

Natural Beef Production:

A Comparison between Conventional Beef and
Natural Beef Production

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Overview

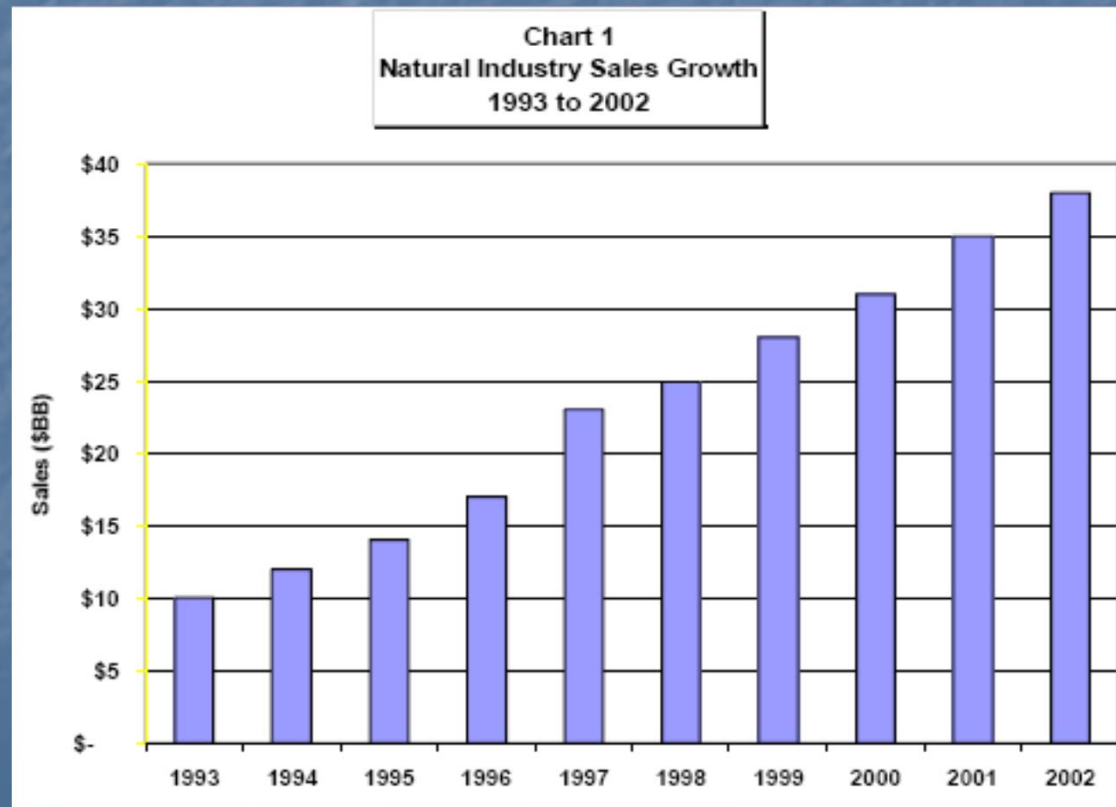
- Background
- Literature Review
- Set Up
- Assumptions
- Methods
- Results
- Conclusions

Background

- What is natural beef production?
 - USDA, Beef product
 - must be minimally processed,
 - cannot contain any artificial ingredients,
 - cannot contain any preservatives
 - According to most marketing associations,
 - animals cannot be fed any ionophores, such as Rumensin or Bovatech,
 - must be free of antibiotics and sulfas, either fed or injected, such as Nuflor (antibiotics) and Albon (sulfa),
 - must be free of growth promoting hormones, like Ralgro and Revalor,
 - must be free of Beta Adrenoceptor antagonist, fed or injected,
 - they cannot be fed any type of animal by-product

Background

- Recent trends show a continually growing market for natural products.



Background

- Consumers are typically willing to pay 30% more for natural meats.
- Natural Foods contributes \$6.9 billion to the food industry.
- Natural food industry has grown 20% over the last decade.
- Natural beef had sales of \$250 million in 2003.

