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Reproduction - Impact of Estrous Synchronization and Al on Cowherd Performance Over Time

G. Cliff Lamb

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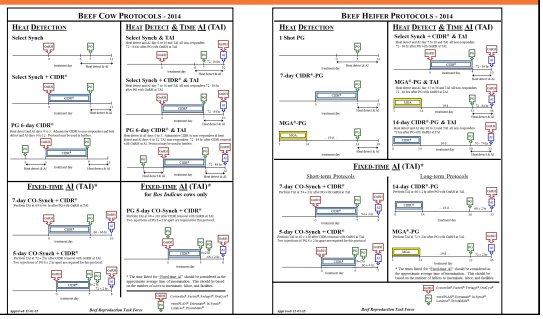
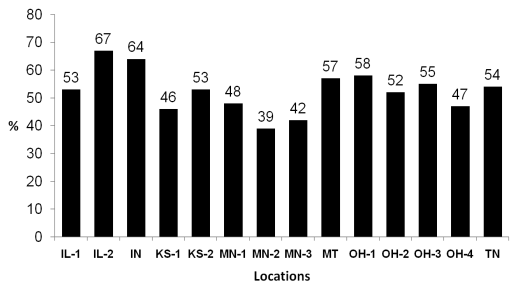
UF IFAS UNIVERSITY of FLORIDA

We know how to synchronize cows!

Estrous Synchronization and AI in Beef Cattle



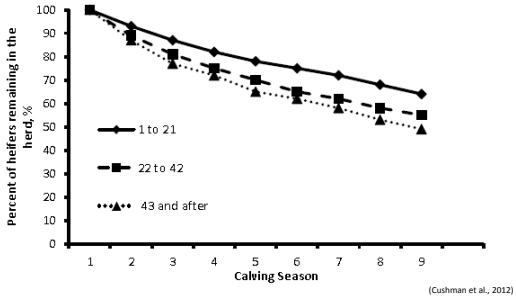
Location/Herd Effects



UF-NFREC Case Study

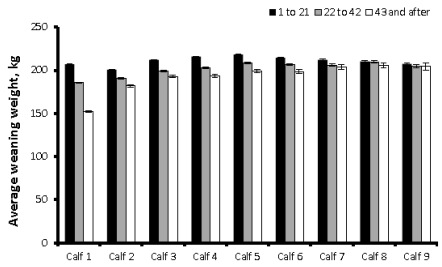
Pregnancy has 4 times greater economic impact than any other production trait!

Influence of Calving Period on Reproductive Longevity



(Cushman et al., 2012)

Influence of Calving Period on Weaning Weights



(Cushman et al., 2012)

Expectations for Every NFREC Female in the Herd

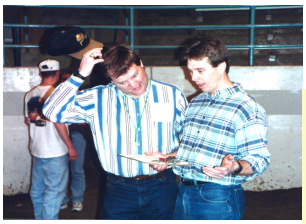
- Must calve by 24 months of age
- Cow must have a calf every 365 days
- Cow must calve without assistance
- Cow must provide sufficient resources for the calf to reach it's genetic potential
- Calf must be genetically capable to perform
- Cows must maintain their body condition score for my conditions
- Must not be crazy (disposition)

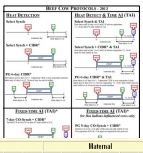
Primary Reasons for Choosing Not to ES/AI

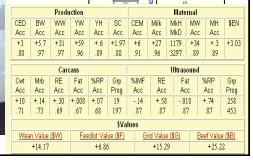
Too many hassle factors!!!

Primary Reasons for Choosing Not to ES/AI

Complicated protocols and sire selection







Primary Reasons for Choosing Not to ES/AI

Reliable facilities

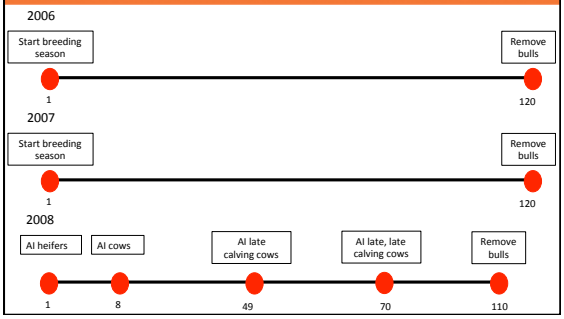
PRIMARY REASONS FOR CHOOSING NOT TO ES/AI

Labor for AI and administering products

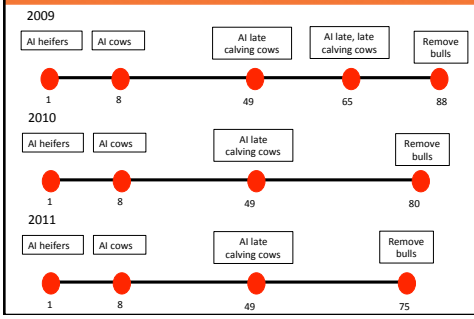
PRIMARY REASONS FOR CHOOSING NOT TO ES/AI

TIME!

