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Characteristics of the United States Organic Beef Industry

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INTRODUCTION

Beef ranchers are in a constant struggle with the environment, fluctuating cattle cycles, and the ability to generate profits. Many ranchers can't make a profit raising commercial beef, so they look for alternative ways to generate a profit. Ranchers are constantly trying to increase their profit margins, but periodically face losses and financial hardship. The commercial beef marketplace is characterized by perfect competition, which occurs when an industry is made up of many small firms producing homogeneous products, information is perfect (timely and accessible by everyone), and there is no impediment to entry or exit of firms. The traditional commercial beef producer is a price taker and has no control over the market. One way for ranchers to escape this is by niche marketing. A niche market that has recently been growing and gaining strength is organic beef. Organic beef offers the incentive of a new market, with potential for higher profits and more sustainable agriculture (Appropriate Technology Transfer for Rural Areas [ATTRA], 2003). The organic beef marketplace is characterized by monopolistic competition, which occurs when there are many firms selling a sole differentiated product or service. The products are differentiated because organic beef producers advertise using their own labels. They differentiate their products from conventional beef by selling a brand-name product.

Ranchers and farmers have been selling beef labeled as organically-grown since 1999

(Foreign Agricultural Services [FAS], 2003). The organic beef industry is a niche market that was developed to produce a safe, natural product grown without synthetic chemicals and to improve the potential for farmers and ranchers to make a profit. Organic beef demands a higher price than conventional beef because of the added labor and management that goes into producing and marketing it (Economic Research Services [ERS], 2003).

According to the National Organic Standards Board (NOSB) of the United States Department of Agriculture (USDA, 2003), organic agriculture is:

> an ecological production management system that promotes and enhances biodiversity, biological cycles, and soil activity. It is based on minimal use of off-farm inputs

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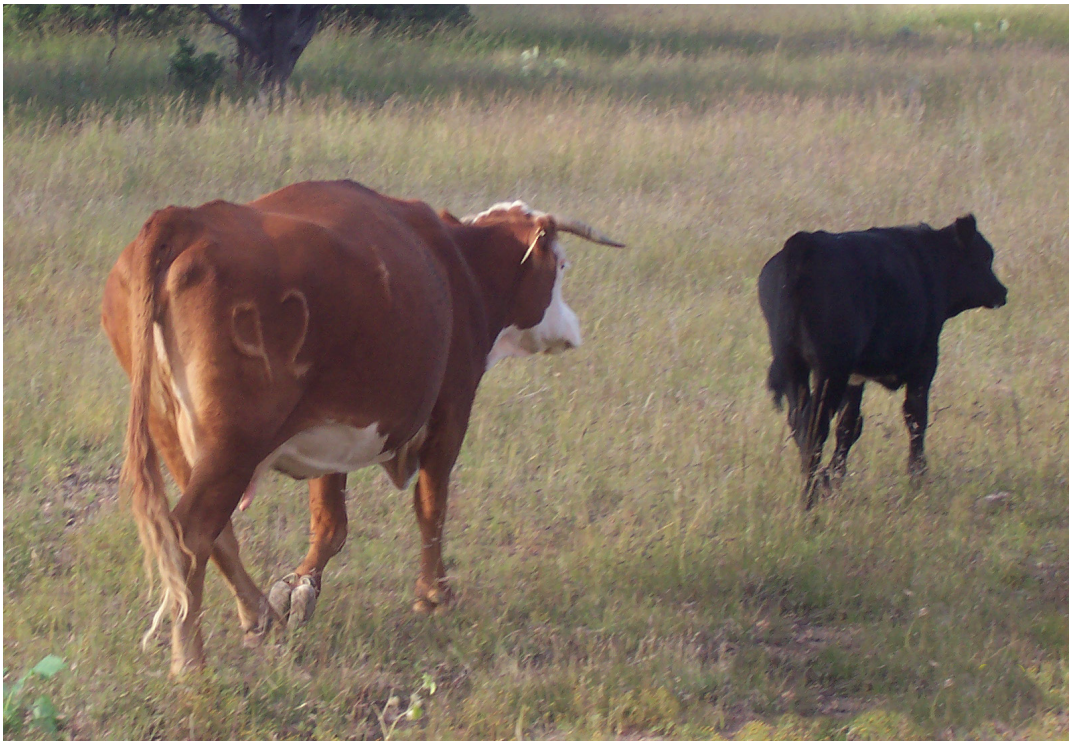

and on management practices that restore, maintain, or enhance ecological harmony. The primary goal of organic agriculture is to optimize the health and productivity of interdependent communities of soil life, plants, animals, and people.

