

American Sheep Industry Sustainability

*Our commitment to care for
our sheep, the environment
and our communities.*





Sustainability to the Sheep Industry means enhancing environmental stewardship, animal wellbeing, healthy communities, and economic viability while ensuring the vitality of our farmers, ranchers and future generations.

Sheep were among the first animals domesticated by humans as early as 11,000 B.C. in Mesopotamia. By providing a consistent source of both meat and wool for clothing, bedding and blankets, sheep played a crucial role in the spread of civilization. The first domesticated sheep were brought to the U.S. in the 16th by Spanish explorers and 17th centuries by colonists smuggling sheep from England. The U.S. sheep population peaked in 1945 at 56 million. Since then, the number of sheep in the U.S. has continually declined and today the current inventory is approximately 5 million.

Farmers, ranchers, shepherds, sheep dogs, families and communities throughout the U.S. have thrived thanks to one of the most ancient and revered domesticated animals. Passed on from generation to generation, the commitment to care and protection, along with a great appreciation for the sheep's role in environmental stewardship and the shepherd's livelihood and family, deepens.

The sheep industry is populated with family operations that have generations of experience caring for their animals and the environment. There are more than 80,000 family-owned sheep farms and ranches in the U.S. today, and sheep are raised in all states and on varied terrain. This diverse industry ranges from small farm flocks with 50 to 200 sheep, to large range operations with 1,000 to 10,000 sheep. Sheep are a dual-purpose animal

one that is valued for both its meat and its wool.

Over the past several years, lamb and wool consumption in the U.S. has rebounded with nutritious food and lifestyle trends. The increasing popularity of global cuisines and international flavors, a growing interest in clothing from natural fibers that support an active, healthy lifestyle, and a renewed value for family farming and sustainability have consumers seeking out American Lamb and American Wool.

Due to the variety of breeds, sheep can be raised in multiple climates, terrains and areas with different types of vegetation. From grassy pastures with rolling hills to arid grasslands and high mountain meadows, there is a breed of sheep suited to almost any environment. Land that is unsuitable for other forms of agriculture (including plant-based alternatives to other livestock species) can sustain sheep – even thrive because of their presence. Sheep take resources useless to humans and in return create valuable and sustainable natural resources – both nourishment and protection.

Sheep are uniquely equipped for grazing in multiple climates for many reasons, not least of which is their wool, which helps sheep control body temperature and stay dry. Yearly, the sheep are carefully shorn to relieve the heavy weight of the wool and to let a fresh new





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wool coat grow. The wool becomes a valuable, natural fiber.

SHEEP BELONG TO THE LAND AND THE LAND TO THE SHEEP

Sheep help manage the ecological system of which they are a part of, boosting biodiversity and contributing to soil health. As ruminants, sheep easily digest grasses and weeds. They graze carefully and choose the plants and weeds that other animals ignore. Sheep prune certain plants so other species (such as cattle, goats and horses) may thrive while fertilizing the soil with vital nutrients and tamping fallen seeds with their hooves into the soil. These actions encourage native plant growth, which in turn helps minimize erosion.

Shepherds manage and care for the land with the help of their animals, moving sheep from pasture to pasture with guard dogs to protect the flocks. The plants and soil are healthier and more resilient as a result of sheep grazing and treading the land daily. As soon as the sheep move on, the pasture is ready for the next growing season.

As grazers, sheep are stewards of the land and often more effective weed mowers than tractors and other machines. In addition, they reduce fuel, pesticide and fertilizer use. In areas of the U.S. prone to wildfire, sheep are used strategically to eat dried plants that might otherwise become wildfire fuel. As sheep graze

underbrush within forests, they help facilitate tree growth by removing vegetation competing with the trees, thus improving the vitality of forests. Some wineries graze sheep through the vineyards to clear weeds and reduce or even eliminate the use of herbicides. This practice also exists in many other parts of the country where sheep help control weeds along roadsides and in ditch banks. Across the U.S., sheep are used to graze stalks and seeds after harvest, “gleaning” the leftovers as a source of nutrition while preparing the fields for cover crop planting.

