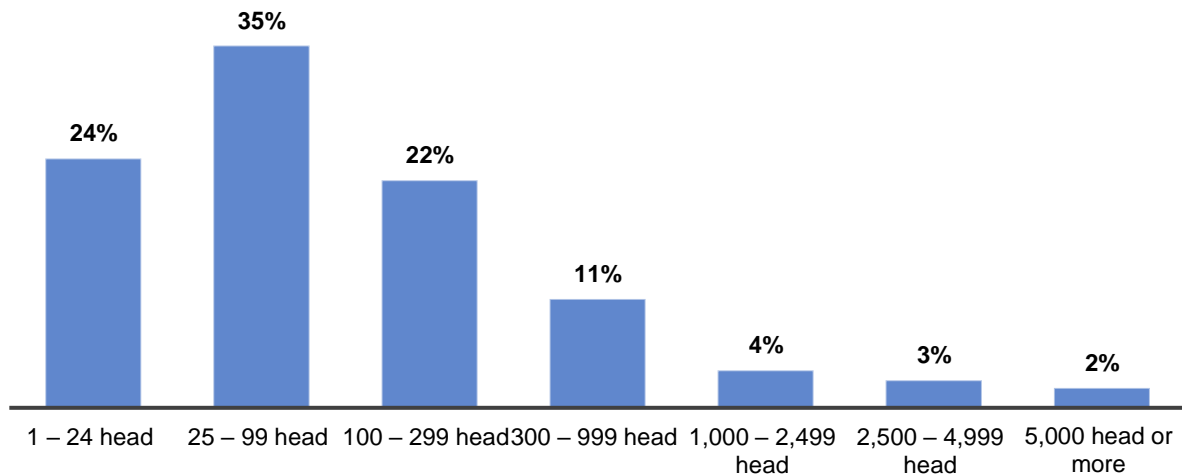


Figure 5 (below) illustrates respondents by flock size based on ewes one-year and older. Most operations had 1 to 299 head of sheep, with 11 percent of operations having 300 to 999 head and 9 percent with more than 1,000 head. The survey aligns with industry statistics showing most sheep operations consist of smaller flocks. According to USDA/NASS 2017 Census of

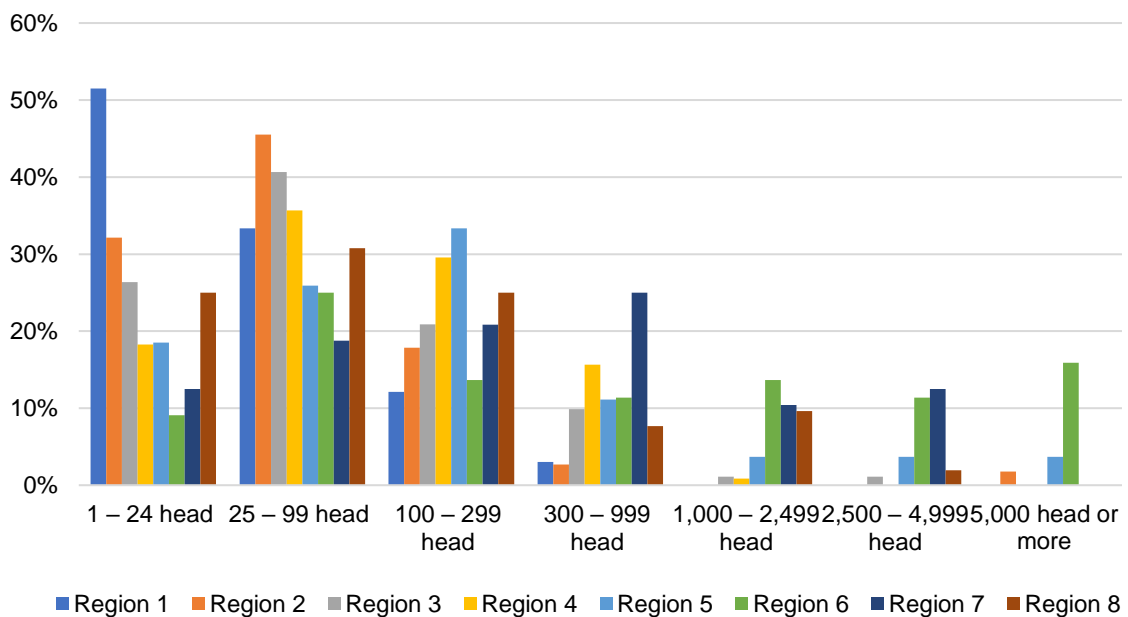
Agriculture, about 98 percent of sheep operations had between 1 to 299 head with the 1 to 24 head category accounting for most operations at 69 percent.³

Figure 5. Flock Size



When looking at operation size by region, a larger number of smaller flocks are in the eastern region of the U.S. (Figure 6). This reflects the growing trend in flock size and location of sheep operations in the U.S. over the past decade.

