

## Sustainable Sheep Production Skills and Knowledge List

*Developed by Extension Professor Richard Brzozowski, University of Maine Cooperative Extension.*

Sheep producers ought to have the following skills and knowledge about sheep so as to

- improve their sheep management skills
- increase their chances of a profitable sheep enterprise or
- gain employment on a successful sheep operation.

If you are just starting out, don't be intimidated by this list; just use it to prioritize your learning. If you are experienced, remember that you can always improve and learn more, whatever your skill level.

**Circle your current and desired (target) competence using this scale:**

- 1=No knowledge/skill  
2=Some knowledge/skill  
3=Well-informed/experienced

Recommended knowledge/skill by category	My current level			My target level		
<b>Sheep Health</b>						
Know how to take rectal temperature	1	2	3	1	2	3
Recognize a normal temperature of healthy sheep	1	2	3	1	2	3
Select the proper needle and size for use on lambs and adults	1	2	3	1	2	3
Properly draw vaccine from a vial into a syringe	1	2	3	1	2	3
Correctly give an intramuscular (IM) injection	1	2	3	1	2	3
Correctly give a subcutaneous (sub-Q) injection	1	2	3	1	2	3
Properly dispose of a used needles	1	2	3	1	2	3
Recognize a sick individual	1	2	3	1	2	3
Recognize signs for internal parasites in sheep	1	2	3	1	2	3
Know how to take a fecal sample for diagnosis	1	2	3	1	2	3
How to select a proper de-wormer for sheep	1	2	3	1	2	3

How to calculate dosage of a vaccine and de-wormer	1	2	3	1	2	3
Know components of a sheep health program (various vaccinations)	1	2	3	1	2	3
Be able to differentiate antibiotics typically used for sheep	1	2	3	1	2	3
Be able to develop a biosecurity plan for your operation	1	2	3	1	2	3
Know how to administer an oral de-wormer (anthelmintic)	1	2	3	1	2	3
Become familiar with common sheep diseases in your area	1	2	3	1	2	3
Know which sheep diseases are reportable to your state veterinarian(s)	1	2	3	1	2	3
Know how to properly trim hooves	1	2	3	1	2	3
Know how to draw blood from an animal	1	2	3	1	2	3
Know how to take a fecal sample	1	2	3	1	2	3
Understand what is involved in a fecal egg count (FEC)	1	2	3	1	2	3
Be aware of the national scrapie program and its requirements	1	2	3	1	2	3
<b>Birthing</b>						
Recognize when a ewe is about to give birth	1	2	3	1	2	3
Recognize a normal birth	1	2	3	1	2	3
Recognize abnormal birthing (dystocia)	1	2	3	1	2	3
Properly stomach tube a newborn lamb	1	2	3	1	2	3
Disinfect newborn's naval cord	1	2	3	1	2	3
Be able to extract milk from a ewe for colostrum	1	2	3	1	2	3
Be able to properly store and handle colostrum	1	2	3	1	2	3
Know how to deliver a lamb	1	2	3	1	2	3
Be aware of zoonotic diseases of sheep (contagious to humans)	1	2	3	1	2	3
Be able to identify gender of lambs	1	2	3	1	2	3
Develop a newborn lamb protocol (ID, castration, other health issues)	1	2	3	1	2	3
Recognize different castration tools for ram lambs	1	2	3	1	2	3
Be able to castrate a ram lamb	1	2	3	1	2	3
Be able to properly dock a lamb's tail (if applicable)	1	2	3	1	2	3
Attach an ear tag to an animal	1	2	3	1	2	3
Assemble materials for a lambing kit	1	2	3	1	2	3
Be able to recognize and treat a retained placenta	1	2	3	1	2	3
Be able to recognize and treat a vaginal prolapse	1	2	3	1	2	3
Appreciate what guard animals can do in protecting sheep	1	2	3	1	2	3
Be familiar with common sheep predators in the region	1	2	3	1	2	3

Be familiar with strategies in preventing and controlling sheep predators in the region	1	2	3	1	2	3
Know how to effectively perform basic first aid on a sheep/lamb	1	2	3	1	2	3
Know how and when to contact a veterinarian for assistance/advice	1	2	3	1	2	3
<b>Sheep Nutrition</b>						
Understand how digestion works in a ruminant	1	2	3	1	2	3
Balance a feed ration for feeder lambs	1	2	3	1	2	3
Train a lamb to drink from a bottle (when applicable)	1	2	3	1	2	3
Balance a feed ration for a pregnant ewe	1	2	3	1	2	3
Balance a ration for a replacement ewe	1	2	3	1	2	3
Know the advantages and disadvantages of feeding by-products	1	2	3	1	2	3
Become familiar with types of feeds and their nutrient values	1	2	3	1	2	3
Recognize common nutritional disorders of sheep	1	2	3	1	2	3
Recognize the value of a total mixed ration (TMR) when applicable	1	2	3	1	2	3
Be able to take a feed bunk sample	1	2	3	1	2	3
Be able to read and interpret a feed tag	1	2	3	1	2	3
Know proper mineral supplements and forms suitable for sheep	1	2	3	1	2	3
Become familiar with feed bunk management such as sanitation, feed quantity, feeding frequency, bunk structural materials, etc.	1	2	3	1	2	3
Know how to properly feed the flock sire (ram)	1	2	3	1	2	3
Be able to list components of a growing/finishing ration for market animals	1	2	3	1	2	3
Calculate feed needs (winter feed supply needs)	1	2	3	1	2	3
Know how to determine the body condition score of a sheep	1	2	3	1	2	3
<b>Sheep Behavior</b>						
Understand how sheep behave in different situations	1	2	3	1	2	3
Know how to safely handle a newborn lamb	1	2	3	1	2	3
Drive a flock of sheep from one point to another	1	2	3	1	2	3
Know / use the safety rules for working sheep	1	2	3	1	2	3
Place a halter on a sheep	1	2	3	1	2	3
Know how to tie a halter for quick release	1	2	3	1	2	3
Load sheep onto a trailer	1	2	3	1	2	3
Weigh a lamb	1	2	3	1	2	3
Weigh adult sheep	1	2	3	1	2	3
Estimate a weight of an individual within 10 pounds	1	2	3	1	2	3

