

Good ram management practices for lambing control

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Why this manual?

The idea is to share useful information and give the breeder a deeper knowledge of the potential of his flock.



CHAPTER 1: Reproduction cycle



CHAPTER 2: Ram effect



CHAPTER 3: Preparing the ram for mating



CHAPTER 4: Practical example



CHAPTER 5: Mating calendar



CHAPTER 6: Year-round breeding of the flock





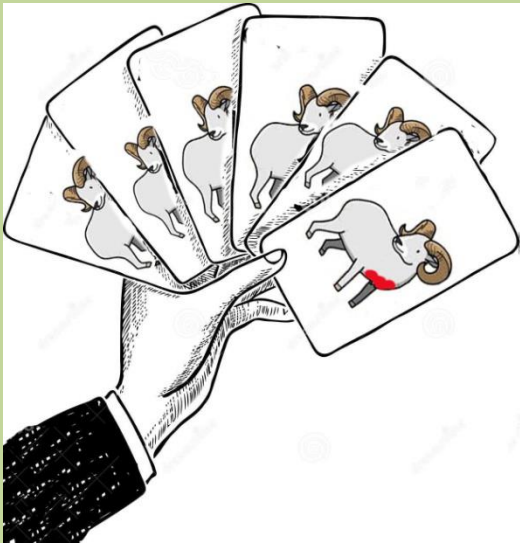
Reproduction cycle

In a large part of the Mediterranean basin at the beginning of the 1900's sheep breeding still followed the natural reproductive cycle. The breeding season, for most sheep breeds, was in late summer / autumn with lambing in late winter . Following industrialization of the production system it was necessary to move the breeding season to late spring with lambing in late autumn. This shift was possible thanks to the geographical position of the Mediterranean basin whose latitude influences the reproductive cycle of the animals in such a way that they are cyclic at least 10 months a year with only two months of sexual rest (anoestrus)



The reproductive cycle

This starts with the breeder who has to properly manage the flock, make the right choices and follow up appropriately. It continues with the flock where there must be a sufficient number of rams and the ewes must be cycling.



In the Mediterranean areas the reproductive activity of the ewes is characterized by a short but very marked period of sexual rest between March and April (anestrus) *

The resumption of reproductive activity is initiated by the male whose re-introduction into the flock, after an isolation period of at least 8 weeks, causes resumption of the ovarian cycle in adult sheep. This phenomenon is called the ram effect.