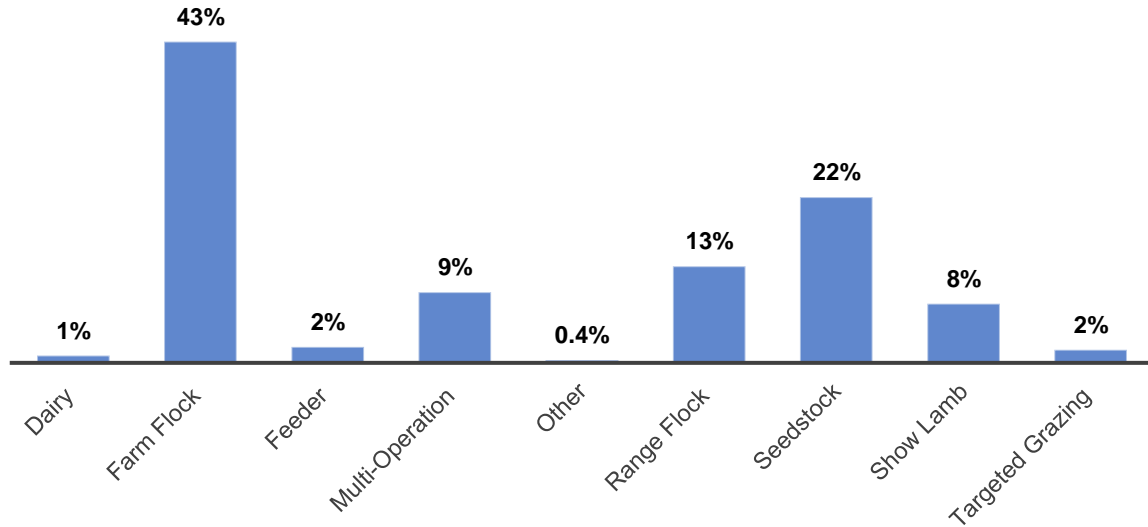
Figure 6. Flock Size by ASI Region



³ USDA/NASS Census of Agriculture <https://www.nass.usda.gov/AgCensus/>

Figure 7 (below) most respondents categorized their operations as farm flock (43 percent) followed by seedstock/purebred operations (22 percent), and range flock (13 percent). For those operations that identified as 'multi-operation' the majority identified as farm flock, followed by seedstock/purebred, feeder, and show lamb/club lamb operations. Over 40 percent of operations also have cattle, followed by horses, poultry, and goats.

Figure 7. Operation Type



Sheep Identification

There are several options available animal identification including ear tags (visual and electronic), ear notches, ear tattoos, and paint brands. The most popular type is visual ear tags and paint brands (Figure 8). This was confirmed by the survey as over 70 percent of respondents use visual ID ear tags, 10 percent use other visual forms with paint brand being the most popular, while only 7 percent use electronic ID, 7 percent use both visual and electronic ID and 3 percent do not use any form of animal ID. For other visual ID methods, paint brands were the most common, followed by ear notches and tattoos.

Figure 8. Identification Methods

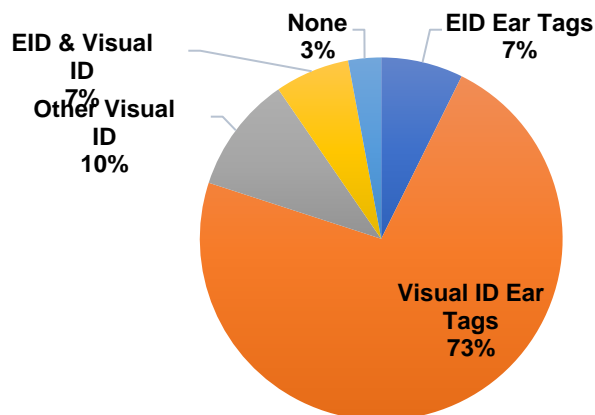


Figure 9 details the reasons why respondents currently use electronic ID in their flocks. The primary reasons for using electronic ID are the ability to identify animals and track animal performance (78 percent), accuracy of data collection (77 percent), faster collection of data (70 percent), to monitor animal health (47 percent), animal disease containment and traceback (22 percent), and because it adds value to their sheep, lambs, and/or wool (20 percent).

