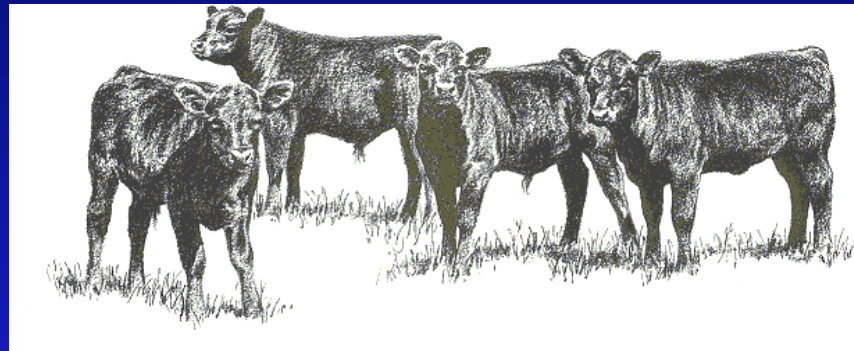


Using High Accuracy Sires



Dona Goede
Livestock Specialist

High Accuracy = AI

- Young bulls do not have high accuracy
 - EPD's will change
- AI bulls can have extremely high accuracy

What is Accuracy?

- Bull A
 - Yearling Angus Bull
 - YW EPD – 106
 - Top 5% of Breed
 - Accuracy - .05
 - 2/3 of progeny +/- 16.2 pounds of 106
- Bull
 - AI Angus Bull
 - YW EPD of 93
 - Top 10% of breed
 - Accuracy of .95
 - 2/3 of progeny +/- .9 pounds of 93

Why is accuracy important?

- Get what you paid for.
- Not guessing at what will happen
- Not necessarily more uniformity!

Keys to Success

- Herd Health
 - Vaccinations should be give at least 30 days prior to breeding
 - If there is a history of breeding programs, investigate
- Nutrition
 - BCS of 5 or higher
 - Steady plane of nutrition
 - Less than 16% protein

Keys to Success

- Reproductive History
 - 85-90 % pregnancy rates
 - 45 days post-calving at start of synch.

