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UNIVERSITY OF WISCONSIN-MADISON

**DAIRY WORKERS'**

TRAINING MODULE **2**

**REPRODUCTIVE SKILLS**

Reproductive Compliance

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### Reproductive performance

- Function of certain management policies
- Cow condition
- Implementation

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### Defining reproductive costs

$$\text{Cost of breeding program} = \text{Reproductive costs} + \text{Cost of days open} + \text{Culling reproductive failures}$$

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Source: Keown, J.F., and P.J. Rossow, Dairy Cattle Reproductive Council

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## Potential gains from improved reproduction

| Measurement               | Financial losses  |
|---------------------------|---|
| Calving interval          | >365 days = \$1 per day<br>>395 days = \$30 + \$3 per day >395 days |
| Dry period                | \$3 per day for >60 days<br>\$3 per day for <45 days                |
| Services conception       | \$1 for each 0.1 service/conception over >1.5                       |
| Average age at freshening | \$30 per month for each month >24 months                            |

Source: Rosen, J.F., and P.J. Rosskopf, Dairy Cattle Reproductive Council

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## Matching losses to current program

|                              | 500-cow dairy | Cost to dairy  |
|------------------------------|---------------|----------------|
| Calving interval             | 398 days      | \$39           |
| Dry period                   | 66 days       | \$18           |
| Services per conception      | 2.2           | \$7            |
| Age at freshening            | 26 months     | \$60           |
| Reproductive losses per cow  | -             | \$124/cow/year |
| Reproductive losses annually | -             | \$62,000/year  |

Source: Rosen, J.F., and P.J. Rosskopf, Dairy Cattle Reproductive Council

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## What is the most limiting factor for reproduction?



**Answer: Failure to detect heats**

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## Advantages of a systematic breeding program

- **Improve** efficiency of heat detection
- **Achieve** timelier first service
- **Reduce** variation in calving interval among cows
- **Reduce** involuntary culling for reproductive reasons
- **Concentrate** labor for reproductive management to specific time periods
- **Improve** overall reproductive performance of herd

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## 1995...The year that gave us OvSynch

### Trust the technology!

It gets the cows pregnant. People, on the other hand, tend to cause most of the problems.

Poor performance is rarely due to physiologic responses of individual cows to the hormonal protocol, but almost always can be attributed to compliance issues at the farm level.

### Economic impact:

For every day a cow is not pregnant beyond 120 DIM, it costs about \$3 per cow per day.

In a 250-cow herd with an average 140 days open, the cost is \$60 per cow, or \$15,000 per year for the extra 20 days open.

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## Protocol objectives: Synchronize heats and induce ovulation

- Reproduction is naturally controlled by hormones
- Protocols use natural process to our advantage
- Hormones must be administered at specific times following a proven standardized system
- Failure to follow leads to poor results and additional costs

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**Factors to achieve success**

- Good body condition of cows and not stressed
- Commitment to follow precise synch program
- Proper employees training to follow the protocol
- Efficient and accurate heat detection for specified days
- Post breeding heat (or return heat) detection must be high
- Proper needles, syringes, and hormones usage
- Proper AI technique

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**What is compliance?**

**The administration of treatments or actions according to a prescribed protocol.**

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**Compliance monitoring points**

- The **execution** of the event itself, or
- The resulting **outcome** from that action that is related to the process.

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## Program compliance

Giving the right cows, the right injection, at the right time.

10% ↑ in breeding compliance  
 =  
 2% ↑ in first cycle pregnancy rate

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## Important compliance factors

- Accurate cow identification
- Appropriate drug type and dosage
- Correct time, day, and route of administration
- Appropriate time of insemination

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## Employee training

An **investment** into the farm business, not just an added expense.

Properly **trained** employees are worth their weight in gold.

When labor is tight, ensure remaining employees have necessary **knowledge** and **skills** to take on new roles, as well as the **time** to include them in their daily tasks.

Remember, if you ask one person to do the work of two, tasks are often not completed as thoroughly.



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## Cost factor of compliance

**Considerations:**

- GnRH = \$3.20 per dose
- Prostaglandin = \$2.50 per dose
- Cow handling = \$1 per cow
- CIDR application = \$9 to \$10 per cow

**Protocols:**

- Ovsynch protocol (excluding semen) = \$12.90 per cow *(four cow handlings)*
- Presynch + Ovsynch protocol = \$19.90 per cow *(six cow handlings)*
- G-6-G protocol = \$20.60 per cow *(six cow handlings)*
- Double Ovsynch protocol = \$24.80 per cow *(seven cow handlings)*

Source: J. Fetzer, University of Minnesota College of Veterinary Medicine

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## To achieve compliance

**Correct injections | Correct cow | Correct days**

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## To ensure breeding success

- Use 18- to 20-gauge, 1-1/2" needles for deep muscle injections
- Choose correct size of syringe based on the volume of injection
- Handle and store hormones according to instructions
- Include health and cycling status of cows as part of the decision to use a timed AI protocol
- Ensure the correct hormone is administered to the right cow at the prescribed time
- Double-check ear tag IDs of cows before each injection.  
Prostaglandin will lyse the corpus luteum and induce abortion

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Even small improvements will impact your bottom line. There are a lot of little opportunities available to improve overall profitability and reduce reproduction costs.

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