Figure 9. Reasons for Using Electronic Identification

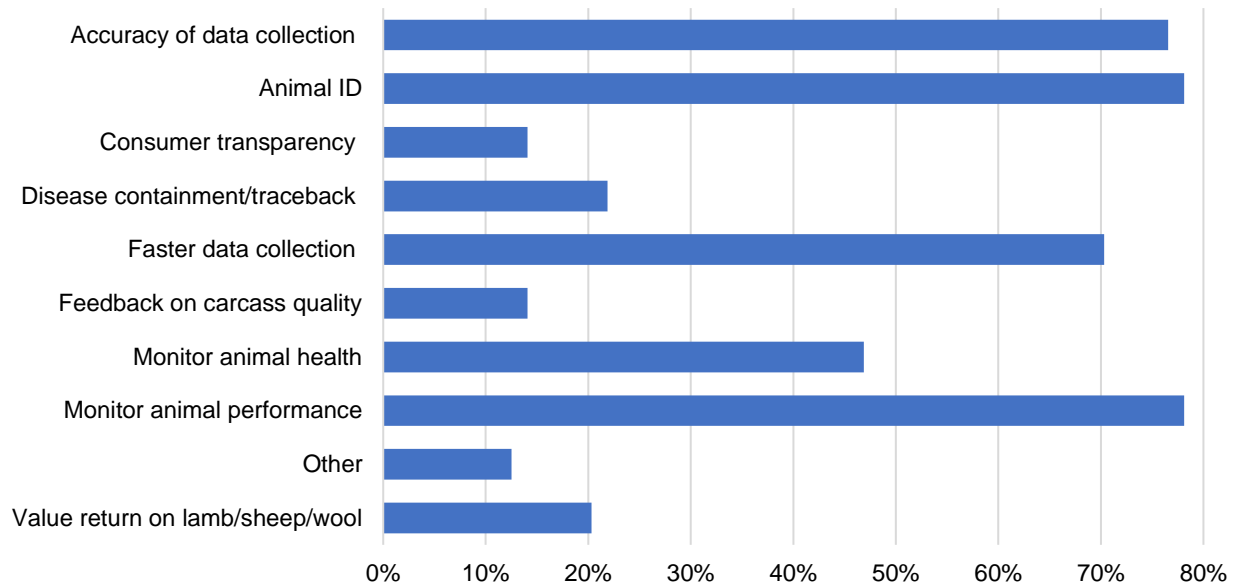
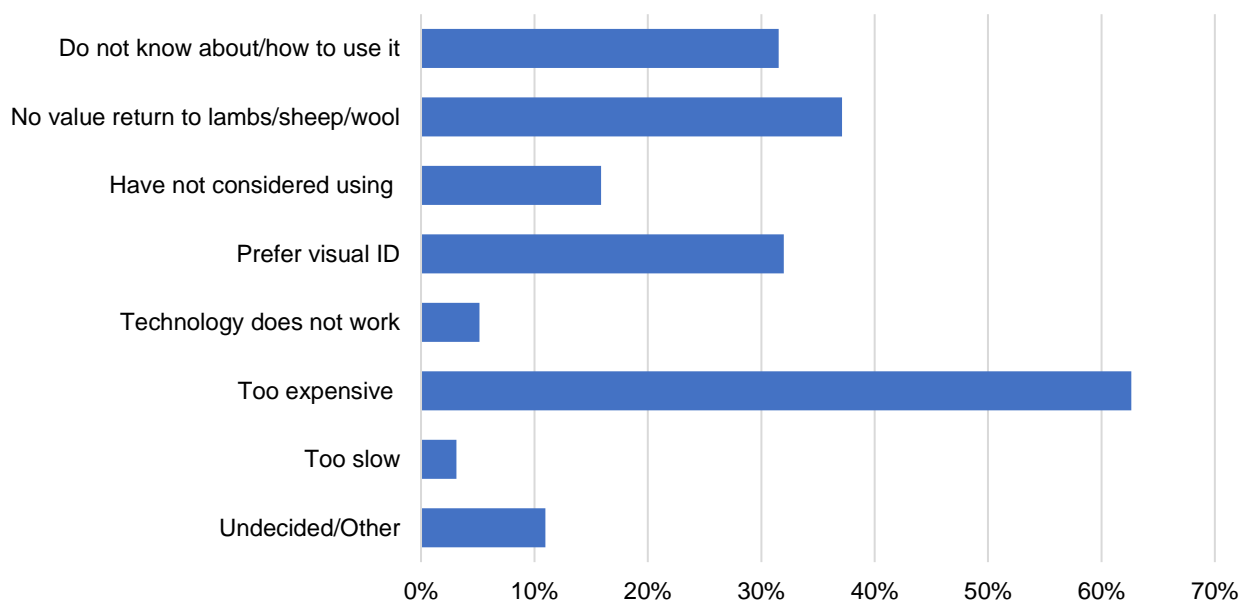