Literature Review

- University of Arkansas
 - Producers can see a \$2 to \$4 cwt premium on natural beef
 - Did not take cost into account
- Kansas State University
 - Producers could expect \$120 more per head on livestock in 2008
 - This represents roughly a \$16 cwt premium

Set Up

- Examined one ranch for 5 years.
- Ranch is a cow-calf operation running 800 pairs.
- Located in Southeastern Wyoming.
- Calves are born in early April to Early May.
- Calves undergo a traditional vaccination regimen at branding and at weaning.
- Calves are retained over the winter and sold as long yearlings the following fall.
- All steers and roughly half the heifers are sold at this time.

Set Up

- Animals are free of implants, hormones, and ionophores.
- Feed is free of animal by-products.
- Animals will be doctored as the need arises.
- Calves will be sold on a video sale.

Assumptions

- Feeding regimen will not change.
- No transportation costs
- Will not deal with carrying costs for breeding stock.
- Only will examine selling the steers.

Methods

- Cash Revenue/Cost Comparison
- Used a similar producer with a natural program to determine percentages that could be applied to case ranch.
- 5% exclusion rate for program
- Took this percentage out of case ranch's steer crop.

Methods

- Found historical averages for like framed cattle to get accurate price information.
- Applied premiums quoted from several sources of \$0.34, \$2, and \$4 cwt.
- Found revenue for conventional and all 3 premiums.
- Less costs to receive a gross profit

Results

	2004	2005	2006	2007	2008*
Conventional					
# of Head	291	298	337	336	318
Average Prices	\$ 109.94	\$ 118.23	\$ 102.97	\$ 110.79	\$ 109.75
Revenue Per Head	\$ 997.47	\$ 1,155.08	\$ 1,023.80	\$ 921.41	\$ 1,003.12
Total Revenue	\$290,263.77	\$344,213.84	\$345,020.60	\$309,593.76	\$318,992.16
Gross Profit	\$283,969.98	\$338,375.38	\$335,123.59	\$299,297.82	\$307,991.40

	2004	2005	2006	2007	2008
Natural With \$0.34 premium					
# of Head	276.45	283.1	320.15	319.2	286.2
Average Prices	\$ 110.28	\$ 118.57	\$ 103.31	\$ 111.13	\$ 110.09
Revenue Per Head	\$ 1,000.56	\$ 1,158.41	\$ 1,027.18	\$ 924.23	\$ 1,006.22
Total Revenue	\$276,604.65	\$327,944.51	\$328,851.78	\$295,015.77	\$287,980.91
Gross Profit	\$270,301.71	\$322,097.22	\$318,946.00	\$284,711.94	\$276,965.10

2004

2005

2006

2007

2008

Natural With \$2 Premium

# of Head	276.45	283.1	320.15	319.2	286.2
Average Prices	\$ 111.94	\$ 120.23	\$ 104.97	\$ 112.79	\$ 111.75
Revenue Per Head	\$ 1,015.62	\$ 1,174.62	\$ 1,043.69	\$ 938.04	\$ 1,021.40
Total Revenue	\$295,545.54	\$350,037.67	\$351,721.92	\$315,181.64	\$324,803.61
Gross Profit	\$289,242.60	\$344,190.38	\$341,816.13	\$304,877.80	\$313,787.80

