

# Marketing & Production Strategies: Response to Increased Corn Prices

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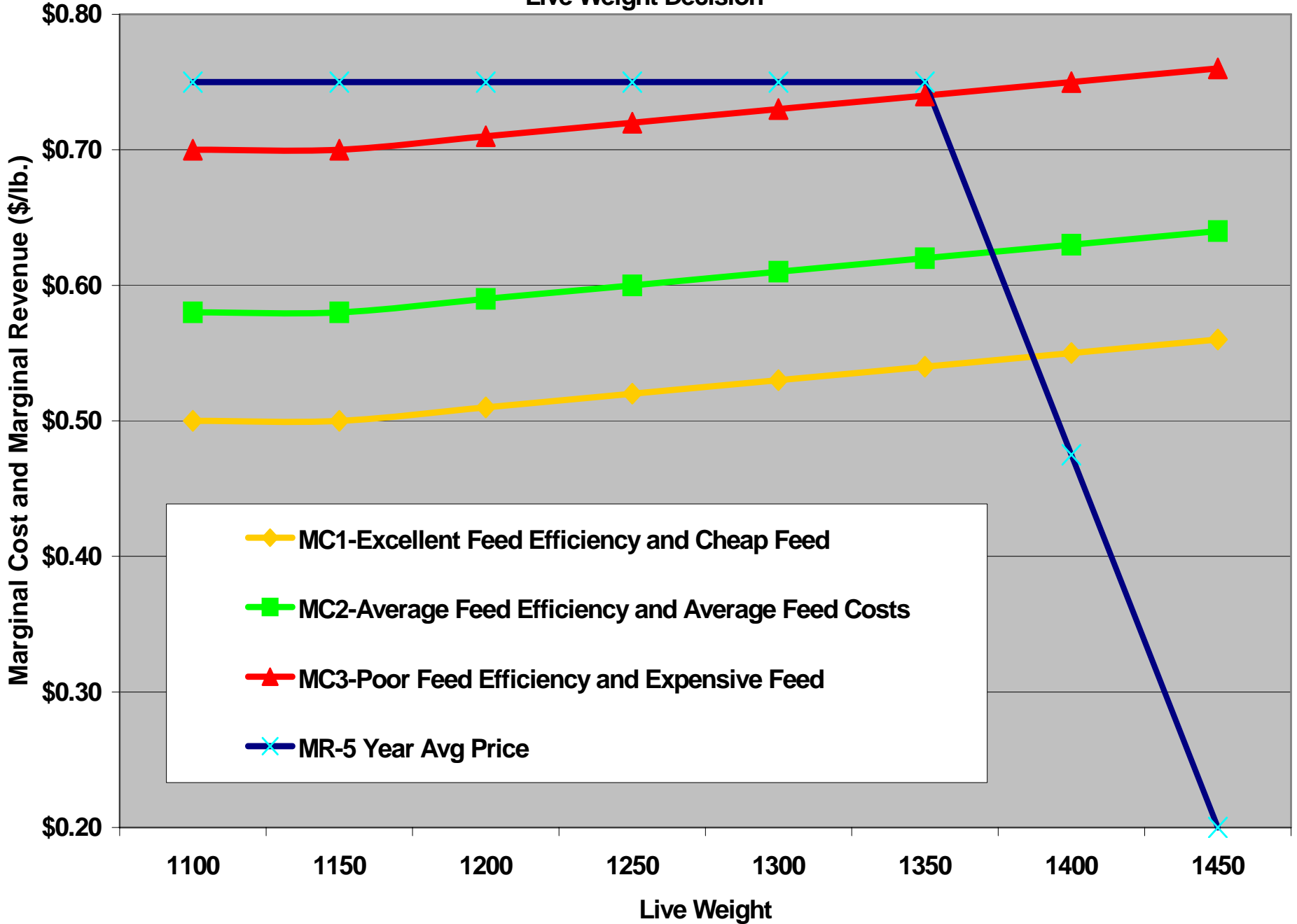
# Broad Questions

- Non-DGS Issues:
  - Should I adjust finishing weights?
  - Input price risk management
  - Placement decisions
- DGS Issues:
  - Can by-products offset corn prices?
  - What implications does DGS use have?