Be able to turn a sheep onto its rump	1	2	3	1	2	3
Be able to hold a sheep in position on its side without the use of hands	1	2	3	1	2	3
Know how to restrain an animal	1	2	3	1	2	3
Be able to recognize the benefits for having an effective herding dog(s)	1	2	3	1	2	3
<b>Breeding &amp; Reproduction</b>						
Select a replacement ewe	1	2	3	1	2	3
Select a ram for certain trait(s)	1	2	3	1	2	3
Calculate/estimate time of lambing from breeding date	1	2	3	1	2	3
Be familiar with marking systems in determining if a ewe has been mounted by a ram	1	2	3	1	2	3
Keep production records	1	2	3	1	2	3
Evaluate individual animals through body condition scoring (BCS)	1	2	3	1	2	3
Understand the implications of body condition to reproductive health	1	2	3	1	2	3
Become familiar with the benefits and drawbacks of crossbreeding	1	2	3	1	2	3
Understand heritability of various traits	1	2	3	1	2	3
Understand hybrid vigor	1	2	3	1	2	3
Know how to read a sire proof for selecting rams (EPD's)	1	2	3	1	2	3
Understand the reproductive tract of a ram	1	2	3	1	2	3
Know why, how and when rams are evaluated for use in breeding	1	2	3	1	2	3
Understand the reproductive tract of a ewe	1	2	3	1	2	3
Understand the basics of artificial insemination (AI) as they may apply to sheep	1	2	3	1	2	3
Become familiar with and be able to identify common purebred sheep breeds	1	2	3	1	2	3
Become familiar with reproductive tract diseases common to sheep and how they are spread, how they can be prevented	1	2	3	1	2	3
<b>Sheep Facilities and other Farm Facilities</b>						
Design, adapt and/or select facilities that can be cleaned and disinfected efficiently	1	2	3	1	2	3
Know principles, design and components of a working chute/facility	1	2	3	1	2	3
Know how to calculate adequate space for sheep	1	2	3	1	2	3
Understand the needs of animals for protection from the elements	1	2	3	1	2	3
Understand space requirements for sheep at different ages / growth stages	1	2	3	1	2	3
Understand the need for proper barn ventilation for different seasons and conditions	1	2	3	1	2	3
Know how to select proper bedding materials for sheep	1	2	3	1	2	3
Know how to build, design or select a feed bunk	1	2	3	1	2	3

Know how to build, design or select a hay feeding system	1	2	3	1	2	3
Know how to select or build or use a windbreak	1	2	3	1	2	3
Know how to design an adequate handling facility for catching and treating individual animals	1	2	3	1	2	3
Become familiar with different watering systems and how they work	1	2	3	1	2	3
Know how to design a basic manure management system	1	2	3	1	2	3
Recognize the value of animal manure	1	2	3	1	2	3
Know basic composting techniques	1	2	3	1	2	3
Become familiar with proper grain storage on the farm	1	2	3	1	2	3
Become familiar with proper hay or forage storage on the farm	1	2	3	1	2	3
<b>Fencing, Forages and Pastures</b>						
Understand the basics of rotational grazing	1	2	3	1	2	3
Understand the principles of seeding and maintaining forages	1	2	3	1	2	3
Be familiar with nutrient management plans in your state (when applicable)	1	2	3	1	2	3
Be able to evaluate a pasture for forage quantity and quality	1	2	3	1	2	3
Recognize the pros and cons of different grazing systems	1	2	3	1	2	3
Become familiar with different watering systems for sheep on pasture	1	2	3	1	2	3
Know advantages and disadvantages of electric fencing	1	2	3	1	2	3
Know advantages and disadvantages of non-electric fencing	1	2	3	1	2	3
Know how to drive a corner fence post	1	2	3	1	2	3
Know how to select and hang a gate	1	2	3	1	2	3
Know how to layout a pasture for flexibility	1	2	3	1	2	3
Recognize different pasture forages	1	2	3	1	2	3
Recognize plants poisonous to sheep in your state	1	2	3	1	2	3
Be able to recognize and control (if needed) those plants that are toxic to sheep	1	2	3	1	2	3
Know how to take a forage sample (hay or silage) for testing	1	2	3	1	2	3
Know how to interpret the results of a forage sample	1	2	3	1	2	3
Know how to take a soil sample for a field or pasture	1	2	3	1	2	3
Know how to interpret the results of a soil sample	1	2	3	1	2	3
Identify forage stages of maturity, implications of forage maturity for quality	1	2	3	1	2	3
Know how to efficiently pasture sheep for optimum performance (sheep and pasture)	1	2	3	1	2	3
Know how to select proper fencing for sheep	1	2	3	1	2	3
<b>Sale of Sheep and Sheep Products</b>						