ANIMAL HEALTH AND COMFORT IS PARAMOUNT

Since it is in the producers’ best interest to raise healthy sheep, there’s an undeniable bond between the farmers and ranchers and their flocks. The sheep demand 24/7 attention, and sheep producers have built their lifestyle around this commitment and are dedicated to the job of looking after their animals and keeping them healthy. The routine care of sheep includes far more than providing fresh air, water and food. It includes providing protection from predators and a full regimen of preventative care including shearing, vaccinations, nutrition and birthing assistance. This humane and proactive approach provides uncompromising welfare standards for sheep that provide American Lamb and American Wool.



- Excellency, improvement, animal care, environmental stewardship and communities
 - Preserve and enhance the vitality of the rangeland/pastures we graze
 - Ensure a healthy, comfortable, stress-free existence for our animals, providing the most wholesome natural products possible
- Care for and improve the environment for the next generation and society as a whole
- Enhance and improve our positive contributions and the quality of our products
- Support our employees and local communities
- Provide consumers with a premium protein that is nourishing, delicious and best savored with loved ones
- Provide consumers with a natural and versatile fiber that provides unrivaled benefits – from luxurious clothing to high-performance sportswear
- Honor and preserve traditions, heritage, food cultures and authentic cuisines

WOOL QUALITIES



Biodegradable

Perfect for all
four seasons

Thermal comfort
and breathable

Moisture wicking
and odor resistant

Naturally durable

Both high performing
and luxurious

Flame resistant

As grazing ruminants, sheep improve the ecology and quality of the land they graze by supporting soil health, sequestering carbon, encouraging plant and insect biodiversity, and consuming vegetation that is unsuitable for other livestock. Wool growth is a continuous, naturally renewable process throughout the life of a sheep.



Environmental Stewardship

The American sheep industry is committed to combining emerging technologies, knowledge and management practices with proven stewardship strategies that protect our natural resources and positively impact the health and biodiversity of pastures and rangelands, all while reducing resource consumption and climate impact.

INDUSTRY PRIORITIES:

- Implement responsible environmental practices that improve soil health and biodiversity while protecting natural habitats and reducing Green House Gas (GHG) emissions
- Define the sheep industry's environmental impact and identify meaningful strategies to reduce GHG emissions for sheep production systems in the U.S.
- Work to maintain and restore grazing lands
- Manage water resources to maximize efficiency and support an optimal water supply

STRATEGIES:

- Determine the aggregate GHG emissions for the U.S. Sheep Industry
- Quantify and promote the benefits of targeted grazing, cover crop management, integrated pest management and other existing regenerative management practices
- Create a best practices toolkit for environmental stewardship and a wide-reaching communication and producer education plan, including partnerships with agencies and organizations that can help disseminate the information
- Increase the use of grazing plans
- Increase the use of regenerative agriculture practices



Sheep Care and Well-Being

The American sheep industry is committed to the most appropriate husbandry, health and nutrition practices that positively impact the care and well-being of our sheep.

INDUSTRY PRIORITIES:

- Allow (support) natural animal behavior
- Provide necessary natural or man-made shelter
- Provide protection from predators
- Prevent, control and manage diseases
- Ensure the sheep's nutrition needs are met
- Minimize pain (discomfort) and stress throughout the production process including transportation, shearing and processing

STRATEGIES:

- Promote body condition scoring surveys
- Take advantage of USDA National Animal Health Monitoring System (NAHMS) survey results
- Access or develop animal care surveys for lamb processors
- Survey producers to identify the participation rates in quality assurance programs and engagement with other training resources
- Promote quality assurance, training and existing sheep care resources

