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## Creating a geographically linked collective brand for high-quality beef: a case study

### Abstract

Many farmers who produce high-quality products do not use market mechanisms that would allow them to differentiate their products and take the fullest advantage of price premiums. This paper describes a pilot program to develop and commercialize an origin-based collective brand for very high quality US beef. We hypothesized that, by using specific market mechanisms to differentiate the beef, cattle producers might be able to capture a greater share of price premiums often captured elsewhere in the marketing channel. Specifically, the pilot program analyzed the feasibility of two mechanisms for differentiating and marketing beef: a certification mark and a USDA Process Verification Program. The research indicates that small producers groups could reasonably protect high-quality products with a certification mark but large groups would be required to justify the high costs of a process verification.

**Keywords:** collective brands, origin-based brands, process verification, product differentiation.

### Introduction

Worldwide, a segment of consumers can afford to pay substantial price premiums for very high quality agricultural products. Many US farmers are producing these high-quality products but are not using market mechanisms that would allow them to take the fullest advantage of price premiums. One way to ensure that premium-paying consumers receive the high-quality products with attributes those consumers value is to differentiate the products in a way that transmits quality information to consumers, transmits price signals from the consumers to producers, achieves a scale of production large enough to justify the costs of creating and maintaining differentiation, and prevents imitation by competitors.

Several recent studies have examined market mechanisms being used to differentiate products and increase premiums. Hayes, Lence, and Stoppa (2004) found that agricultural producers often lose out on premiums for their highest-value output because commodity-based marketing systems commingle high-value output with lower-value output. Under this system, any price incentives are quickly eliminated as producers rush to compete for higher prices and oversupply the market. Further, producers often do not own the rights to differentiated product, so any profits associated with those products are received elsewhere in the marketing channel. One way for producers to retain property rights and receive premiums is to market their niche product as a collective brand.

Collective brands have become popular in the European Union, where high-value agricultural products are protected based on geographical linkages, unique product attributes, and traditional production practices. These EU brands, often registered as geographical indications, have earned some producers large premiums relative to returns for commodity products (Babcock and Clemens, 2004). Collective brands can also discourage overproduction and dependence on subsidies and encourage adding value locally, which can result in a positive impact on the rural economy (Clemens, 2004; Hayes, 2005).

In the United States, a certification mark – a type of trademark – can be used as a collective brand that links a product to a geographical production area, certifies minimum production and quality standards, and protects the product from imitation. Another market mechanism available to US producers is process verification using a USDA-audited system which ensures that a set of minimum production, processing, and/or quality specifications have been followed and allows producers to make claims about their products based on these specifications.

The Iowa-80 Beef pilot program was developed to test the feasibility of using these two mechanisms to differentiate and market a very high quality agricultural product. Beef was chosen as the test product because the attributes that premium-paying consumers value can be defined and the production practices needed to produce those attributes can be documented. Further, a geographical linkage for very high quality beef exists for the state of Iowa, where beef producers have an abundance of low-cost corn and corn co-products available for feeding cattle (see Fig. 1) and a history of raising breeds of cattle that produce high-grading beef – two factors that have contributed to Iowa's international reputation for producing tender, flavorful beef.

