



# Building Efficiency Through Reproductive Management

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Scale 1:67,000,000

Azimuthal Equal-Area Projection



Boundary representation is not necessarily authoritative.















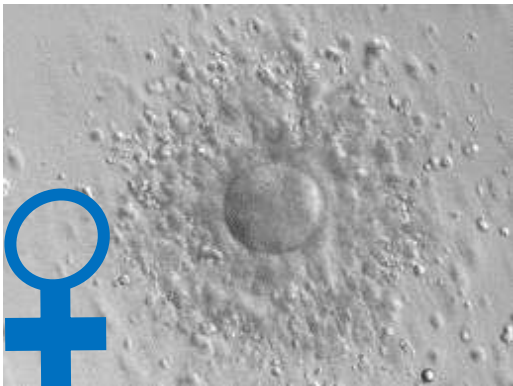
# Recipe for a calf

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# Factors affecting fertility in beef females

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- Postpartum anestrus
- Suckling stimulus
- Age
- Genetics
- Nutrition
- Body weight
- Body condition score
- Reproductive management
- Plane of nutrition
- Body composition
- Animal handling



# Strategies to improve reproduction efficiency

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- **Breeding season**
- **Reproductive technologies**
- **Selection pressure**
- **Management**





# Establishing a Breeding Season

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- **Remove your bulls from the cows!!!**
- **When do you want your calves to be born?**
  - **Nutrition**
  - **Cow performance**
  - **Calf performance**
  - **Cattle Market**





# Establishing a Breeding Season

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- 365 days is not a breeding season!
- Establish goals
  - 45-120 days
  - 10-15 days per year decrease

NFREC-Marianna

**Calving Season**

**Cattle Market**

**Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov**

**Breeding Season**



# Breeding Season

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- **Management**
- **Selection pressure**
- **Culling cows**
- **Pregnancy diagnosis**
- **Breeding Soundness Exam**
- **More pregnant cows at the beginning of the breeding season**
- **More calves at the beginning of the calving season**



# Artificial Insemination


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- Disease prevention
- Widespread selection of bulls
- Proven genetics
- Genetic selection of replacements heifers improves overall cowherd genetics
- Reduce costs associated with bull maintenance
- Uniformity
- Crossbreeding

# Heat Detection

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- AM-PM rule
- Early in the morning – **AM**
- Late in the evening – **PM**