Producers abide by the following standards in the production of organic agricultural products:

1. Genetic modification, or the splicing of genes between species, is prohibited.
2. Irradiation of foods is prohibited.
3. Use of processed sewage sludge, or biosolids, as fertilizer is prohibited.
4. Livestock must be given access to pasture.
5. Synthetic pesticides, including herbicides, fungicides, and other chemicals are prohibited.
6. Livestock are not given growth hormones or antibiotics (sick animals are treated, but removed from the herd and not sold as organic).
7. Livestock are given organically grown feed.
8. Land must be free of chemical applications for three years before crops can be considered organic.
9. Written farm plans and audit trails are required.

According to the New Mexico Organic Commodity Commission (NMOCC), mother cows producing organic slaughter stock must be under organic management from the last third of gestation. Breeder stock can be obtained from any source, and vaccinations are allowed for all cattle. Detailed record keeping on individual animals from birth to slaughter, including all inputs used, is required. These records are used to ensure organic integrity and to facilitate audits by the third-party–certified accrediting agency (NMOCC, 2002).

In 2001, organic food labeling was standardized by the National Organic Program (NOP). The NOP standardized labeling criteria is easier for consumers to understand. It consists of four categories: *100% organic, organic* (95% organic ingredients), *made with organic ingredients* (70% or more organic ingredients), and *less than 70% organic* (organic ingredients can be listed on the side panel only). These labels clearly define what kind of organic product a consumer is buying. Labels are an important part of marketing beef and educating consumers.

The organic market appears to have a bright future. "The market is forecast to be worth almost $20 billion by 2005, with an annual growth rate of 21%" (USDA, 2003). Organic meats account for three percent of total US organic production (ERS, 2003). The organic meat industry has been slow to

develop because the industry was unable to label meat products as organic until February 1999, when a provisional label was approved by USDA/Food Safety and Inspection Service (FAS, 2003).

Most organic beef research in the United States has been in the areas of conversion processes, production practices, and consumer acceptance. Little is known about the characteristics and economics of organic beef ranches in the United States. The goal of this publication is to convey the findings of a 2004 thesis, "Characteristics of the United States Organic Beef Producer," by Clayton Spurgeon, which examined the characteristics and economics of organic beef ranches in the United States. Spurgeon obtained information on the characteristics of organic beef ranches in the United States by surveying 131 organic producers via a mail questionnaire (See Appendix 1).

CHARACTERISTICS SUMMARY

The 131 organic beef producers who completed the mail questionnaire shared many characteristics. The mean number of years the respondents had produced organic beef was 6.25, with a mode of three years. A little more than 72% of the respondents had raised conventional beef, for an average of 23 years, before they started raising organic beef. Transitional periods of converting from commercial to organic ranged from 0 to 8 years with an average of 1.8 years. Eighty-five percent of the respondents indicated they did not raise conventional beef at the time of the survey. The most common reason reported for raising organic beef was that it complemented another type of organic operation. Health considerations and producing clean, wholesome products were commonly cited reasons for producing organic beef. Only about 17% reported that their main reason for raising organic beef was potential income. Most of the organic beef producers were health-conscious and believed that organic products were superior. Two respondents stated that they enjoyed setting their own price and not having to deal with the conventional market. Six percent reported they started raising organic beef because of consumer demand.

The typical respondent participated in the cow–calf segment of production, and seventy percent reported producing cattle into the finishing segment of organic production. The most common types of cattle raised were Angus, English crosses, Angus crosses, and mixed herds. Close to 85% of United States organic beef producers reported raising some of their own feed products. About 20% had to purchase organic feeds. Those who bought organic feeds paid an average premium of 57%. Grass and hay were the most common feed sources, with an average of 93% of respondents using grass and 87% using hay. Grains were used by 68% of organic producers. The most common production practice problems were in controlling disease/parasites, finding feed sources, and finding buyers.

Cattle vaccines were used by about half of the producers, and the other half did not vaccinate. The most common vaccination was 7-way. Forty-three percent of organic producers have had to use antibiotics at least once to treat a sick animal. In 2002, the average number of head treated was 2.74, with 0 head being the mode. Organic beef producers used different products to treat their cattle. Diatomaceous earth was widely used to treat internal and external parasites. Pasture rotation is a proven way to decrease parasites and was used by many producers. Nontraditional products like garlic, mineral oil, and herbs also were used to treat parasites.