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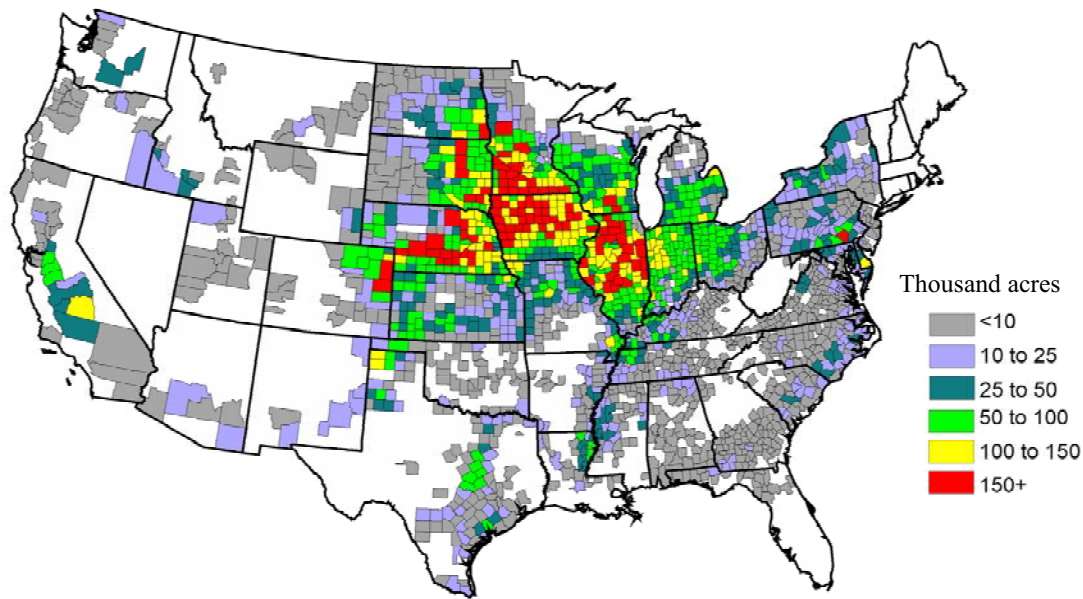


Fig. 1. Corn for grain, 2003 planted acres by county

### 1. Potential markets and product attributes

The primary target market for the Iowa-80 Beef pilot program was Japan. A BSE-related ban on imports of US beef was in place in Japan when the pilot program was initiated in mid-2004. However, Japan had been the largest importer of high-value US beef prior to the ban, and the United States and Japan were negotiating conditions for re-opening the market. The secondary target market for the pilot program was the domestic market for very high quality beef.

As the primary target market, Japan was the focus for creating a brand name. Prior to the import ban, Japanese consumers generally preferred grain-fed beef from the US Midwest over imported short-fed or grass-fed beef from other regions and countries. Japanese importers had become familiar with the USDA inspection number assigned to individual packing plants and wanted more beef from the plants that process long-fed Midwest cattle. Because production and processing of this beef occurs along the US Interstate 80 corridor, grain-fed beef from the Midwest was informally known as I-80 beef to some Japanese buyers. The Iowa-80 Beef brand combines this quality association with the geographical linkage to Iowa.

Branding has become an important marketing tool in Japan, and conversations with Japanese importers prior to this research revealed interest in purchasing high-quality beef with an Iowa brand. However, because so little beef packing occurs within the state (Babcock and Clemens, 2005), these importers expressed concern that it would

be difficult to ensure that cattle processed in another state had been fed in Iowa. The two market mechanisms being tested for the Iowa-80 Beef pilot program would address these concerns by providing audited, documented certification and verification of how and where the Iowa cattle were produced. The documentation would also provide full traceability and allow retailers to tell the “story” of the Iowa-80 Beef brand. These two attributes are highly valued as marketing tools to fulfil Japanese consumers’ desire to know where and how their foods are produced (Clemens, 2003).

**1.1. Defining the value-added attributes of Iowa-80 beef.** The objectives of the first phase of the pilot program were to define the attributes that differentiate Iowa-80 Beef from other commodity and non-commodity beef and to estimate the potential supply of beef with those attributes. Because the long-term success for agricultural brands depends in part on ensuring that supply does not overrun demand and eliminate any premiums, a state brand risks becoming a commodity standard (Hayes, Lence, and Stoppa, 2004; Hayes, 2005). One way to restrict supply within a large geographical area is to set sufficiently stringent standards that raise the product well above commodity status. Because the standards for Iowa-80 Beef were designed to achieve a *very* high quality product, supply would be naturally restricted because not all Iowa producers would be willing to adopt the production processes or provide the mandatory documentation for the program. Figure 2 shows the preliminary specifications established for the pilot program.