# Non-DGS Issues

- Finishing weights
  - Feed efficiency decreases at higher weights
    - Add weight until MC weight = MR weight
    - Optimal weights decline as feed costs increase
- Dillon Feuz, Utah State
  - As DOF increases:
    - ADG declines
    - F/G, Fat, Yield Grade increase

# Live Weight Decision



# Non-DGS Issues

- Price risk /Placement decisions
  - Watch FC purchase price
    - “Margin” Decisions vs. “Risk Loving Mentality”
  - Volatility in uncertain environment
    - Feeder cattle and feed prices
  - Selling vs. feeding corn (if applicable)

# Impact of Higher Corn Prices

Placement Weight	750
Selling Weight	1300
Corn (bu)	55

## *Impact of \$1 increase in corn (\$/bu):*

Increase in Feed Costs	\$ 55.00
Needed reduction in purchase price (\$/cwt).	\$ 7.33
or Needed increase in sales price (\$/cwt)	\$ 4.23

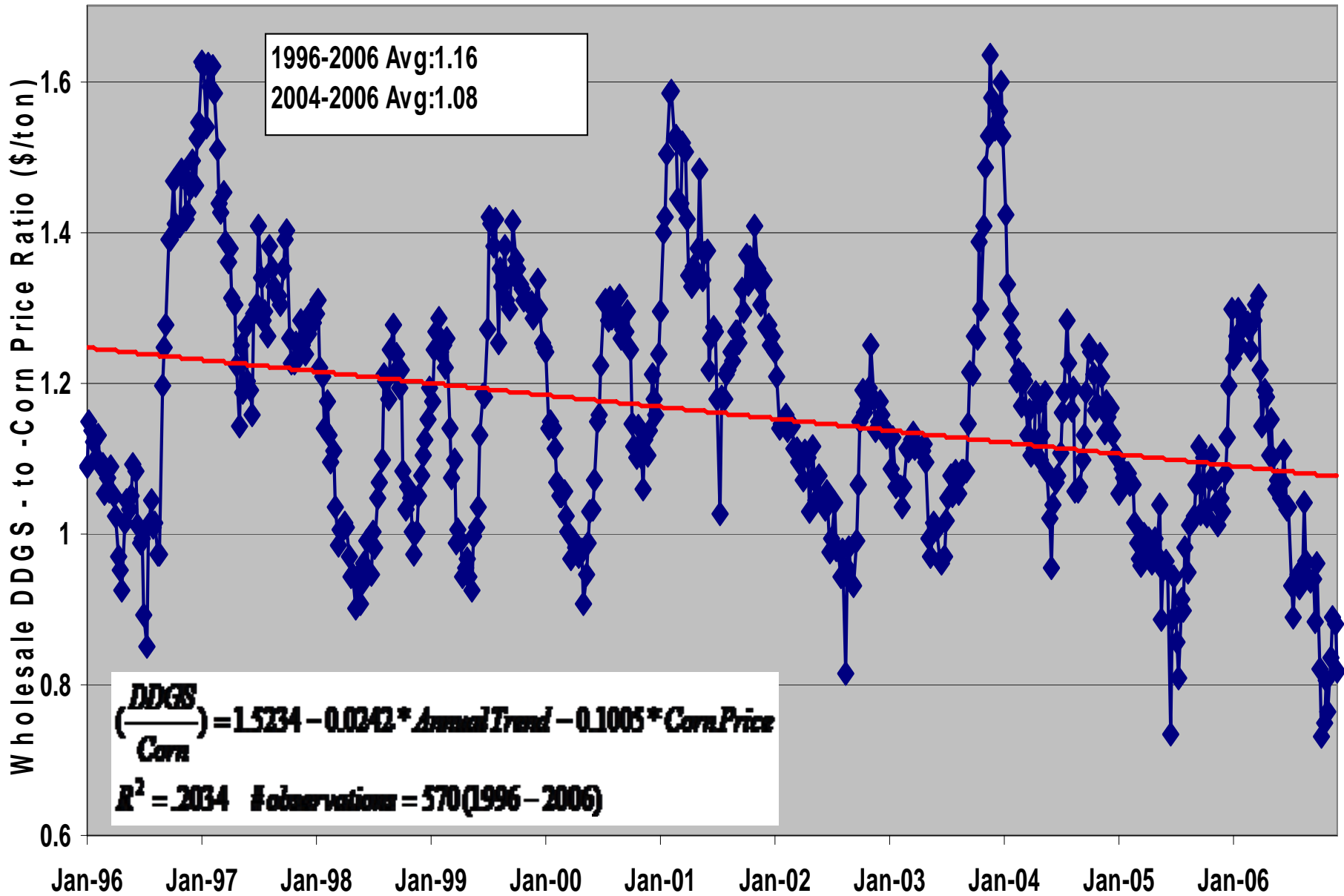
## *Impact of \$2 increase in corn (\$/bu):*