Death loss percentages were low, with 65% of respondents reporting a death loss of 0 to 1%. Only 3% reported death losses of 5% or more. The average total head of organic beef raised in 2002 was about 100. Of this, cows averaged about 62 head and heifers and steers around 30 head each. The number of cattle raised ranged from 0 to 1,110 head, and only about 14% of the respondents raised more than 200 head of cattle in 2002. The total number of cattle reported during this survey was 12,987 head, which is close to the total organic beef head count by the ERS in 2001 of 15,197. About 11% of the respondents did not produce other organic products. The remaining primarily produced alfalfa, corn, and other grains. Organic beef producers averaged 3,247 acres in production. The majority of

organic beef production was found to occur on dry land rather than irrigated.

The majority of organic beef operations had estimated gross incomes in the $5,000 to $15,000 range. Only about 15% of the producers had gross incomes above $50,000 in 2002. Income data needs to be collected over many years to get an accurate report on income, both because of cash flow issues with beef production and because organic beef is a relatively new product. Many of the producers didn't know or preferred not to report their cost of production; however, 34% of respondents did answer this question. They reported a mean of $612 per head in 2002. Forty-five percent of the respondents raised organic beef full-time, and 57% financed part of their organic beef operation with off-farm/ranch income. The average percentage of total family income earned off-farm/ranch was 40%. Half of the part-time producers received income from sources off-farm/ranch, compared to only 25% of full-time producers. Financing problems were common to those producing beef products. Cash flow was the biggest problem, followed by borrowing and increased cost of production. However, about 40% of the respondents reported they had no financing problems.

Seventy-five percent of the respondents marketed their beef directly to consumers. Marketing to supermarkets was reported by only 9% of the respondents, though supermarkets have experienced the largest growth in sale of organic products in the last few years. Local and in-state sales were the most common, and 37% of producers also sold organic beef out-of-state. Only two respondents sold beef internationally. The biggest problems faced in marketing organic beef were finding a market, getting access to slaughter facilities, getting a premium price, raising enough beef to meet demand, and educating the consumer. Those producers who reported not being able to find a market were receiving the lowest prices for their beef. Some producers were not processing their beef in federally inspected, organic-certified slaughtering facilities; therefore they were unable to sell the meat retail.

Average price per pound received from selling organic beef in 2002 was $3.05 for hanging beef and $1.07 for live cattle. Price received per pound was the largest difference between organic beef and commercial beef. Organic producers who averaged less than $2.00 per pound had lower incomes despite operating with more cattle than others who received higher prices. Producers receiving the lowest prices received an average low price of $1.42 and an average high price of $1.90. Producers receiving greater than $2.00 per pound had an average low of $2.58 and a high of $7.81. The lowest high price reported was $3.00. Those producers in the higher price level and top 5% of the income bracket were the largest in both cattle numbers and land area. Many of the respondents raised less than 100 head of cattle, and most of them received more than $2.00 per pound. Ground beef was the most common meat product receiving the lowest price. Tenderloins were the most common meat cut receiving the highest prices.

Only 15 respondents reported testing their beef for nutritional benefits. These included producers in all brackets of income except the lowest. Fat, Omega-3 fatty acids, and conjugated lineolic acid (CLA) were the substances most commonly measured. One respondent tested for beta-carotene and two tested for Omega-6 fatty acids. Yellow fat in finished beef products was reported by 20% of the respondents. Fat color didn't seem to be specific to the types of feeds being used. Forty-three percent reported white fat and 25% of those were only feeding grass or grass and hay, which are the feeds most commonly thought to cause yellow fat.

ORGANIC BEEF INDUSTRY AND BSE

In light of the discovery of BSE in the United States on December 23, 2003, a short mad-cow questionnaire was sent to organic beef producers to determine how the organic beef industry reacted to the BSE scare. Only five questions were asked in the questionnaire. They can be seen in Appendix 2. Eighty usable completed questionnaires were received.

