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Alternative Feedstuffs and Changing Coproducts for Cowherd

Dr. Dan Shike
University of Illinois

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Outline

- Introduction
- Alternative feedstuff considerations
  - Nutrient composition
  - Availability and consistency
  - Storage and feeding
  - Effects on performance
  - COST
- Changing coproducts

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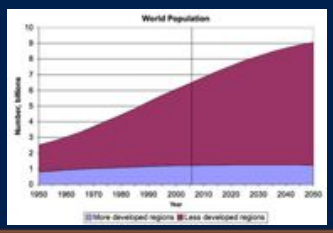
Introduction

- Changing dynamics in agriculture
  - Increasing population
  - Decreasing acres for grazing or crops
  - Increased utilization of grain for fuel
  - Increased input costs



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Cow/Calf Profitability

- Graze as many days as possible
  - Varies from region to region
  - Varies year to year
    - *Drought*
    - *Snow/ice*
- Feed Costs!!!
  - 50-70% of the cost of production
  - Most of the costs are in stored feeds
  - ↑ Costs of traditional feeds (hay and corn)

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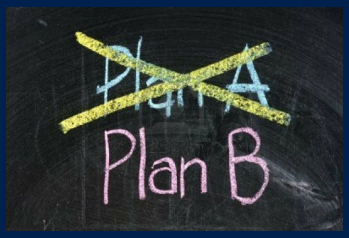
Alternative Feedstuffs

- Alternative
  - Available as another possibility
- Varies from region to region



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Alternative Feedstuffs

- Alternative feedstuff considerations
  - Nutrient composition
  - Availability and consistency
  - Storage and feeding
  - Effects on performance
  - COST

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Nutrient Composition

- Nutrient composition
  - Get feed analyzed
  - Know the requirements of your cows
- Supplement considerations
  - Need calcium for corn coproducts
  - What about sulfur?

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Availability and Consistency

- Availability
  - Google Missouri Byproduct
  - Drought affected corn coproduct availability
- Consistency
  - Plant to plant variation
  - Within plant variation

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Storage Considerations

- Commodity shed
- Bunker
- Bag
- Bin
- Ground

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Storage Considerations

- Wet vs. Dry
  - Feed Cost / trucking cost
  - Shelf-life of wet product

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Feeding Method

- Product form poses challenges
- DDGS
  - Difficult to pellet
  - Meal
    - *Wind*
    - *Mud*

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Feeding Method

Bunks

Ground

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Equipment Considerations

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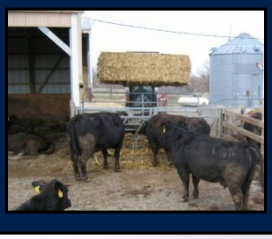
Effects on Performance

Traditional

"Alternative"



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Methods

- **164 Angus and Simmental Cows (16 pens)**
- **Trial started at calving**
- **Trial ended at time of AI**
- **Cow DM disappearance, BW change, milk production, calf ADG, and AI conception**

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Treatments

- **Ad Lib:** DDGS (~14.3 lbs DM/d) with ad libitum access to corn stalk residue bales
- **High Residue:** DDGS (~14.3 lbs DM/d) and ground corn stalk residue (~ 14.1 lbs DM/d)
- **Low Residue:** DDGS (~16.5 lbs DM/d) and ground corn stalk residue (~ 9.9 lbs DM/d)
- **Hay:** (Control) Ad libitum access to good quality mixed alfalfa hay bales

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Feed Analysis

Ingredient	% CP	%ADF	%NDF	%TDN	% Fat	%S	%K	%Ca	%P
DDGS	27.38	14.17	29.82	74.44	7.87	0.62	1.33	0.11	0.89
Stalk Bale	3.05	48.69	77.07	52.71		0.07	1.34	0.63	0.08
Alfalfa Bale	20.1	37.57	48.62	61.7		0.2	1.66	1.13	0.34

