

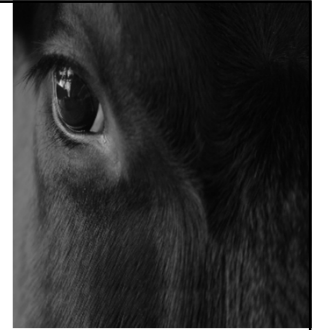
# Feed Those Soon-to-be-Born Calves Right for Long-Term Herd Success

Kelly Sanders, PhD  
Westway Feed Products

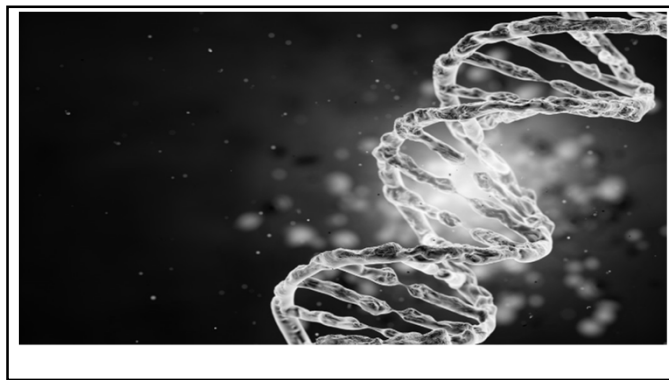


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1. Provide thoughts on epigenetics that affect cattle's ability to express their genetic potential.
2. HOW do we manage our genetics through nutrition



2



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What is  
Epigenetics?

4

## Abnormal Gene Expression

"Canadian Moose Beaver"



"African Horse Monkey"

5

When & where did it start?



Dutch Winter Hunger



6

When & where did it start?

**Holocaust Survivors**



7

When & where did it start?



8

How does this affect me? **Cattle Feeding – Quality Grading**



9

How does this affect me? **Reproduction**



10

How does this affect me? **1<sup>st</sup> Trimester nutrition**



1. Reduced life time supply of oocytes
2. Increase follicle stimulating hormone
3. Increased testosterone
4. Reduced Sertoli cells in bulls
5. Enlarge aorta
6. Increased blood pressure

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How does this affect me? **2<sup>nd</sup> Trimester nutrition**



1. Muscle fiber development
2. Weaning weight
3. Finishing weight

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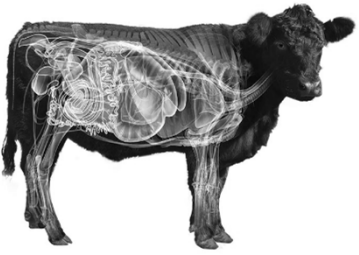
How does this affect me? **3<sup>rd</sup> Trimester nutrition**



1. Muscle fiber development
2. Adipocyte development
3. Potential weaning weight
4. Potential Carcass weight
5. Potential age of puberty for heifers
6. AI conception rates
7. Earlier conceptions rates, 1<sup>st</sup> 21 days
8. Health


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How does this affect me? **Immunity**



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How does this affect me? **Environmental Stress**

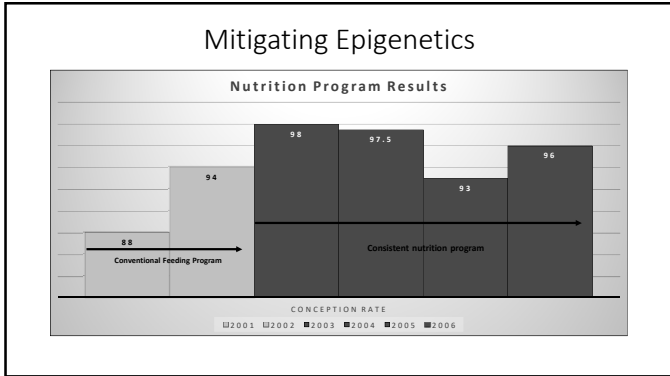


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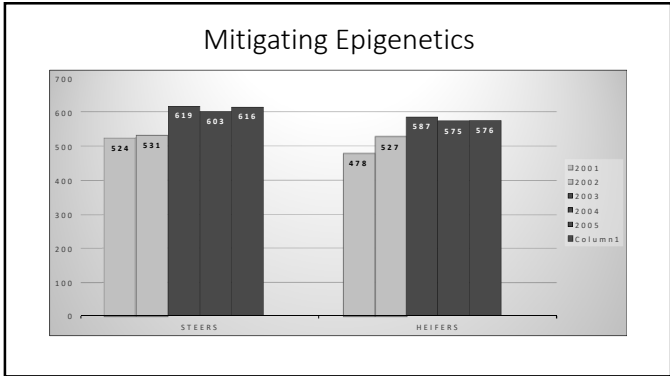
How do we manage the opportunity?



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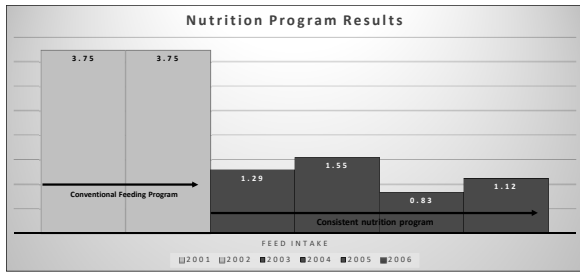


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## Mitigating Epigenetics



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If they ask you anything you don't know, just say it's due to epigenetics.

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