2004

2005

2006

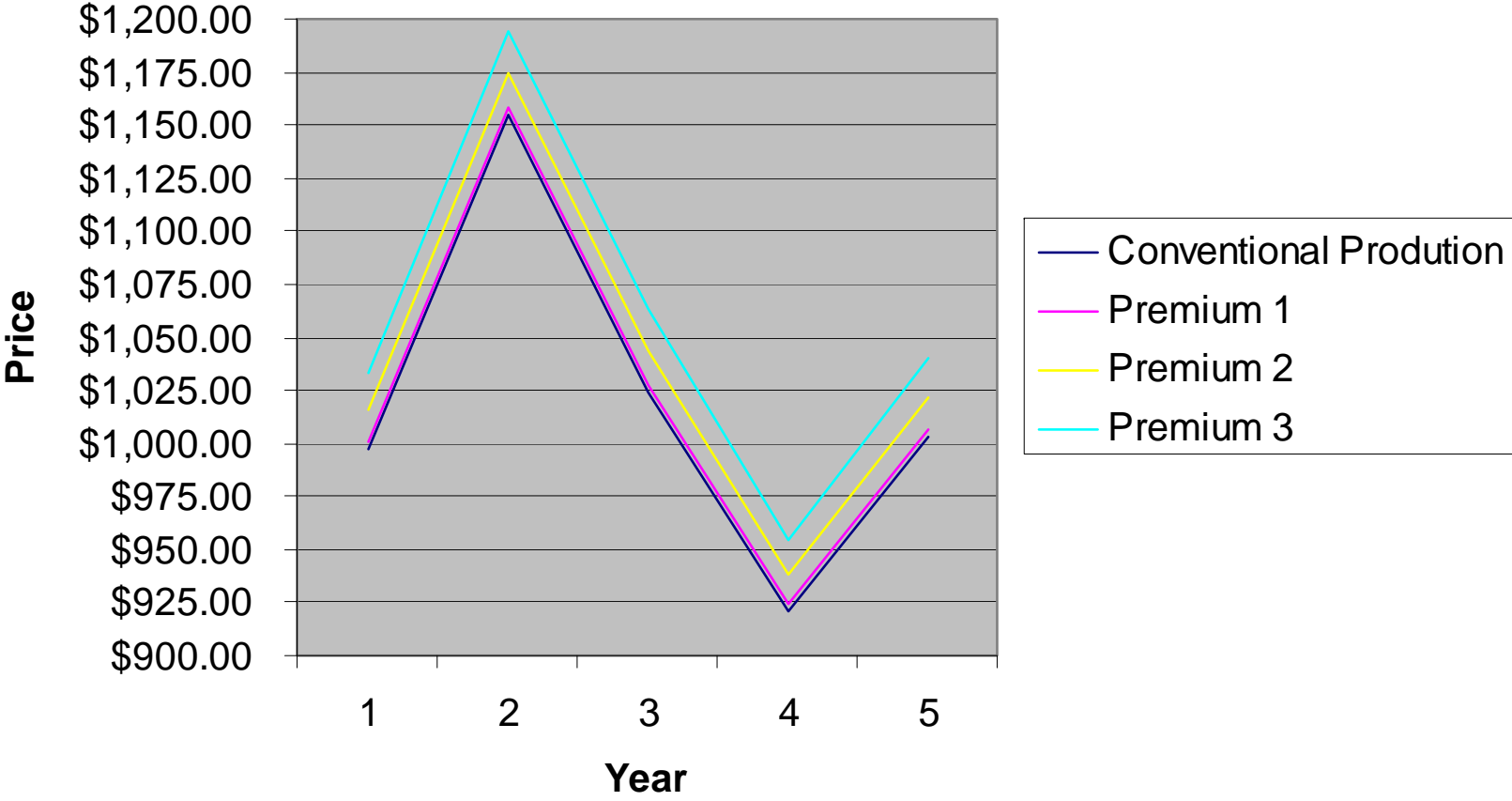
2007

2008

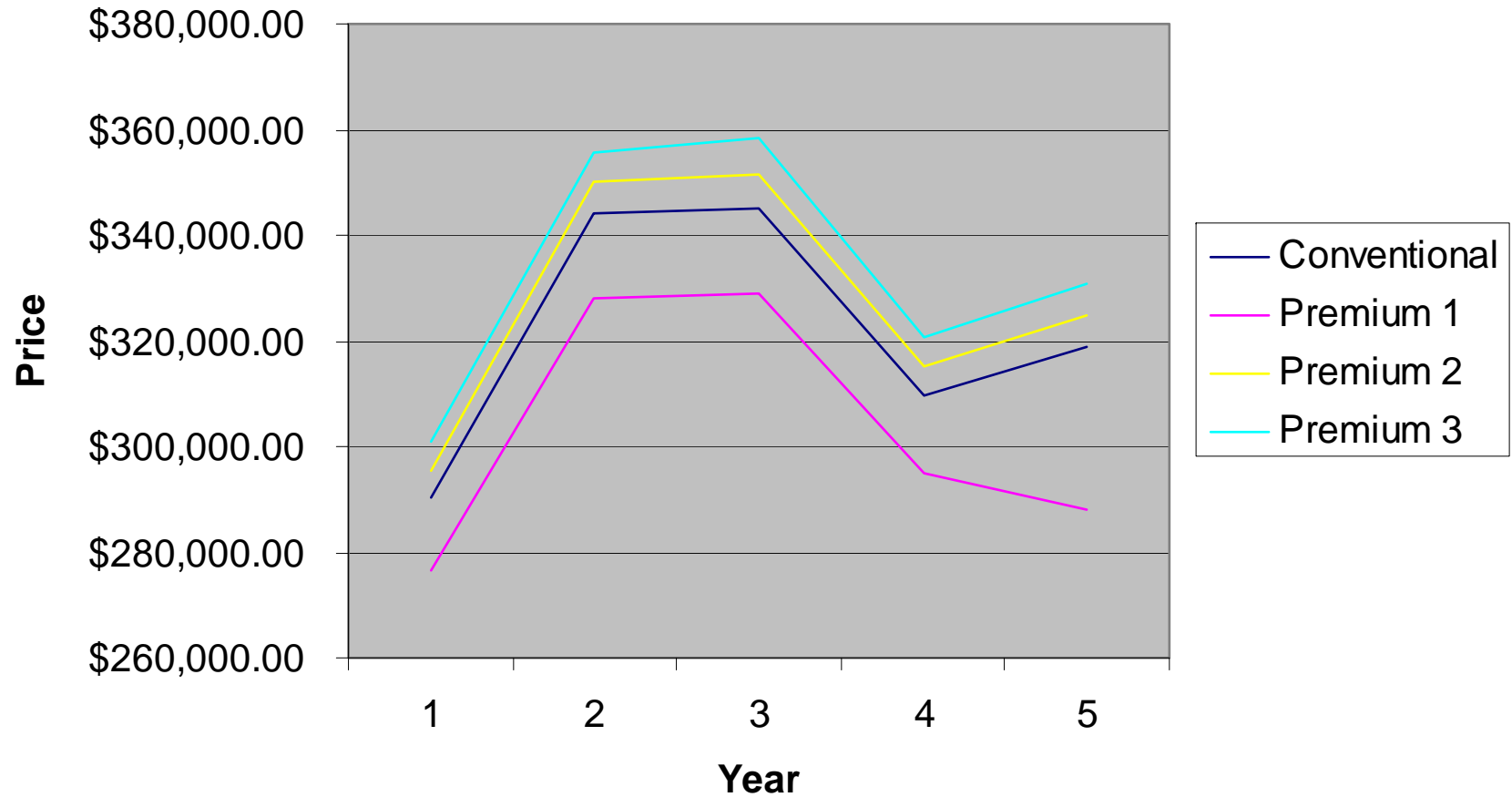
Natural With \$4 Premium

# of Head	262.6275	268.945	304.1425	303.24	257.58
Average Prices	\$ 113.94	\$ 122.23	\$ 106.97	\$ 114.79	\$ 113.75
Revenue Per Head	\$ 1,033.77	\$ 1,194.16	\$ 1,063.57	\$ 954.67	\$ 1,039.68
Total Revenue	\$300,825.97	\$355,860.47	\$358,423.30	\$320,770.46	\$330,616.65
Gross Profit	\$294,523.03	\$350,013.18	\$348,517.51	\$310,466.63	\$319,600.84

