

Sheep Production in South Carolina

The sheep industry is as old as our nation. It has seen both a tremendous growth and a drastic decline. In 1942 there were 56 million sheep in this country, but in 1980 there were only 12 million, with 80 percent of these sheep raised in 17 western states. The current lamb market is concentrated along the East Coast, Great Lakes, and West Coast. Consumer demand outstrips available supplies. Today, the U.S. sheep industry is alive and growing. In 1975, leaders of the sheep industry called for action to stop the decline in numbers and gradually increase growth. Plans called for the following changes by 1985:

1. Double lamb production.
2. Increase the live market weight of lambs from 105-110 to an average of 125 pounds.
3. Increase the weaned lamb crop by 25 percent.
4. Increase ewe number by 50 percent.
5. Increase wool production by 50 percent.

These goals, established in 1975, appear achievable and progress has been made.

A CONVENTIONAL SHEEP ENTERPRISE

A conventional enterprise is defined as one in which ewes are bred to lamb once per year. In this system, sheep are usually a secondary (supplementary) source of income.

Size of Enterprise

Generally, flock size in our state is small, 5 to 20 ewes. However, about 100 brood ewes should be considered as minimum size for a conventional enterprise. The beginner can start with 30 ewes and increase as managerial skills are developed. One person can care for 600-700 ewes; with automated feeding, 1,200 ewes can be cared for. The size of the enterprise is a matter of skill and desire.

GETTING STARTED

Purchasing Ewes

Crossbred ewes are highly desirable. The best buys are crossbred western ewes, with black-faced ewes preferred and white-faced ewes the second choice. Rambouillet ewes, native Suffolk, Hampshire and Dorset ewes, or their

crosses are satisfactory. Crossbred ewes are superior to straightbred females because they produce more lambs, more milk, and wean more pounds.

When purchasing ewes, avoid the following:

- Ewes that are bred. You are never sure when they will lamb.
- Lame ewes. Don't buy foot rot trouble: you will have enough of that on your own.
- Ewes with unsound udders.
- Ewes that have had mastitis.
- Ewes with worn or missing teeth.
- Culls from another flock.

With a large flock, developing your own replacement ewes is advisable. With a small flock, replacements can be purchased. This simplifies management since you can purchase crossbred ewes and a ram of another breed and benefit from the three-way crossbreeding system.

Rams - Breed and Source

Suffolk, Hampshire, or Dorset rams are recommended. Although they can come from other locations, breeders in South Carolina, North Carolina, Georgia, Virginia, and Tennessee can supply rams that are satisfactory.

Postweaning gains are a major consideration. Weight at 12 months, 16 months, or mature weight is also important. If possible, find rams with expressed growth superiority over contemporaries. The state of Virginia conducts postweaning tests on rams and holds annual sales.

Housing and Equipment

Converting an existing barn or shed is generally satisfactory. If a new facility is to be built, an economical pole-type barn or shed opening to the south is well suited for sheep. Some protection for the flock is needed during wet and cold weather. For lambing, enclose an area to make it dry and draft-free. Ten to twelve lambing pens (5 feet x 5 feet) per 100 brood ewes are adequate.

Drainage away from the shed should be excellent. Allow 16 square feet of floor space per brood ewe. This will allow

enough space for a lamb creep at one end of the shed. Allow about 24 inches for hay rack and/or feed bunk space per ewe.

For proper management you need equipment for drenching, shearing, docking, castrating, identification, foot trimming, a cutting gate, loading chute, and foot bath. Iodine for treating navels of newborn lambs is essential.

Pastures

Pasture is the cheapest feed source so make full use of it. Plan to establish a grazing system using both cool- season and warm-season grasses.

Seed 50 percent of pasture acreage to cool-season species (for example, ladino clover-orchard grass mixture). Limited acreage of pure orchard grass to be fertilized with nitrogen is satisfactory. Kentucky 31 fescue is acceptable but is not as good for sheep as orchard grass. If fescue is used, be sure the mixture is 45 to 60 percent ladino clover.

Remaining acreage should be sprigged to Tifton 44 bermudagrass (warm-season species). Approximately five to six ewes per acre will allow for heavy stocking rates in the spring and for hay to be cut from the bermudagrass pastures. Pearl millet can provide temporary summer grazing, as can wheat, rye, barley, and oats during winter months. Clovers should be seeded with the winter cover crops.

