

## **A PASTURE SYSTEM FOR PROLIFIC SHEEP**

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### **Why Choose A Pasture System For Prolific Sheep Or Prolific Sheep For A Pasture System?**

To most veteran sheep producers, the words pasture and prolific are not often associated with each other. Triplets conjure up to many the image of extra time in the lambing pen and lots of TLC. Many experienced shepherds are inclined to say that there is no way sheep can successfully birth and rear triplets totally on pasture.

There are a lot of good reasons why many hold the opinion that triplet-bearing ewes belong in a confinement situation, but the biggest reason is perhaps that we are just not familiar with pasture lambing of sheep, period. Most midwestern sheep are raised in confinement, and the experience of most shepherds begins with an intensive confinement system. When sheep are confined, lambled in a crowd, penned, and turned out into a group of lambled sheep in a relatively small area, they behave quite differently than they would if they lambled in a 3 acre field where they can seek a quiet corner, lamb, and feed within 30 feet of the lambing bed. There are a lot of able instincts in our sheep that are not expressed in the barn situation but which will be expressed in the pasture. Shepherds who have lambled in a confinement situation probably have not witnessed the full capabilities of their sheep.

Another reason why many may not feel triplet-bearing ewes are a viable option on a pasture system is simply due to the effect confinement lambing has had both on selection of sheep and on learned behavior. Sheep lambled indoors are relatively easy to deal with when problems occur. Should a ewe or lamb need to be caught to help with suckling, to unplug a teat, or if a pair needs to be confined longer to help with a poor bond, it is not difficult to do. Intervention is done with such regularity that only sheep with outrageous deficits are culled. Hence sheep that would not perform well under a pasture system are allowed to continue in a confinement system. There also appears to be a certain amount of learned behavior as well. Sheep that have always lambled in a barn are inclined to lamb in the crowded bedding area out on pasture the first year. Sheep with pasture lambing experience are inclined to lamb in more isolated parts of the pasture. Veteran pasture lambers even seek shelter by bushes or windbreaks to have their lamb, and will stay separate from the flock for several days. Due to the learned behavior and the needed culling, it can take several years to convert a barn-lambing flock into a successful pasture-lambing flock.

So if pasture-lambing a prolific flock is going to require some effort to ‘convert’ the sheep, why would anyone bother? There are several reasons, but economics, nutrition, and labor are the big three.

**Economics:** Sheep and beef are low margin enterprises. Traditional confinement sheep operations with a large investment in buildings and harvested feeds require a prolific flock just to break even rather than result in added net income. Properly designed pasture-based sheep systems can keep costs down by eliminating the need to invest in buildings and machinery (which depreciate), and keeping the investment in land and livestock (which appreciate or produce their own replacements). Pasture systems also can greatly lower total feed costs.

**Nutrition:** Ewes raising triplets may be working as hard as a Holstein cow producing 80 to 100 lb. of milk per day and should be fed accordingly. If fed indoors, this means unlimited dairy quality (18 - 22% crude protein) legume hay, and two or more pounds of corn. Ewes raising

lambs on well managed pasture are already receiving 22 to even 30% crude protein forage. One pound per ewe per day of shelled corn from the second week post lambing to weaning helps improve weaning weights and improve ewe body condition at weaning. The first ration, using hay, requires a lot of daily labor and costs 53 to 60 cents per ewe per day. The second ration requires very little labor and costs 10 cents per sheep per day.

Good pasture is more palatable than good hay, and feed intake can be higher, hence milk production could be better on well-managed pasture.

Labor: Perhaps the biggest reason to take a prolific flock to pasture is labor, especially at lambing time. There are a lot of details about lambing that a ewe can take care of herself. She just needs a proper environment to do it in. In a pasture system, there is no time spent feeding sheep, there is very little time spent moving sheep. Most of the time is spent making 'rounds' to dip navels and ear tag, dock tails, and castrate newborns. Definitely more time will be spent just walking, so there is a trade off, but for some, this is a much more desirable way to spend time (vs. lifting bales and buckets). The net effect is that the shepherd can lamb a much larger number of sheep.

Why choose prolific sheep for a pasture based system? In the northern states the answer is very simple. We have very long winters and very high winter feed costs compared to the rest of the country. Just like dairy farms here need to be very efficient, our sheep operations too must be very efficient to offset the extra winter feed costs. It is paramount to keep winter feed costs to a minimum by lambing late in the spring and grazing into the snowy season. Managing livestock in these circumstances means it is desirable to have the bare minimum of stock on hand throughout the winter and have an 'explosion' of population in the spring to match the equal explosion of forage growth. Prolific sheep help match this forage curve.