* the females are not sexually active

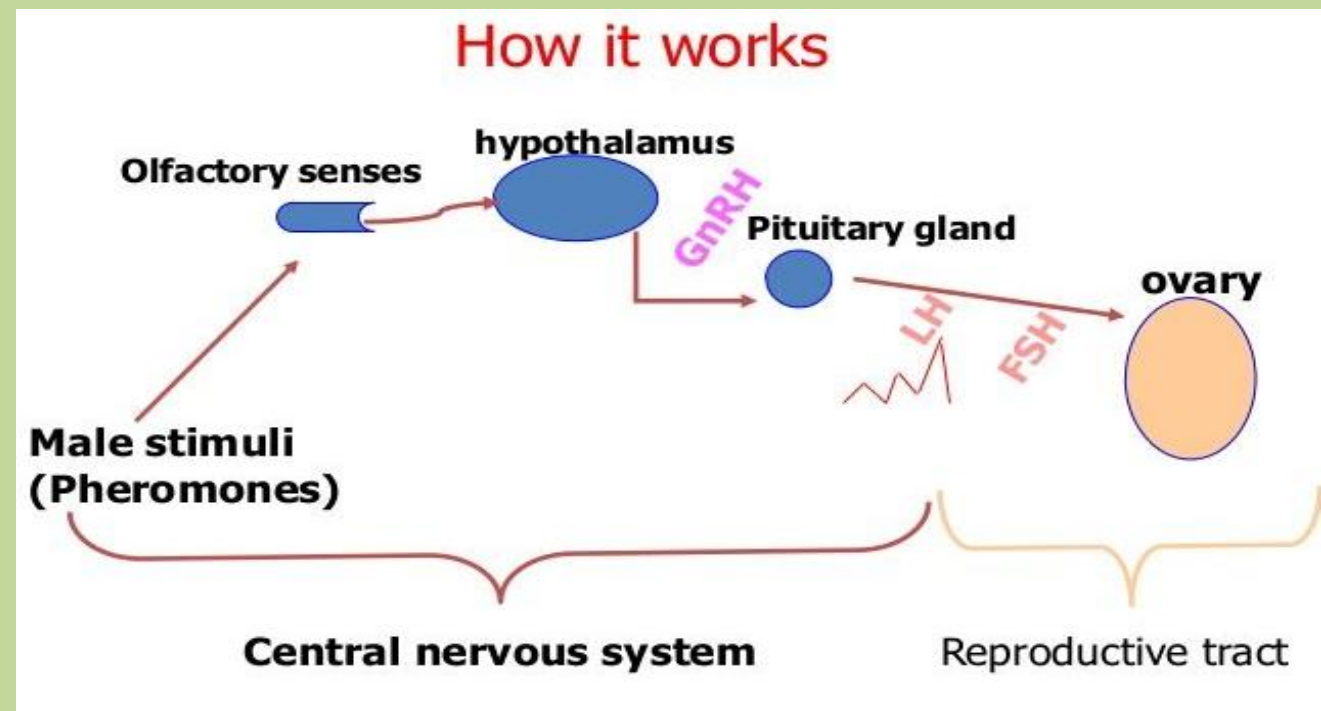


Ram Effect

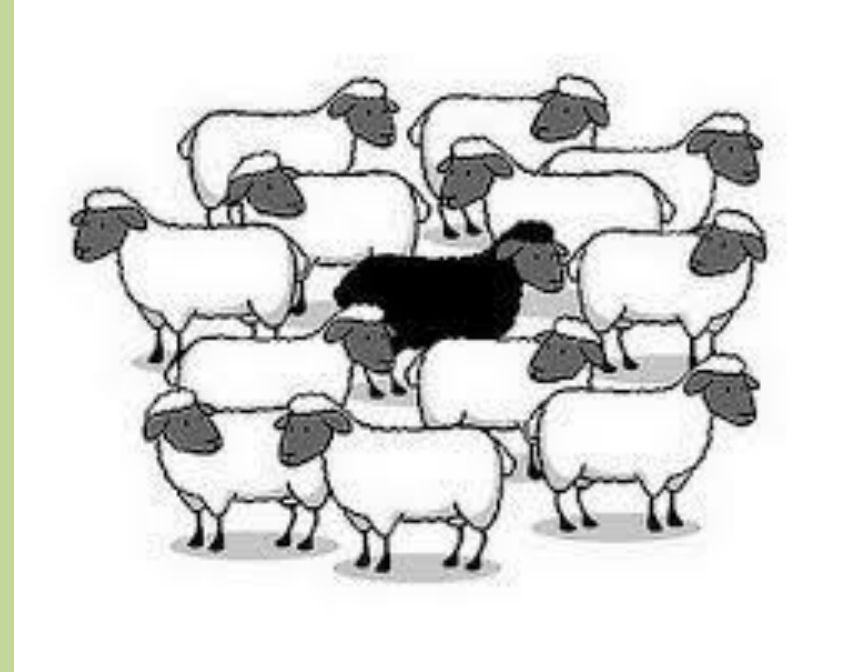
The Ram Effect is the physiological response of the sheep to a sudden re-introduction of the ram into the flock at the beginning of the breeding season (May / June)



The presence of the ram stimulates the resumption of ovarian activity. Heat is followed by mating in about 17-24 days after the introduction of the rams.



The resumption of ovarian activity is favored by: 1) the number of males introduced, at least one for every 16-20 females 2) courtship ability typical of adult males 3) the age of the females (only adults respond to the male effect) 4) the physiological conditions of the flock (nearing the end of anestrus) and 5) the time since last lambing (at least 4months).