Increase in Feed Costs	\$ 110.00
Needed reduction in purchase price (\$/cwt).	\$ 14.67
or Needed increase in sales price (\$/cwt)	\$ 8.46

# DGS Feeding Issues

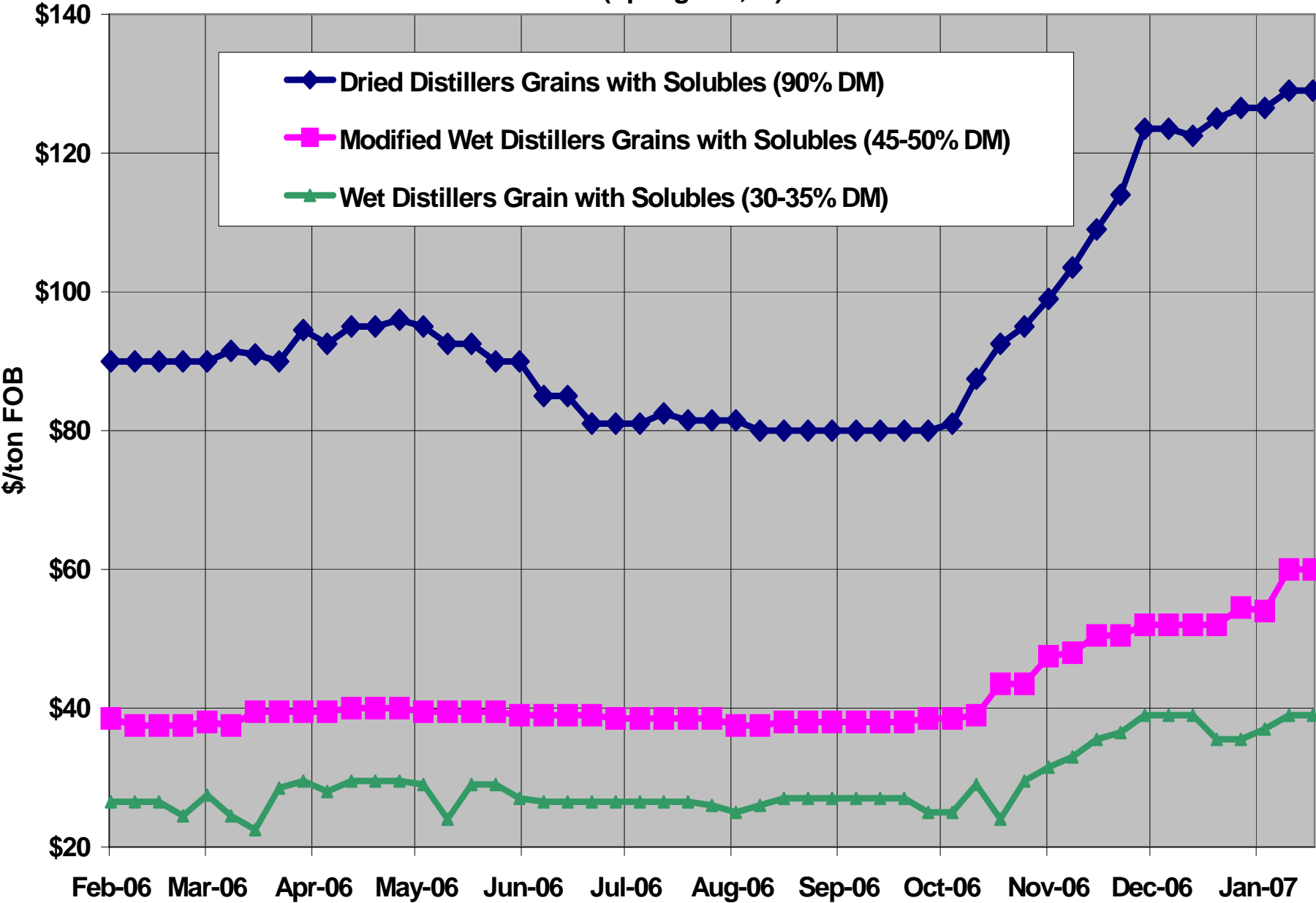
- Feeding Factors
  - Nutrient variation (w/i & across plants)
  - Manure implications / fertilizer impacts
  - Storage/transportation
  - Routine vs. “hiccup” feeding
  - Proper inclusion rates
    - Meat quality impacts (economic vs. meat science)