◆ Each animal is identified with a unique identification number using an electronic ear tag by the time of weaning.
◆ Source of origin (place of birth) is verified for each animal.
◆ The age of each animal is verified to be less than 18 months at time of slaughter.
◆ The genetic makeup of each animal is verified to be produced only from sires and dams that are Black Angus, Red Angus, or Hereford (horned or polled) and that Iowa-80 Beef program calves are at least 50 percent of any of these breeds. No other breeds or crossbreeds will be used.
◆ All animals are fed in a single Iowa cattle producer's feedlot for a minimum of 200 days.
◆ All animals are fed a high-concentrate ration of at least 75 percent corn or corn co-products for the full feeding period.
◆ All animals and all beef products sold as Iowa-80 Beef program are segregated, processed, and labeled at the beef processing plant.
◆ All beef is hung and dry-aged for a minimum of 14 days before shipment to customers.
◆ All carcasses must meet the quality standards for one of the following two levels, according to official USDA grades.

- The first level meets all the above criteria and grades Choice Plus or Prime.
- The second level meets all the above criteria and grades Middle Choice.

**Fig. 2. Preliminary production specifications for Iowa-80 Beef**

**1.2. Determining potential supply.** To calculate the potential supply of Iowa-80 Beef using the specifications shown in Figure 2, Lawrence and Ibarburu-Blanc (2005) used two existing datasets – the Tri-County Steer Carcass Futurity Cooperative (TCSCFC) program dataset for 2003-2004 and Iowa Quality Beef Supply Network (IQBSN) dataset for 2001-2002 – to estimate the percentage of cattle fed in Iowa that would meet all the program specifications.

The TCSCFC dataset included feedlot data, carcass data, and birthdates for more than 14,000 cattle originating from eight states and fed in Iowa. Table 1 shows the percentage of cattle in the TCSCFC dataset that would have qualified for each specification and for all the specifications on a monthly and annual basis. As shown, only 0.67 percent of the TCSCFC cattle would have met all the Iowa-80 Beef preliminary specifications if they had been enrolled in the program during 2002-2003. Also as shown, the most restrictive specification was days on feed (13.6%) and the least restrictive was age at harvest (85.7%).

**Table 1. Percentage of TCSCFC program cattle fed in Iowa that would comply with preliminary Iowa-80 Beef specifications**

Month	Angus or Hereford sired	Minimum 200 days on feed	< 18 months at harvest	USDA grade			All specifications
				Middle choice	Upper choice	Prime	
(percent)							
January	74.7	3.8	80.4	16.5	4.5	0.7	0.16
February	82.6	9.4	77.2	16.8	6.6	1.4	1.43
March	74.3	4.1	91.1	15.4	5.8	1.8	0.00
April	70.0	7.9	92.6	17.9	7.1	1.7	0.35
May	62.7	24.7	89.9	16.4	2.4	1.2	0.71
June	63.1	21.6	91.7	16.4	3.9	2.1	1.58
July	65.9	56.9	70.4	10.3	5.0	1.2	2.36
August	91.1	0.0	44.8	6.6	2.1	0.8	0.00
September	80.2	0.8	50.8	8.7	0.0	1.6	0.00
October	73.5	0.0	43.3	3.5	4.7	0.6	0.00
November	81.4	8.1	60.2	9.7	4.3	1.7	0.00
December	89.5	12.8	94.4	16.8	5.2	1.6	0.70
Year	71.0	13.6	85.7	15.7	5.0	1.5	0.67

Note: The additional assumption was made that the cattle produced carcasses weighing 600 to 900 pounds (hot weight).

The IQBSN data were reported differently from the TCSCFC data and could not be used to determine whether cattle would qualify as Iowa-80 Beef based on all specifications. However, the two datasets could be compared based on quality grade indicators. As shown in Table 2, IQBSN cattle produced a higher percentage of Middle and Upper Choice and Prime carcasses than

did the TCSCFC cattle. We did not know animal age or days on feed for the IQBSN animals, however, based on the quality comparison, we were able to determine that the relatively large number of cattle sold in this group each month would increase the number of Iowa-80 Beef qualified cattle without oversupplying the program.