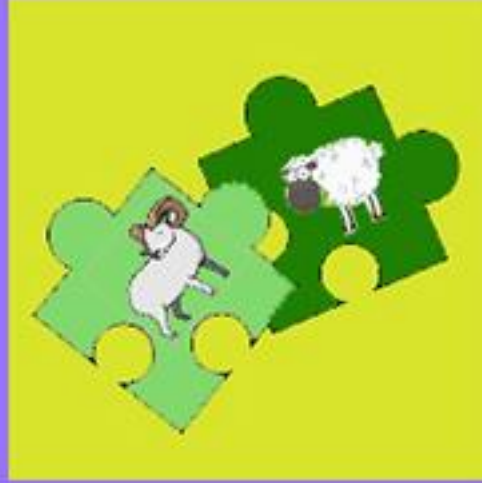
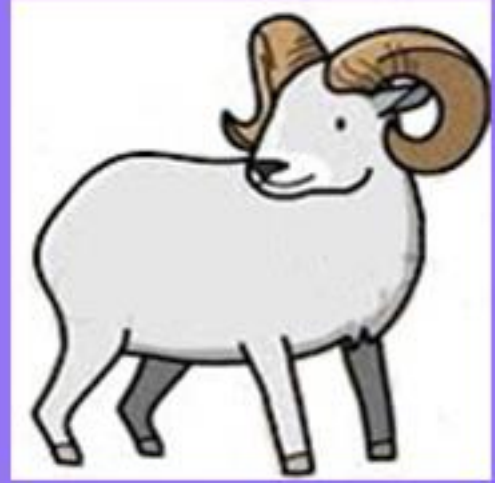


Ram Effect

Requires this precaution:

In the fleece there are pheromones, chemical substances that stimulate the resumption of ovarian activity. As a result, males must not be shorn before their reintroduction into the flock. However, shearing should be done about 10 later; leaving the rams unshorn in the the high temperatures of May and June can reduce courtship activity and mating.





Mating Preparation

Actions

Preparation of rams of proven fertility must start at least 50-60 days before mating, with particular attention to the general health of the animals. Antiparasitic treatments are important, especially to control lung strongyles whose presence in the upper airways reduces the sense of smell and compromises the ability of the ram to recognize sheep in heat. Additionally, vaccination and cutting and cleaning of hooves should be done at this time.



Actions

It is essential to have a veterinary examination of the reproductive system, including if possible the quality of the ejaculate, and to monitor the animal's propensity to courtship and mating.

The simplest method of verifying breeding is to equip the newly re-introduced males with a marking harness with colored crayon and check the marks left on the back of each female in heat. This will indicate mating activity.

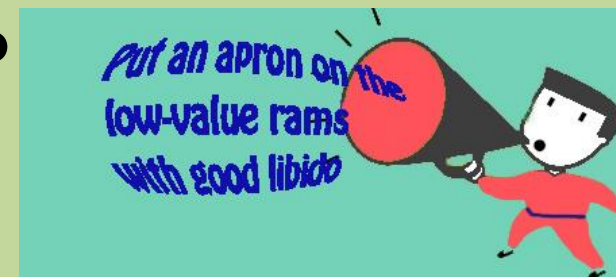


Actions

When it is important to know the paternity of lambs but still take advantage of the male effect, the farmer needs to introduce a large number of rams equipped with "aprons" into the mating group.

Rams wearing an apron can mount but not breed. If additionally they are equipped with colored marking crayon applied on their sternum they will both stimulate the resumption of ovarian activity of the females (male effect) as well as identify and mark the females in heat without making them pregnant.

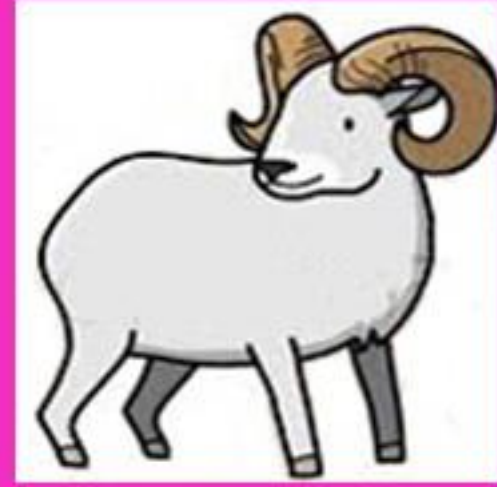
Subsequently, the desired male can be introduced into the group of females, or the ewes in heat can be brought to a chosen male for breeding.