Sheep Industry Productivity

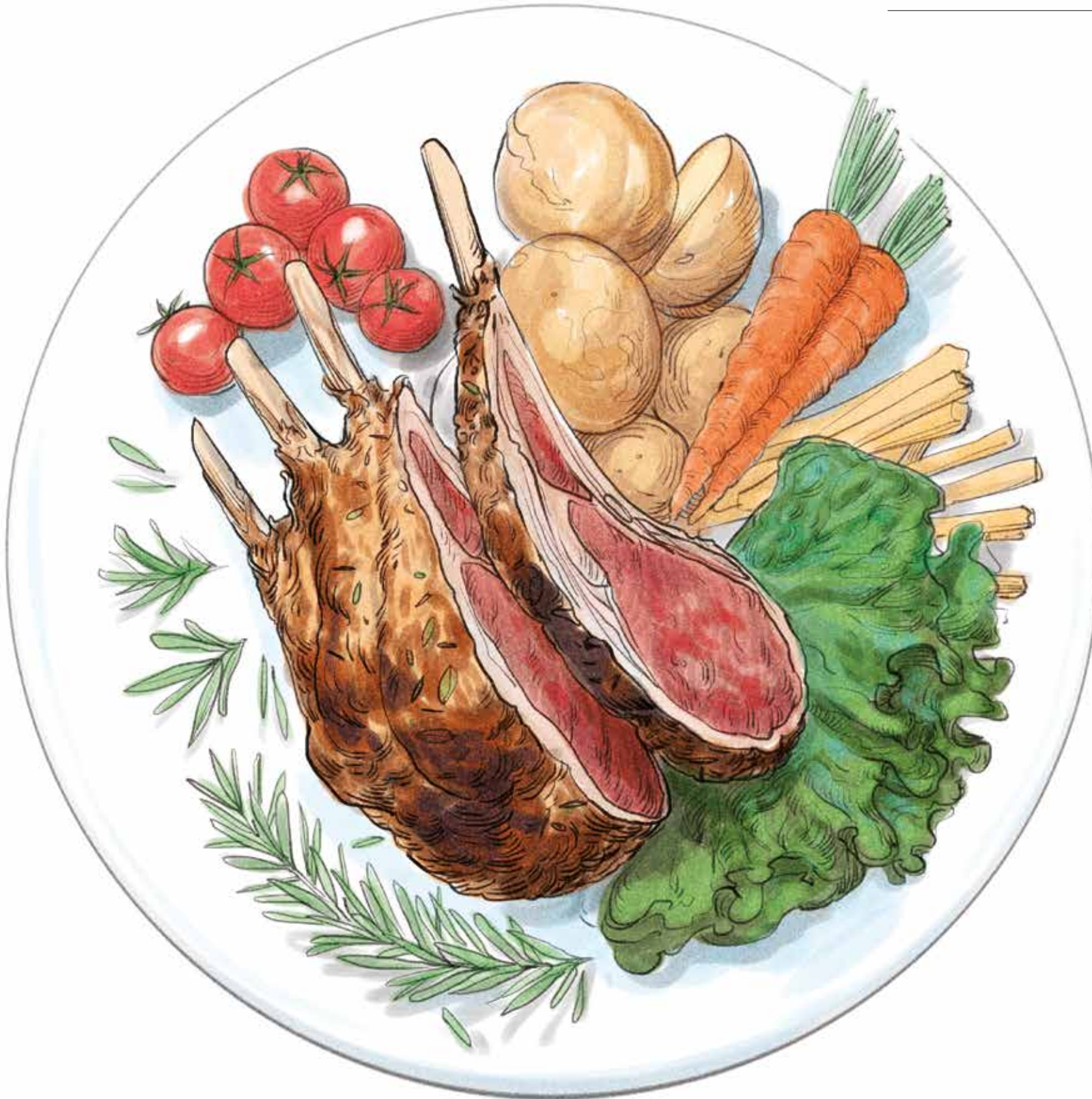
The American sheep industry is committed to improving efficiencies, enhancing product value and increasing demand, which collectively enable operations and businesses to maintain and improve long-term viability.