# Chicago Wholesale DDGS - to - Corn Ratio (\$/ton)



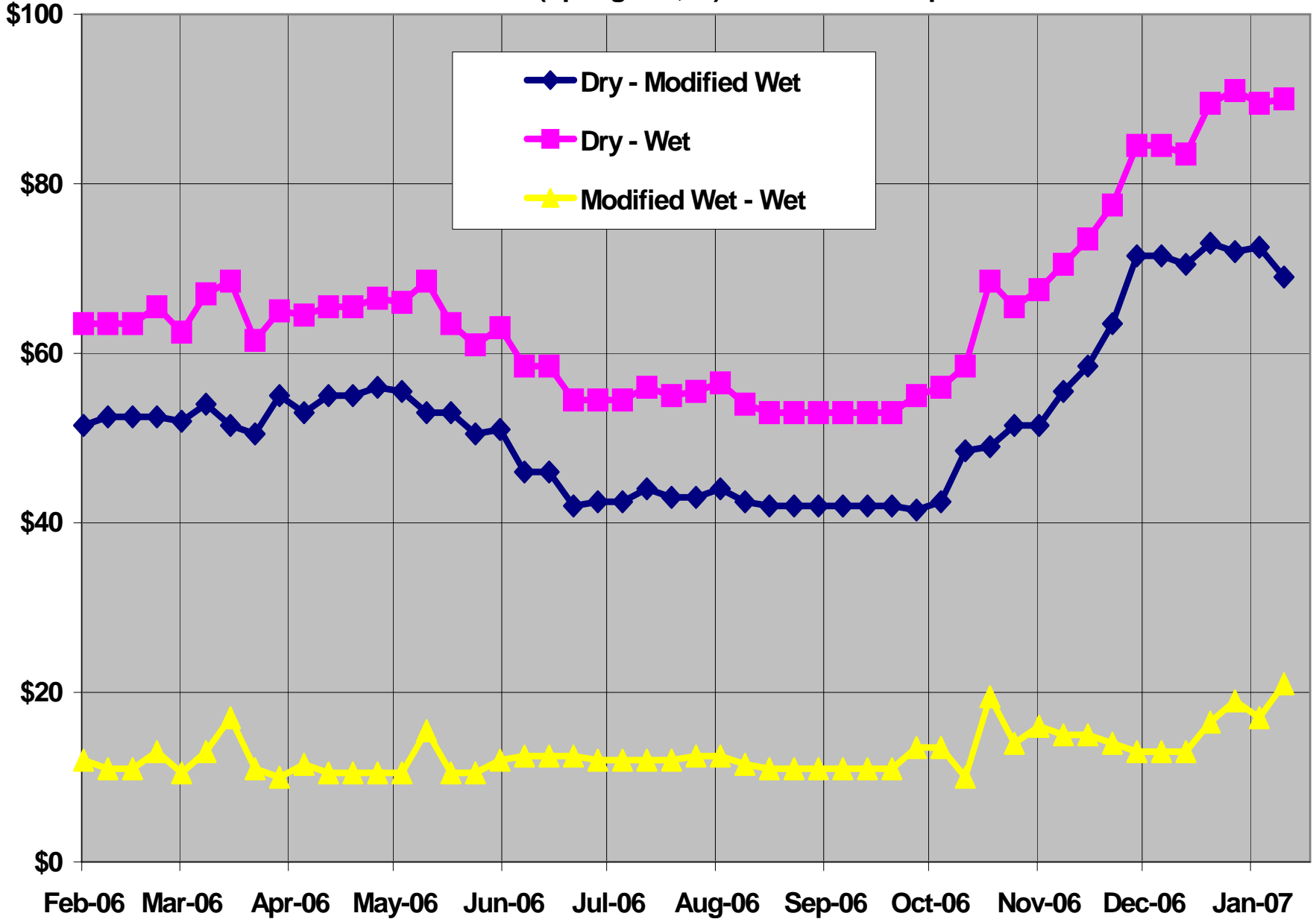


### Eastern Cornbelt (Springfield, IL) Distillers Prices



Source: Livestock Marketing Information Center and USDA-AMS; Last updated 1/23/2007

# Eastern Cornbelt (Springfield, IL) Distillers Price Spreads



# DGS Feeding: Cattle Finishing

- For a feed cost analysis, adopt competing rations:

	0% DGS	20% DGS	40%DGS
Corn	78.03%	61.85%	41.85%
Soybean Meal 49	4.00%	0.00%	0.00%
DGS	0.00%	20.00%	40.00%
Urea	0.52%	0.00%	0.00%
Limestone	1.00%	1.70%	1.70%
Corn silage	15.00%	15.00%	15.00%
Salt	0.35%	0.35%	0.35%
VTM-premix	0.10%	0.10%	0.10%
Ionophore mix	1.00%	1.00%	1.00%