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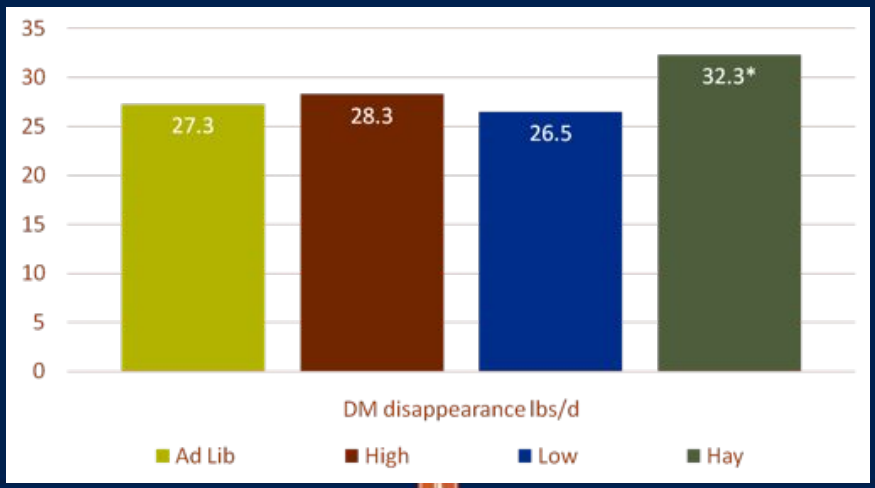
DM Disappearance lbs/d



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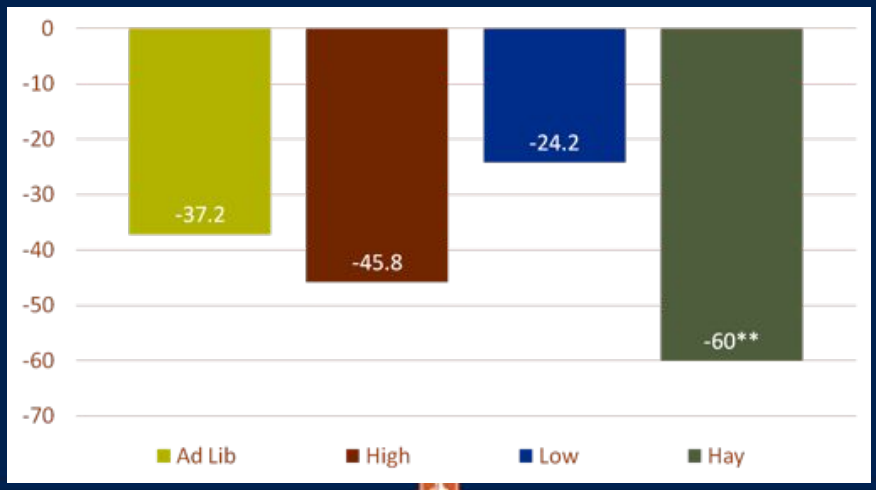
BW change, lbs



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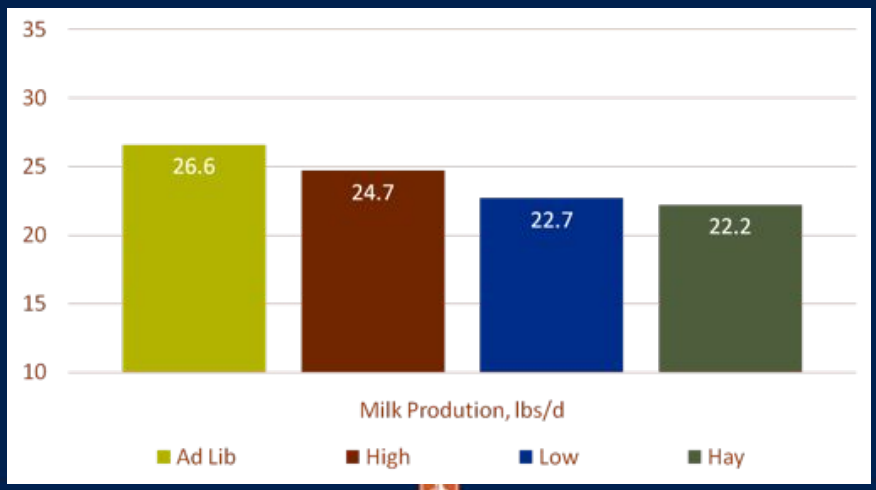
Milk Production, lbs/d



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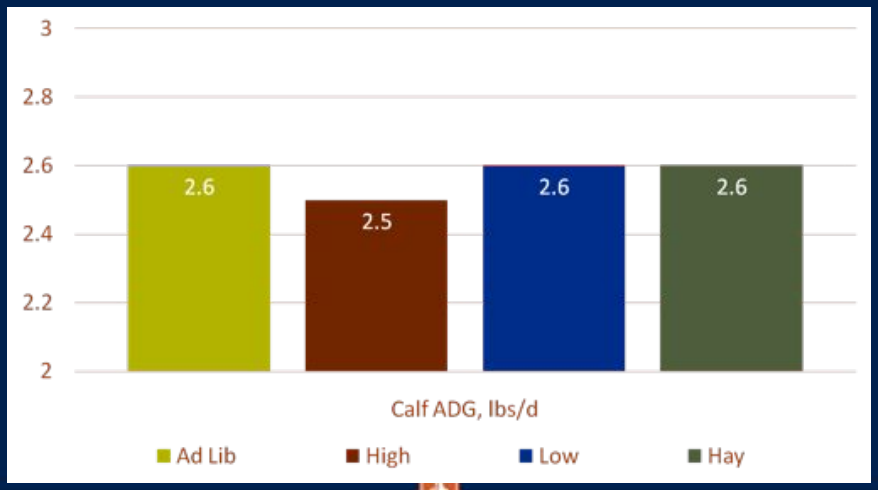
Calf ADG, lbs/d