### **How To Manage Prolific Sheep On A Pasture System**

Begin with scanning the ewes for fetal numbers about 80 days after the rams went in. Just before lambing begins, sort the ewes into groups according to fetal numbers. Ewes lambing with triplets behave differently and have different needs than ewes lambing with singles. Also the single lambing ewes are much more likely to be first-time lambers, who know little about the business of lambing and are very likely to meddle or interfere with a set of triplets. Since we want the triplet group as small as possible, it is desirable to sort the twins off as well. Another benefit from scanning is that pasture resources can then be allocated according to litter size. The pastures with the heaviest predator pressure and lowest nutrition can be given to the single group, and the best feed and most sheltered fields can be saved for the triplets.

Adequate nutrition is paramount during the prelambing and lambing period to making everything run smoothly, after lambing is done, nutrition affects performance, but does not affect management nearly as much. Lambing should begin at the point in time when there is adequate grass to feed the flock without any supplemental feed. For the Spooner area, this is close to the date of May 10th. This point in time usually occurs about three weeks after the first buds appear on the brush. Prior to this point in time, some supplemental feed, both hay and corn will be necessary. Pre-lambing nutrition will affect the size of the lambs, and the size of the lambs will affect their ability to tolerate cold rainy weather. So be sure to have the ewes in condition score three by lambing. The feed value and quantity of the grass is changing very rapidly at this time, so supplements need to be adjusted accordingly.

Once lambing begins, it is essential to stop all supplemental feeding, and it is essential to keep 2 to 4 inches of grass under foot. The goal is to get the sheep to spread out, lamb in quiet places, and have no particular reason to move (such as for food or water). Supplemental feeding

causes sheep to rush from their lambing spot, drawing a portion of lambs with them, and scattering newborns all over the field.

There are two 'styles' of lambing sheep. One is called drift lambing, whereby sheep are moved every one to three days to a new paddock, leaving the newly lambed ewes behind to stay in the old paddock. The other is called set stock lambing, where every paddock is stocked with a predetermined number of ewes and left there until lambing is complete.

Drift lambing is a little more suited to sheep that are to receive closer supervision than is set stock lambing. Drift lambing concentrates all the newborns in one paddock, where they can be quickly found and attended to. This can be very helpful during periods of cold rainy weather for example.

Set stock lambing requires that the shepherd travel over the entire farm and can require more walking if lambing is to be supervised. Set stock lambing is most often used where large numbers of ewes are lambed with very minimal supervision. The advantage to set stock lambing, is that by spreading the lambing ewes all over the farm, the day's newborns are very far apart resulting in less mix ups (it is less likely two sets of newborn triplets will run in to each other) and in fact the sheep probably require less supervision.

As a minimum, twice daily rounds need to be made to check on and process newborn lambs. More often is necessary if the sheep experience lambing difficulties, or when the weather becomes cold and wet. Pasture-lambing sheep seem to deliver easier than their barn lambing counterparts, and multiple births are smaller and less likely to need assistance. So twice a day (morning and evening) may be all that is necessary. All lambs found in the morning round for example, are marked with paint, ear tagged, and their navel dipped in iodine, while all lambs from the previous evening round are observed to assure they are receiving adequate milk, and are docked and castrated. This way a lamb is processed at birth and then re-examined about 6 to 12 hours later. This helps catch lambs that are on ewes with inadequate milk supply.

Painting lambs (with the aerosol sprays) is a real benefit to monitoring the status of a litter. When each set is marked with its own unique marking, the shepherd can observe if the lambs are staying together with their ewe, or they are straying apart.

Cold, wet weather is a big bugaboo in pasture lambing, especially with prolific sheep. If a typical single is born with enough fuel to last 6 hours in a cold wet night, a twin will last only 3-4 hours, and triplets only 1-2 hours. Some triplets or quads, if born into a cold puddle, may never even stand up. This is one place where the prolific sheep need a little assistance. There are five strategies to minimizing cold stress losses. They are: if possible, move the lambing bunch (must be drift lambing to do this) to a pasture with shelter, monitor rectal temperatures of lambs, use moveable shelters out in the field, use warming boxes equipped with hot water bottles out in the field, use hypothermic first aid and rewarm lambs if the first four fail. Again, prelambing nutrition affects lamb birth weights and ewe milk supply. Inadequate nutrition will become obvious when the weather turns bad.

Critical temperatures to know are: be concerned if it is raining and air temperatures drop below 55 degrees F. Temperatures at or below 45 degrees F are critical if it is raining and lambs cannot get dry. Monitor rectal temperatures frequently. Normal lamb temperature is 103 - 103.5. Lambs with temperatures of 102 should be watched, but if adequately fed will usually do fine. These lambs respond nicely to temporary shelter, such as a teepee. When the lamb's temperature drops to 101, the lamb can no longer digest milk and must be rewarmed. A lamb warming box with a hot water bottle out in the field will work. Two hours may be enough time in the box, then the lamb and its family should graduate to a shelter. Lambs that drop below 99 degrees must be

brought home and rewarmed. If the lamb cannot raise its head, it will need intraperitoneal glucose.

