

***Reproductive Management:
How can I increase the
reproductive efficiency of my
cows?***

Part III

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***How can I increase the reproductive
efficiency of my cows?***

Pregnancy rate = Heat detection rate X Conception rate

**Pregnancy rate can decrease
due to problems with heat
detection efficiency,
conception, or both**

What Should we do ? (Management Policy)



I) Heat Detection

II) Conception Rate

III) Herd Health and Proper nutrition management

IV) Recognize importance of early breeding (reasonable VWP) and systematic breeding program

I) Recognizing Factors that Affect the Expression of Heat

- Cow's reproductive health
 - Uterine health, ovarian cysts, etc.
- -----
 - Concrete vs. soil surface and pasture
- Number of animals in estrus at any given time
 - Cows during the luteal phase of the estrous cycle do not exhibit estrus

I. Heat Detection :Use heat detection aids

- ✓ Utilize visual observation, Tail chucking, HeatWatch, pedometers, or other aids
- ✓ Spend some time
 - Every 21 days a cow may stand to be mounted by a herdmate for only.....!
- ✓ S-----
- Ovsynch, Modified Targeted Breeding, or CIDR-prostaglandin synchronization programs



Pregnancy rate = Heat detection rate X Conception rate

II. Factors Affecting Conception Rate

- **A.I.**
 - ✓ **Semen handling and quality**
 - ✓ **Site of semen deposition, time of insemination**
- **Heat detection**
- **Cow's fertility (Health, % anovular cows)**
- **Nutrition, Heat Stress**

III. Nutrition and management

- ✓ BCS at dry off and during breeding time
- ✓ Critical during the “transition period”: three weeks before calving and three weeks after calving
- ✓ Encourage high DMI to minimize the degree and duration of negative energy balance
- ✓ Consult with a nutritionist

Effect of BCS on Fertility to Timed AI

Moreira et al., 2000; Theriogenology 53:1305

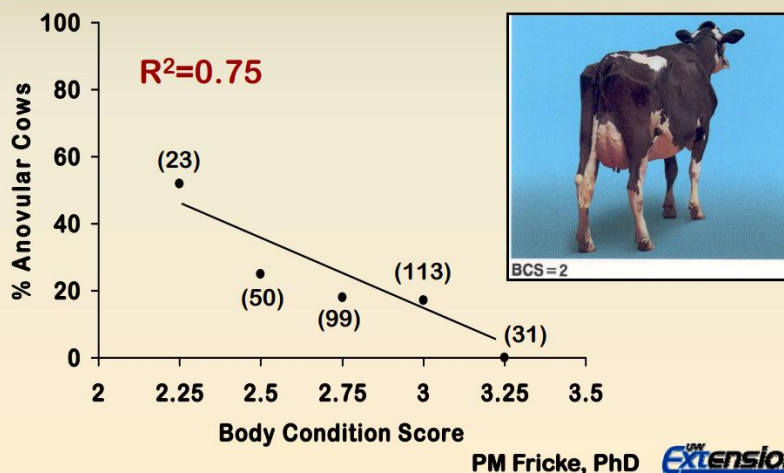
Conception rate (%) after first service timed AI

BCS Group	Conception rate (%)	
	27 d (n=207)	45 d (n=207)
Low (<2.5)	18.1^a	11.1^a
Control (≥2.5)	33.8^b	25.6^b

^{a,b}Within a column, proportions with different superscripts differ (P<0.02)

Percent of all anovular cows plotted by BCS at 47-53 d postpartum

Gumen et al., 2003. Dairy Sci. 86:3184-3194



Body Condition Score Rules of Thumb

- ❑ **Never let a cow go below a BCS of 2.0**
 - For thin cows, reproduction and milk production may suffer from a lack of energy reserves
- ❑ **Total loss should never exceed 1 BCS point**
 - A decrease in BCS of more than 1 point resulted in a marked decrease in 1st service conception rate
- ❑ **Never let a cow go above a BCS of 4.25**
 - Obese cows are at a higher risk for metabolic problems, lameness, and will likely remain open for an extended period

PM Fricke, PhD

IV) Detecting early heats (before 50 days postpartum)

- Can tell us about cow reproductive health
– cyclic or anestrous
- Can tell us about the
.....
– Fresh cow problems (dystocia, retained placenta, metabolic disorders)
- Help managing and organizing breeding programs

General Comments

Diagnose pregnancy prior to 40 days after AI