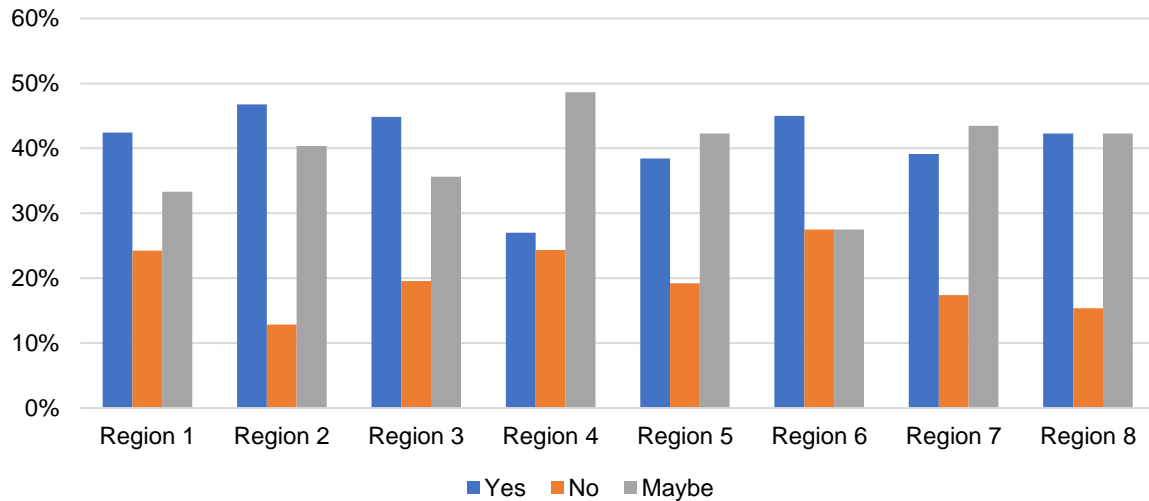
Figure 10. Reasons for *Not* Using Electronic Identification

Figure 10 details the reasons why respondents do not use electronic ID. Over two-thirds stated the primary reason is expense of compared to visual ID. Other reasons include not providing value to their lambs/sheep/wool (37 percent), a preference for visual ID (32 percent), lack of familiarity with electronic ID (32 percent). Of those respondents that do not use electronic ID, 43 percent considered using electronic ID with some currently in process of transitioning to electronic ID.



Forty percent of respondents that use only visual ID indicated an interest to attend a webinar and/or workshop on how to use electronic ID, with 40 percent indicating a potential interest in attending, and 19 percent with no interest in attending. (Figure 11).

Figure 11. Measuring Willingness to Attend a Workshop on Electronic ID by ASI Region



Animal Disease Traceability

USDA/APHIS has established a goal of utilizing electronic animal ID as part of a national animal disease traceability system to allow for rapid traceback of animals during an animal disease outbreak.

In Figure 12 support/opposition to a mandatory animal traceability system that requires electronic ID is measured. While the majority (39 percent) are opposed, over a third of respondents indicated 'maybe' and 26 percent stated yes. Support/opposition measured by ASI region is detailed in Figure 13 (below).

Figure 12. Measuring Willingness for a National Mandatory Electronic Animal ID Disease Traceability System

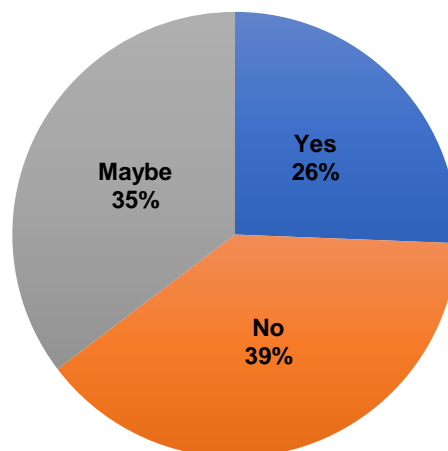


Figure 13. Measuring Willingness for a National Mandatory Electronic Animal ID Disease Traceability System by ASI Region