Action

Equally important is to take care of the diet during the preparatory period by administering for example: 1.8 kg of natural meadow hay + 0.5 kg of commercial concentrate (during breeding increase to 0.6 kg) + blocks of salt and vitamins. Check the BCS which must be at least around 3 points.





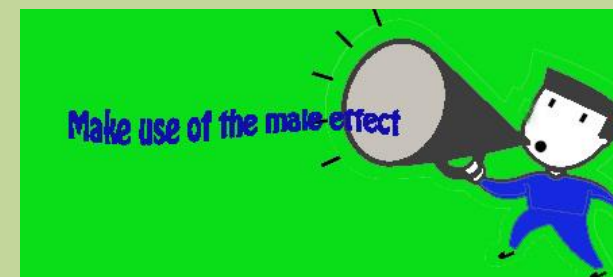
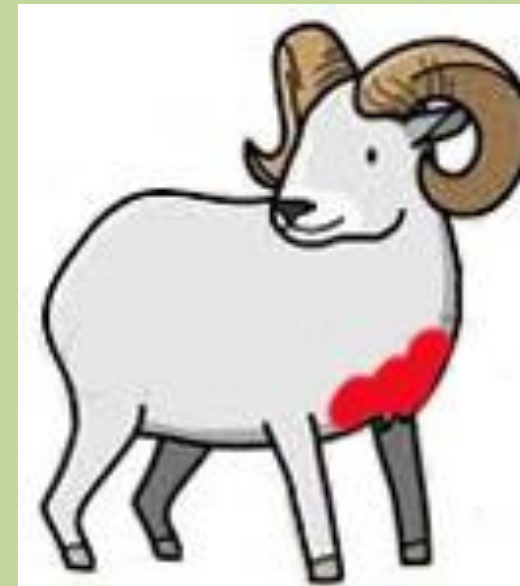
Practical Examples

Commercial flock

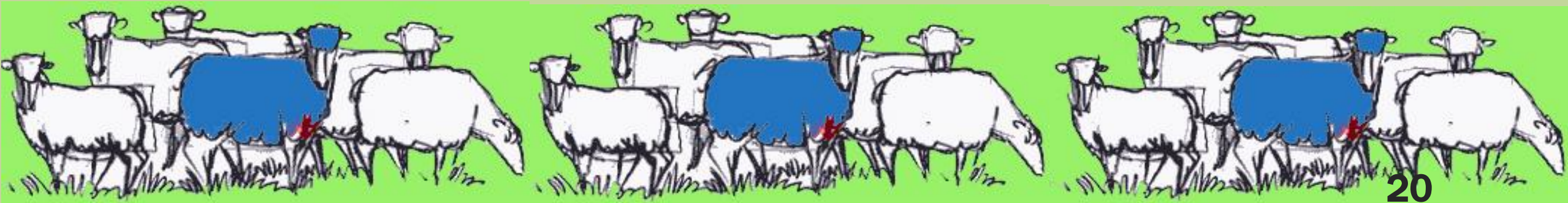
If the farmer is not interested in knowing the paternity of newborn lambs he can take advantage of the male effect using rams without an apron. This will still synchronize heat among the ewes and therefore synchronize lambing.

The introduction into the flock of a sufficient number of rams (equipped with marking pastel) will initially serve to stimulate the resumption of ovarian activity and, after 2 to 3 weeks, to fertilize the sheep that will gradually come into heat.

At least 4-6 males per 100 females is required to ensure a good conception rate.



Remember that during the breeding season 6-8% of females come into heat daily. With the male effect this percentage can increase considerably, forcing the rams to work very hard for a few days. For this reason it is important to have the minimum recommended number of rams.



On mating days you can rest the most active and valuable males during the day and put them back into the group at sunset (most mating takes place late at night and early in the morning).

This way, during the daytime non-valuable males will mount a limited number of sheep. This option can be chosen only if you have a good number of males available.

A good trick is also to alternate the males of the various breeding groups. It is essential to record daily the number of mounted sheep either on paper or electronically.