Heat in **AM**  Breed in **PM**

Heat in **PM**  Breed in **AM**

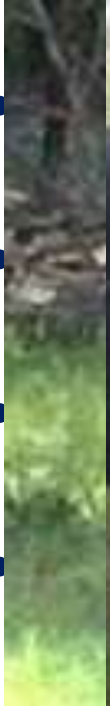


# Heat Detection

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- M

- S



- N

**STANDS TO BE MOUNTED**

# **Estrus Synchronization**

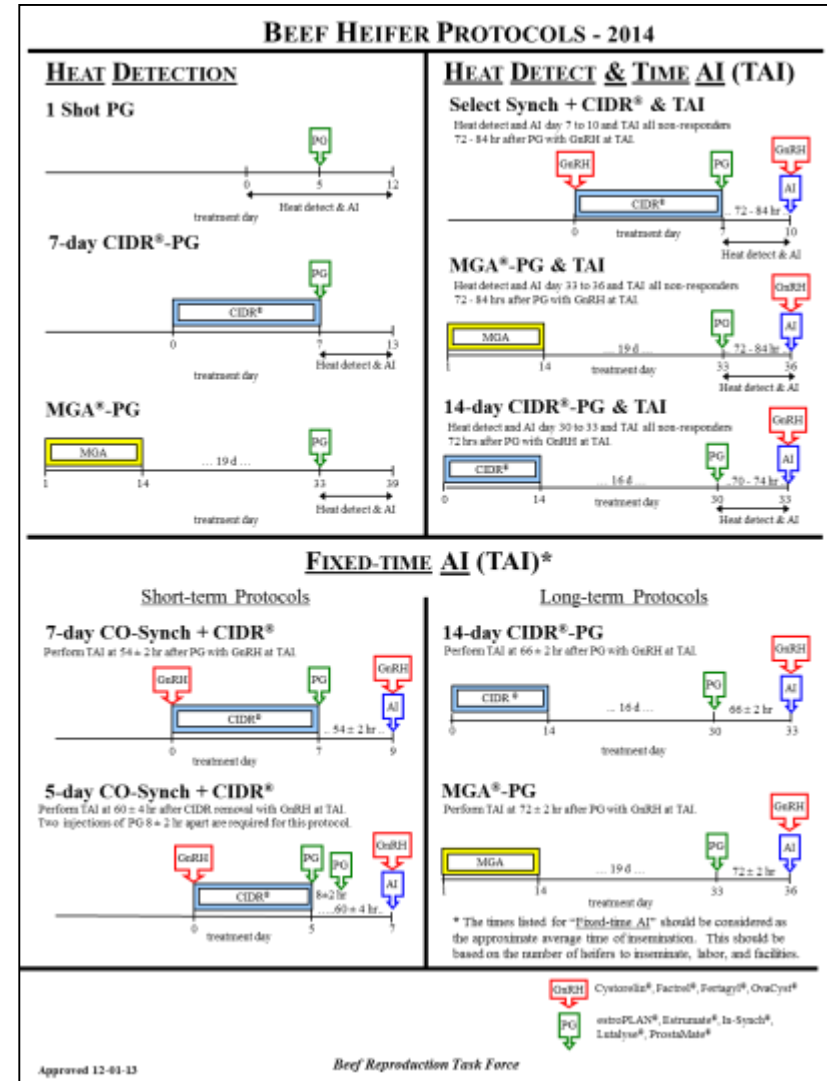
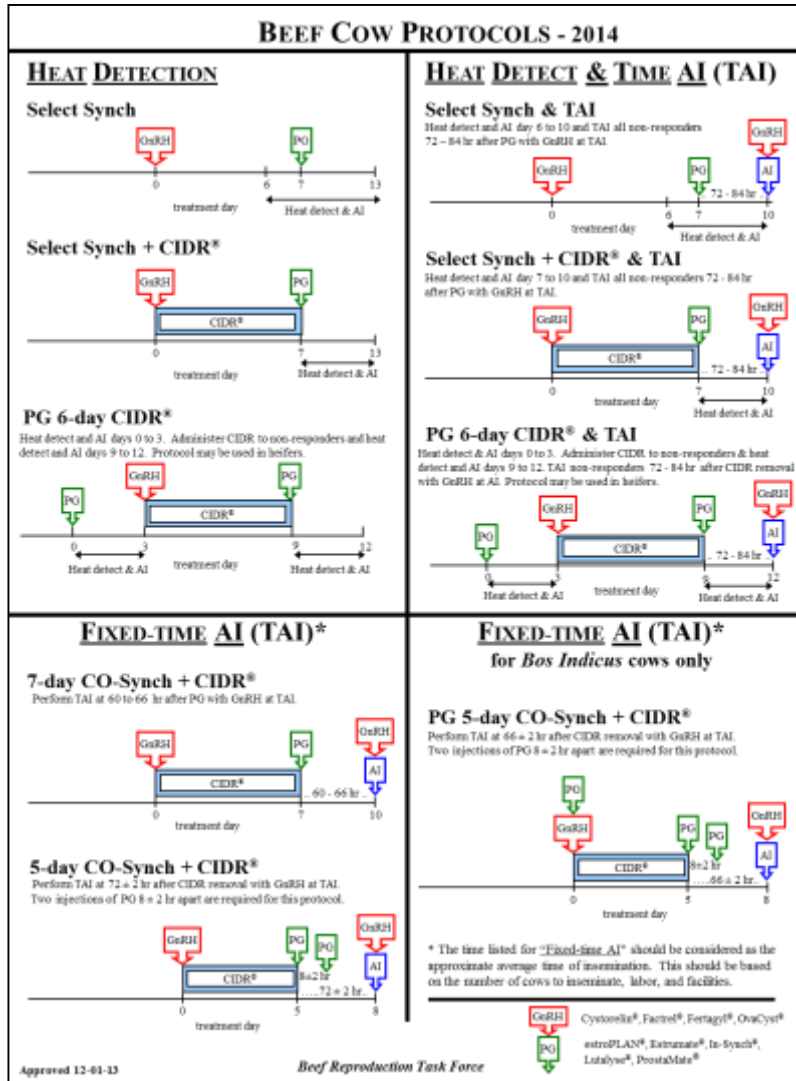
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- **Pharmacological control of the Estrus Cycle**
- **Fixed-Timed Artificial Insemination - TAI**
- **Advantages of TAI**
  - **Induction of cyclicity**
  - **No heat detection**
  - **Optimization of labor**
  - **Increase proportion of females exposed to AI**
  - **More females pregnant to AI in a shorter period**