Become familiar with the US sheep industry infrastructure	1	2	3	1	2	3
Become familiar with food safety and food-related regulations in your state and US as they apply to sheep products (dairy and meat)	1	2	3	1	2	3
Know how to determine when an animal is ready for market	1	2	3	1	2	3
Know the grades of sheep (both quality grades and yield grades)	1	2	3	1	2	3
Become familiar with the value of an animal at different growth stages and conditions	1	2	3	1	2	3
Know how to develop a marketing plan for your own sheep operation	1	2	3	1	2	3
Understand the importance of value-added sheep products	1	2	3	1	2	3
Know the cuts of meat and from what part of the ovine carcass they come	1	2	3	1	2	3
Identify marketing options (sales, private treaty, cooperative marketing, and direct marketing)	1	2	3	1	2	3
Know how to determine if a carcass is a lamb or yearling by the break joint in the front leg	1	2	3	1	2	3
<b>Wool</b>						
Be able to properly prepare sheep for the shearer	1	2	3	1	2	3
Be able to prepare an area for efficient shearing	1	2	3	1	2	3
Be able to effectively skirt a fleece	1	2	3	1	2	3
Be able to recognize wool quality	1	2	3	1	2	3
Be able to evaluate a fleece for quality	1	2	3	1	2	3
Know how to properly store wool to maintain quality	1	2	3	1	2	3
Be familiar with wool terms	1	2	3	1	2	3
Understand how and why sheep are shorn	1	2	3	1	2	3
Know how to manage your animals to protect the quality of the wool	1	2	3	1	2	3
Be aware of biosecurity measures at the time of shearing	1	2	3	1	2	3
<b>Financial Management</b>						
Know how to figure break-even point for a specific enterprise	1	2	3	1	2	3
Become familiar with sheep-based enterprise budgets and how to use them	1	2	3	1	2	3
Develop or select an effective financial record keeping system	1	2	3	1	2	3
Know how to keep useful financial records (computer or paper)	1	2	3	1	2	3
Become familiar with income tax Schedule F and how to complete it correctly	1	2	3	1	2	3
Know how to analyze financial records to make wise business decisions	1	2	3	1	2	3
Become familiar with different sheep enterprise types	1	2	3	1	2	3
Know where to obtain low interest loans or grants	1	2	3	1	2	3
<b>Social Human Interactions</b>						

Know who your neighbors are and how to be a good neighbor	1	2	3	1	2	3
Be aware and follow local code enforcement regulations	1	2	3	1	2	3
Know how to be a positive influence in your community as a farmer	1	2	3	1	2	3
Know how to protect yourself and your workers from zoonotic disease	1	2	3	1	2	3
Develop a working relationship with a local veterinarian	1	2	3	1	2	3
Work effectively with local feed and equipment dealers so as to maintain agriculture infrastructure	1	2	3	1	2	3
Know how to attract and keep effective farm workers	1	2	3	1	2	3
<b>Other</b>						
Know how to implement an animal ID system	1	2	3	1	2	3
Know about the mandatory sheep/goat identification program	1	2	3	1	2	3
Be able to track performance of individual lambs and ewes	1	2	3	1	2	3
Identify and express the goals of your sheep operation	1	2	3	1	2	3
Know how to set criteria for culling individual sheep from your flock	1	2	3	1	2	3
Become familiar with sheep terms	1	2	3	1	2	3
Become familiar with agencies and resources (public and private) for sheep producers in the US and your state	1	2	3	1	2	3



*Information in this publication is provided purely for educational purposes. No responsibility is assumed for any problems associated with the use of products or services mentioned. No endorsement of products or companies is intended, nor is criticism of unnamed products or companies implied.*

© 2015

**Call 800.287.0274 (in Maine), or 207.581.3188, for information on publications and program offerings from University of Maine Cooperative Extension, or visit [extension.umaine.edu](http://extension.umaine.edu)**

The University of Maine does not discriminate on the grounds of race, color, religion, sex, sexual orientation, including transgender status and gender expression, national origin, citizenship status, age, disability, genetic information or veteran status in employment, education, and all other programs and activities. The following person has been designated to handle inquiries regarding nondiscrimination policies: Director, Office of Equal Opportunity, 101 North Stevens Hall, Orono, ME 04469, 207.581.1226. [eoinfo@umit.maine.edu](mailto:eoinfo@umit.maine.edu)