

Why Should We Talk About Reproductive Efficiency?

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- Reproductive efficiency is one of the key factors that influence productivity and ensure the **economic sustainability** of cow-calf enterprises

Baruselli et al., 2007

Hayes et al., 2013

Lamb et al., 2016

Lima et al., 2010

Pravia et al., 2014

Rodgers et al., 2012

Vishwanath, 2003

- Trenkle and Willham described that in economic terms, reproduction is **five times more important** than weight gain.

Trenkle and Willham, Sicence. 1977

- Operations with higher reproductive efficiency tend to have an **increase profit margin**.

Baruselli et al., 2014

De Vires et al., 2013

Lamb et al., 2016

Ojeda et al. 2020



Before talking about
repro let's talk about
profit margin

“The amount by which revenue from sales exceeds costs in a business. Narrow profit margins typically sit lower than 10%, but that can differ between industries.”



Livestock production: Narrow profit margin business

It is hard to make investment decisions: we are always thinking about the benefit–cost ratio

Play with the volume!

Small farms are much more likely than larger farms to have an PM of less than 10 percent, an indicator of high financial risk. Between half and three-fourths of small farms have an PM that low, compared with 35% of midsize and large-scale farms. *Hope, 2017. AgUpdate.com*

Find a niche market

- Organic or non-GMO meat
- Locally produce meat
- Specific breeds
- Directly to consumers
- **Less than 5%**

Efficiency!

Efficiency:

Achieving maximum productivity with minimum wasted effort or expense.



Beef industry?

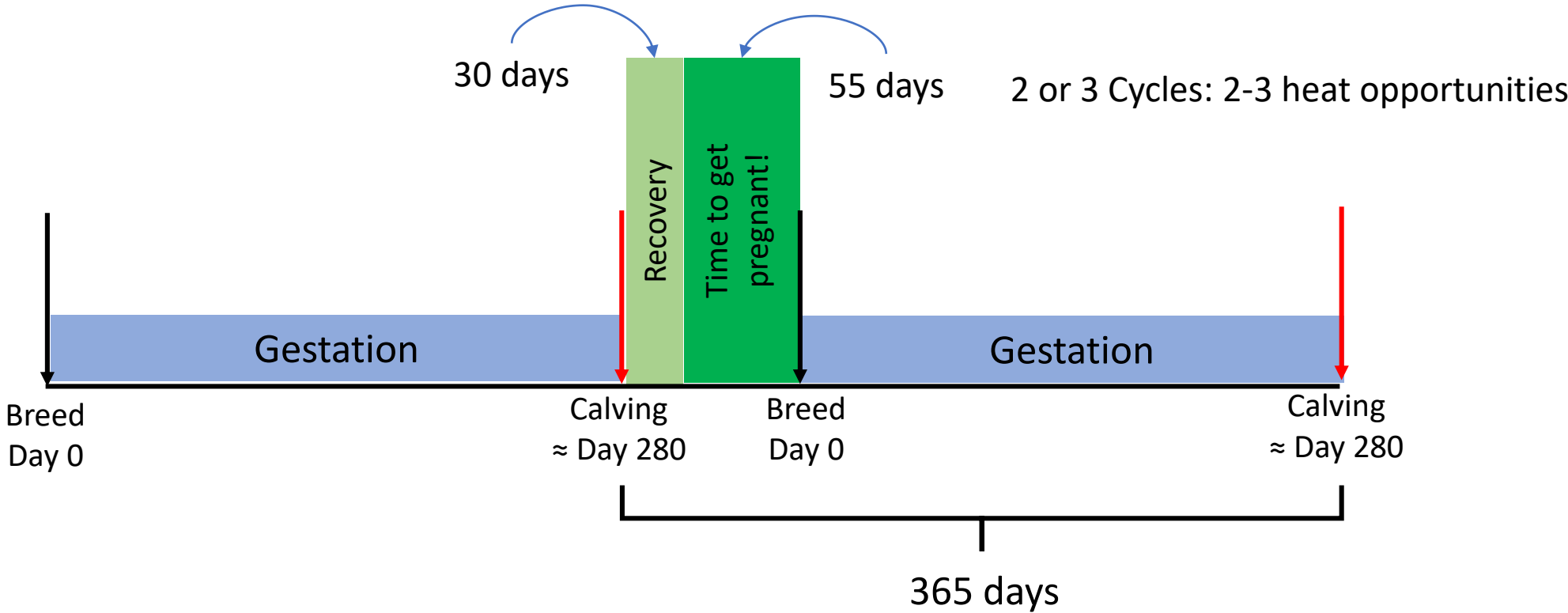
- Feed efficiency
- **Reproductive efficiency**

Reproductive Efficiency

The efficient cow is the one that calves every year
Calving interval: 12 months!