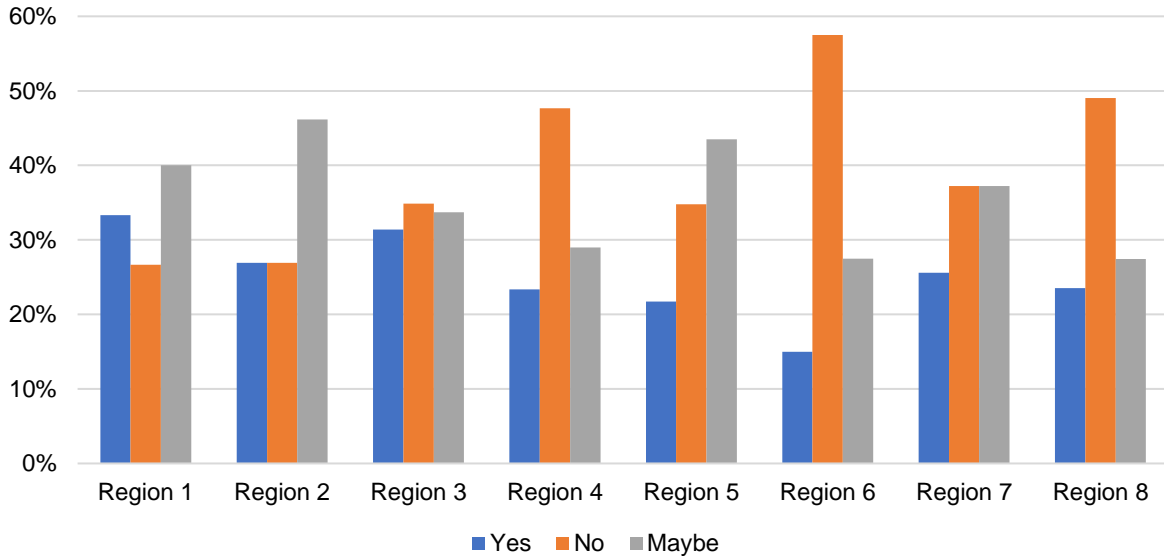
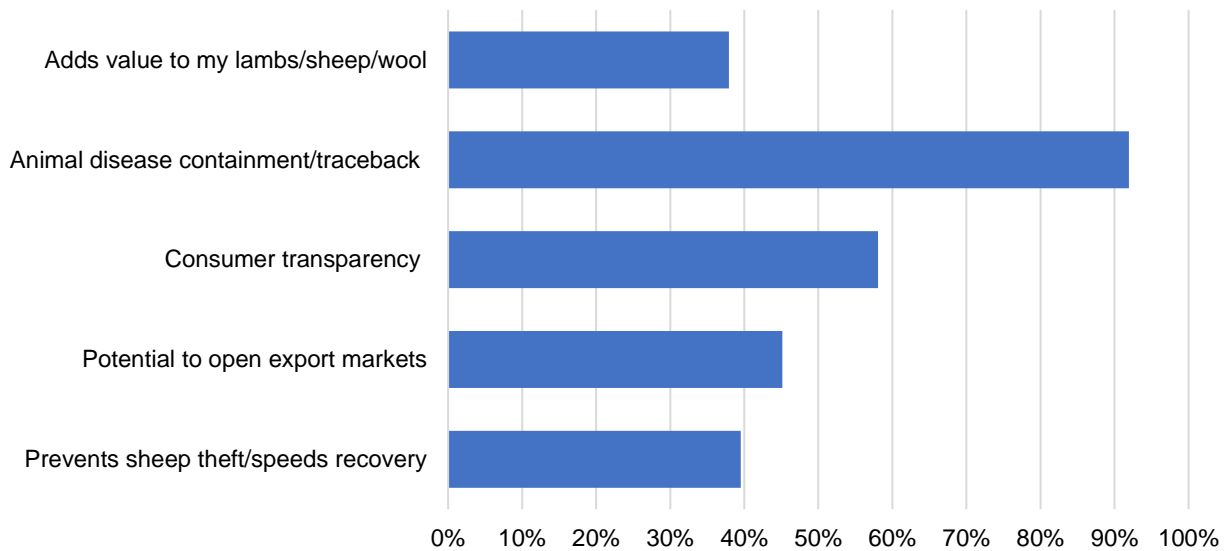