# TAI protocols for beef females



# Impact of TAI on Calving and Weaning

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**Control**  
**n = 615**



**TAI**  
**n = 582**

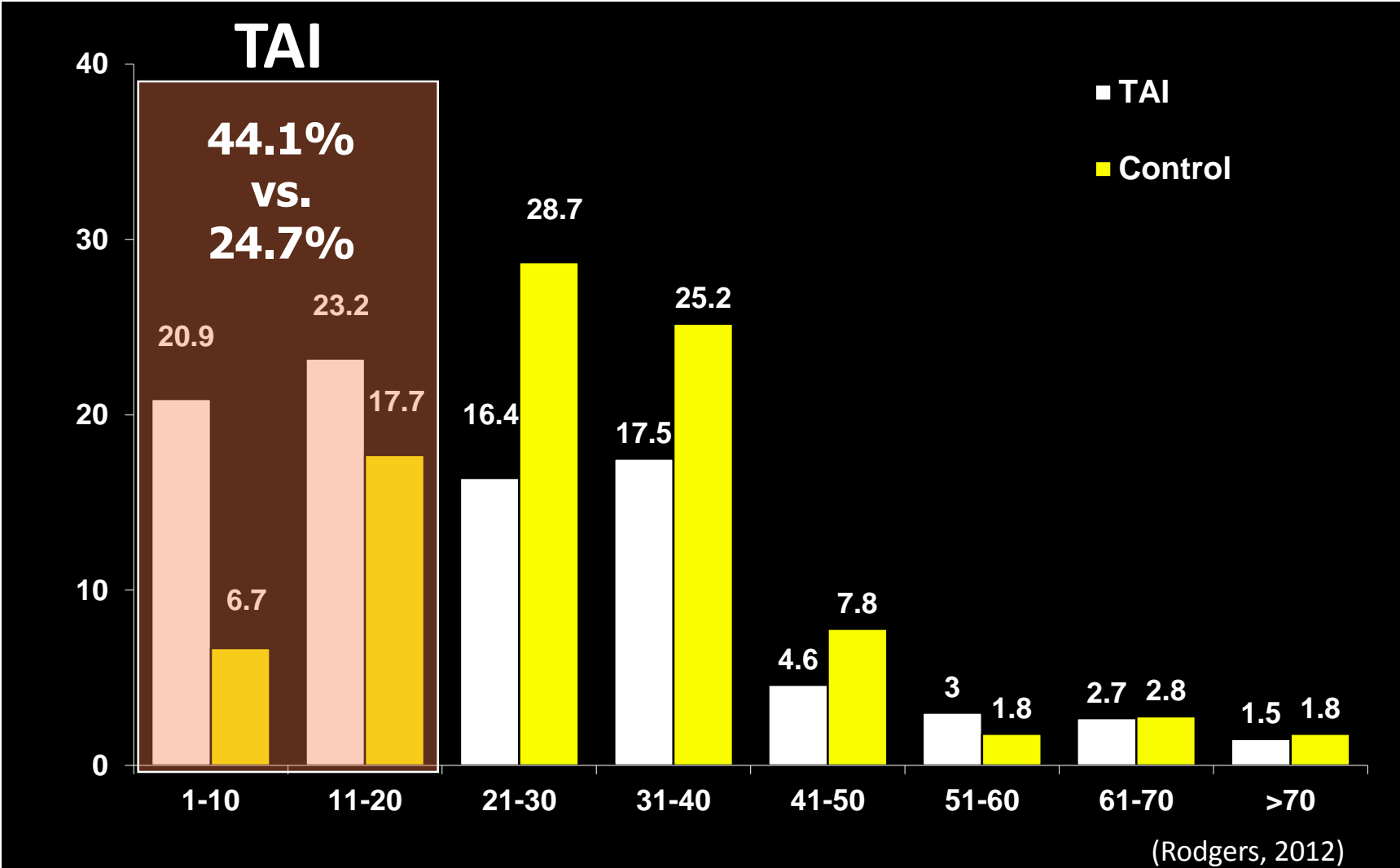