Always Always Always, if one lamb must be removed from a litter, bring the whole litter with it. If only one lamb is removed from a ewe for rewarming there is a very good chance the ewe will not take it back. The odds are improved if the whole litter sticks together.

Managing the milk supply is the most critical part of success with a prolific flock. This is influenced to a large degree by nutrition, but genetics will play a very important role. Ewes should be selected for heavy (60 day) litter weights, as this weight is the most indicative of milk production. But managing milk supply goes beyond genetics and nutrition. When ewes are lambing simultaneously, the shepherd has a brief opportunity to swap lambs and even-out litter sizes. This can only be done successfully while the ewe is still giving birth. It is also important to identify lambs that are not receiving adequate milk very early (during the first 4 days) while they can still be easily trained to use a milk creep. Lambs can be successfully reared on the dam, while being supplemented on a milk creep out in the pasture. The creep should be located near a favorite loafing area. The lamb will need to be taken to the creep three or four times before it will catch on. Lambs reared this way will use one half of the milk replacer that an orphan lamb will use and will be every bit as big as its contemporaries raised on the ewe. Lambs that stay with the mother learn to eat grass at a younger age and require no special treatment at weaning. Another aspect to managing the milk supply is thorough culling. Ewes should be bagged (udders examined) after weaning and any problems removed from the flock. Consideration also should be given to eradicating Ovine Progressive Pneumonia (OPP) as this disease has a big impact on milk production.

Lambs and ewes identify with a particular spot in the pasture where they can find each other. At first this is the lambing bed, but as the lambs grow older, this location will move due to weather, predators, insects, feed, or water supply. During the first three to four weeks of life, a lamb cannot become lost from its mother for very long, without suffering from inadequate milk. Hence moving sheep after lambing can result in lambs and ewes that will, at least temporarily, be quite disoriented. The best policy is to set stock newly lambed ewes for a period of 30 to 50 days post lambing. If it is essential to move sheep from a paddock, move the whole group together, not just a portion of them. It is better to combine two groups than it is to split a group in half.

Rotational grazing is a method of grazing that better utilizes and manages growing forages. Once the lambs have reached at least 30 days old, it is now possible to resume rotational grazing. Small paddocks of sheep can be joined together into larger and larger groups until all of the triplets are in one group, all of the twins in another, and all of the singles in a third. The triplets should lead the rotation, and be permitted to lightly graze, while the larger twin group will keep pushing the triplets ahead. The single group could either be joined with the twin group at this point, or may be managed as a separate group cleaning up behind the twins. Sheep with young lambs perform best on 2 to 4 inches of pasture. The less pasture removed, the faster the regrowth will be, but if too little is removed then the plants will mature and lose quality. The amount of rest between grazings depends upon the pasture plants and the weather. During rapid early spring growth, a 10 day rest may be all that is needed, while during the slow dry fall weather, a 6 week rest may be required.

Ewes raising triplets are putting a lot of body reserves into producing lamb and can be expected to drop to a condition score of 1.5. The most economical way to rebuild the body condition back to prepare for winter weather and breeding, is to wean the lambs relatively early. Early weaning on pasture is around 70 days old (as opposed to 100 days or older). Lambs should be prepared for weaning with proper vaccination for Enterotoxemia and should receive two dewormings, one when six weeks old, and the other at or just before weaning. The night before

weaning, the flock should be moved to the paddock lambs will be weaned into, so that lambs become familiar with the surroundings. On weaning day, the only processing the lamb should receive is to run through the sorting chute. Stress should be kept to a minimum. The ewes should be removed from the lambs and placed on very mature pasture, or better yet, grass hay for about one week. Weaning goes much smoother if the ewes and lambs cannot hear each other.

After weaning, lambs can be grazed rotationally on the choicest pasture, while the ewes clean up behind them. Lambs should only graze the top 1/3 of the pasture plants. It may take three weeks before the ewes can be grazed within sight of the lambs safely! Fall forages do not produce the same gains as the summer pasture did. Supplementing lambs with one half to one pound of corn can help boost lamb gains economically, and will get a portion of lambs to marketable weight before winter.

Triplet lambs will be smaller than twins and singles and of course will take longer to reach market weight. Most likely these lambs will need to be transitioned from pasture onto harvested feeds in November. Feeding shelled corn on pasture during September and October will help with the transition. Sheep producers in the U.K. almost always make use of baleage or haylage as winter forage for lamb feeding. Silage provides a succulent palatable feed more readily accepted than hay, and can make the transition to winter feeding easier without set backs.

Ewes that were weaned in August will be able to regain all of their lost weight by November simply by cleaning up behind the lambs. They will then be prepared for winter weather and December breeding.