

Managing Dry, Open Ewes

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Traditional Sheep Production

The Farm Flock Area of the United States includes those states east of the 100th meridian, which extends from Canada to Mexico and basically halves the states of North and South Dakota, Nebraska, Kansas, Oklahoma, and Texas. Traditional sheep production east of the 100th meridian is predicated on the reproductive capabilities of ewes, availability of labor and facilities, lamb growth rates, and marketing 100 to 120 lb slaughter lambs. This system is dependent on a late summer/early fall breeding season, January/February lambing period, and lamb growth rates that produce 100 to 120 lb slaughter lambs marketed in May/June. A brief discussion of the reproductive capabilities of ewes will illustrate why they fit into a Traditional Sheep Production System. Some management tips that contribute to the success of the system will follow.

Ewe Reproduction

The average female ovine (the ewe) has recurring estrous periods (heats) every 16 to 17 days until becoming pregnant in the fall of the year. The normal breeding season for these “seasonal” breeders extends from late summer to January 1, peaking in October/November. Some ewes are “out-of-season” breeders. These have recurring estrous periods every 16 to 17 days, until they become pregnant, from January 1 through spring and continuing through the whole year until the next January 1. Unfortunately, the population of out-of-season breeders is much smaller than seasonal breeding ewes. Consequently, a late summer/fall breeding season is traditional in the Farm Flock Area and can be divided into these periods:

1. Breed from August 15 to October 1 to produce January/February-born lambs
2. Breed from September 15 to November 1 to produce February/March-born lambs
3. Breed from November 1 to December 15 to produce April/May-born lambs

Although production from all of these systems is practiced, the first one is the most traditional. Reasons for this include efficient use of labor and facilities and use of forages in the fall. Internal parasite infestations in lambs in the spring can be avoided by marketing 100 to 120 lb slaughter lambs in May and June (3 to 5 months of age) for traditional high prices. However, ewes must be managed efficiently prior to the beginning of the breeding season to receive any of the benefits of January/February lambing.

Dry (Non-lactating), Open Ewes

Lambs produced in the traditional sheep-production system are typically early weaned in March and April or they are marketed directly off ewes in May and June (before July 1). So what

do ewes have to do from the time lambs leave (weaned or sold) until the next breeding season? Not much, but this period of the sheep production year is as important to the success of this system as any other period during the year. Why?

Managing Dry (Non-lactating), Open Ewes

The grass is green, flowers are blooming, and temperatures are relatively cool in the spring.

After going through the stressful lactation period, ewes can now go on vacation. This is the time when they can become fat and lazy. For those that may have had an attitude problem, were poor milkers, were poor mothers, or produced subpar lambs, it will be their time to make a trip to the stockyards.

At the beginning of this period, all ewes should be checked for stomach worms via the FAMACHA procedure. Deworm those with a score of 4 or 5. Those with a score of 3 are “on the bubble.” The shepherd makes this call depending on previous history of these ewes, their current body condition, and general health. Older ewes with 4 or 5 scores should probably be culled because chances are they had previous parasite problems. Identification of these ewes at weaning, or soon thereafter, will allow them to join ewes that have been previously marked for culling for other reasons.

Wool-producing ewes should be sheared soon after weaning and before hot weather sets in. This is also a good time to trim their feet and, as a precaution, to walk all wool and hair type ewes through a 10 percent zinc sulfate foot bath. An alternative for the foot bath is a zinc sulfate “walk-through” that ewes must walk through as they go through a gate, enter or leave a barn, or pass through another entrance or exit on a daily basis. This “walk-through” can be constructed from wood or metal. The zinc sulfate has to be kept damp, but not in solution like the foot bath, to be successful. Continued observation of all these ewes is necessary because some may be “chronic limpers” and may need to be culled during this dry, open period.

Once milk production has ceased and udders of the ewes have involuted (returned to a non-milk producing status), each udder should be palpated. The normal udder will be soft, pliable, and free of lumps. Identification of ewes with any variations from this is essential for a successful lambing and lactation period the next year. These ewes are, for sure, candidates for culling because nothing is more frustrating and disappointing than having a ewe give birth to a nice set of twin lambs on a 0°F night in January and finding that only one side of her udder has milk!

The previous discussion may sound like shepherds need to cull all their ewes. Not so, but those that need to be culled should be removed/chosen as soon after lamb weaning as possible to conserve pasture and eliminate problems for the next year’s production. So, how do we manage the keeper ewes from the end of lactation until the next breeding season?

The most important factor to consider when managing ewes on vacation is to prevent them from becoming too fat. It is a well-established fact that overly fat ewes entering the breeding season have decreased conception rates. If these ewes do conceive, they may encounter lambing problems even though lambs may be smaller than normal at birth. These ewes are likely poor milkers, so weaning weights will be below average. Ewes that are too fat at breeding wind up being poor producers for the rest of the production year.