Both the TCSCFC and IQBSN data indicate that seasonality would present a challenge in maintaining steady supplies of eligible Iowa-80 Beef cattle. One reason for the low cattle marketings in Iowa during the fall is that cattle prices are seasonally low, in part because of large supplies. Spring calving is dominant in the United States, with approximately 64% of calves born during

February, March, and April combined (US Department of Agriculture, 1997). Given that there was no requirement for Iowa-80 Beef cattle to be born in Iowa, qualified feeder calves could be sourced from states and regions with calves born throughout the year and a price premium might encourage producers to manage cattle into low-marketing time slots.

Table 2. Percentage of animals fed in Iowa grading middle and upper choice and prime in the IQBSN 2001-2002 dataset and the TCSCFC 2003-04 dataset

Month	IQBSN carcasses			TCSCFC carcasses		
	Middle and upper choice (percent)	Prime (percent)	Total cattle	Middle and upper choice (percent)	Prime (percent)	Total cattle
January	25.46	4.27	5,836	20.94	0.73	826
February	24.34	3.87	8,012	23.45	1.35	1,403
March	28.21	4.40	11,636	21.22	1.82	1,871
April	22.76	3.35	10,029	25.00	1.67	3,464
May	20.93	1.85	13,090	18.78	1.17	2,988
June	25.94	2.75	6,288	20.32	2.09	1,722
July	23.39	4.11	8,072	15.31	1.20	418
August	25.22	5.12	9,262	8.61	0.82	244
September	27.65	4.35	9,750	8.66	1.57	127
October	26.04	5.39	8,895	8.19	0.58	342
November	21.22	3.48	7,009	13.93	1.74	517
December	21.21	2.90	6,266	21.90	1.55	388
Total	24.41	3.80	104,145	20.67	1.50	14,310

The preliminary Iowa-80 Beef specifications were also compared to descriptions of South Dakota Certified Beef™ (SDCB) and Nebraska Corn-Fed Beef®, two other programs with minimum production specifications and identity tied to a US state. According to data published on the Internet in 2005 and 2006, the SDCB program required for cattle to be born, fed, and processed within the state; for producers to keep individual birth records on the cattle; and for carcasses to be equivalent to USDA Select (SDCB base tier) or Choice (SDCB upper tier) grades (South Dakota Certified Beef, 2006). The Nebraska Corn-Fed Beef program's minimum days on feed (100) and ration requirements (50 percent corn or corn by-products) were similar to those of the SDCB program, but the Nebraska program restricted grade to Choice beef and included yield grade and carcass weight requirements (Nebraska Corn-Fed Beef, 2005).

### 1.3. Revising the production specifications.

Based on the estimates of potential supply, feed-

back from industry experts, and the comparison of state beef programs, revisions were suggested that would better fit the production potential and differentiation goals of the pilot program but would not diminish the desired product quality. A second supply estimation was run using the suggested revisions. As shown in Table 3, the potential supply of cattle in the TCSCFC dataset more than doubled, from 0.67 percent to 1.4 percent, and the number of months in which no eligible cattle were slaughtered was reduced from four months to three months.

Based in part on these estimates, the revised specifications for the Iowa-80 Beef program were adopted (see Fig. 3). The genetics, corn-based ration, minimum days on feed, and grade specifications ensure a consistent long-fed product with the marbling, flavor, and tenderness attributes of very high quality beef. Requiring that feeding take place in Iowa provided the certifiable geographical linkage to Iowa. Other factors were also considered in arriving at the final specifications.