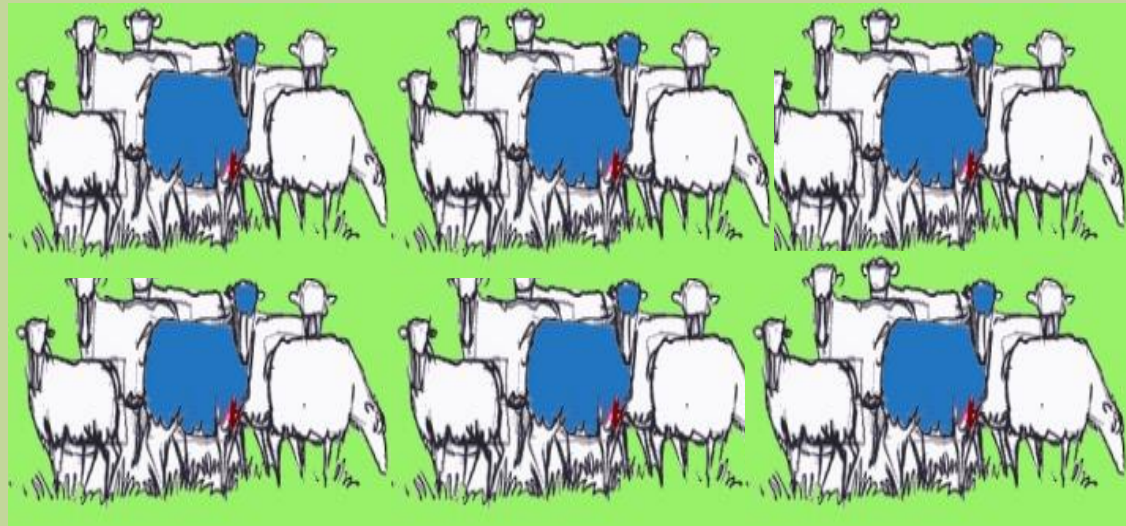


Selective breeding

To know with certainty the paternity of newborn lambs, three different systems can be used:

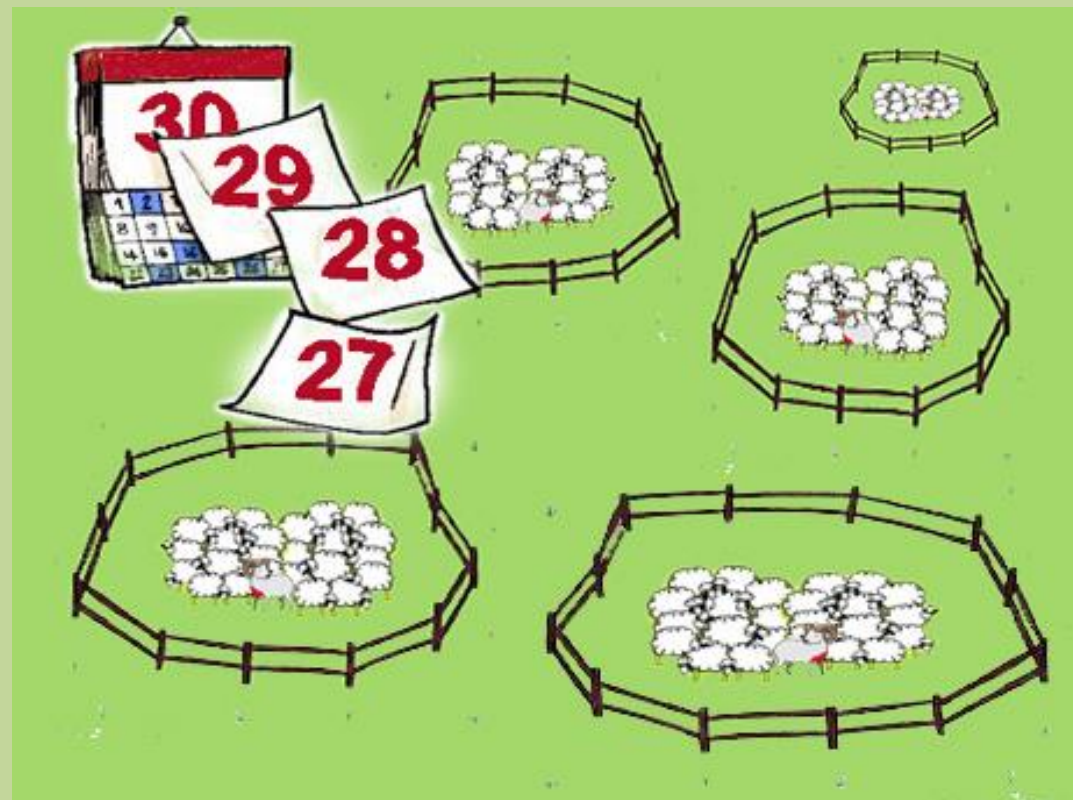
Breeding groups with 1 ram, controlled breeding, and artificial insemination.

