

# CIDR and Light Management in the Breeding of Ewes

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## Introduction

- There are different methods to manage estrus induction in breeding ewes.
- One management technique is to use progesterone implants, such as Controlled Internal Drug Release (CIDR), inserted intravaginally.<sup>7</sup>
- Another method is to adjust light timing to mimic seasonal patterns (autumn).
- Both methods allow producers to potentially utilize fall lambing in their flock.



## CIDR Management Protocol

- Wear gloves when handling the CIDR.<sup>7</sup>
- Put a lubricant on the CIDR applicator.<sup>7</sup>
- Insert the CIDR intravaginally.<sup>7</sup>
- Consult a veterinarian to determine the most appropriate CIDR protocol.
- Breed the ewe shortly after CIDR removal. The ewe should display estrus within 3 days.<sup>7</sup>
- CIDR management is less successful in maiden ewes than ewes that have lambed before.<sup>7</sup>
- 20 CIDR inserts cost approximately \$130 with the applicator costing approximately \$8.<sup>7</sup>
- If using natural breeding, utilize the ram effect as well. Do not allow ewes to have any contact with rams for 30 days prior to being bred.<sup>1</sup>
- If the ram to ewe ratio is inadequate (this ratio will vary by breed and operation) or if the rams have health issues, this CIDR protocol alone will not be successful.<sup>7</sup>

## Light Management Protocol

- Beginning in late winter to early spring, expose ewes to artificial light for 16 hr/d for 8-12 wks.<sup>6</sup>
- 100 lux of light is required during the artificial light period.<sup>2</sup>
- After 8-12 wks, reduce light exposure to 8 hr/d for an additional 6-8 wks.<sup>6</sup>
- To avoid flashes of light which upset the ewes' perception of darkness, darken windows and complete chores only during the light period.<sup>6</sup> As shown in the image of the barn (left), all possible sources of incoming light should be blocked during the dark period, especially during daylight hours.
- Only 10 lux of light is required during the dark period.<sup>2</sup>
- After the 6-8 wk period, ewes will begin to cycle.<sup>6</sup>
- If housed under the same conditions, rams will show increased scrotal circumference and overall breeding capacity.<sup>6</sup>

## CIDR Management Pros & Cons

### Pros

- Excess CIDR inserts can be frozen for use at a later date.<sup>9</sup>
- Potential to increase the number of lambs born.<sup>7</sup>
- Increased success in synchronization of the ewe flock allows for predictability in lambing dates.<sup>7</sup>
- Use may contribute to higher success rates of artificial insemination in ewes.<sup>7</sup>
- Relatively inexpensive.
- Minimal labor required.<sup>10</sup>

### Cons

- Use of CIDR inserts does not mitigate the effects of stress on fertility or success of the pregnancy.<sup>7</sup>
- Requires specific disposal procedures.<sup>7</sup>
- Veterinarians should be consulted before the insertion or use of any intravaginal hormone implants.<sup>10</sup>
- Time sensitive process.

## Light Management Pros & Cons

### Pros

- Light management to induce out-of-season breeding does not result in decreased fertility of rams or ewes.<sup>2, 8</sup>
- Fall lambing results in higher market price/head.<sup>3</sup>
- Most sheep breeds are responsive to light management.<sup>2</sup>

### Cons

- Any ewes that do not become pregnant during the out-of-season breeding will suffer a setback of 8-12 wks in the onset of estrus during the fall.<sup>2</sup>
- Light management = confinement.
- Sheep cannot be kept on pasture.<sup>5</sup>
- Light management requires a barn that can be fully closed up to restrict natural light.<sup>4</sup>
- Expensive.<sup>4</sup>
- Labor intensive.<sup>4</sup>



## Conclusions

- CIDR management is a practical and effective method for out-of-season breeding.
- Light management is a less practical method due to an increase in overall cost and labor.

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