# Cost Savings (\$/head) of DDGS & WDGS: 700lb-1,300lb Steers

Cost Savings (\$/head) Relative to 0% DDGS Inclusion

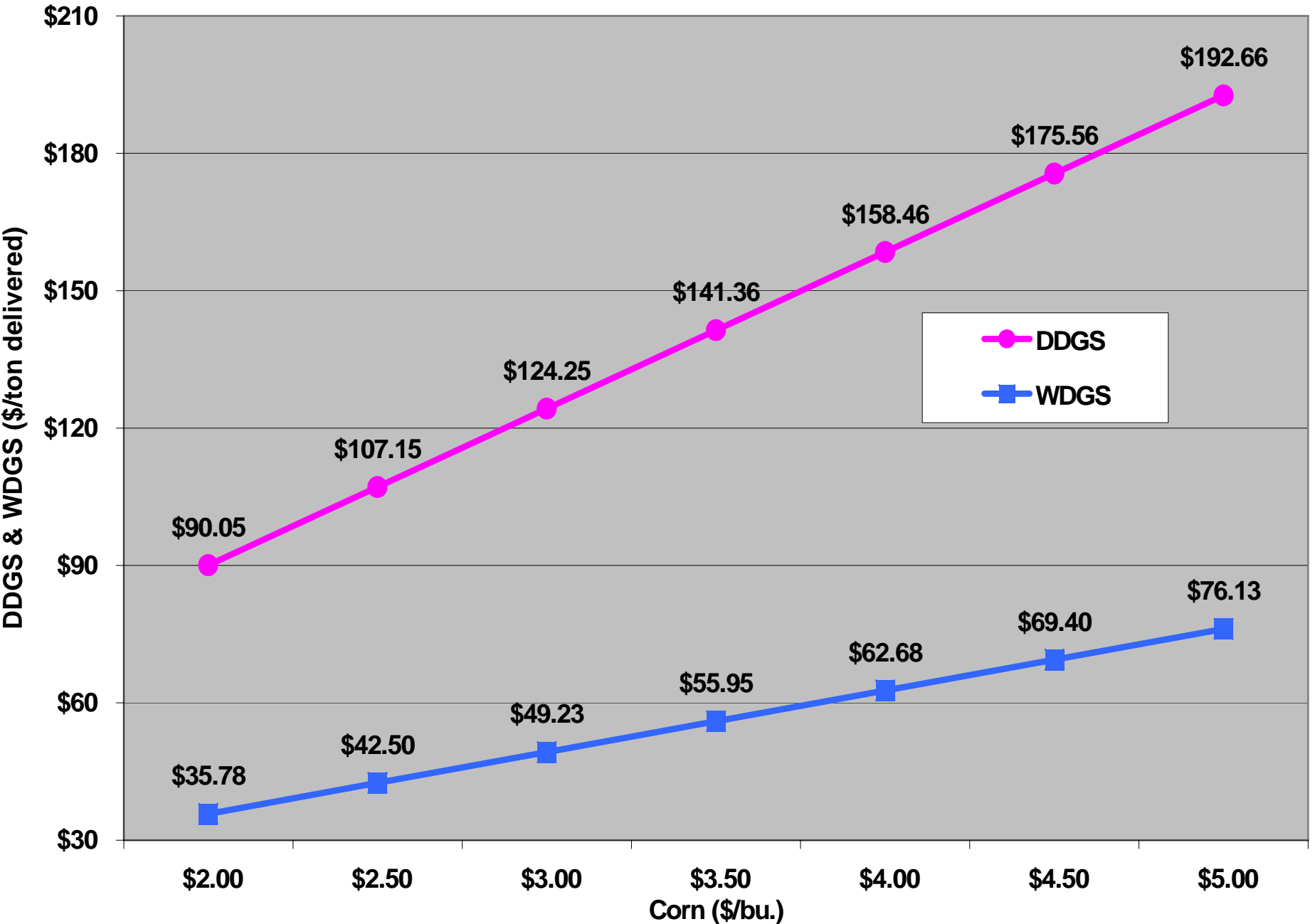
DDGS (\$/ton)	DDGS Inclusion	Corn (\$/bu.)							
		\$ 2.00	\$ 2.50	\$ 3.00	\$ 3.50	\$ 4.00	\$ 4.50	\$ 5.00	
\$ 100	20%	1.94	8.57	15.19	21.82	28.45	35.08	41.71	
\$ 100	40%	(8.62)	6.20	21.02	35.84	50.66	65.48	80.31	
\$ 125	20%	(8.90)	(2.27)	4.36	10.99	17.62	24.25	30.87	
\$ 125	40%	(30.29)	(15.47)	(0.65)	14.17	29.00	43.82	58.64	
\$ 150	20%	(19.73)	(13.10)	(6.47)	0.16	6.78	13.41	20.04	
\$ 150	40%	(51.96)	(37.13)	(22.31)	(7.49)	7.33	22.15	36.97	

Cost Savings (\$/head) Relative to 0% WDGS Inclusion

WDGS (\$/ton)	WDGS Inclusion	Corn (\$/bu.)							
		\$ 2.00	\$ 2.50	\$ 3.00	\$ 3.50	\$ 4.00	\$ 4.50	\$ 5.00	
\$ 20	20%	25.44	33.04	40.64	48.25	55.85	63.45	71.06	
\$ 20	40%	37.86	54.00	70.14	86.28	102.42	118.56	134.70	
\$ 40	20%	0.44	8.04	15.64	23.25	30.85	38.45	46.06	
\$ 40	40%	(10.14)	6.00	22.14	38.28	54.42	70.56	86.70	
\$ 60	20%	(24.56)	(16.96)	(9.36)	(1.75)	5.85	13.45	21.06	
\$ 60	40%	(58.14)	(42.00)	(25.86)	(9.72)	6.42	22.56	38.70	