Figure 1 shows the changes in body condition scores (external appearance of body fat) ewes should undergo through a 12-month production year. The body condition score (BCS) scale extends from 1 (emaciated) to 5 (obese). Changes in BCS depend on how the jobs of the ewes change during the year (flushing, breeding, early gestation, late gestation, early lactation, late lactation, and maintenance). Dry, open ewes are those at maintenance (Figure 1). Therefore, at lamb removal, healthy ewes should have a BCS of 1.5 to 2.0. They should retain this score until the nutritional flushing period begins on August 1 in the traditional sheep-production system. To accomplish this, shepherds must continually monitor internal parasite loads, prevent foot problems, continually supply a complete mineral and cool, fresh, clean water; make sure shade is available, control pasture forage intake by adjusting stocking rates, and rotationally graze pastures. Stocking rates are normally high from April through June; then, decrease during July and August (Table 1). Fall regrowth of orchardgrass, fescue, and bluegrass permits an increase in stocking rates during September and October.

These rates allow ewes to consume 3.0 lb of forage dry matter per head per day, which is all that a 150-lb dry, open ewe needs during maintenance to stay at a BCS of 1.5 to 2.0. Also, these stocking rates are based on a rotational grazing system in which the forage has at least 30 days to recover after a grazing session.

Table 1. Proposed stocking rates for ewes on vacation.^{a, b}

Month	Grass ^c	
	OG or F	BG
April	6 to 15	2 to 4
May	16 to 30	4 to 10
June	20 to 25	13 to 20
July	13 to 16	13 to 16
August	0 to 8	0 to 3
September	8 to 15	3 to 6
October	16 to 20	5 to 8
November	3 to 6	0 to 2

^a Dry, open ewes at maintenance; number of ewes per acre.

^b Assuming mature ewes weigh 150 lb and are provided a daily dry matter intake of 2.0% of body weight (3.0 lb dry matter intake per head per day).

^c OG = orchardgrass; F = fescue; BG = bluegrass.

Ewe Body Condition Score Changes throughout Production Cycle

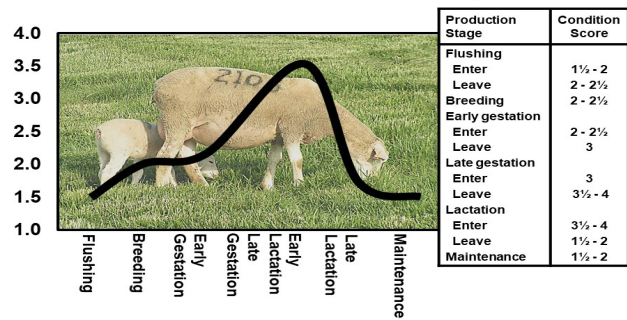


Figure 1. Ewe body condition scores over the production year.

The nutritional flushing period extends from August 1 to August 15. The nutritional regime imposed during flushing continues for three weeks after the ram is turned in on August 15 (first 3 weeks of the breeding season). For this five-week period, ewes can be supplemented with 0.5 to 1.0 lb grain per head daily (usually shelled corn) or moved to a new pasture that has been saved for the flushing and breeding periods (orchardgrass, bluegrass, or a 50:50 grass/white clover mixture). Stocking rates during these periods should be decreased at least 25 percent from those in Table 1 because these ewes need to gain 0.2 to 0.25 lb per head daily resulting in an overall 0.5 increase in BCS (1.5 to 2.0 or 2.0 to 2.5). Ewes should remain in the same management regime for 7 to 10 days after ram removal on October 1. Products of the described dry, open ewe management can be a more synchronized breeding/conception period and a 15 to 20 percent higher lambing rate than obtained from ewes that are too fat at breeding. The breeding season in this system should end on October 1 after 95 to 98 percent of ewes have conceived.

If ewes are to be exposed to rams later in the fall (September 15 to November 1: Period 2) or November 1 to December 15: Period 3), the management described above still applies. The only thing that will change is the specific calendar date when each management practice is imposed.

Summary

Ewes on vacation should remain healthy, but not become obese. Keeping them in a BCS of 1.5 to 2.0 will not be an easy chore because all they have to do is graze and deposit body fat. Limiting forage dry matter consumption to 2 percent of body weight daily through stocking rate management and rotational grazing is the best way to keep ewes from becoming excessively fat. If ewes have an optimum BCS at the beginning of nutritional flushing, and are flushed correctly, 95 to 98 percent of the ewes will conceive in a short period of the breeding season and lambing rate can be increased by 15 to 20 percent above that of less intensely managed ewes.