Economics of Reproduction

Joe Horner, Ryan Milholin, and Scott Poock

Commercial Agriculture

Five ways to "Find 80 cents a Cow each day"
Mike Hutjens

- Boost Components
- Long Day Lighting
- **Fewer Days Open**
- **Higher Pregnancy Rates**
- Extra Milking

2 out of 5 suggestions pertain to Reproduction

What is the added value of a Pregnancy?

- **A pregnancy is worth $200-500**

What is the cost of an extra day open?

- **$0.42 to $4.95 a day for a day open after 110 DIM.**

For examples let's use:

$3.50/day

What is your average Days Open?

- 121 Herds on DHIA in Missouri
- Average 186 days open
- Range from 103 to 389 days open
- National Average 154

What is your average Days Open?

- 186-154=32
- 32*3.5=112

- **$112 lost due to excessive days open per cow in the herd vs national average**

What is the cost of poor reproduction?

- $35 per cow in the herd for each % point increase in **Pregnancy Rate**

What is **Pregnancy Rate**?

•100 cows

How many were bred?

- **33** cows (heat detection rate)
  - Or more importantly

- **67 cows were not bred!**

How many will become pregnant?

- 12

- Therefore

- The Preg rate is 12%

What is Pregnancy Rate?

- 100 cows

- 33 cows bred

- 33/100= 33%, Heat Detection Rate

- 12 diagnosed pregnant

- 12/100= **12%** Pregnancy Rate

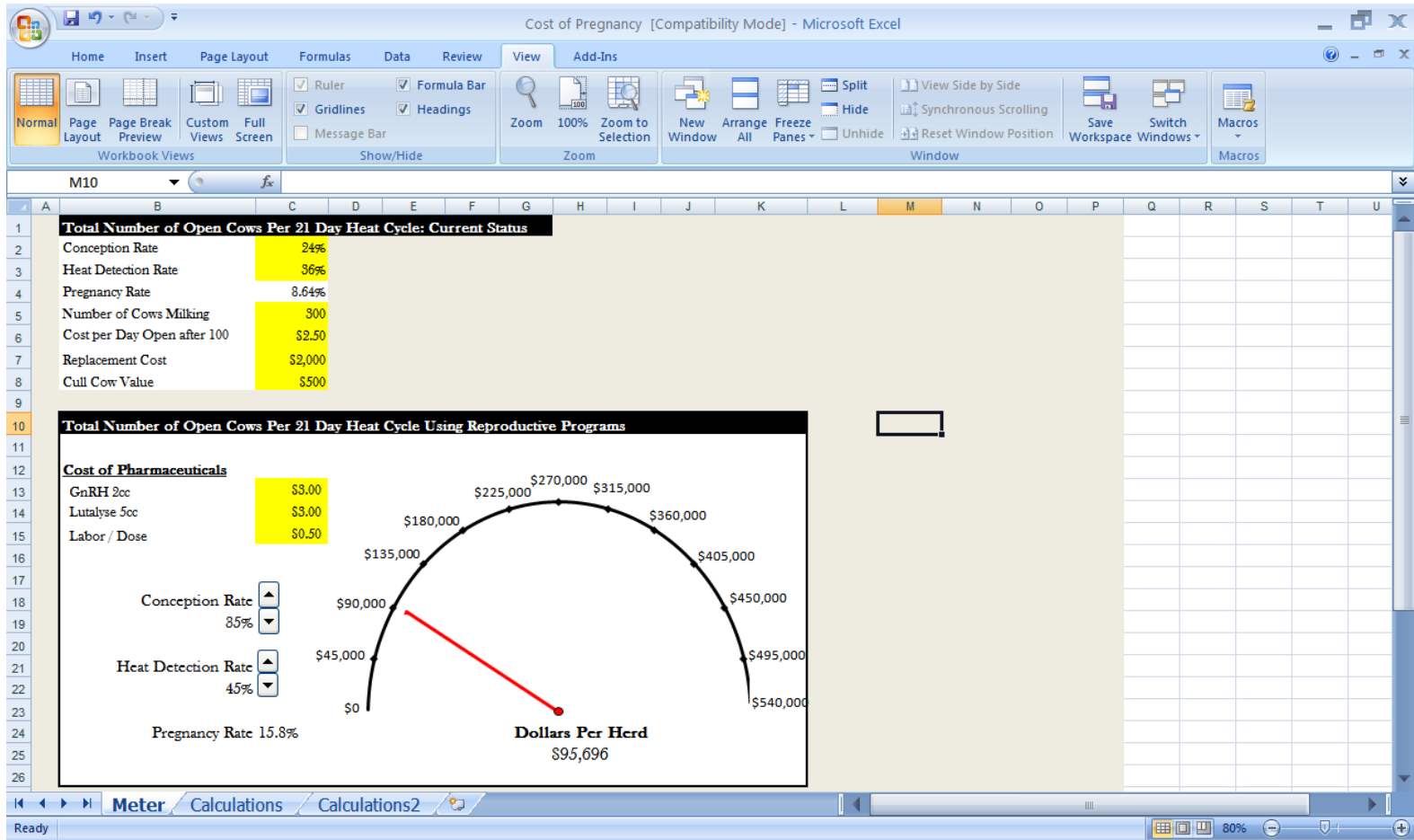   - These are Missouri averages!