These systems allow breeding of the best females in the flock with the best rams for production of the best possible offspring.



Breeding group with 1 ram

This system requires a small fenced plot of land where approximately 25 females for each male of proven fertility are kept together for at least 30 days. The ram will be equipped with marking pastel. During this period mating will be checked daily, and mated sheep removed.



Controlled Mount

This system, rather complex and demanding for the breeder, provides for the placement of the selected breeding males in single box stalls. Males in the stalls cannot see each other.

The females will be identified as in estrus by rams equipped with aprons and pastel markers and will be brought to the box of the chosen ram to be mated.

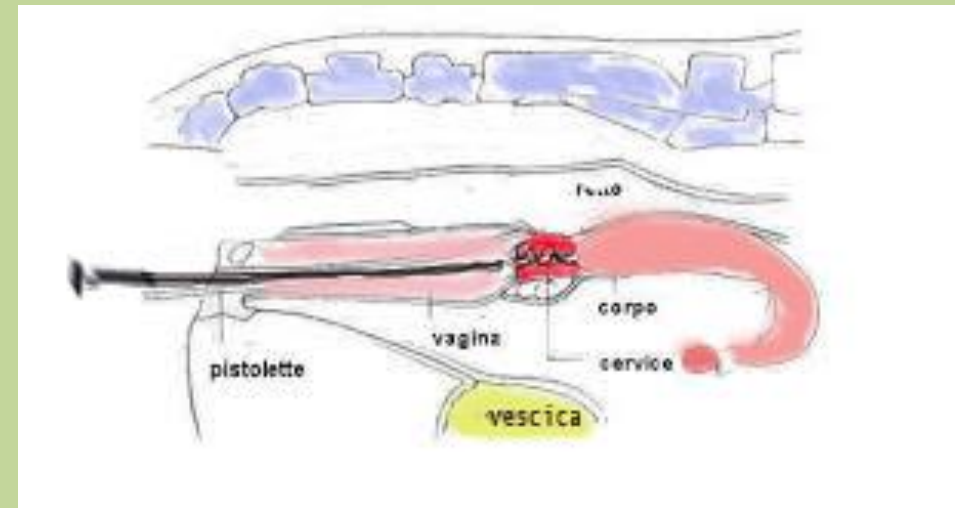
Each male will be assigned no more than 4 -6 females per day, on alternate days. The females should preferably be brought to the male in the early hours of the morning.



Artificial Insemination

On selected farms it is also possible to carry out artificial insemination with the semen produced by rams selected as superior.

This practice involves synchronizing the heats of females with the use of hormones and artificial insemination (AI) 55 hours after the end of hormonal treatment.



Returns to heat

In a flock, however well managed, there will always be some females who, for different reasons, will not become pregnant.

Holding males in the breeding group for two more reproductive cycles (17 + 17 days) will ensure the fertilization of most of them.