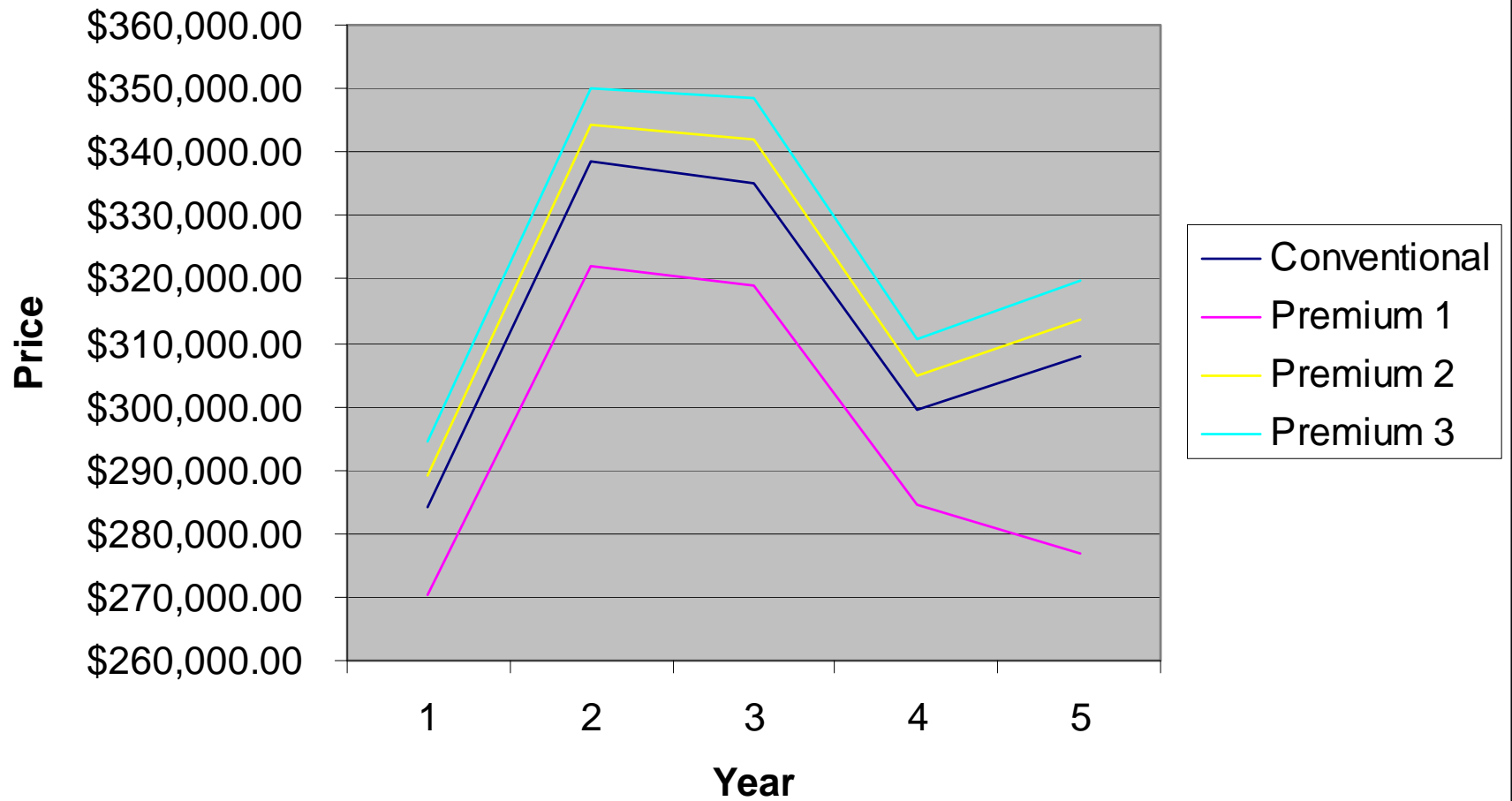
Revenue Per Head



Total Revenue



Gross Profit



Conclusion

- Given previous research, a producer should expect the \$2 to \$4 range in premium.
- This producer should go with selling their livestock as natural.

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