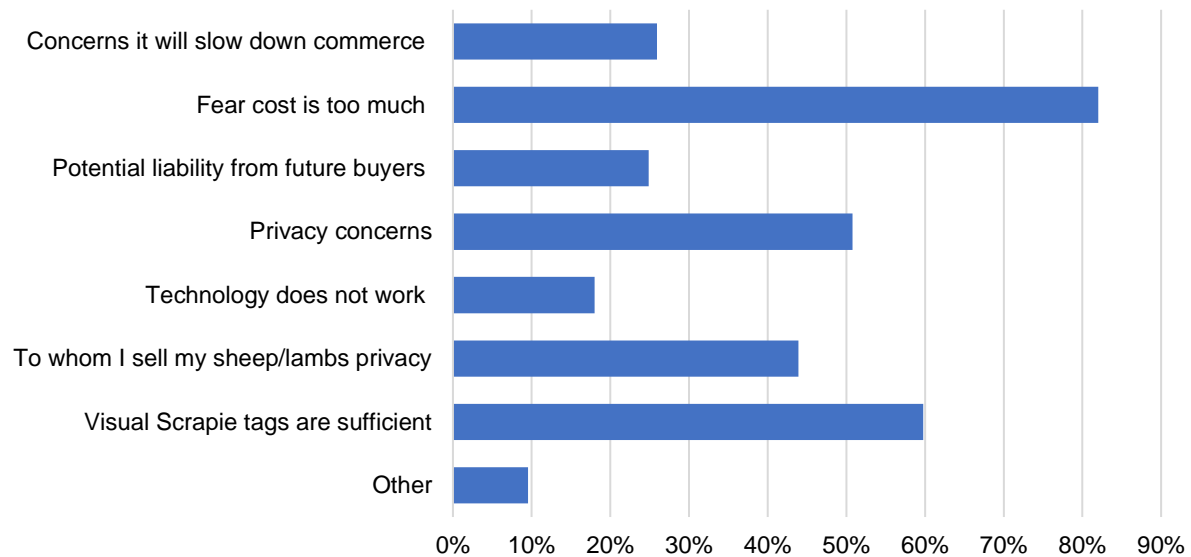
Figure 14 details the reasons why respondents support the development of a mandatory national electronic animal ID disease and traceability system. The primary reasons for supporting include animal disease containment and response, consumer transparency, and potential to open export markets for American lamb and wool.

Figure 14. Reasons for Supporting a National Mandatory Electronic Animal ID Disease Traceability System



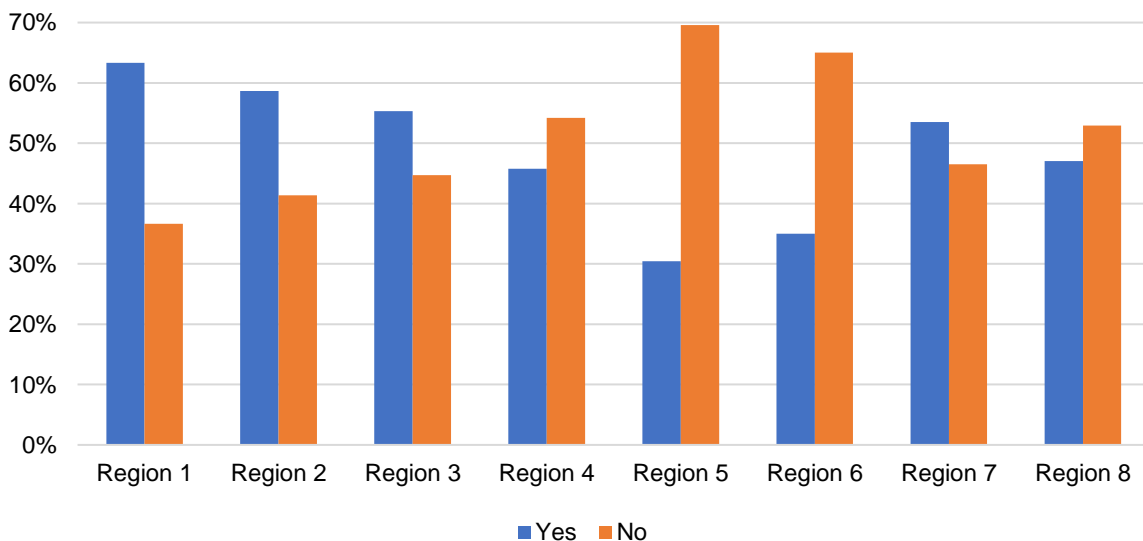
Respondents that are not in favor of a mandatory electronic animal ID disease traceability system cited concerns regarding the cost and who is going to pay for the program (82 percent), followed by scrapie tags being sufficient (60 percent), concerns over data confidentiality (51 percent), who they sell sheep/lambs should be private (44 percent), it will slow down commerce (26 percent), and that it will lead to potential liability from future buyers (25 percent) (Figure 15). Note that the 'Other' respondents generally were supplemented by comments regarding opposition to mandatory government programs.