Table 3. Percentage of TCSCFC program cattle fed in Iowa that would comply with revised Iowa-80 Beef specifications

Month	Angus sired	Minimum 180 days on feed	18 Months or less at harvest	USDA grade		Cattle that meet all specifications
				Uper choice	Prime	
(percent)						
January	73.8	23.1	83.9	2.8	1.5	0.4
February	79.6	19.7	79.7	6.0	1.3	1.8
March	72.3	20.0	88.3	3.7	2.0	0.8
April	65.9	32.9	91.6	4.1	1.8	1.3
May	59.7	50.9	92.1	2.6	1.3	1.7
June	56.3	56.7	92.1	3.2	2.5	2.0
July	52.4	47.9	79.1	3.2	0.8	2.3
August	66.4	26.5	53.5	2.3	2.0	0.4
September	71.8	24.2	56.0	0.3	1.2	0.0
October	65.1	0.0	47.0	3.1	1.0	0.0
November	68.6	11.1	66.5	2.4	1.2	0.0
December	67.7	24.4	75.9	4.0	1.2	0.5
Year	64.9	37.3	87.3	3.4	1.7	1.4

Notes: The additional assumption was made that the cattle produced carcasses weighing 600 to 900 pounds (hot weight). Additional data were used to calculate six-year averages rather than the one-year average used for the preliminary specifications.

- ◆ Each animal is
  - sired by a 100 percent Angus bull;
  - source verified to the farm of birth using an identification system with a unique ear tag number that identifies the animal through the production process;
  - fed a high-concentrate ration that totals at least 75 percent corn and corn co-products over the feeding period;
  - fed in an Iowa feedlot for a minimum of 180 days;
  - age verified and processed at 18 months of age or less.
- ◆ All animals and beef products are segregated, processed, and labeled at the beef processing plant.
- ◆ All beef carcasses meet the quality standards for USDA grades upper one-third Choice or Prime.

**Fig. 3. Final Iowa-80 Beef production and grading specifications**

*Genetics.* The primary target market for Iowa-80 Beef was the Japanese import market, where consumers tend to prefer black-hided animals, and using Angus sires was deemed an appropriate fit to this market preference.

*Animal identification.* Individual animal identification was deemed key to protecting the integrity of the brand and meeting Japanese desire for full traceability. Identification is also required for USDA process verification. Discussions with potential producer-participants revealed that a significant proportion of them had not adopted electronic ear tags yet,

so the requirement for ear tags to be electronic was dropped.

*Source and age verification.* Information about the negotiations to re-open the Japanese market to US beef indicated that age and source verification would be part of any agreement. The requirement that US beef be harvested from animals 20 months of age or younger had not been adopted yet, and conservative 18 months were chosen for the pilot program.

*Ration.* The specification for at least 75 percent corn or corn co-products was clarified to indicate that the percentage applied as an average over the entire feeding period.

*Days on feed.* Based on the second supply estimation run, this specification was reduced. More than twice as many cattle achieved desired weights and grades in 180 days as did so in 200 days, and the shorter feeding period would reduce feeding costs and unwanted fat deposition on some cattle.

*Product segregation.* Segregation and labeling during harvest and processing would ensure non-program beef was not inadvertently mixed with program beef, requirements for both process verification and brand certification.

*Grade.* To establish Iowa-80 Beef as a very high quality product and to achieve greater differentiation from other branded beef programs and commodity product, the final specifications included only Upper Choice and Prime beef. The tradeoff for more stringent grade specifications was smaller supply.

*Dry aging.* Because dry aging greatly increases processing costs and a limited number of facilities are equipped to dry age beef, this specification was eliminated from the program.

## 2. Obtaining a certification mark

Once the production specifications were finalized, the first objective of the second phase of the pilot program was to protect Iowa-80 Beef against competition from lower-quality product. Earlier research examined the potential benefits of obtaining the type of US trademark known as a certification mark (Hayes, Lence, and Stoppa, 2004; Babcock and Clemens, 2004). Certification marks can be used to certify product origin and specific standards for quality, materials, or mode of manufacture. Further, trademark law differentiates certification marks from other trademarks in three important ways. First, a certification mark may not be used by the owner of the mark. “The mark may be used only by entities other than the owner of the mark, with authorization from the owner of the mark. The certification mark owner controls the use of the mark by taking steps to ensure that the mark is applied only to goods/services that contain or display the requisite characteristics or meet the specified requirements that the certifier/owner has established or adopted for the certification” (US Patent and Trademark Office, 2006b).