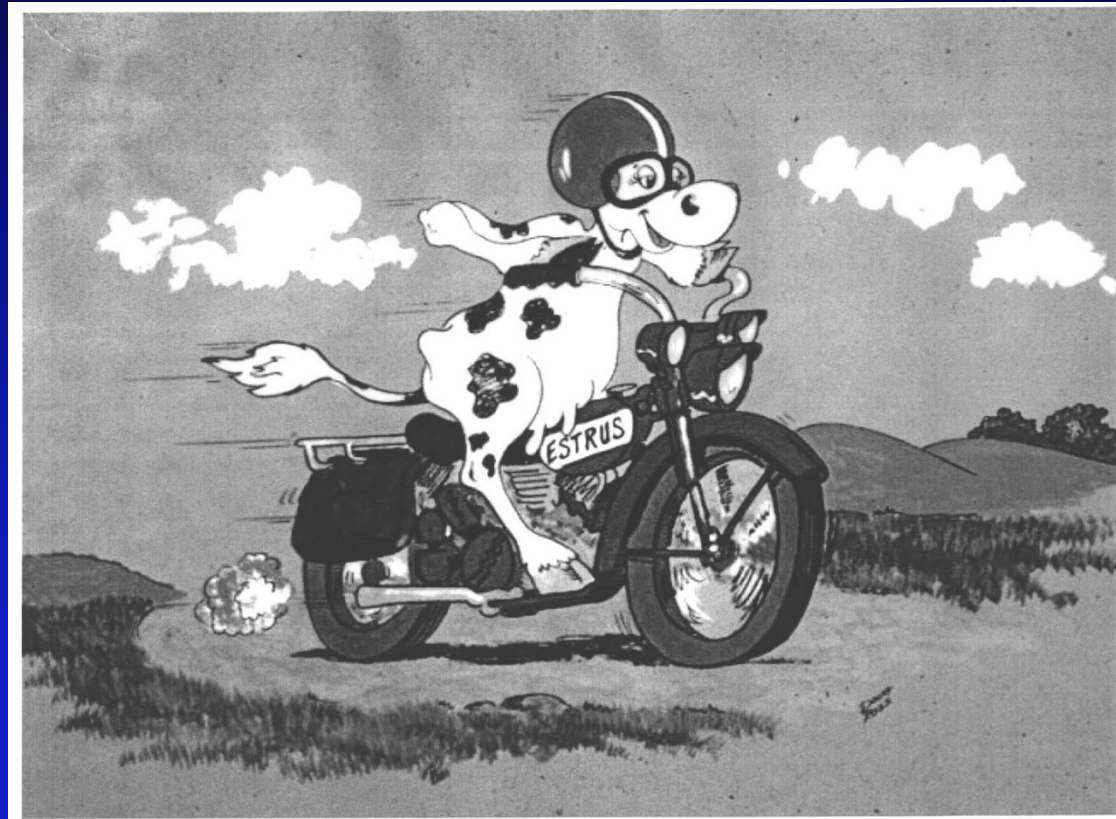
Keys to Success

- ID and record keeping
 - Know if calves are AI or not
 - Know what bulls calves are out of
- Proven AI Sires
 - Some don't work in fixed-time AI program
 - Genetically proven animals

Keys to Success

- Facilities
 - Able to work all animals in a reasonable amount of time
 - AI barn
 - Low Stress
- Other tips
 - 18 gauge 1 ½ inch needles
 - Cleanliness
 - Turn out bulls 10-14 days after AI
 - Preg Check
 - Do not transport

Are your cows cycling?



Is Estrus Synchronization and AI Profitable?

- Trial on Western Kentucky Farm
 - Commercial cows
 - 351 mature cows and first-calf heifers
 - Two-thirds were subjected to estrus synchronization and AI and rest were exposed to a bull.
 - All costs were determined.

Comparisons

- Synchronized
 - Overall:
 - 85% calve in first 30 days
 - 90% pregnancy rate
- Natural breeding
 - Overall
 - 62% calve in the first 30 days
 - 81% pregnancy rate

Costs

- Cost of AI:
 - $\$12 + \$5 + \$10 = \$27/\text{cow}$
- Cost of Labor
 - 4 hours/working X 3 workings
X 4 laborers X \$6 per hour = \$288.
- Total Costs
 - $\$2700 + \$288 = \$2988$

Returns

- Weaning Weight
 - 23 more calves born early and an additional 30 pounds of weaning weight = 690 more pounds
 - $690 \times .80 = \$552$
- Percent Calf Crop
 - 9 more calves \times 500 pounds \times .80 = \$3600
- Total returns
 - \$3600 + 552 = \$4152

Return on Investment

- Total Returns = \$4152
- Total Expense = \$2988
- Return on Investment

\$1164 or \$11.64 per cow!

Reproductive Management of Bulls

- Reproductive management of bulls is the most important aspect of reproductive management of a beef herd!!
- Most important tool for reproductive management in bulls is subjecting the bulls to a breeding soundness exam (BSE) 30-60 days prior to the breeding season.
- BSE has three components:
 - physical exam
 - scrotal circumference
 - semen evaluation

Reproductive Management in Bulls

Scrotal circumference

- highly correlated with semen output and quality
- highly negatively correlated with puberty in bull, sibling and progeny. For every 1 cm increase in scrotal circumference there is a corresponding decrease in age at puberty by 4 days of the bull's daughters.
- Puberty in bulls occurs approximately 8-10 months of age, but mature function isn't until 12-18 months of age depending upon breed. A bull reaches puberty when the scrotal circumference is about 26 cm.

Reproductive Management in Bulls

Physical exam:

- Visual evaluation of the structural correctness, health and well being of the bull. A health history should also be taken. Illness that results in a high fever or other heat stress can reduce fertility for 60 days.
- Rectal palpation of the accessory glands
- Electro-stimulation to observe extension of penis and if any abnormalities exist.

Reproductive Management in Bulls

Semen evaluation:

- Sperm morphology
- Sperm motility

Evaluation

- Classified as Satisfactory, unsatisfactory , or the classification is deferred.
- Only use bulls that grade satisfactory.
Minimal scrotal circumference is 30 cm at 12 months of age.

Reproductive Management in Bulls

Management factors that affect bull fertility:

- Health, especially high fever
- Injury
- Nutrition

Reproductive Management in Bulls

Serving capacity:

- As bulls mature their serving capacity increases
- Traditional: mature bulls = 1:30-40 cows, yearlings = 1:10-20.
- For estrus synchronization: mature bulls = 1:7-10 cows

Any Questions?