BSE RESPONSE SUMMARY

Organic beef producers directly benefited from the BSE discovery. Organic beef was perceived to be higher in quality and safer

than conventionally marketed beef. There were no reported decreases in demand; instead, about 70% experienced an increase in demand for their product. Twenty-two percent of the respondents experienced price increases for their product. The average price increase was 16%. Only two respondents reported price decreases. There was no effect on organic beef prices for 73% of organic beef producers. Most of the respondents were not planning to change their marketing strategy to advertise BSE-free beef, and all organic producers favored Country of Origin Labeling (COOL).

CONCLUSIONS

The organic beef producers studied were characterized as health-conscious individuals who are complementing a broader organic program with organic beef. The average producer has been raising organic beef for about six years. Most of the producers had produced conventional beef in the past—three years was the common transitional period—and most producers no longer raised conventional beef. Organic beef herds were mostly below 100 head, and organic beef land averaged about 3,200 acres. Ninety percent of the respondents produced other organic products, with the majority raising alfalfa, corn, and grains. Family owned and sole proprietorships were the common forms of enterprises, and about half of the respondents were full-time producers.

Gross revenues were mostly below $30,000 in 2002, with average beef prices around $3.05 per pound hanging weight. The respondents who reported higher than $2.00 per pound for organic meat were those producing more income with either more or fewer cattle than those receiving lower prices.

There were no major differences between operating systems for organic beef ranches. Ninety-five percent were cow/calf producers, and 70% raised finished beef. The differences discovered were in the prices received for organic beef. Respondents receiving less than $2.00 per pound had the lowest incomes, and they were commonly centered in the Great Lakes region. Cash flow was the biggest problem in financing an organic beef operation.

Organic beef producers marketed their beef products in many ways. Direct-to-consumer sales dominated, with restaurants, alliances and cooperatives, and natural food stores following. Some producers received less than $2.00 per pound on beef marketed strictly with alliances and cooperatives. Most sales were in-state, and only two producers sold internationally. The biggest obstacles in marketing organic beef were finding markets and slaughtering facilities and receiving price premiums.

The majority of the respondents produced their own feeds. Those who purchased feeds paid, on average, 50% more than they would have for conventional feeds. Grass, hay, and grains were the primary types of organic feed. Vaccinations were used by about half of the organic beef producers.

Diatomaceous earth and pasture rotation were the most common methods for fighting external and internal parasites. Controlling disease and parasites, finding feed sources, and locating buyers were the most common problems reported.

It is recommended that consumers be educated about organic beef so they can make informed decisions about the products they buy. Additionally, slaughtering facilities for organic beef should be expanded, as currently they are limited to only a few areas.

It also is worth considering that ideas developed for organic beef production may be beneficial to conventional beef producers. Eliminating feeds that could be contaminated with BSE and knowing exactly where and how an animal is produced are concepts that are increasingly important in conventional beef production, due to the discovery of BSE and the introduction of County of Origin Labeling. Some of the marketing strategies and principals used for organic beef could be applied to the conventional beef industry to increase demand by making it more appealing, healthy and safe.

ACKNOWLEDGEMENT

Much of the material in this publication was adapted from:

Spurgeon, Clayton G. (2004.) "Characteristics of the United States Organic Beef Producer." M.S. Thesis, New Mexico State Univ., Las Cruces. 69pp

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APPENDIX 1. ORGANIC BEEF MAIL QUESTIONNAIRE

Organic Beef Producer Survey

Please answer all questions. Your information is important to the organic industry.

1. How many years have you been raising certified organic beef? _____

2. Did you raise commercial beef before you raised organic beef?
   ___ Yes
   ___ No

3. If yes, how many years did you raise commercial beef? _____

4. How long of a transitional period did you have before being certified organic? _____

5. Do you currently raise conventional commercial beef in addition to organic beef?
   ___ Yes
   ___ No

6. Within which segment(s) of organic beef production do you participate? (check all that apply)
   ___ Cow/Calf
   ___ Stocker
   ___ Finishing

7. What breed(s) of beef cattle do you raise? _____

8. What is the source of your organic feed? (check all that apply)
   ___ Produce it yourself
   ___ Buy locally (within county)
   ___ Buy in state, (not locally)
   ___ Buy out of state
   ___ Don't feed (pasture fed)

9. Do you pay a premium for organic feed over similar conventional feed?
   ___ Yes
   ___ No
   If yes, how much of a percentage increase in price do you pay? _____