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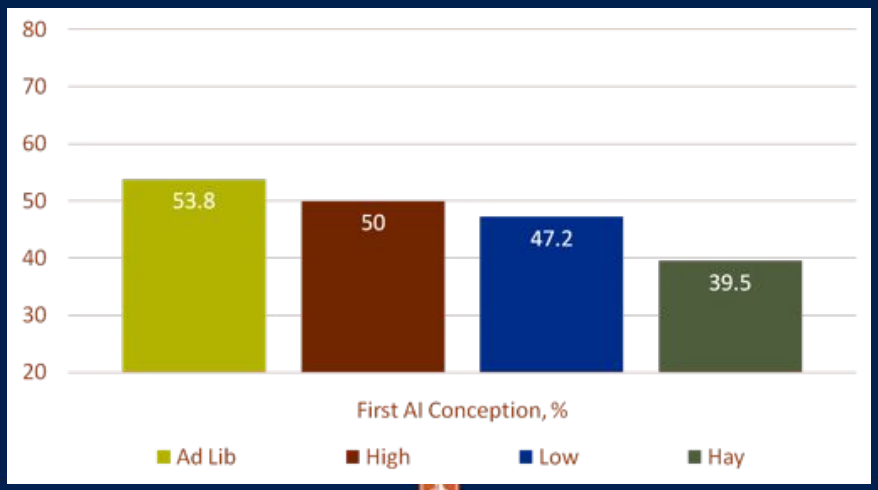
First AI Conception, %



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Cost

- If nutrient requirements are met and performance is adequate decisions can be made solely on COST

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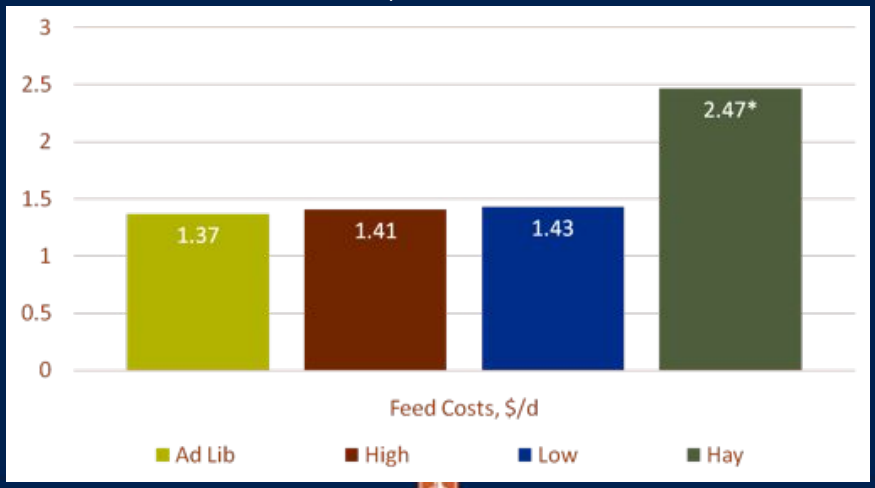
Feed Costs, $/d

Prices: DDGS - $120 / ton, Hay- $130 / ton, Corn Residue $55 / ton



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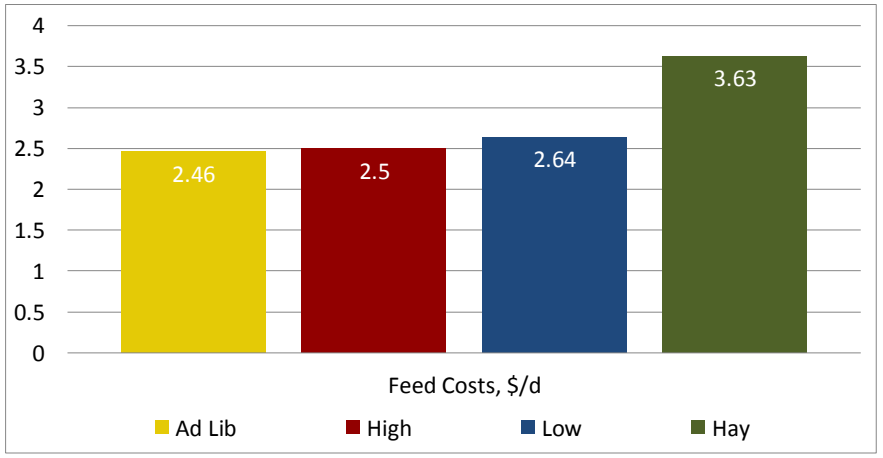
Feed Costs, $/d