Figure 15. Reasons for Opposing a National Mandatory Electronic Animal ID Disease Traceability System



When asked if a national electronic animal ID disease and traceability system were to become mandatory, should it extend beyond the current National Scrapie Eradication Program (NSEP) to other significant animal diseases the results were about even with 51 percent in favor and 49 percent opposed (Figure 16).

Figure 16. Measuring Willingness to Extend a National Mandatory Electronic Animal ID Disease Traceability System Beyond Scrapie by ASI Region



If a national electronic animal ID disease and traceability system became mandatory, most respondents (59 percent) have concerns regarding data security (Figure 17). Respondents generally supplemented answers with comments regarding concerns ensuring confidentiality of information from third parties, lack of trust in government and government interference, and concerns about the implications of misreporting of disease information.

Figure 17. Measuring Concerns for Data Security with a National Mandatory Electronic Animal ID Disease Traceability System by ASI Region

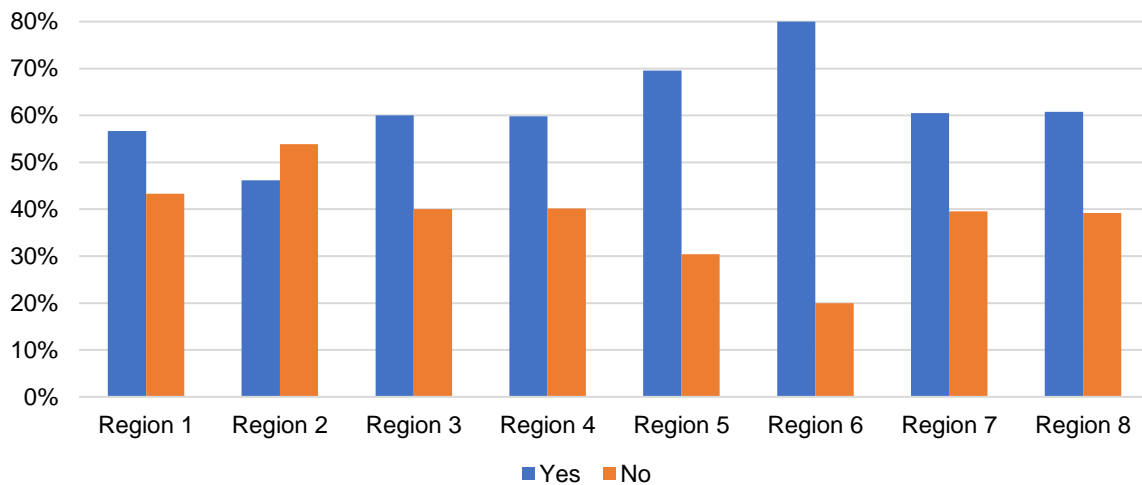
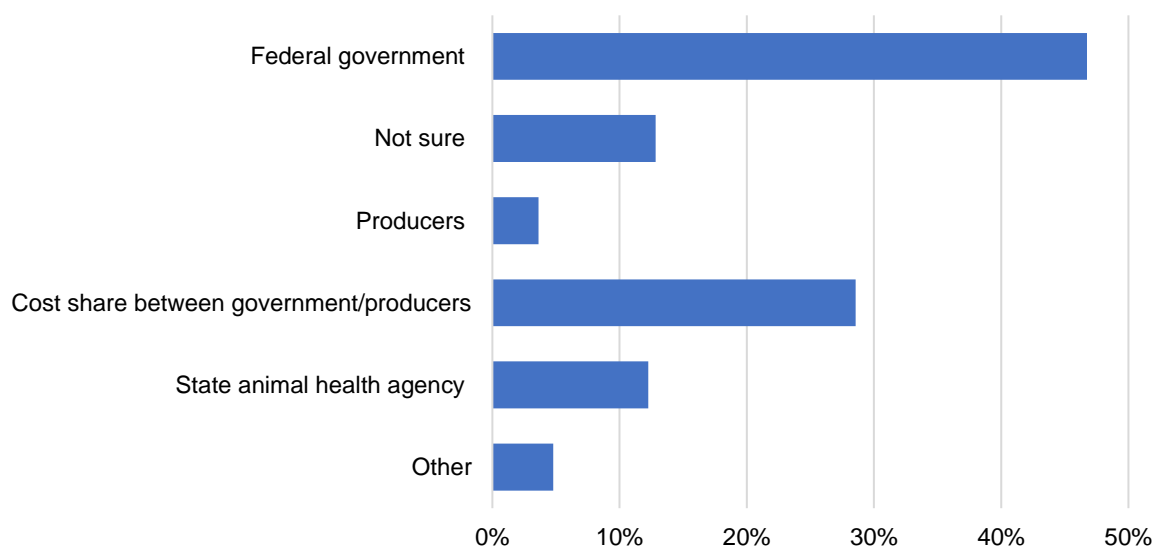