INDUSTRY PRIORITIES:

- Increase productivity of all industry segments
- Optimize finish/decrease excessive fat OR optimize carcass quality to deliver a consistent product that our consumers want
- Encourage innovation, technology and new product development (investment and adoption)
- Increase economic viability for all sectors including new revenue streams

STRATEGIES:

- Identify and promote management practices that increase productivity while ensuring animal well-being, such as crossbreeding, accelerated lambing, genetics, optimal feeding, increased lamb and wool yields
- Continue to grow educational programs to inspire adoption of productivity best practices and technology
- Increase participation in the National Sheep Improvement Program (NSIP) and increase the number of rams sold using Estimated Breeding Values (EBV)
- Increase participation in quality assurance programs
- Promote and increase engagement with existing resources and programs including best practice guides, training and educational programs, etc.



80,000 family farmers in the United States are committed delivering quality American lamb that was responsibly raised to consumers, chefs and butchers. Sheep in the United States graze on natural pastures consisting of high-quality grasses and forage and are never administered hormones. A 3 oz. serving of American Lamb is naturally nutrient rich. It's packed with an array of essential nutrients. On average, American Lamb is an excellent source of protein, zinc, selenium, riboflavin, niacin, vitamin B12, and good source of iron and vitamin B6. American lamb is:

- A fundamental source of complete protein
- Versatile
- Local
- Nutrient rich
- Adventurous flavor
- A vital ingredient in many international cuisines
- Elevated, memorable dining experience



Social and Economic Impacts

The American sheep industry is committed to producing high quality lamb, wool and other products, while increasing the well-being of our communities and our industry.

INDUSTRY PRIORITIES:

- Support a healthy community and workforce
- Ensure worker safety and well-being
- Cultivate continued trust in our products
- Respect the rich heritage of the sheep industry, supporting new producers and the next generations
- Support the sustainable use of sheep grazing services and practices in communities and public use areas
- Continue to contribute to the U.S. economy
- Provide for the traceability of our products to enhance food safety
- Maintain continued satisfaction and loyalty to our products

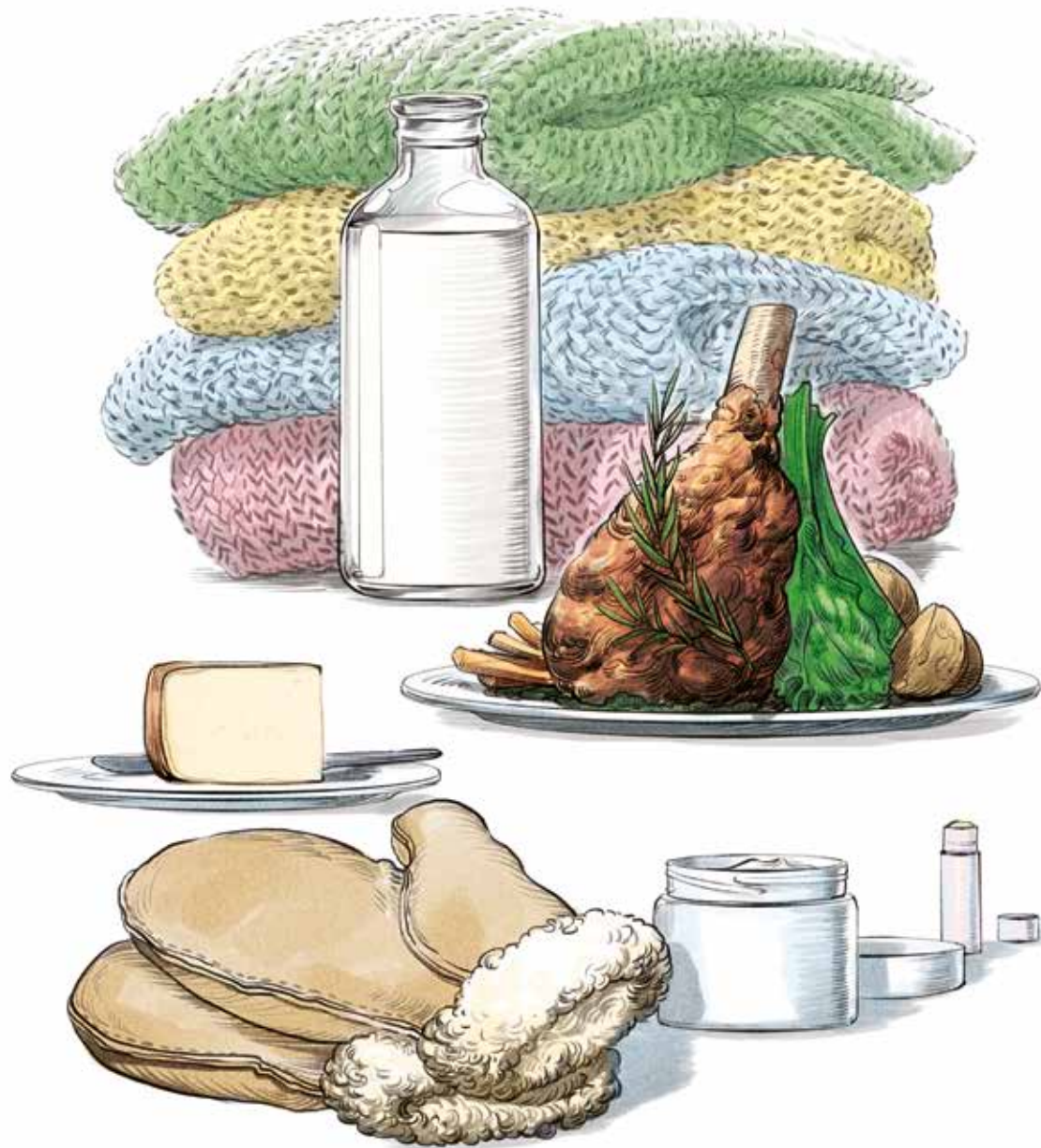
STRATEGIES:

- Increase employee retention and worker training program participation
- Develop employee handbook templates for sheep operations and businesses
- Continue to update the sheep economic impact study
- Support programs designed to attract new producers and encourage the next generation to stay involved in the sheep industry
- Develop succession planning tools/ programs for multigenerational ranches



By Choosing American Lamb and American Wool you are:

- Supporting American farm and ranch families
- Assuring that your lamb and wool are produced locally
- Contributing to the health of our rangelands and pastures
- Helping preserve slow fashion, natural fiber systems, food cultures and global culinary traditions



The American sheep industry is proud of the enormous value sheep contribute — we are maximizing the purposeful use of what nature provides while minimizing waste.

MSU Study Summary

The sheep industry is working with Michigan State University (MSU) to evaluate its environmental footprint and build a rigorous evidence base for decision making. At the conclusion of MSU's research, the sheep industry will use this new data to inform future strategies that will improve our industry's sustainability efforts. MSU has:

- Identified the best methodology to estimate a sheep operation's total Green House Gas (GHG) emissions
- Examined/calculated GHG emissions from different sheep production systems, including:
 - Intensive production
 - Intensive grazing
 - Extensive grazing
 - Range
 - Feedlots
- Incorporated metrics into the GHG methodology which capture the diversity of how sheep are raised and marketed in the U.S. so that sheep operations can be compared one to another, rather than one aggregate value that does not capture the diversity of our industry
- Identified major production factors contributing to GHG emissions in US sheep production
- Created mitigation strategies/best practices to reduce emissions in each production system based off their emissions profile



Where We've Been and Where We're Going

In 2013, the American Lamb Board initiated an assessment of the industry's operational practices as they relate to impact on economic viability of producers, worker health and safety, community development, regional employment and the environment. Sustainability consultants were hired to gather and analyze data, and to provide recommended sustainability strategies.

The assessment teams visited farms and ranches across all U.S. regions – covering the production systems that include range, intensive farm flock, forage farm flock and feeders. They focused on production inputs (fuel, feed, water), labor, animal welfare factors and community outreach/volunteerism. Individual input from each visit was used to inform/develop a larger survey of industry members. This quantitative survey generated findings that served the industry in making operational recommendations and best practice guides.

GOAL

In 2023, the sheep industry will update and repeat the quantitative sustainability survey to assess progress and inform future strategies to continue to identify ways to improve or achieve excellence.



