

A System for Intensive Production of Lambs

Douglas F. Watson, V. M. D.

Head, Department of Veterinary Science
Virginia Polytechnic Institute

RESEARCH REPORT 58

JANUARY, 1962

**VIRGINIA AGRICULTURAL EXPERIMENT STATION
Blacksburg, Virginia**

A System for Intensive Production of Lambs

Douglas F. Watson, V. M. D.

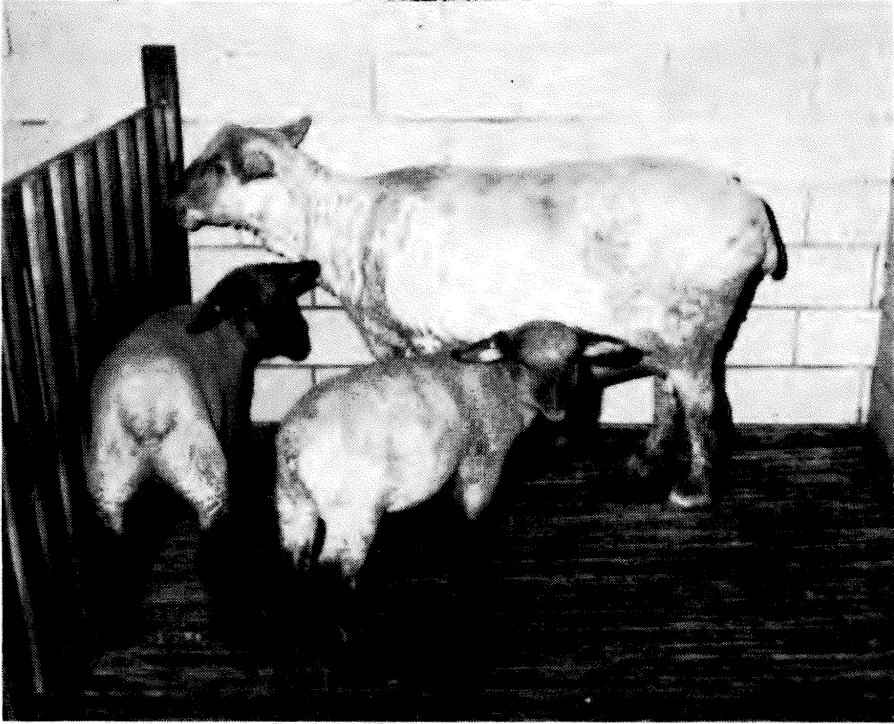
During the past few years much has been written about the need for stimulation of the sheep and wool industry. Prophecies have been made that if something is not done, the sheep industry will be eliminated from the picture of agriculture. As far as Virginia is concerned, attention has been called to its favorable position with respect to short distance to most favorable markets, climate, available land, etc.

Parasites have always been considered the number one problem in sheep husbandry. For several years the Department of Veterinary Science has been investigating parasites as they affect sheep. During the course of our investigations, we found it was necessary to produce a lamb as free of parasites and diseases as was economically possible. Previous work attempting to produce a parasite free lamb was too expensive, in that Caesarean sections were needed and lambs had to be hand fed. This procedure also was time consuming and survival rates of the lambs were low. We, therefore, developed the following system which has the advantage of being economical as well as producing a lamb suitable for research. After 2 years of producing lambs under this method, it became apparent that commercial application of this system holds great possibilities.

EQUIPMENT:

The apparent success of this method lies in the use of slatted floors. The slats are made of oak or other hardwood, are 2" x 2" thick, and may be any convenient length. These 2" x 2" pieces are nailed to 2" x 4" crosspieces, $\frac{3}{4}$ " apart. The $\frac{3}{4}$ " spacing keeps the feet of the lambs from going through the open slots and is still wide enough for manure to pass through. We usually made our slatted floors in sections of 10' x 10' as this size is easier to handle. Small pieces of $\frac{3}{4}$ " flooring were used between the slates, at the point where they are nailed to the 2" x 4" crosspieces, to keep them in proper position. (See illustration.)

Slatted floors should always have space below them for the collection of feces. The space should be . . . around 4' deep as this will give a good storage space which will not require too frequent cleaning. The walls of the cellar or foundation under the floors should be completely enclosed so that there will be no drafts to cause respiratory