UF-NFREC CASE STUDY



UF-NFREC CASE STUDY



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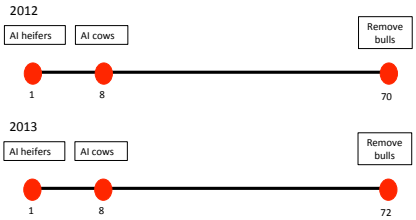

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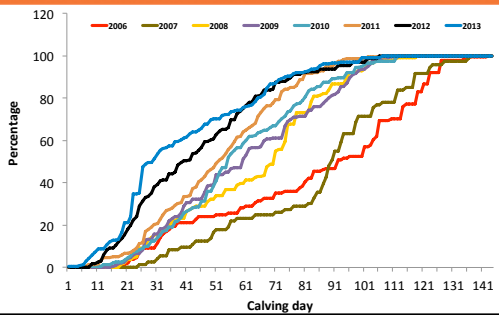


UF-NFREC Case Study

Breeding season pregnancy rates:

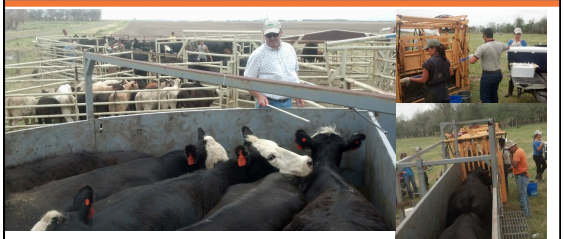
Year	2006	2007	2008	2009	2010	2011	2012	2013
PR	81%	86%	84%	86%	82%	94%	92%	93%
Mean calving day	79.2	80.9	59.2	56.2	53.7	47.2	39.5	38.7
BS length	120	120	110	88	80	75	70	72

UF-NFREC Case Study

Change in calf value:

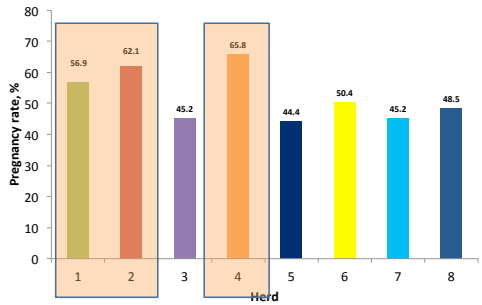
Year	2006	2007	2008	2009	2010	2011	2012	2013
Mean calving day	79.2	80.9	59.2	56.2	53.7	47.2	39.5	38.7
Difference from 2006/2007	0	0	21.7	24.7	27.2	33.7	41.4	42.2
Per calf increase in value	0	0	$87	$99	$109	$135	$166	$169
Herd increase in value	0	0	$19,100	$29,700	$32,700	$40,500	$49,800	$50,700

2nd Experiment Case Study

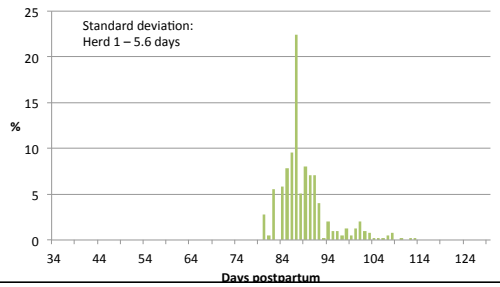


- 1,700 cows on 7 operations

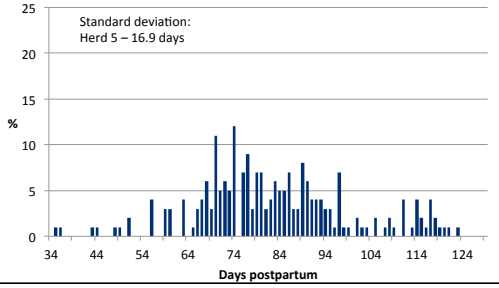
Pregnancy Rates by Herds



Distribution of Days Postpartum – Herd 1

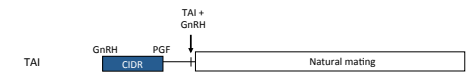


Distribution of Days Postpartum – Herd 5



Economics of Implementing TAI Program

Impact of Fixed-Time AI on Calving and Weaning



(Rodgers et al., 2011)