Rotate ewes on pastures often. Don't overgraze – best grazing height is 3 to 4 inches. If grass gets ahead of ewes, cut it and make hay. Keep both grazing and hay quality high. Having low quality forage is not good sheep management because production will certainly decline.

Fencing

Woven wire topped with a strand of barbed wire is generally used, especially for perimeter fencing. Electric fences are used for cross fencing. The high tensile fence with a couple of electrified strands is excellent. The electric fence provides some protection against predators (dogs). It is best to bring sheep into a more protected area at night to discourage predators. Once a routine is established, sheep will respond. Securing your flock at night can save many ewes and lambs.

Winter Feed

Limited acreage seeded in the fall to winter annuals (small grain in combination with crimson clover or arrowleaf clover) reduces feed costs and amount of harvested roughage (hay, silage) required. Good quality legume hay or silage is ideal. Mixed grass-legume hay cut early and baled as soon as possible (without rain) is

desirable. If winter annuals are available, graze them. If no other roughage is available, dry brood ewes will require 4 pounds of hay per day. Both hay and silage samples can be tested by your state's forage analysis laboratory.

MANAGEMENT

Nutrition

Graze as many days of the year as possible. Plan pasture systems that will allow for this. Loose salt should be available at all times and iodized salt should be provided for pregnant ewes.

Energy is most critical for brood ewes. The following are suggested rations for ewes weighing 130-140 pounds. Remember that thin ewes need more energy, and fleshy ewes need less. Less supplemental feed will be necessary if some limited grazing is provided.

General Feeding Recommendations for Ewes

1. Dry ewes and ewes in early pregnancy:
 - Good grass, grass-legume or small grain pasture
 - Good grass or grass legume hay (3.5-4.5 lb)
 - Alfalfa, lespedeza, or clover hay, 3.5 lb
 - Corn silage (6-7 lb) and protein supplement (0.2-0.3 lb) and ground limestone at 0.04 lb
 - Good legume hay (2-2.5 lb) and corn silage (3-4 lb)
2. Ewes in late pregnancy (last 4-6 weeks of gestation): same rations as in the first recommendation but with the addition of 0.5-0.75 lb of grain
3. Ewes nursing lambs:
 - Good grass-legume or small grain pasture. With pure grass, limited grazing, multiple lambs and/or thin ewes, feed 1 lb grain/ewe/day.
 - Good legume or grass-legume hay with 1-1.5 lb grain
 - Good grass hay (4 lb) with 0.25 lb protein supplement, 1-1.5 lb of grain
 - Corn silage (6-8 lb), 0.3-0.4 lb protein supplement, 1-1.5 lb grain, and 0.04 lb ground limestone
 - Good legume hay (2 lb), 4-5 lb corn silage, 0.2 lb protein supplement, and 1 lb grain.

Breeding Season

Ewes come in heat in late August to early September. The period in which ewes will breed lasts from 1 to 3 days and reoccurs every 14 to 19 days. Ewes should be gaining weight just before and during the breeding season. From breeding to lambing is approximately 140 to 150 days. A September bred ewe will lamb in February.

Confine rams in a cool barn or shed with an exercise area during the summer. Re-shear rams in late July, drench for internal parasites, and trim feet. A semen check is also recommended. A vasectomized ram or cryptorchid placed into the ewe flock on August 1 will help initiate the heat cycle among ewes. On August 10-15, drench flock for internal parasites, trim feet, and place flock in coolest place possible with the ram. A cool barn or shed (confinement) is recommended. Feed a well balanced, economical ration. One fertile ram per 35 ewes is recommended.

As weather cools in late September, return the flock with ram(s) back to pasture. A pasture along a creek bottom would be excellent for coolness. Ram(s) should be removed from the flock after a 60-70 day breeding season (October 15-25). Confinement of the flock in early part of breeding season is not necessary if the weather is cool or you have an exceptionally cool pasture (for example, along a creek bottom).

Lambing

The most critical time for a good sheep grower is before and during lambing. Extra care saves lambs, and percent lamb crop is the key to success. Observe the following:

- Separate ewes that will lamb first from the flock (about 4 to 6 weeks in advance of lambing). Increase energy intake by feeding 0.5-0.75 lb of grain per day in addition to pasture, hay, or silage.
- Shear around udder and crotch.
- Check ewes frequently during lambing period. Just before or shortly after lambing, put ewe into a dry, well-bedded lambing pen. Render assistance if necessary. Warm chilled lambs. Confinement for 3 to 5 days after lambing is adequate.
- Make certain the lambs nurse, teat openings are not plugged, and paint the navel cord of lambs with iodine.
- Dock and castrate lambs by 13 to 14 days of age, preferably when turned out of lambing pen at 3 to 5 days.
- Identify lambs at birth.
- Start creep feeding lambs at 1 to 2 weeks of age.
- Vaccinate lambs for overeating disease at 4 to 6 weeks of age.
- Provide plenty of fresh water for ewes after lambing. Feed fresh hay and small amount of grain the day after lambing. Then gradually increase feed daily until ewe is on a full ration.