Assumptions: SBM=\$200/ton, 6.5 F/G ratio in all DDGS rations, 6.25 & 6.0 F/G ratio in 20% & 40% WDGS rations, respectively. Also assuming all prices are "delivered prices," and including DGS results in no changes in carcass composition, days on feed, or changes in manure handling costs.

**DDGS & WDGS Prices Equating Cattle Finishing Feed Costs of 0% and 40% Inclusion Rates**



# Increasing Risk Exposure

- DGS risk management?
  - Increases in importance with inclusion rates
  - Cross-hedging of price risk?
  - Uncertain carcass composition
  - Manure implications may vary drastically
- As DGS market matures:
  - Which producers will have DGS access?
  - What type of purchasing arrangement?

# NASS/Nebraska Corn Board Co-Product Study

- 12 state survey of livestock producers (Jan/Feb)
- Identify:
  - Co-product use
  - Inclusion levels
  - Channel of purchase (plant, feed co., broker)
  - Available/desired services (nutrient profile,..)
  - Purchase type
    - Spot or contract (several lengths)
    - Reference point of price (corn, soybean meal, other?)

# Past NASS DGS Survey

- 721 Iowa & Minnesota Producers & 25 Ethanol Plants
- Ethanol Plants (2004)
  - 30% had minimum order for DGS; avg. min = 9.8 tons
  - DGS sales agreements:

<u>Monthly</u>		<u>Quarterly</u>		<u>6-Month</u>		<u>Yearly</u>	
2002	2003	2002	2003	2002	2003	2002	2003
10%	15%	10%	13%	9%	12%	NA	20%

<u>Spot</u>		<u>Clock</u>		<u>No Contract</u>	
2002	2003	2002	2003	2002	2003
38%	18%	11%	10%	19%	13%



# Past NASS DGS Survey: Ethanol Plants (2004)

## Transportation of DDGS, 2003

	<b>% Plants Using Transport Mode</b>	<b>% Product Hauled by Transport Mode</b>	<b>Average Miles Hauled</b>	<b>Average Transport Costs/Ton</b>
<b>Paid by Plant</b>				
Rail	100	16	1,550	30
Truck	67	10	82	4
<b>Paid by Buyer</b>				
Rail	50	16	1,812	40
Truck	100	58	133	7

## Transportation of WDGS, 2003

	<b>% Plants Using Transport Mode</b>	<b>% Product Hauled by Transport Mode</b>	<b>Average Miles Hauled</b>	<b>Average Transport Costs/Ton</b>
<b>Paid by Plant</b>				
Rail	0			
Truck	100	23	61	4
<b>Paid by Buyer</b>				
Rail	0			
Truck	100	77	60	4

# Past NASS DGS Survey

- Livestock Producers (2003)
  - Cow/calf, dairy, cattle on feed, hogs, turkeys (721 total)

## Operations Profile

	<u>All Operations</u>		<u>Feeding Distillers Grains</u>		<u>Not Feeding Distillers Grains</u>	
	Avg Peak Inventory (head)	Operations Feeding DGS (%)	Avg Peak Inventory (head)	Avg Years Feeding DGS	Avg Peak Inventory (head)	% Considered Feeding DGS
Cow/Calf	121	24	359	4	91	27
Dairy	202	56	214	7	183	51
Cattle on Feed	2,074	72	2,302	6	1,399	74
Hogs	15,373	22	16,523	2	14,994	37
Turkeys	124,301	8	180,000	---	118,534	22