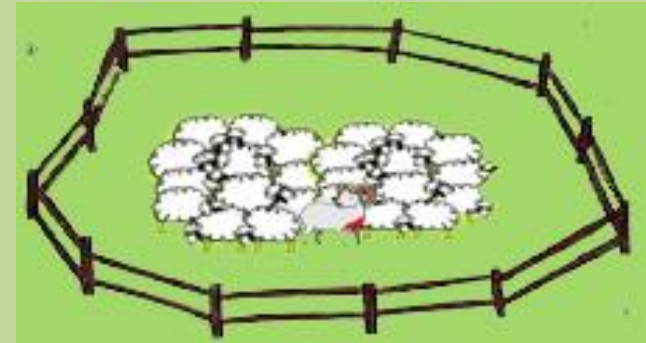
In order to have the lambing occur over a concentrated period of time, males should be moved away from the ewes after the third cycle ends and kept away until the following season.



Management of returns to heat

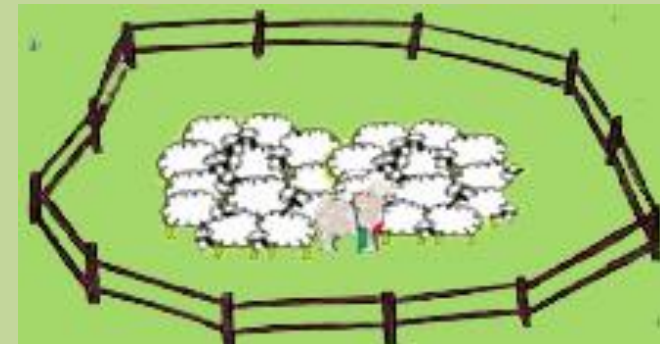
Commercial flock

The rams will be left (with pastel marker) to mark and breed the females who return to heat in the second or third cycle.



Selective breeding

Small breeding groups will be left with a ram with marking pastel in order to identify ewes returning to heat.



Practical example of using the ram effect to synchronize lambing



Step 1

Ram isolation

Separate males from females for at least 8 weeks . They must be far enough that the ewes cannot see, hear or smell them. This would mean at least 1500 meters on flat land or 500 meters in hilly conditions.



Step 2 Ram Effect

Day 1 = Re-introduction of rams into the flock



Day 10 = Shearing of the rams



Step 3

Preparation of breeding groups and heat detection

Day 13-14 = Prepare the mating groups and mark the rams with crayons.

We recommend making small mating groups of 1M / 25 F if you wish to know the paternity of newborns and make larger breeding groups of 4-6 M / 100F to produce milk and lambs for sale .

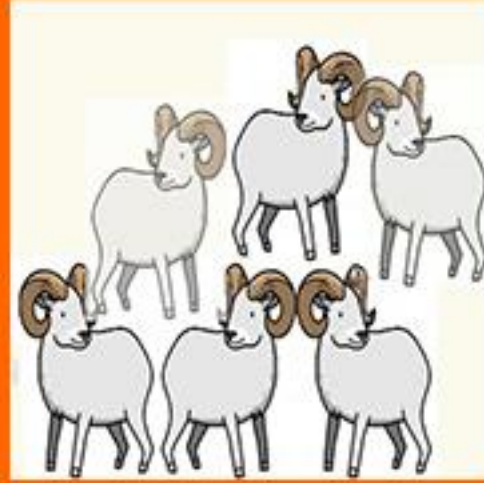


Step 4 Mating

Day 17-20 –beginning of heat and mating

Most of the heats and mating will occur within 7-10 days of the start of the first heat. It is useful to remember that if you increase the number of females for each male (e.g. 1M / 40F) there is the risk that lambings will not be concentrated.





Mating Calendar

In a good mating system the breeder carefully plans the calendar of heats with a goal of lambing at the desired times. Lambing season can be established in advance via precise timing of the introduction of the males into the flock.



