

# **An integrated approach to expand marketing opportunities for small- and medium-sized beef producers from value-added heifers and steers**

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United States Department of Agriculture  
National Institute of Food and Agriculture

# **Challenges & opportunities facing the beef industry...**

## ***Challenges.....***

- **A segmented industry, steeped in tradition, comprised of large numbers of small- to medium-sized farms**
- **Slow to adopt technology**
- **Rising input costs**
- **Declining inventory**
- **Increasing global competition**
- **Perceived lack of incentives**

## ***Opportunities.....***

- **On-the-shelf technology not being used (*that works*)**
- **Increasing domestic & global demand for high-quality beef**
- **Marketing incentives that will add value**



# Specific Aims

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## *Specific Aims:*

- 1) To implement a comprehensive Extension education program (based on current but under-utilized information) focusing on management and marketing of replacement beef heifers and steers to increase profit of small- and medium-sized enterprises.
- 2) To Research the economic implications for farmers that participate in the program.
- 3) To develop an Education program for practicing veterinarians, extension field staff, veterinary students, and animal science students, and through a pilot program to assess opportunities to educate vocational agriculture students and 4-H club members to ensure that the program is self-sustaining.



# Developing a plan

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1. Create an understanding of the importance of heifer development based on reproductive outcomes.
2. Changes in heifer development spill over into the cow herd.
3. Importance of reproductive management becomes apparent.
4. Focus expands to genetic improvement.
5. Creation of a value-added product requires a re-evaluation of marketing strategies.





## *Implementation through an existing program....*

### The Missouri Show-Me-Select Replacement™ Heifer Program

#### Since 1997.....Participation and sales

<b>706 farms</b>	<b>109 sales</b>
<b>205 veterinarians</b>	<b>23,112 heifers sold</b>
<b>97,950 heifers</b>	<b>\$25,936,950 in gross sales</b>

**Tier Two: Heifers are eligible to qualify for Tier Two in the Show-Me-Select Replacement Heifer Program based on minimum accuracies of the heifer's sire at the time of sale.**

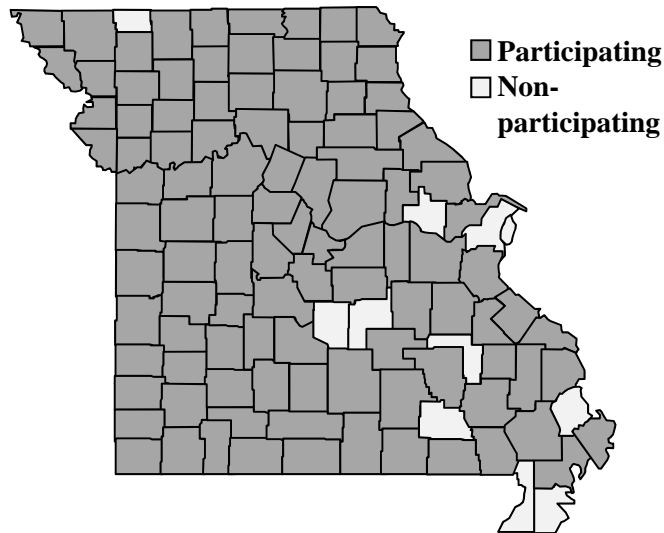
<b>Trait</b>	<b>Accuracy</b>
<b>Calving ease (direct)</b>	<b>.65</b>
<b>Calving ease (maternal)</b>	<b>.30</b>
<b>Weaning weight</b>	<b>.75</b>
<b>Carcass weight</b>	<b>.20</b>
<b>Marbling</b>	<b>.20</b>



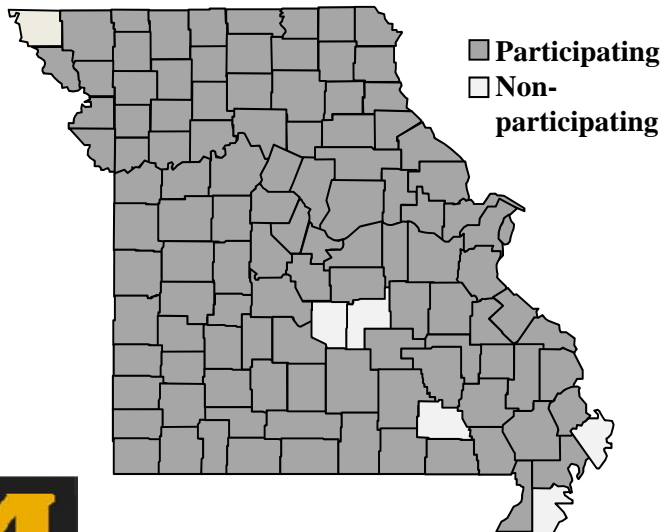
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# Enrollment & sales