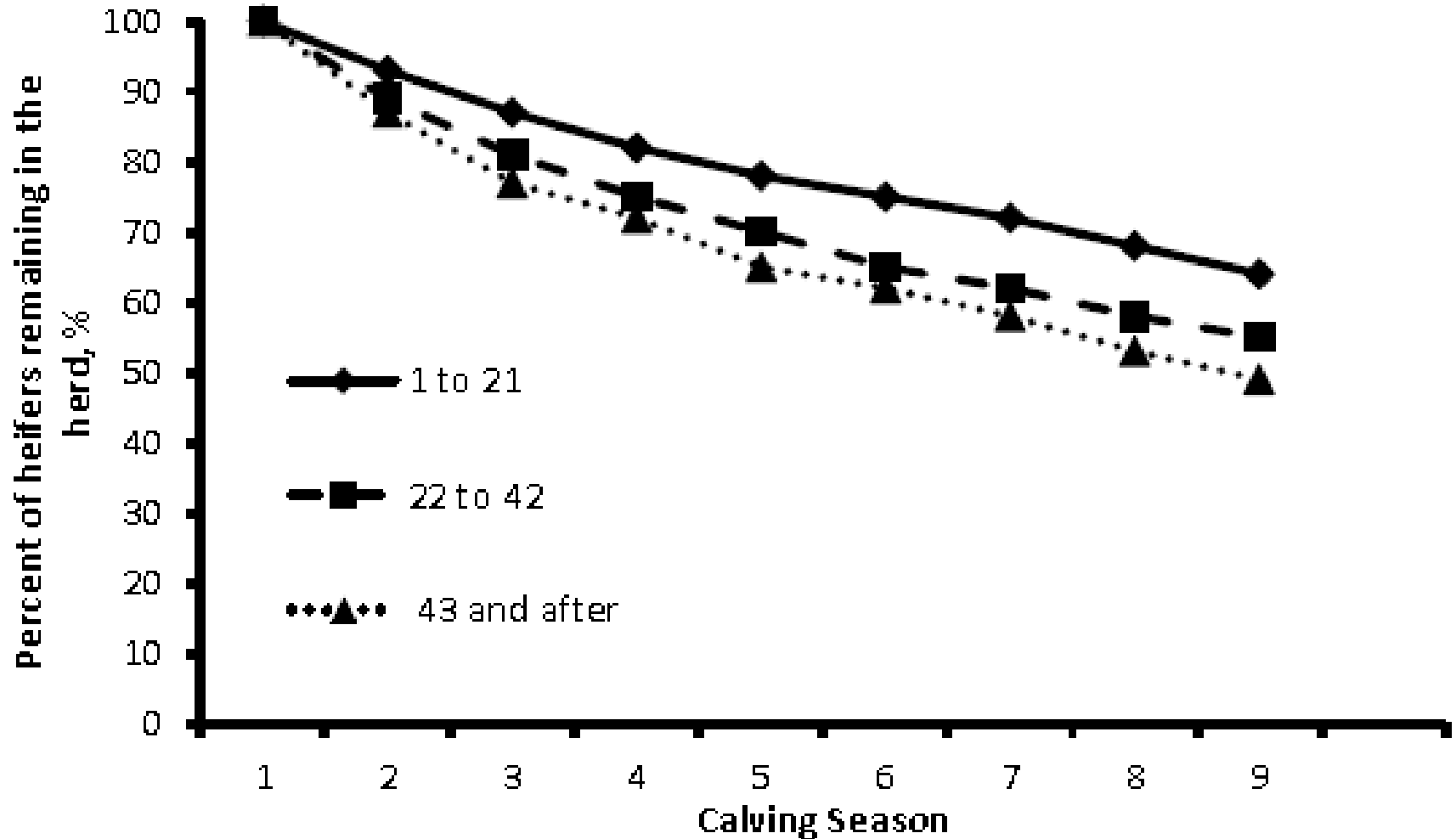
# Impact of TAI on Calving and Weaning

Item	Treatment	
	Control	TAI
No. of cows	615	582
Weaning rate, %	78	84
Weaning weight, lb	387 ± 8 <sup>a</sup>	425 ± 8 <sup>b</sup>