Prices: DDGS - $275 / ton, Hay- $225 / ton, Corn Residue $75 / ton



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Changing Coproducts

- **Coproducts change**
  - **Different composition**

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Methods

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Treatments

- **DDGS:** 14.3 lbs DM/d DDGS with ad libitum access to corn stalk residue bales
- **Bran/DDGS:** 9.7 lbs DM/d Bran and 4.8 lbs DM/d DDGS with ad libitum access to corn stalk residue
- **Bran/HP:** 11.2 lbs DM/d Bran and 3.3 lbs DM/d HP with ad libitum access to corn stalk residue
- **Hay:** (Control) Ad libitum access to good quality mixed alfalfa hay bales

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Feed Analysis

Ingredient	% CP	%ADF	%NDF	%TDN	% Fat	%S	%K	%Ca	%P
Dakota Gold BPX DDGS	30.68	17.82	33.04	90	9.67	0.88	1.12	0.07	0.78
Dakota Gold HP	40.04	13.35	30.29	89	5.5	0.68	0.47	0.13	0.41
Dakota Bran	13.34	5.34	22.01	89	9.89	0.69	1.06	0.11	0.65
Corn Residue	3.37	46.11	71.63	54.52	-	0.05	1.03	0.61	0.05
Alfalfa Mixed Hay	17.31	37.98	52.05	61.42	-	0.17	1.67	0.94	0.29

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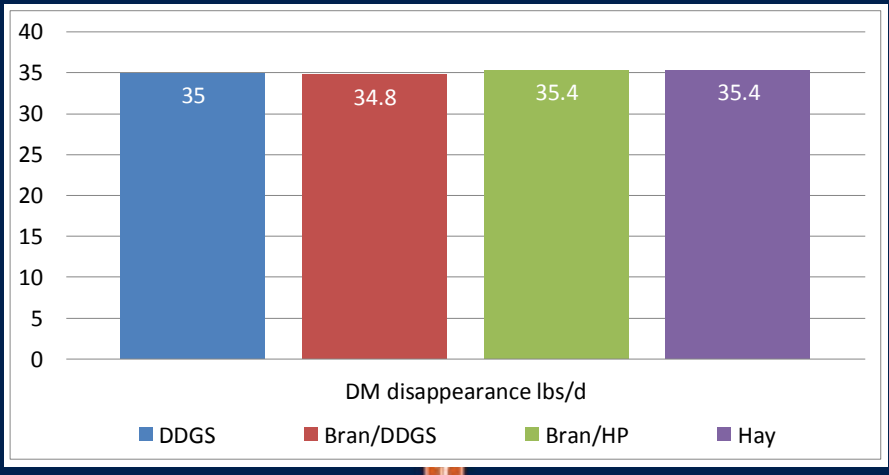
DM Disappearance lbs/d



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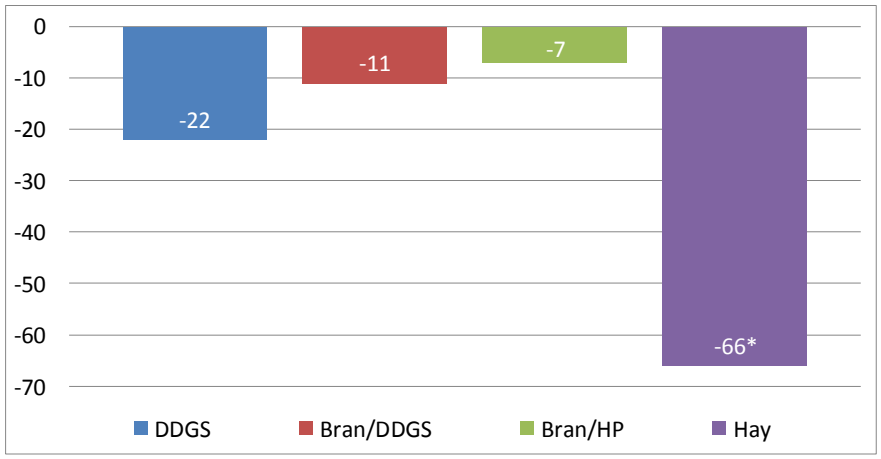
BW change, lbs