**Producers from 103 (90%) of Missouri's 114 counties enrolled heifers in the Show-Me-Select Replacement Heifer Program from 1997-2011**



**Buyers from 108 (95%) of Missouri's 114 counties purchased heifers from the Show-Me-Select Replacement Heifer Program from 1997-2011 sales.**



# Can producers make more money?

(data from Fall '10 & Spring '11)

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- Tier 1 NS bred (n = 597) BASELINE AVG. \$1,439
- Tier 1 AI bred (n = 500) added \$87 = \$1,526
- Tier 2 NS bred (n = 34) added \$136 = \$1,575
- Tier 2 AI bred (n = 82) added \$241 = \$1,680



# Can producers make more money?

- **CAB<sup>®</sup> premiums** = \$3-5/cwt or \$25-40/animal (over Choice)
- **Prime premiums** = \$8-10/cwt or \$65-80/animal (over Choice)
- **Choice averages** = \$8/cwt (over Select)



# 2008-2010 Steer Performance Data

MU Thompson Farm Research Center

Stacking technologies using fixed-time AI and high accuracy sires

Sire group	Maternal Grand Sire	No. of steers	Choice or higher (%)	CAB <sup>®</sup> (%)	Prime (%)
High accuracy	High accuracy	118	100	52	33
High accuracy	Low accuracy	53	100	60	34
High accuracy	Natural service	27	100	56	19
<b>Totals</b>		<b>198</b>	<b>100</b>	<b>55</b>	<b>31</b>
Natural service	High accuracy	39	95	54	15
Natural service	Low accuracy	12	100	42	25
Natural service	Natural service	23	96	26	9
<b>Totals</b>		<b>74</b>	<b>96</b>	<b>43</b>	<b>15</b>

Angus Carcass Challenge 1<sup>st</sup> place – 2<sup>nd</sup> quarter, Central Region

2010 = 87% CAB<sup>®</sup> & Prime

2011 = 89% CAB<sup>®</sup> & Prime

(Currently in the U.S., 1 in 5 carcasses qualify for CAB<sup>®</sup> and 3% of all carcasses grade Prime)

# Outcomes - Research

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- **2008 - Producer survey**
  - **Perceptions regarding technology adoption**
- **2009 - Creation of a heifer life-time value index**
- **2010 - Economic cost and returns assessment**
- **2011 - Post-adoption producer assessment**

- Increased profits are achieved through changes in calving distribution patterns of herds.
- Higher percentages of cows calve during a more concentrated time frame and earlier in the calving period.
- Rapid improvements in genetics result from use of high accuracy superior sires.

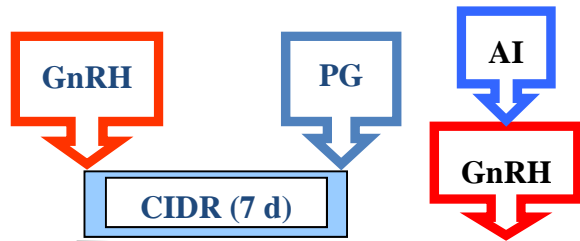
18 Publications: Refereed journal articles, abstracts & proceedings papers



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# Outcomes - Extension

## On-farm demonstrations with fixed-time AI in postpartum beef cows



0 Treatment day 7 .....66h

Fixed-time AI pregnancy rates

73 herds = 4327/7028 (62%)

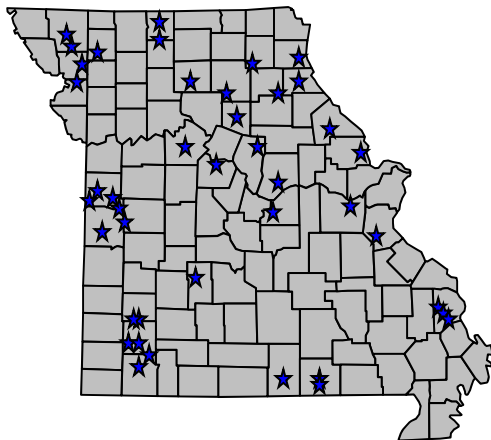
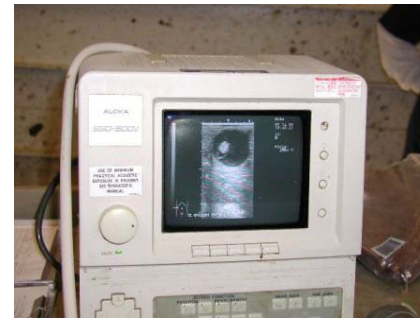
### Portable AI Barns