The calving interval



why it is important to have a 12-month interval?

Without breeding season

Cow date of birth
01/01/2008
and FIRST CALVING
01/01/2010

Caving
Interval



12
Months



Dorothy



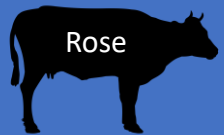
Blanche

13
Months



Sophia

14
Months



Rose

15
Months

\$450 to \$1200 to feed a cow per year

For the example: \$650 per year

Calving Interval



12 Months

13 Months

14 Months

15 Months

Time needed to produce 10 calves

12 years

12 years and 9 months

13 years and 6 months

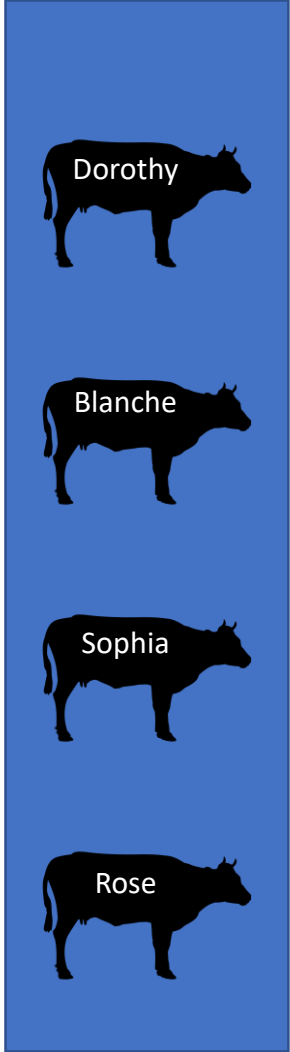
14 years and 3 months

\$7800.00

\$8287.50

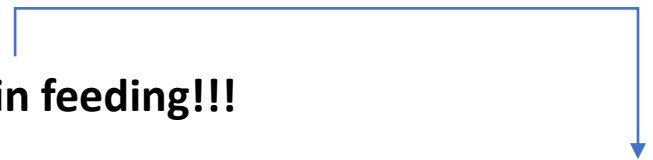
\$9075.00

\$9262.50



\$1462.50 just in feeding!!!
+vaccines
+vet care
+labor
.....?

How many inefficient cows do you have?



Farms with Breeding Season

Cow date of birth
01/01/2008
and FIRST CALVING
01/01/2010

Caving
Interval



12
Months



Dorothy



Blanche

13
Months₀



Sophia

14
Months




Rose

15
Months

Every year: breeding season from March 1st to June 30th

For the example: \$720 calf price

Cow date of birth
01/01/2008
and first conception
date 03/22/2009



Dorothy

Blanche

Sophia

Rose

Caving
Interval



12
Months

13
Months

14
Months

15
Months

Time needed to
produce 10 calves

10 Calves

9 Calves

8 Calves

7-8 calves

U\$ 7200.00

U\$ 6480.00

U\$ 5760.00

U\$ 5040.00

Difference of \$2160

How many
inefficient cows do
you have?

How can I improve my reproductive efficiency?