Second, a certification mark does not distinguish the goods or services of one person from those of another person (US Patent and Trademark Office, 2006a). And, finally, any producer who fulfils the certification standards and produces eligible product can use the mark. As such, a certification mark fits quality and property protection goals of the pilot program by ensuring that eligible producers are the only source of product, recognizing the output of individual producers equally, and protecting the product quality.

The first step in applying for a certification mark for Iowa-80 Beef was to design a mark. As much as possible, we attempted to achieve the objectives of the pilot program at the most reasonable cost, which included developing the mark in-house rather using a commercial design or marketing firm and applying for the mark without employing an attorney.

Once the mark was designed, the next step was to search for existing marks on which the design or content of the proposed Iowa-80 Beef mark might infringe. The US Patent and Trademark Office (USPTO) Internet site includes the Trademark Electronic Search System (TESS), which allows users to search pending, registered, and dead federal trademarks. Searches in TESS, other Internet

sites, and print media did not reveal any potential infringement.

On December 15, 2004, we submitted an “Intent to Use” application using the USPTO’s Trademark Electronic Application System (TEAS). We used the language of registered marks for other agricultural products and followed the TEAS instructions for preparing and submitting the application. We received email notification that it would take approximately six months before the application would be examined by a USPTO attorney.

Approximately seven months later, we received a Notice of Office Action from USPTO. The examining attorney had found no registered or pending mark that would bar registration of the Iowa-80 Beef mark but required four amendments to the application:

1. Revision of the identification of goods.
2. Inclusion of language to “disclaim the geographically descriptive wording ‘IOWA’ apart from the mark as shown because it is primarily geographically descriptive of the applicant’s geographic location and where the goods originate”.
3. Replacement of the term “applicant” with “certifier”.
4. Refinement of the certification standards.

The amendments were submitted electronically, and a Notice of Publication was received from USPTO approximately 60 days later. The Iowa-80 Beef certification mark was published in the Official Gazette for 30 days “for the purpose of opposition by any person who believes he will be damaged by the registration of the mark” (US Patent and Trademark Office, 2005). No opposition was filed, and a Notice of Allowance requested documents to show the use of the mark in commerce. A Notice of Acceptance of Statement of Use was issued on June 21, 2006, and the certification mark was registered on August 1, 2006.

In our experience, the TEAS site provided all the information needed to submit an application. Obtaining registration of the certification mark took approximately 20 months and cost \$435 in fees paid to the USPTO.

## 3. Recruiting participants

Concurrent with applying for the certification mark, we attempted to recruit a group of participants sufficiently large to allow us to apply for USDA process verification. An early concern for the program was finding a slaughter and fabrication facility that met two major needs of the pilot program – USDA inspection of the facility and the ability to perform

small slaughter runs. Beef for international markets must be processed in USDA-inspected facilities, and only seven such slaughter facilities were operating in Iowa at the time. This lack of USDA-inspected slaughter capacity greatly limits options for a non-commodity, branded beef program such as Iowa-80 Beef (Babcock and Clemens, 2005). Thus, to allow for future growth, the Iowa-80 Beef program did not limit slaughter and processing to Iowa facilities.

In addition to performing small slaughter runs, the facility would need to ensure proper segregation and labeling of live cattle, carcasses, and beef. Amend Packing Company in Des Moines, Iowa, met both needs, was willing to accommodate the pilot program, and provided the additional advantage of previous experience with federally audited programs.

On the animal production side, two groups of potential participants were identified. The first group consisted of cow/calf and feedlot producers from the TCSCFC program in Southwest Iowa. Twenty producers were contacted by letter and then by telephone to determine interest in the program. The second group consisted of six individuals who had learned of the pilot program through media reports or other sources and contacted pilot program staff.

Iowa-80 Beef program staff met with 13 producers to explain the objectives of the program. At these meetings, a Program Compliance Checklist was used to create a brief profile of each producer's animal identification, production, and recordkeeping systems and identify recordkeeping, animal identification, and other management changes that would be needed to participate in the program. The pilot program was in very early stages of development when these meetings took place, and producers were informed that we could not guarantee any price premium for participation. Six producers agreed to enter cattle into the Iowa-80 Beef program.