- MU Extension funding placed 8 barns across Missouri



### Pregnancy determination with ultrasound

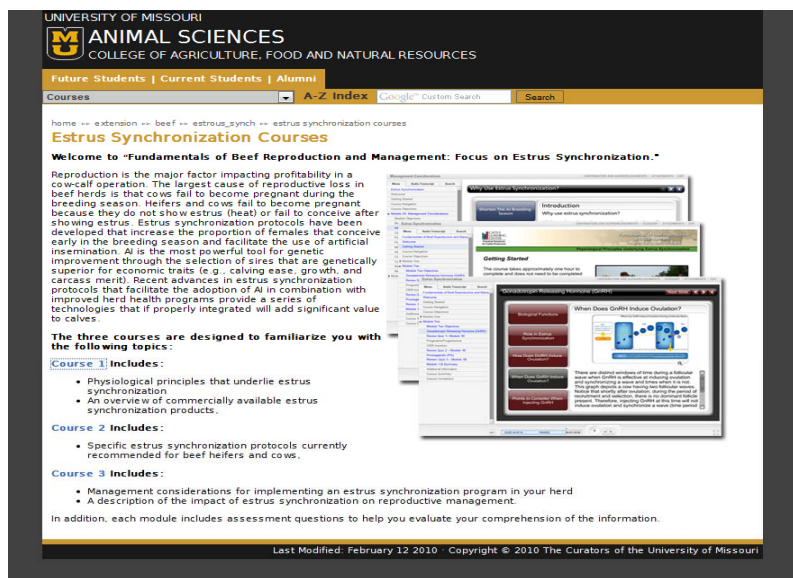
- Early diagnosis
- Fetal sexing



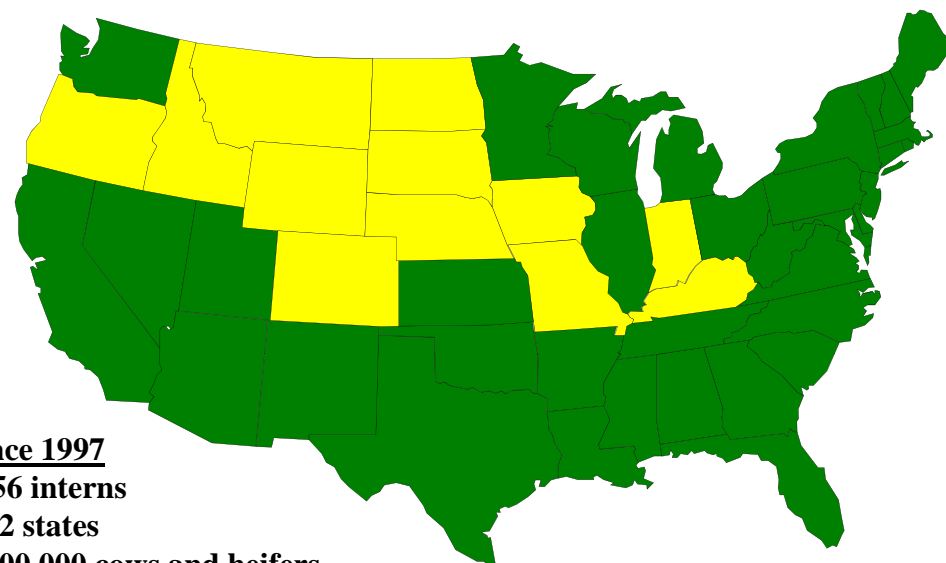
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# Outcomes - Education

## Curriculum development, internship, in-service training



**Estrus synchronization curriculum**



### Since 1997

- 156 interns
- 12 states
- 200,000 cows and heifers

**Reproductive management internship**

- Practitioner training – ultrasound; 35 veterinarians state-wide
- In-service training for Vocational Agriculture Instructors; 2010-2011; 42 instructors
- Industry tours to participating KS feed yards; 2009-2011; 125 participants



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# Acknowledgements

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 Extension