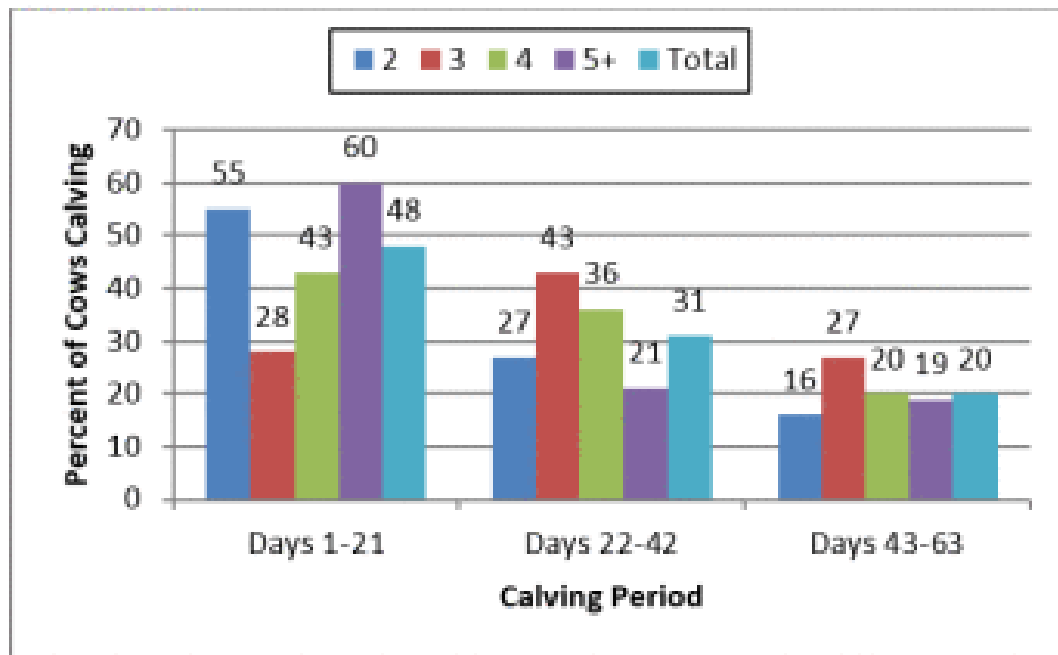
Synchronization

- Timed Natural Breeding (Synch + Bull)
- Timed AI + Bull
- Timed AI + ReSynch + Bull
- Timed AI vs. Heat detection
- Induction and pre-Synch protocols
- Modify the calving distribution



Calving distribution

- One of the simplest ways to track the reproductive success of a cow-calf herd is to graph a calving distribution.
- When calves are born?



By Dr. Rachel Endecott, MSU
Extension, Beef Cattle Specialist 2014
<https://mtstockgrowersblog.wordpress.com/2014/07/02/calculating-calving-distribution-to-evaluate-reproductive-performance/>

Breeding season

Farm A

Natural mating = 92%

Farm B

Timed AI
Day 0

Natural mating = 92%

Day 90

Same final pregnancy rate

Gestation

Calving Season: number of calves born in each month

Farm A 20 20 50 = 90

Farm B 60 20 10 = 90

Same amount of calves produced

Day 0

Day 30

Day 60

Day 90

Growth

Weaning: all at the same day!

Farm A

550 lbs.

20

20 calves x 550 lbs. x \$1.5 = \$16,500

480 lbs.

20

20 calves x 480 lbs. x \$1.5 = \$14,400

400 lbs.

50

50 calves x 400 lbs. x \$1.5 = \$30,000

= \$60,900

Difference: \$9,000 \$90 more per each cow exposed during the breeding season.