#### **4. Developing a USDA process verification program**

Another objective of the second phase of the pilot program was to obtain USDA process verification as a mechanism for differentiating and marketing Iowa-80 Beef as a premium product. A USDA Process Verified Program (PVP) "provides suppliers of agricultural products or services the opportunity to assure customers of their ability to provide consistent quality products or services" (US Department of Agriculture, n.d.). Under a PVP, producers and processors support specific process verified points with a documented quality management system (QMS). USDA uses ISO 9000 standards to evaluate QMS program documentation, ensure consistent auditing practices, and promote international recognition of audit results. Thus, a PVP is an interna-

tionally recognized method of differentiating beef, providing buyers with documented assurance that the process verified points have been followed, and allowing suppliers to make marketing claims based on their process verification points.

Attempting to develop a PVP was much more difficult and more expensive than registering a certification mark. Once we had defined the Iowa-80 Beef product specifications, we prepared and submitted a PVP manual to the USDA Agricultural Marketing Service's Audit, Review, and Compliance Branch. A Kansas State University study suggests that hiring a consultant to write PVP program documentation can be costly but can also save a great deal of time (Sanden, Boland, and Thielen, 2004). We arrived at the same conclusion after being notified that the manual we had submitted was not acceptable. We hired a consultant who had experience in developing PVP documentation and who provided us with extensive guidance in preparing the procedural manuals and training documents for the pilot program.

**4.1. Testing the process verification points.** To pass USDA review and audit, a PVP must be fully operational so USDA staff can verify conformance to the process verification points. Before enrolling cattle and submitting the new documentation to USDA, we began to test the system to determine how closely the documented processes matched actual practice. At this point, we had not yet officially enrolled cattle into the program, and we purchased two cattle that fit pre-slaughter specifications from a participating producer.

As expected, the test run revealed several problems. The most serious problem occurred when the owner of the cattle failed to submit the necessary documentation. Given that the success of a PVP hinges on documentation, this lack of documents was a critical process failure. Part of this failure may have been attributable to performing the test run before the program manuals had been distributed to the producers. However, starting with the first meeting with each producer, Iowa-80 Beef staff had emphasized the importance of documentation and provided this participant with given all the documents needed for the test run.

Perhaps it was the knowledge that this was "only a test run" that caused the participant to discount the importance of submitting documentation. And, although the participant was paid a small "hassle-factor" premium for the two cattle, there was little incentive for completing the paperwork. This outcome raises the question of the level of economic incentive that is required to ensure that producers will invest the time needed to complete PVP records.



A second problem occurred when neither carcass from the test run graded high enough to qualify as Iowa-80 Beef. This outcome prevented us from determining whether a premium could be obtained and measuring consumer acceptance of Iowa-80 Beef. Where to market nonconforming product was a recurring issue during program development. Solving this problem over the long term is critical to the success of any premium beef program, and especially so for a small program with highly stringent quality specifications.

Finally, the cost of the beef from the two test animals was exceedingly high (\$3.88 and \$3.66 per pound, respectively), in part because unusually high transportation costs were averaged over only two animals. In addition, returns were low because the beef was sold as non-conforming product and because so little drop value was recoverable at the processing facility.

**4.2. Roadblocks to process verification.** As noted, achieving USDA process verification requires that the program for which application is being made is fully operational. Here, the pilot program encountered a roadblock that a commercial venture would not encounter: the research portion of the pilot program was not permitted to purchase more than two cattle to avoid competing with the private sector and to avoid any potential liability associated with commercializing the program. Once the test run was completed, commercial activities were required to be conducted outside the university. Research funds could be used to pursue USDA process verification, maintain the certification mark, provide internal audit and review services, and measure the economic feasibility of the pilot program, but non-university funding would be necessary to create a separate business entity to perform commercial activities. As of this writing, we have not secured non-university funds to continue the program. The documentation prepared for the PVP was not submitted to USDA for review but was published on the Internet as a resource to others.