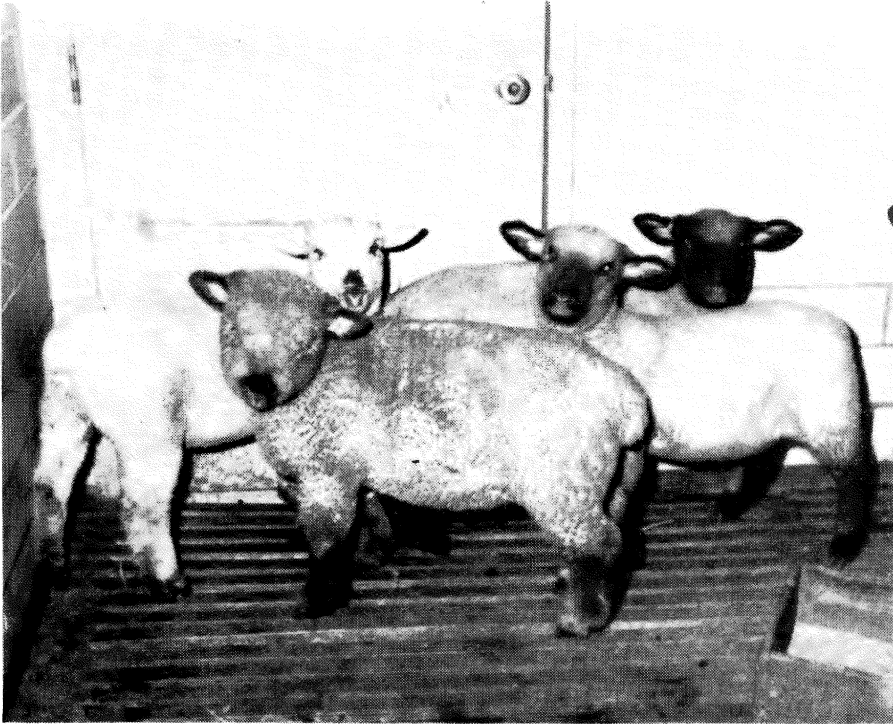


troubles. Openings in the foundation should be provided for the removal of manure but they need adequate covering. The actual building may consist of a very simple structure, such as a roof and 3 sides, with 1 side open. Feed racks should be on the fence so that there will be no accumulation of hay beneath the slatted floors.

A heavy stable broom should be used daily to sweep off the floors and knock manure into the slat openings. Most of the manure will fall through without any difficulty unless the feces become watery and loose. Construction of slats in 10' sections permits the use of hydraulic lifts or tractors to clean out the manure after the slats are removed.

Manure beneath the slats does not appear to cause accumulation of ammonia in the structure, as it is not packed by the feet of the sheep and dries out rapidly. This rapid drying also destroys parasite eggs which must have heat and moisture to survive.

If slats become rounded off after some years of use, they may be removed, turned over, and renailed. Concrete slats are presently



under investigation and may prove to be more effective and more economical.

During lambing, hurdles should be provided so that the slatted area may be sub-divided for individual ewes and their lambs.

ANIMALS AND THEIR MANAGEMENT:

A flock of ewes of any size can be used. We cannot recommend any special breed, as experience so far dictates only that a large frame, heavy milking, calm type of ewe should be selected. The number of rams chosen would be the same as for an equivalent sized farm flock. Again breed importance has not been established, although fertility is a very important factor.

The ram should be provided with ewe marking harness. The color of the crayon is changed every 3 weeks and the breeding dates in the ewes are recorded. The change of color on the crayon will be an indication of any problem in breeding efficiency. Ewes and rams are carried in a regular pasture under usual pasture condi-

tions. It is desirable to feed necessary grain and hay in an area that can be enclosed with hurdles, so that sheep may be shut in at feeding time if it is necessary to check sheep or to catch them. For convenience in reading numbers, all sheep are paint branded on both sides with their ear tag numbers, using a scourable paint, and letters and numbers that are at least 4" in height. With this system, one need not catch the sheep to get the numbers. Using the recorded breeding dates, and checking the ewe's udder for evidence of imminent lambing, ewes that are a week from lambing are caught and brought into the building with slatted floors. Then they are shorn with a Wyoming comb, brushed off all over the body and the underparts, and the udder and genital areas scrubbed with soap and warm water. The ewe is then placed on the slatted floor in the area divided up with hurdles for individual ewes.

To prevent pregnancy disease, ewes are fed a supplement of grain beginning with the 12-14th week of pregnancy. We began with 1/4 lb. of grain and increased until we reached a pound per head per day.

Ewes are allowed to lamb in the slatted floor area. The umbilical cord is treated with Tincture of Iodine at birth. Care is taken to see that all lambs nurse and that ewes have ample milk. At 7-10 days of age lambs are castrated, docked, ear-tagged, and given 5 cc. of Clostridium Chauvei-Septicus bacterin subcutaneously. They also receive 5 cc. of Clostridium Perfringens (Enterotoxemia) bacterin and 2.5 cc. of a Mixed Bacterin (Ovine). The lambs remain with the ewes until they are 30 days of age. At this time, they are weaned and placed in a slatted floored pen with lambs of the same age group. During the period that the ewes are with their lambs, they are fed 1 1/2 lbs. of grain and 3 lbs. of alfalfa hay per day. Lambs pick what they want of this allowance. Our lambs averaged over 30 lbs. at weaning time. Immediately after her lambs are weaned, the ewe is placed back in the flock with the ram. Many will breed back in 6-15 days. Over 2/3 of our ewes have bred back and produced 2 lamb crops per year.

Lambs are fed out in groups of relatively the same age and they receive the same ration as the ewes. Most lambs reach market weight at 4-4 1/2 months of age.

We were able to produce lambs which were free of all parasites except Strongyloides species, and it is believed that this parasite does not cause any trouble in sheep. Complete washing of the entire body of the ewe might possibly eliminate even this parasite.

This system can be applied to commercial sheep husbandry with little or no modification. Equipment and facilities need not be

elaborate and can be used during most of the year. Groups of ewes can be bred so that lambing takes place 4 times a year with each group lambing twice a year. It is evident that selection of sheep for this type of enterprise would be necessary. One would breed for high conception rate, twinning, heavy milking, and tranquil nature.

There are other advantages to following this program. The fleeces from the lambs are very clean as they never get any dirt or extraneous material in them. Manure can be removed and used in fields which are cropped. In this manner, parasites can be better controlled as grazing sheep would have no contact with this manure which is a source of parasites. Better utilization of facilities, animals, capital, and labor should be possible.

The flock of ewes can be built up by selecting ewe lambs that were outstanding as replacement ewes. One advantage of this system is that ewes handled in confinement are usually very easy to handle as they are used to people and are almost pets. They are much like orphan lambs that have been raised on a bottle in this respect. It is possible that a new breed or strain of sheep can be developed for this system.

We cannot comment on the economic factors involved in this system. These would be best worked out with a larger band of ewes under more natural field conditions than what we have in our facilities.

IP-1:62-3M-5-2-WML