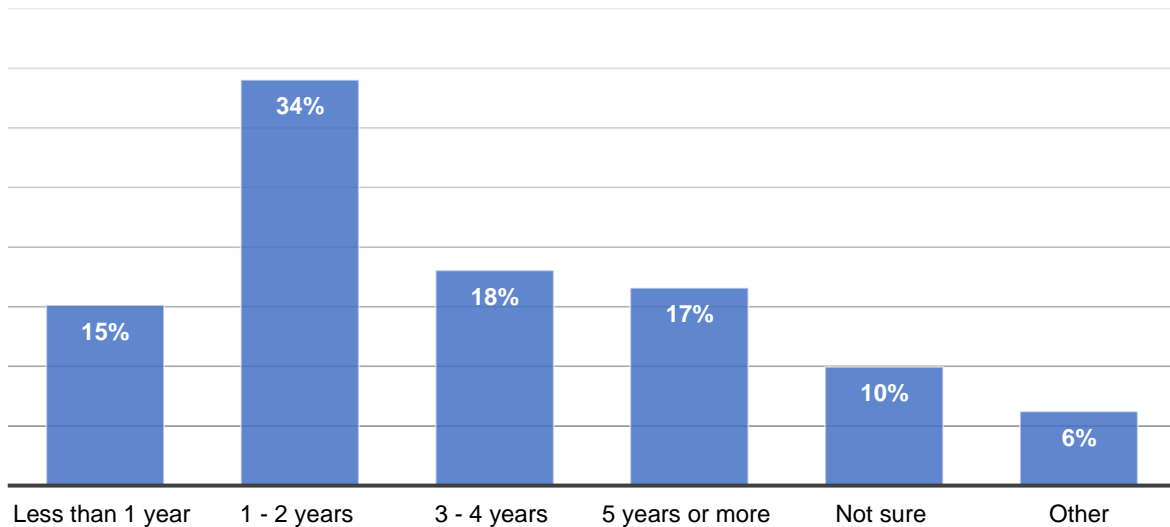
Figure 18 details who respondents believe should pay for the official electronic ID/RFID ear tags if a national electronic animal ID disease and traceability system became mandatory, with most stating the federal government (47 percent), followed by a cost-share between government and producers (29 percent). Note that the ‘Other’ respondents generally were supplemented by comments regarding opposition to mandatory government programs.

Figure 18. Measuring Who Should Pay for EID/RFID Ear Tags Under a National Mandatory Electronic Animal ID Disease Traceability System



If a national electronic animal ID traceability system became mandatory about half of respondents indicated 2 years or less would be a reasonable amount of time to transition their flock to official electronic ID/RFID ear tags (49 percent), followed by three to four years (18 percent), and more than five years (17 percent) (Figure 18). Note that the 'Other' respondents generally were supplemented by comments opposing a mandatory program and already having implemented electronic ID.

Figure 19. Measuring Amount of Time to Transition to EID/RFID Ear Tags Under a National Mandatory Electronic Animal ID Disease Traceability System



Summary

The information presented in this report provides a better understanding of sheep producer perspectives on electronic ID and animal disease traceability systems. The insights provide a better understanding of the issues and concerns of sheep producers regarding electronic ID and animal disease traceability programs. This survey will assist ASI and the sheep industry in identifying further producer education and outreach efforts regarding animal identification and animal disease traceability systems. For example, ASI should consider hosting a webinar or workshop on electronic ID as the survey indicates there is a strong interest by respondents to learn more about this type of animal identification.