Some examples of ram introduction programs



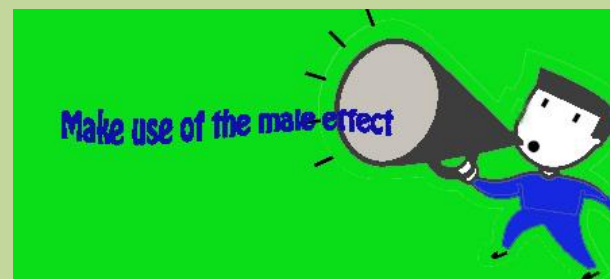
Introduction of rams in mid-April



Lambing in late September



Lambs to be slaughtered by Nov. 1

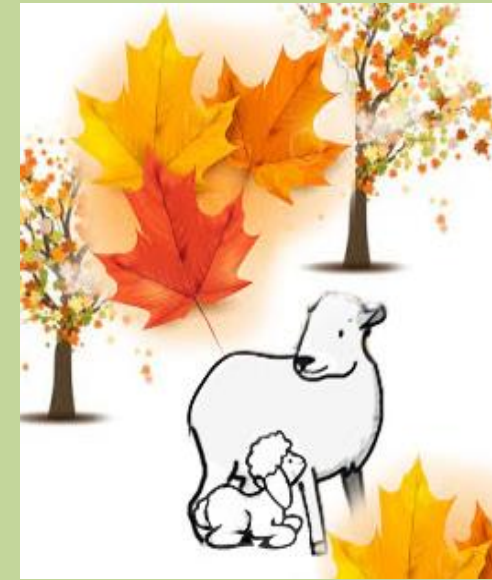


This program will be possible only on a farm where lambings are generally quite early in the season

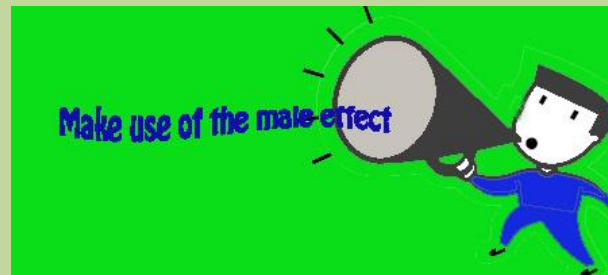
Introduction of rams in mid-May



Lambing in late October



Lambs to be slaughtered by Dec 20



Introduction of rams in October



Lambing in late March



Lambs to be slaughtered for Easter



Introduction rams in December



Lambing in May





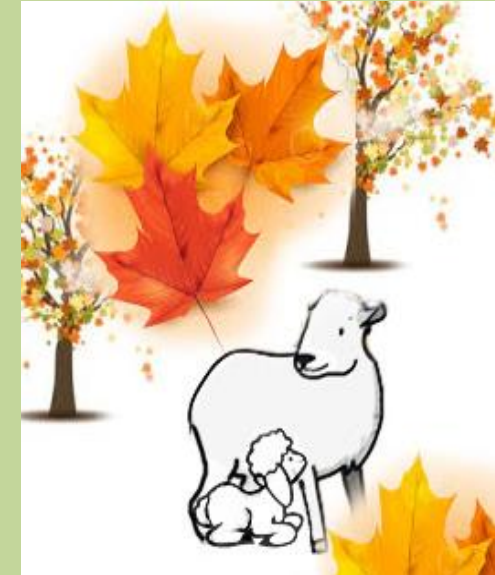
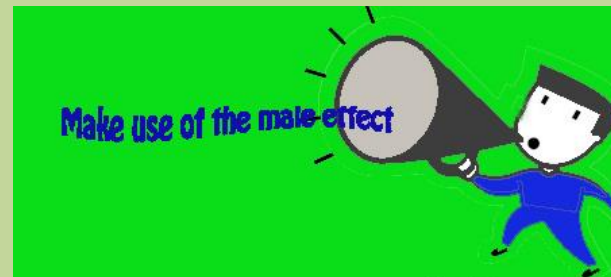
The year-round breeding flock

**To produce milk all year around, it will be necessary to have three breeding groups with different birth dates.
This program may be of particular interest to farms with irrigation systems.**



First Group

Mating May/June



Lambing in October/November

Second group

Mating September/October



You can take advantage of the natural reproductive season of sheep which begins in late summer and extends until late winter when the hours of daylight are reduced.



Lambing in February/March



Third group

Mating December



You can take advantage of the natural reproductive season of sheep which begins in late summer and extends until late winter when the hours of daylight are reduced.



Lambing in May

Alert

*Put an apron on the
low-value rams
with good libido*



Make use of the male effect



*Make use of the natural
cycle of sheep*



*At the end of the
breeding season
remove males from the flock*



*It is important to record
the ewes in heat daily*



*Keep a daily record
of heat and matings*





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