What is your Pregnancy Rate

- 121 Herds on DHIA in Missouri
- 13 annualized average Pregnancy Rate
- National Average 18

What is your Pregnancy Rate

- Average herd in Missouri 110 cows
- Increasing Pregnancy rate from 13 to 18 yields:

- $**105.68** per cow in the herd

Using the Reproduction Economics Spreadsheet

Put in your herd's numbers (yellow boxes)

	B	C
1	**Total Number of Open Cows Per 21 Day Heat Cycle: Current Status**	
2	Conception Rate	24%
3	Heat Detection Rate	36%
4	Pregnancy Rate	8.64%
5	Number of Cows Milking	300
6	Cost per Day Open after 100 days	$2.50
7	Replacement Cost	$2,000
8	Cull Cow Value	$500
9		
10	**Total Number of Open Cows Per 21 Day Heat Cycle Using Reproductive Programs**	

Fill in the cost of the medications and labor

Now change Conception Rate
and
Heat Detection Rate
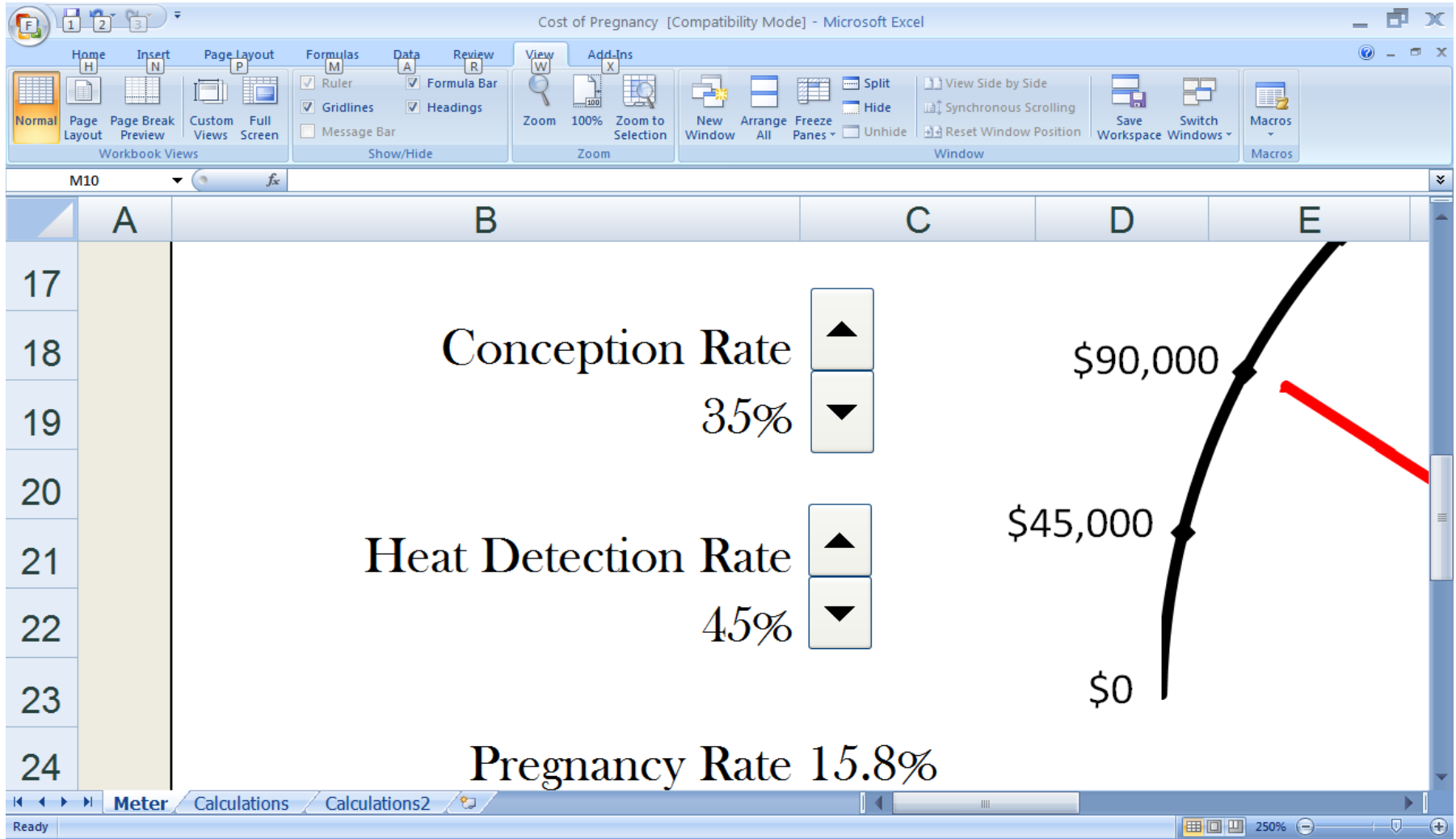
Observe the change in $/**herd**