# Past NASS DGS Survey: Livestock Producers (2003)

**Percent of Distillers Grains Purchased By Purchasing Method**

	Spot	Monthly	Quarterly	6-Month	Yearly	Other	No Contract
Cow/Calf	29	14	0	7	0	0	50
Dairy	9	0	1	15	1	0	74
Cattle on Feed	6	0	7	35	26	4	22
Hogs	17	18	0	0	5	15	45

# Experiences of Feeding Distillers Grains: Case of Porter Farms

*composed by:*

Glynn Tonsor

Dept. of Agricultural Economics  
Michigan State University

*on behalf of:*

Richard Porter  
Porter Farms  
Reading, KS

# Porter Farms Overview

- Reading, KS (100 miles SW of Kansas City)
- Feedlot
  - Feeds “high risk” steers from southeast
  - Feeding byproducts since 1995
  - Markets 8,000 head per year
    - Tyson plant in Emporia, KS (20 miles)
- Crops
  - 13,000 acres
    - 2,500 tillable (1,700 corn; 800 beans)
    - 2,200 CRP
    - 8,000 grass
    - 300 waste & improvements

# Historic DGS Use

- First started feeding byproducts in 1995
- Modified wet; +/- 60% dry matter
- Mainly from Eddyville, IA (Cargill, 320 miles)
  
- Typical ration:
  - 20% MWDGS                      17% Silage
  - 60% Corn                              3% Mineral
- Inclusion varies from 0%-40% (20% avg.)
  - At 0%, corn is 80%
  - At 40%, corn is 40% and silage is +/- 15%
  - Always includes some urea

# Storage/Logistics

- Cargill frequently changes truck lines
  - No longer has personal relationships with drivers
  - Evidence of market intensification
- Cargill schedules delivery (used to be Rich)
  - +/- 26 tons
- Storage:
  - 1 month storage is commonly feasible
  - Recommends isolated storage
    - Contact with silage accelerates decay

# MWDGS Nutrient Makeup

- Believes Cargill has notably improved consistency
- Does not receive nutrient breakdown by load
  - Simply gets a weekly statement of price & volume corresponding to auto-payment
  - Every 6 months has his own tests conducted



# Manure Management

- Believe all feedlots of at least 5,000 head note nutrient changes in manure
- Now more intensely uses spreader trucks
- Doesn't add commercial phosphorous
  - Owns lots of brome/fescue that utilize manure rich in phosphorous

# Buying Relationship

- “Relationship is key”
  - Routine delivery benefits both parties
  - He occasionally alters quantities/inclusion rates to aid plant in periods of shortage/surplus

# Pricing

## ■ Pricing:

- Cargill has cash, contract, and option alternatives:
  - Contracts: 3, 6, 9, or 12 months fixed price and quantity
  - Price set at % of Blair, NE corn price (DM basis)
    - Initially 82-84%, 90-92% as of Oct. 2006
  - Option: Pay \$2/ton for a ceiling on cash pricing
- Porter farms typically uses 12 month contracts
  - Slight incentives for longer contracts
    - More complete price risk management
    - Better production scheduling for both parties

Questions?

# Links of Interest

- ISU Ethanol Impacts on Livestock:
  - <http://www.card.iastate.edu/publications/synopsis.aspx?id=1029>
- Feeding DDGS to Swine; Jerry Shurson, Univ. of Minn.
  - [http://www.iowacorn.org/forms/DDGSpresent\\_swinelayer.pdf](http://www.iowacorn.org/forms/DDGSpresent_swinelayer.pdf)
- 2003-2004 NASS Ethanol Plant & Producer Surveys
  - [http://www.nass.usda.gov/Statistics\\_by\\_State/Iowa/Links/2004\\_national\\_dg.pdf](http://www.nass.usda.gov/Statistics_by_State/Iowa/Links/2004_national_dg.pdf)
  - <http://www.distillersgrains.com/pdf/03-Survey%20Summary-Livestock.pdf>
- Eastern Cornbelt (Springfield, IL) DGS Prices:
  - [http://www.ams.usda.gov/mnreports/gx\\_gr212.txt](http://www.ams.usda.gov/mnreports/gx_gr212.txt)