Farm B

60

60 calves x 550 lbs. x \$1.5 = \$49,500

20

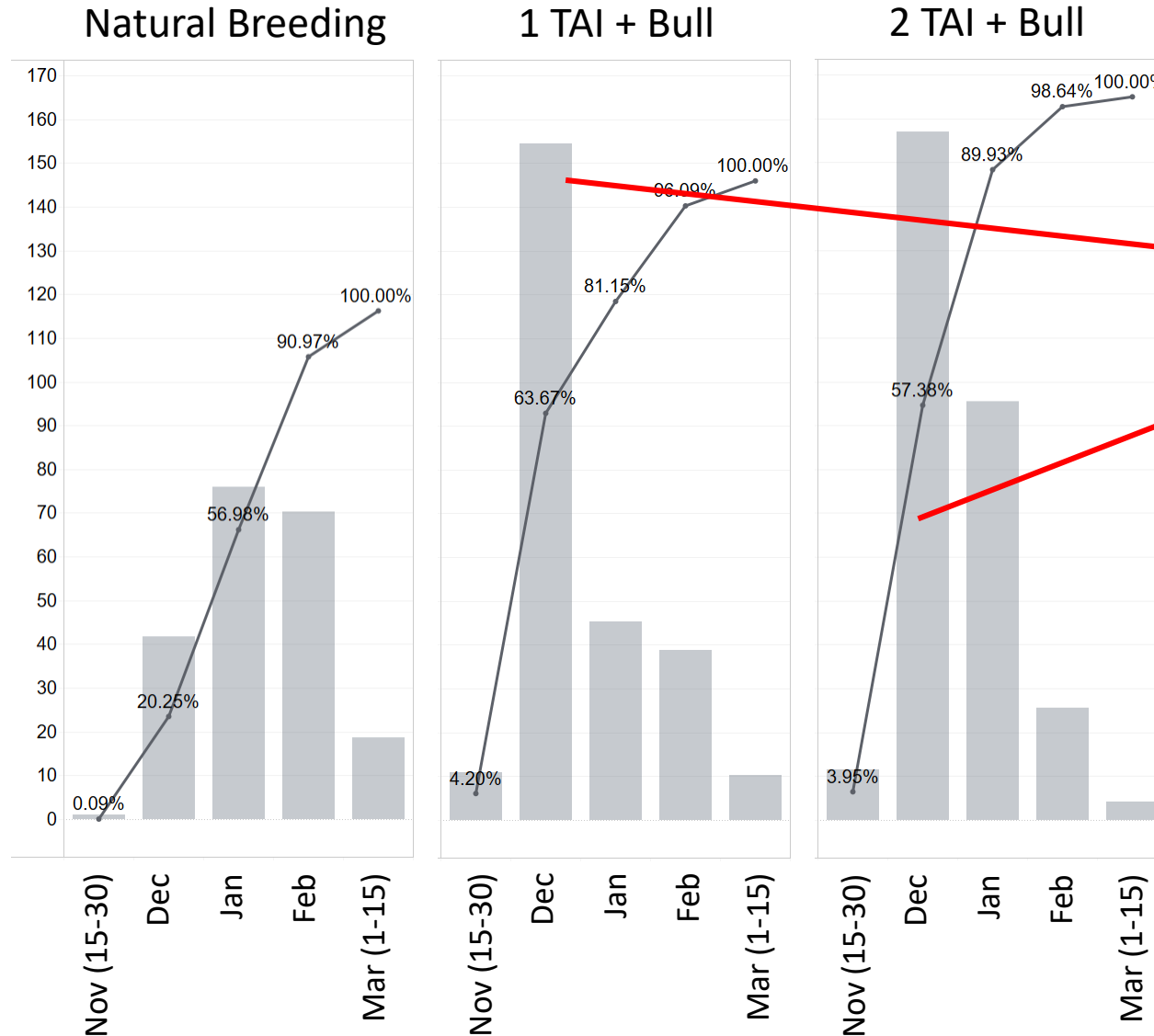
20 calves x 480 lbs. x \$1.5 = \$14,400

10

10 calves x 400 lbs. x \$1.5 = \$6,000

= \$69,900

Calving distribution



- Heavier calves:
1. They born at the best time of the year
 2. They are weaned older (20-30 days)
 3. Better genes due to AI

Evaluate your results every year

- Keep Records!!!!
- Basic Information: calving date, AI date, weights, calving problems.
- Evaluate basic reproductive parameters:
 - Calving Interval
 - Age at first Calving
 - There are more: Average Herd Age, Stayability, Calving-Conception Interval



Take a Home message

- Efficiency: achieving maximum productivity with minimum wasted effort or expense.
- Calving interval: 12 months
- Cows need to become pregnant at the beginning of the breeding season
- Easier way to do it: Synchronization
- Evaluate your reproduction: calving interval and age at first calving (at least!)
- Ask for Help: UF-IFAS Extension services.



WHAT
YOU
NEED
TO
KNOW?



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\$10- \$14:
remember you can
use it until 3 times

Price of the protocol:
CIDR 1: 19.29
CIDR 2: 12.29
CIDR 3: 9.95



\$56.99 (100 mL):
\$2.8 (5 ml dose)

\$24.99 (20 mL):
\$2.49 (2 ml dose)