Parasite Control

You will have to work to prevent the buildup of internal parasites in sheep. Avoid overgrazing pastures. Remove

excess pasture forage by mowing for hay or letting cattle graze. Make use of summer millets and winter small grains for temporary grazing. In permanent type pastures, rotate the sheep flock often (every 2 weeks) and mow for hay as often as possible.

The ewe flock should be dewormed from three to four times yearly, depending upon circumstances. A suggested parasite control program is:

- Deworm at the start of the grazing season (April).
- Deworm in mid to late summer (early August), and
- Deworm at the end of the grazing season (November).

All lambs should be dewormed at weaning. You will probably need to spray the sheep flock a week after shearing to control ticks and lice.

Feeding and Managing Lambs

Start lambs on creep immediately (1 to 2 weeks of age).

Lamb Rations			
Small Grain or Grass - Legume Pasture		Non-Legume Pasture	
Ground Yellow corn	83%	Ground Yellow Corn	76%
Soybean Meal (50% protein)	15%	Soybean Meal (50%)	12%
Salt	1%	Alfalfa Meal	10%
Ground Limestone	1%	Salt	1%
		Ground Limestone	1%

The concentrate mixtures should be self-fed. A vitamin premix (2,000,000 I.U. of Vitamin A, 500,000 I.U. of Vitamin D, and 35,000 I.U. of Vitamin E per ton of feed) provides protection against stiff lamb problems occasionally encountered with early weaned lambs.

Make certain the lamb diet contains approximately 15% protein. Also, continue lambs on the same diet when weaned. Do not change the diet at weaning.

Market lambs as they reach 120 to 130 pounds. Lambs will generally be marketed directly off pasture plus creep in April, May, and June. Once the weather gets hot (June), wean remaining lambs, deworm, and finish under a shed. At weaning, shear lambs if as much as 30 days feeding time to finish remains. This will allow additional daily gains to occur.

Pneumonia in Sheep

Pneumonia is the most common respiratory disease of sheep, and it affects all ages. It is caused by a number of organisms and foreign bodies that affect the lungs. The most common type is acute pneumonia, which primarily

affects lambs up to yearling age. Progressive pneumonia more commonly affects older sheep and is most often seen as a chronic wasting disease of range sheep. This condition is also loosely identified as Thin Ewe Syndrome (TES). Pneumonia starts in an animal by invasion of pathogenic agents (viruses) such as PI-3, PPLO, or PLV groups. These viruses break down cells in the mucous membranes, clearing the way for an invasion of infectious agents, the most common of which is *Pasteurella*.

Control and Treatment

- Consider using sulfamethazine in drinking water for ewes 2 weeks before lambing
- Keep lambing shed clean and well ventilated. Avoid over-confinement
- Move ewes and lambs through lamb shed as soon as possible, consistent with good management.
- Shear around udder and crotch of ewes before lambing to eliminate wool tags from ewe's udder.
- Proper nutrition is a must. Extremely thin ewes have little resistance to disease.
- Avoid overuse of heat lamps.
- If pneumonia is a recurring annual problem, set up a health review with your local veterinarian.

Wool

Sheep are sheared in the spring after warm weather arrives. The time depends upon location but it is usually from mid-March through May. Following are suggestions about shearing:

- Do not feed for 10 hours before shearing.
- Shear on a dry clean floor (using a canvas).
- Do not shear wet sheep.
- Separate tags, leg wool, black wool, etc.
- Tie fleece with paper twine and store in burlap bags.
- Make certain wool is stored in a dry place.
- Market wool cooperatively in wool pools.

MULTIPLE LAMBING SYSTEM

A more highly intensive system of lamb production involves very early weaning of lambs (30-60 days) and rebreeding ewes to lamb more often than once a year. Multiple lambing is an intensive, highly specialized enterprise. Further discussion of this system will not be handled in this publication. This system is for those individuals with exceptional management skills.

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