<sup>ab</sup> Means within row differ (P < 0.01)		<b>38 lbs</b>

# Impact of TAI on Calving and Weaning



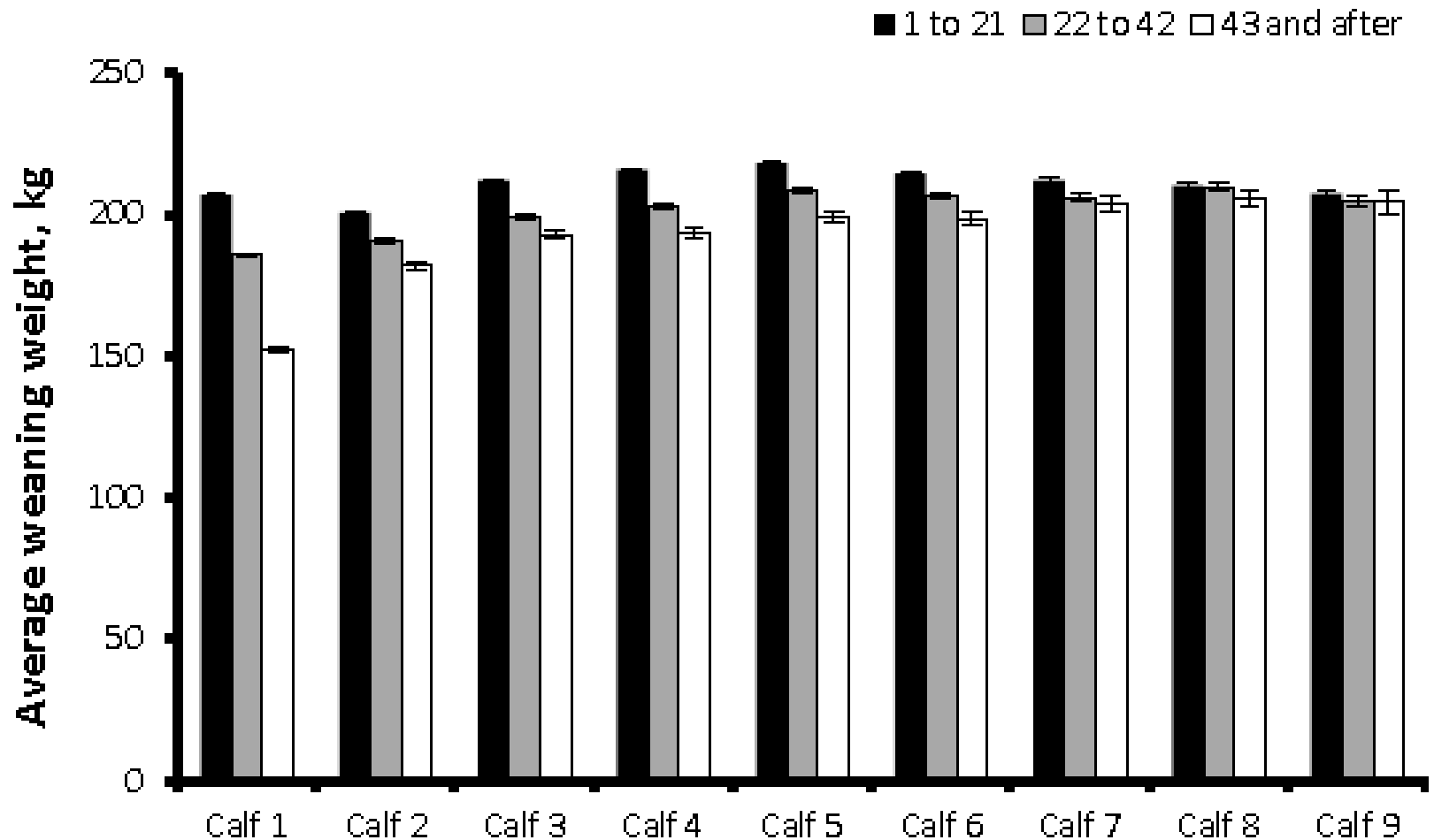
# Influence of Calving Period on Reproductive Longevity