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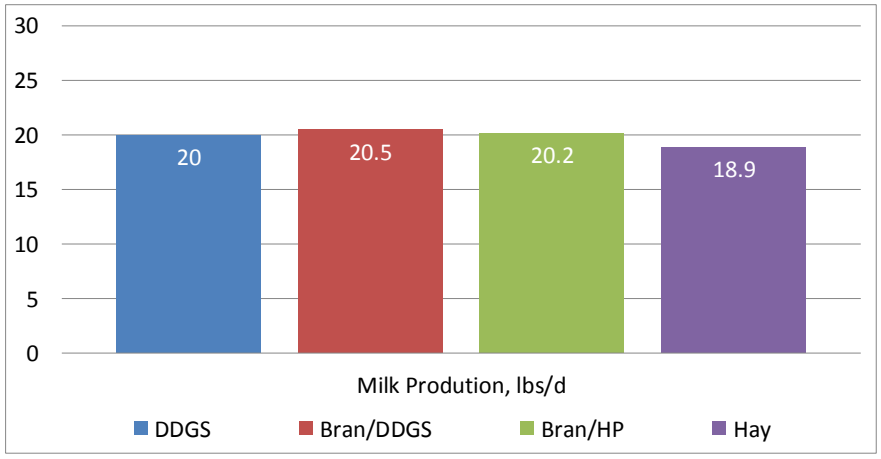
Milk Production, lbs/d



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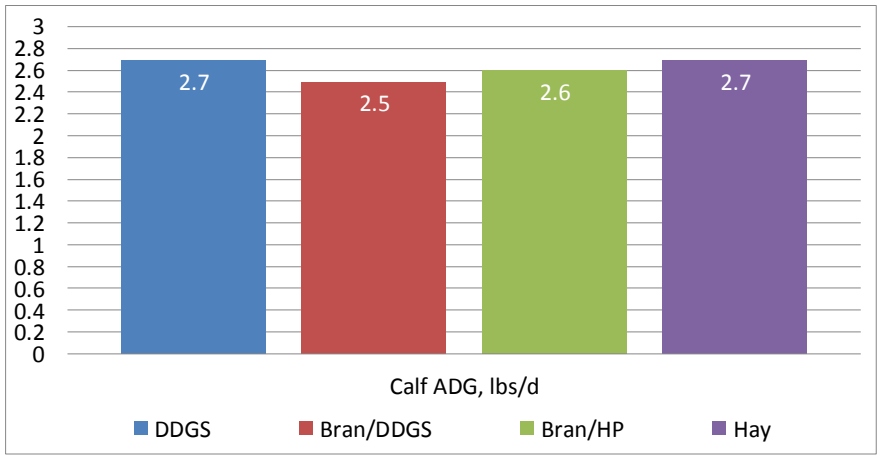
Calf ADG, lbs/d



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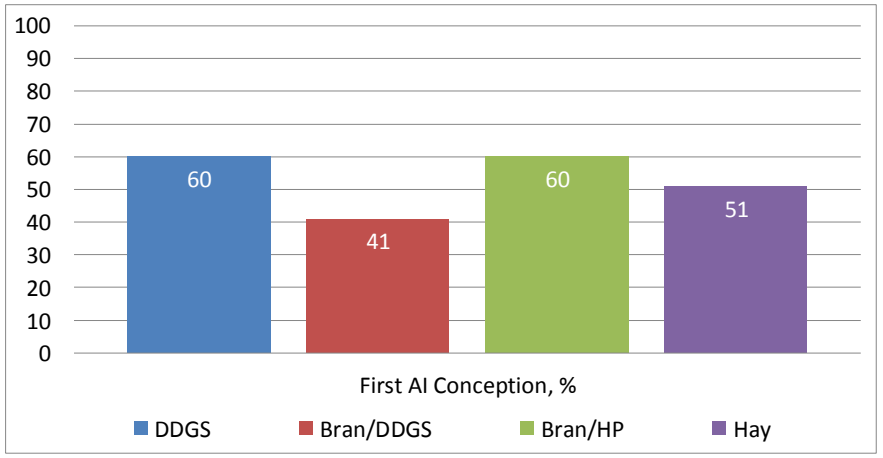
First AI Conception, %



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Summary

- Alternative feeds vary from region to region
- Must consider availability and consistency
- Evaluate storage and feeding requirements
- If performance is comparable, costs dictate
- As coproducts change, producers will adapt
- KNOW ANALYSIS and COSTS

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