

Can heat synchronization work for sheep

BY LAURIE DOBROSKY

LITITZ — Now that the longest day of the year has come and gone, farmers and livestock are being subtly reminded the days are getting shorter and the nights cooler.

This annual phenomenon not only triggers sheep throughout the state to have 'romantic' inclinations, but it causes shepherds to ponder their lot in life as they 'look forward' to those cold nights spent in the barn watching for lambs. These winter-vigil reminiscences that last for weeks and sometimes months until all the lambs arrive prompt each shepherd to ask themselves if there isn't a better way?

The answer to those shepherds' questions (and prayers) may be on the horizon in the form of hormones for heat synchronization. Researchers at various universities and at laboratories of private sheep organizations have been looking at a number of possibilities — one in particular is prostaglandin, known commercially as Lutalyse.

Used in common practice on beef cattle and non-lactating dairy cattle, Lutalyse is used to control

the time of the estrus cycle and ovulation in reproductively cycling cattle.

In cattle, its basic purposes are to bring females into heat and to synchronize the estrus cycles in a number of animals so calving will occur within a short interval.

Since Lutalyse works only in cycling animals this presents a major problem for most sheep producers where ewes don't come in heat every 21 days like cattle. In nature, sheep are brought into estrus cycles by a decrease in the amount of daylight. This occurs at only one time of year — in late summer and fall.

According to Penn State's Clair Engle, this would mean the product could be used with good results only during August and September. Since the University has done no controlled experimentation on using prostaglandins in sheep, his conjectures are based on the experiences of sheep producers who have voluntarily tried the product on their own.

There is one exception to this rule, however — Dorsets. This breed of sheep will cycle throughout the year. So, on this

particular breed, "Lutalyse will function the same as in cattle," states Engle.

"This material is not officially cleared for use in sheep," Engle stresses. However, he adds that, to his knowledge, there are very few side effects when used on sheep.

In discussing the potential use of a product like Lutalyse, a University of Pennsylvania veterinarian working at New Bolton Center, Kennett Square, comments how it could be a management tool for shepherds wishing to have all the sheep in a flock lamb at approximately the same time. This would reduce the man-hours spent each year during the lambing season, she says.

Because of their close birth dates, the lambs would have no major size difference due to age. This uniform group of lambs has a better chance of finding a higher-priced market from volume commission buyers than would an assorted group of ages, weights and sizes.

For the shepherd who doesn't want to risk experimenting with a hormone injection to bring sheep into season, there are a number of management practices that can be used to bring sheep into heat about one month earlier.

According to the New Bolton vet, artificial lighting will move the season ahead. However, its becoming an accepted practice among sheep breeders is almost as slow as the changing day length. For those who are using this concept, the sheep are kept in an enclosed building sometime in August and the amount of light is regulated, making the sheep believe it is fall.

"Developing breeds of sheep

that reproduce without breeding restrictions, such as season, is slow in development," she stated.

An early introduction of a ram with the ewe flock will start the breeding season a month or so earlier, too. Vasectomized rams can be run directly with the ewes. However fertile rams should be separated from the ewes by a strong fence. Both will achieve the desired effect.

"The use of other hormones, such as progestogenes, will also help advance the breeding season. The length of the luteal phase of the estrus cycle will inhibit the events associated with estrus and ovulation until the corpus luteum occurs. The removal of the inhibiting effects of progesterone is followed by estrus and ovulation," explains the veterinarian.

There are several ways to administer these hormones. The best results have been obtained when 30 mg. of Flourogestrone acetate is administered by placing a vaginal sponge in the canal and leaving it for 12-14 days. After removing the sponge, an injection of 375-750 international units of PMSG (pregnant mare serum) is given to the sheep.

There is some controversy over the use of these sponges, however, and it is advisable for all sheep breeders to consult with their veterinarians.

Flushing is another method that helps to push the breeding season forward along with helping to increase fertility rates, according to Engle. Flushing means giving the ewes a higher energy ration with more total volume of feed. According to Engle, "this (flushing) has the positive effect of

multiple births and early cycling of the ewes."

Dr. Tom Yonkers, veterinarian in charge of animal regulatory services for the Upjohn Company, joins Engle in stressing that Lutalyse has not been approved for use in sheep. At the present time there is no petition by the Upjohn company to gain its approval, he notes, even though there is an increasing amount of interest in the product for use in both sheep and goats.

"In my opinion, Lutalyse is probably safe for use in sheep," Dr. Yonkers states. However, he qualified his opinion since it is only based on practical experience, not actual research data and has been tested on only a small number of animals.

Since Lutalyse has not been approved for use in sheep, the Company can give no recommended dosages. Only experimental data on dosages and fertility can be given.

Citing The Sheep and Goat Manual published by the Society for Theriogenology (a fancy word for reproduction), the New Bolton vet notes that a dosage of 8 milligrams of prostaglandin given in two injections was administered 11 days apart in experiments done on sheep. Ewes usually came into estrus 53 hours after the first injection of the material.

Unlike cattle, where prostaglandin can be used throughout the year, the use and effectiveness of the hormone in sheep depends on the time of year. Various studies have shown both sides to the prostaglandin story — both positive and negative. Sheep producers will have to consider whether they are satisfied with nature or want to help it along.

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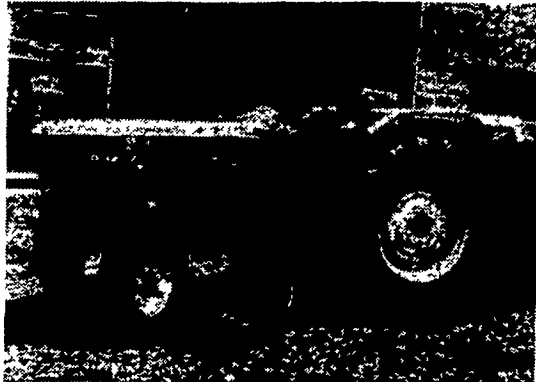


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