# Influence of Calving Period on Weaning Weights

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# Why folks choose not to TAI?

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**“Too many hassle factors...”**

**“PREGNANCY RATES TO TAI ARE TOO LOW...”**

- **40-60% pregnancy rates to TAI**
- **It is a process that will take time and commitment!**

# UF-NFREC CASE STUDY

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# UF-NFREC CASE STUDY

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**2006**

Start breeding season



1

Remove bulls



120

**2007**

Start breeding season



1

Remove bulls



120

**2008**

TAI heifers



1

TAI cows



8

TAI late calving cows



49

TAI late, late calving cows



70

Remove bulls

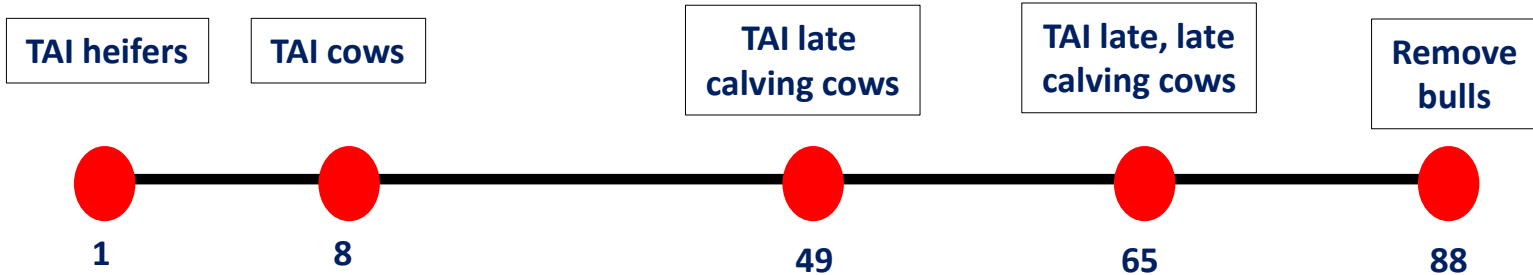


110

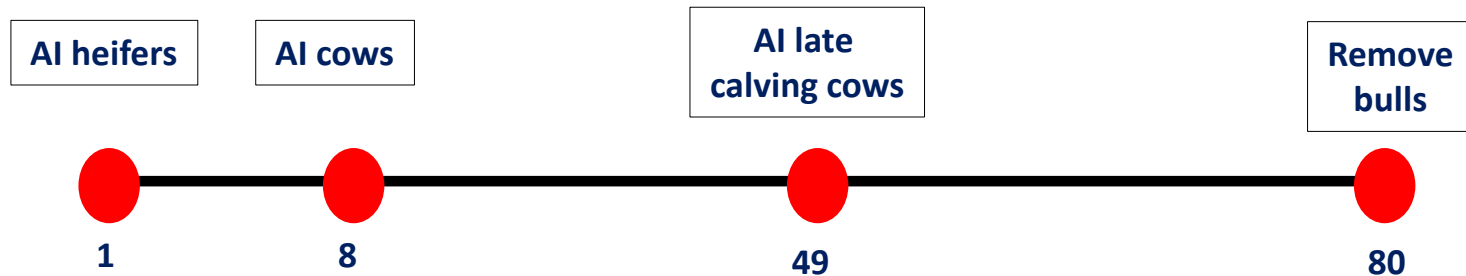
# UF-NFREC CASE STUDY

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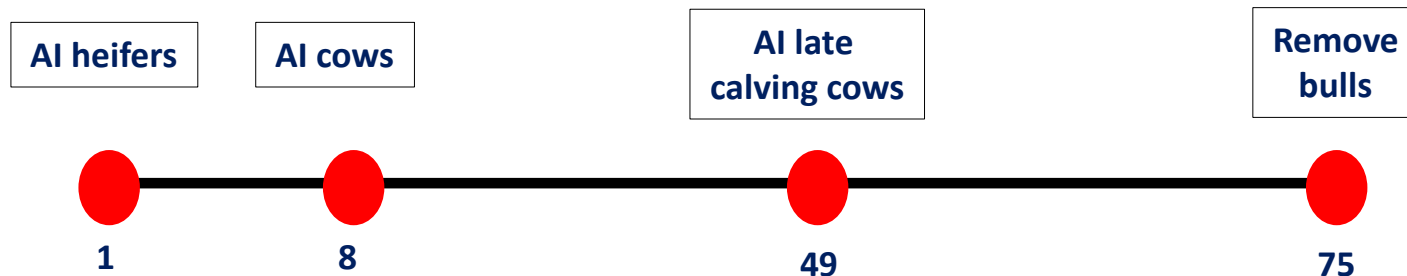
2009



2010



2011



# UF-NFREC CASE STUDY

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2012



2013







# UF-NFREC CASE STUDY

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Breeding season pregnancy rates:

Year	2006	2007	2008	2009	2010	2011	2012	2013
Breeding season length	120	120	110	88	80	75	70	72
Pregnancy rates	81%	86%	84%	86%	82%	94%	92%	93%
Mean calving day	79.2	80.9	59.2	56.2	53.7	47.2	39.5	38.7

# UF-NFREC CASE STUDY

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## Change in calf value:

Year	2006	2007	2008	2009	2010	2011	2012	2013
Mean calving day	79.2	80.9	59.2	56.2	53.7	47.2	39.5	38.7