10. What types of feed do you use? (check all that apply)
    ___ Grains
    ___ Grass
    ___ Hay (alfalfa)
    ___ Silage
    ___ Supplemental protein
    ___ Other_____
11. Do you vaccinate your cattle?
    ___ Yes
    ___ No

    If yes, what types of vaccinations are used? _____

12. Have you ever had to use antibiotics to treat a sick organic certified animal?
___ Yes
___ No

If yes, how many head of cattle did you treat in 2002? _____

13. What organic practices do you use to treat: (1) external parasites? _____

(2) internal parasites? _____

14. What was the estimated death loss percent of your organic cattle herd in 2002?
___ 0 to 1%
___ 1% to 2%
___ 2% to 5%
___ 5% or more

15. Please indicate the number of head of organic cattle you raised in 2002.
Cows _____
Bulls _____
Heifers _____
Steers _____

16. What other types of organic crops or livestock do you produce? (check all that apply)

___ Poultry	___ Alfalfa
___ Dairy cattle	___ Corn
___ Sheep and/or goats	___ Grains (other than corn)
___ Swine	___ Fruits
___ None	___ Vegetables
___Other_____	_____

17. How many organic acres are used for your organic beef operation?
_____ Dry land pasture
_____ Irrigated pasture
_____ Other

18. Is your beef operation a:
___ Sole proprietorship
___ Family owned
___ Partnership
___ Corporation

19. What was your estimated gross revenue from organic beef in 2002?
___ No Income or Loss
___ Less than $5,000
___ $5,000 to $15,000
___ $15,001 to $30,000
___ $30,001 to $50,000
___ $50,001 to $100,000
___ $100,001 to $250,000
___ $250,001 to $500,000
___ Over $500,001

20. What was your estimated average total cost of production per organic head in 2002? (i.e. fixed costs, variable costs, land, labor management, feed, ect.) _____

21. Do you raise organic beef full time or part time? (please circle)

22. Do you finance any part of the organic beef operation with off-farm/ranch income?
    ___ Yes
    ___ No

23. What percentage of your total family income is off-farm/ranch? _____

24. How do you market your organic beef? (check all that apply)
    ___ Directly to consumers
    ___ Farmers Market
    ___ Alliances or Cooperatives
    ___ Natural food stores
    ___ Supermarkets
    ___ Wholesale
    ___ Specialty food stores
    ___ Internet (please provide site address) _____
    ___ Other _____

25. Where do you sell your organic beef? (check all that apply)
    ___ Local (within county)
    ___ In State, but not local
    ___ Out of state
    ___ Internationally

26. What was the biggest problem you faced in marketing your organic beef? _____

    _____

27. What was the average price per pound you received from selling organic beef in 2002?

    _____

28. What was the lowest price you received on organic beef in 2002? _____

    What was the type of animal? _____

29. If you sell meat, what meat cut received the lowest price? _____

30. What was the highest price you received on organic beef in 2002? _____

    What was the type of animal? _____

31. If you sell meat, what meat cut received the highest price? _____

32. Have you had your beef tested for nutrition benefits?
___ Yes
___ No

If yes, check all that apply:
___ Fat
___ Omega-3 fatty acids
___ Omega-6 fatty acids
___ Beta-Carotene
___ CLA
___ Other _____

33. Do your finished organic beef products have yellow fat?
___ Yes
___ No
___ Don't Know

34. What is your main reason for producing organic beef? _____

_____

35. What is the biggest problem you face in the production practices of raising organic beef? _____

_____

36. What kinds of financing problems do you face raising organic beef? (i.e., borrowing, cash flow, interest rates, etc.) _____

_____

37. Would you like a summary of the results of this survey?
___ Yes (If address is different, please provide)
___ No

APPENDIX 2. BSE QUESTIONNAIRE

1. Has there been any change in the demand for your organic beef product?
   ____ Increase, Can you estimate a percent change?_____
   ____ Decrease, Can you estimate a percent change?_____
   ____ No Change

2. Have you had a change in price of your product since the BSE scare?
   ____ Increase, Can you estimate a percent change?_____
   ____ Decrease, Can you estimate a percent change?_____
   ____ No Change

3. What percent of your customers have discussed BSE directly with you?_____
   What, if any, was their greatest cause of concern?_____
   _____

4. Have you changed or do you plan to change your marketing strategy to suggest BSE free Beef?
   ____ Yes
   ____ No

5. Are you in favor of Country of Origin Labeling (COOL)?
   ____ Yes
   ____ No

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