Impact of Fixed-Time AI on Calving and Weaning

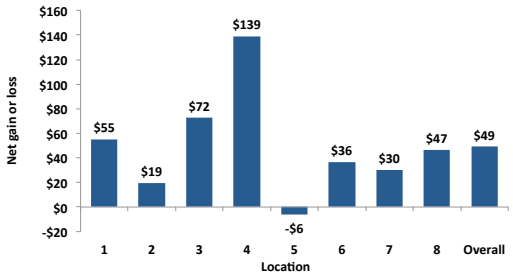
	Treatment	
Item	Control	TAI
No. of cows	615	582
Weaning rate, %	78	84
Weaning weight, lb	387 ± 8[a]	425 ± 8[b]

[ab] Means within row differ (P < 0.01)

38 lbs

(Rodgers et al., 2012)

Gain or Loss per Cow Exposed to TAI



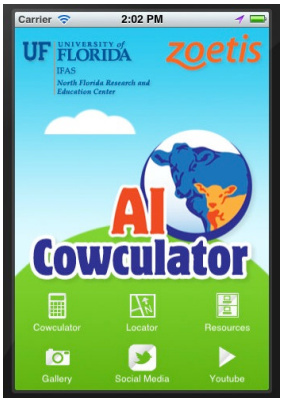
(Rodgers et al., 2011)

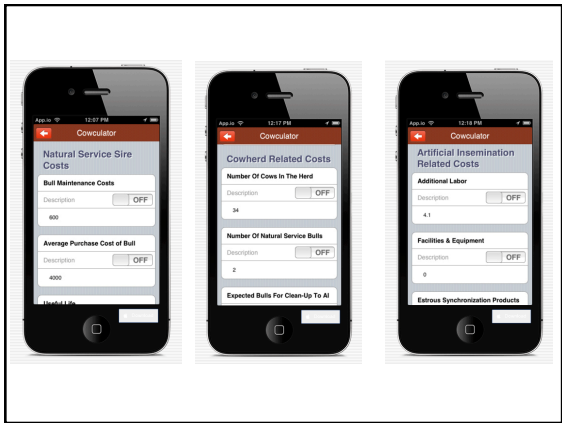
Change in Value Based on Herd Sire Costs

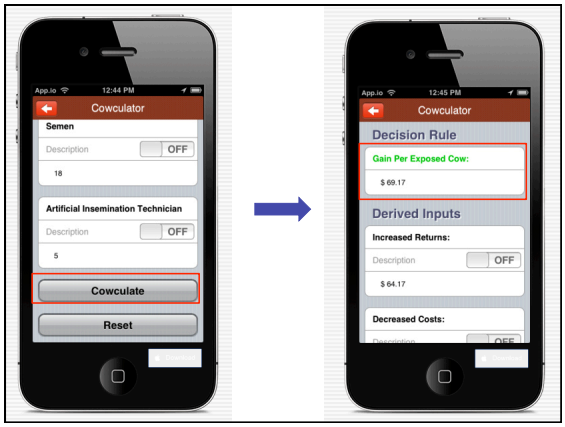
	Bull Value		
Item	$3,000	$6,000	$10,000
Increased returns (increased value of AI calves)	$97.22	$97.22	$97.22
Decreased costs decreased costs of clean-up bulls)	$32.11	$61.35	$100.34
Decreased returns (Attributed to fewer clean-up bulls included in decreased costs calculation)	$0.00	$0.00	$0.00
Increased costs (additional labor, semen, AI supplies, etc.)	$44.60	$44.60	$44.60
Gain per cow exposed to AI	$84.73	$113.97	$152.97
Gain per 34 head operation	$2,881	$3,875	$5,201
Gain per 100 head operation	$7,446	$9,434	$12,086

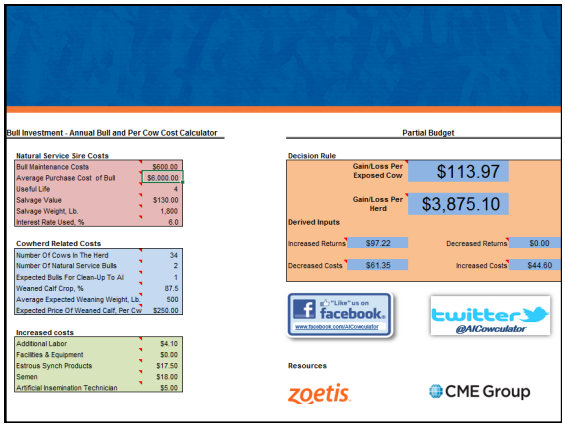
AI Cowculator

Google Play Store
or
Apple iTunes










THANK YOU!