## 5. Marketing efforts

As noted, the Japanese market was closed to US beef when the pilot project was initiated. However, once US beef regained access, Iowa-80 Beef would meet the high quality standards and documented age and animal identification specifications desired by the Japanese import market. As negotiations between the Japanese and US governments matured, we decided to introduce Iowa-80 Beef at FOODEX Japan, the largest annual food show in Japan. With assistance from the US Meat Export Federation and a small grant of Market Access Program funds, marketing materials were developed for the March 2006 show.

Three months prior to the 2006 FOODEX show, the Japanese market reopened to US beef but closed shortly thereafter when a shipment of US veal was found to contain bones banned under the US export agreement with Japan. Negative attitudes toward US beef from this incident were exacerbated by the discovery of bone fragments in a shipment of US beef to Hong Kong just as the FOODEX show was getting under way in Tokyo. Despite widespread negative press reports in the Japanese media, business contacts made during FOODEX confirmed that, even at a very difficult time for US beef in international markets, importers in Japan and other Southeast Asian countries were interested in very high quality US beef products when markets re-opened.

## Lessons learned / Conclusion

The goal of the Iowa-80 Beef pilot program was to create and commercialize an origin-based collective brand for very high quality beef for export to Japan. The objective of the research for the program was to examine the processes, costs, and feasibility of using a federally registered certification mark and a USDA PVP to differentiate and market premium beef from the state of Iowa. The production and product quality criteria were shown to be sufficiently stringent to ensure differentiation based on the attributes that can command a price premium and to prevent the type of overproduction that normally occurs when a premium is offered for an agricultural product.

The research revealed that the costs of registering a certification mark were relatively low in terms of USPTO fees and that a mark would be relatively easy for a small producer group to obtain. However, several costs are not accounted for in this case study. Labor costs were not quantified for designing the mark, conducting searches to determine potential infringement, and preparing the application, and such costs would vary depending on whether professional services were used. As noted, the Iowa-80 Beef mark was registered without using a trademark attorney, but this decision should be given careful consideration. Legal expertise would likely have been needed if the Iowa-80 Beef application had encountered any major obstacles during the application process. Also, because of the short-term nature of the pilot program, the case study does not include long-term costs, such as certifying producers (we planned to use the PVP documentation), protecting the mark against infringement and unauthorized use, and renewing the mark. Despite these costs, registering a brand is critical in protecting the product against imitation that could oversupply the market.

By comparison, the pilot program showed the costs of a USDA PVP to be very high. Although some applicants may have the expertise to prepare program documentation without assistance, hiring an experienced consultant was a sound investment for the Iowa-80 Beef program. As with the certification mark, labor costs were not quantified for program staff, but there is no doubt that the labor investment was large. For applicants who submit documentation for review, USDA staff conduct a desk audit of the documentation and on-site audits of administration, production, and processing facilities. Applicants reimburse the USDA for the time and travel expenses associated with these audits, and Sanden, Boland, and Thielen (2004) estimated PVP audit costs at \$5,000. Once a PVP is approved, ongoing costs include program administration, internal review, and periodic USDA audits, in addition to the recordkeeping, training, and other costs to participating producers and processors. These costs make it highly unlikely that a small group of producers could afford to use a PVP to differentiate a branded beef product.

On the export side, the individual beef export verification programs eventually negotiated between the United States and other countries require the use of approved facilities. The costs of acquiring approval for one or more export markets would likely exceed the benefits for a small custom packer. Also, a small branded program could not tolerate the risks involved in exporting to newly re-opened markets if shipments were held up or returned, payment was delayed, or markets suddenly closed. Any branded program would need to be large and stable enough to withstand such risk.

Finally, industry experts, traders, and foreign importers interviewed during the course of this project confirmed strong worldwide demand and lack of consistent supplies of very high quality beef. Further, one of the fastest-growing market segments is for natural and organic beef. Although organic certification might not be specified in a branded beef program, certified organic product that also meets the specifications for a collective brand could further differentiate the product and open additional niche markets.

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