Difference from 2006/2007	0	0	21.7	24.7	27.2	33.7	41.4	42.2
Per calf increase in value	0	0	\$65	\$74	\$82	\$101	\$124	\$127
Herd increase in value	0	0	\$19,530	\$22,230	\$24,480	\$30,330	\$37,260	<b>\$37,980</b>





**AI**

**Cowculator**



# AI Cowculator

Product/Service

Create Call-to-Action

Liked

Message



Timeline

About

Photos

Likes

More

PEOPLE >



665 likes

Margo Lamb, Manuel Ramos and 4 others like this.



Status Photo / Video Offer, Event +

AI Cowculator What have you been up to?

AI Cowculator Posted by Pedro Levy [?] · Yesterday at 11:07am

Nice article written by Dr. Dubeux, our forage specialist at the NFREC.

# Managing Reproductive Efficiency

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- Nutrition
- Breeding season
- Breeding soundness exam
- Pregnancy diagnose
- Cull open cows
- Estrus synchronization – TAI

**YOU DECIDE WHEN YOUR COWS  
GET PREGNANT!!**



# THANK YOU!

A photograph of two brown cows in a green field. The cows are positioned in the middle ground, one on the left and one on the right. They are surrounded by large, mature trees with thick trunks and dense foliage. Spanish moss hangs from the branches of the trees, creating a soft, dappled light effect. The background shows a misty or hazy landscape with a wooden fence visible on the left side.

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**[www.secattleadvisor.com](http://www.secattleadvisor.com)**

**Beef Reproduction Task Force**

**[www.beefrepro.unl.edu](http://www.beefrepro.unl.edu)**

**[www.edis.ifas.ufl.edu](http://www.edis.ifas.ufl.edu)**