University of Nebraska - Lincoln
DigitalCommons@University of Nebraska - Lincoln

Presentations, Working Papers, and Gray Literature: Agricultural Economics

Agricultural Economics Department

8-15-2003

Hot Issues and Cool Rules

Bradley Lubben
University of Nebraska-Lincoln, blubben2@unl.edu

Follow this and additional works at: http://digitalcommons.unl.edu/ageconworkpap

Part of the Agricultural and Resource Economics Commons

Lubben, Bradley, "Hot Issues and Cool Rules" (2003). *Presentations, Working Papers, and Gray Literature: Agricultural Economics.* Paper 26.
http://digitalcommons.unl.edu/ageconworkpap/26

This Article is brought to you for free and open access by the Agricultural Economics Department at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Presentations, Working Papers, and Gray Literature: Agricultural Economics by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

HOT ISSUES AND COOL RULES

Bradley D. Lubben
Extension Agricultural Economist
K-State Research and Extension
331 I Waters Hall
Manhattan, KS 66506-4011
P: 785.532.2276
F: 785.532.6925
E: blubben@ksu.edu

Presented at:

Risk and Profit Conference 2003
Department of Agricultural Economics, Kansas State University
August 14-15, 2003
Ramada Inn, Manhattan, Kansas

HOT ISSUES AND COOL RULES

Bradley D. Lubben
Extension Agricultural Economist
K-State Research and Extension

When President Bush signed the Farm Bill on May 13, 2002, much of the focus was on the new commodity and conservation programs and how they had changed relative to the 1996 Farm Bill. However, near the end of the Farm Bill was some language that has become one of the most contentious issues today.

Title X, Section 10816 of the *Farm Security and Rural Investment Act of 2002* (2002 Farm Bill) addressed country-of-origin labeling (COOL) rules for beef, lamb, pork, fish, fruits, vegetables, and peanuts. The legislation called for voluntary guidelines to be implemented no later than September 30, 2002 with mandatory regulations due on September 30, 2004. As the voluntary guidelines were proposed and implemented, and, as the mandatory deadline approaches, the focus on COOL has intensified, with debate over the proposed rules, the potential benefits, and the potential costs.

Many of the questions over COOL will remain unsettled until USDA proposes final rules for implementation of the mandatory provisions of COOL. When and if that will happen is a question itself, pending legislative action in the U.S. House of Representatives to strip appropriations for COOL implementation for fiscal year 2004 (October 2003 - September 2004).

The following discussion focuses on the background and issues involved with COOL and the impacts as they affect the livestock and meat industry, particularly beef and pork. While a review of the available literature will address many of the questions being debated, there are very few definitive answers at this point in time. Instead, the discussion proceeds with an assessment of the key policy questions yet to be resolved.

Legislative Background

As noted, COOL legislation was included in the 2002 Farm Bill. Mandatory COOL provisions as they related to fruits and vegetables were offered as an amendment to the Farm Bill in the final hours of debate on the floor of the U.S. House of Representatives by Representative Mary Bono of California. The amendment was approved as part of the House-passed version of the Farm Bill. On the Senate side, COOL provisions on beef, pork, lamb, farm-raised fish, fruits, and vegetables were included in the Farm Bill legislation Senator Tom Harkin passed out of the Senate Committee on Agriculture, Nutrition, and Forestry.

While the eventual path COOL provisions took to inclusion in the 2002 Farm Bill involved some late-hour deal-making, it was not as if COOL had come from nowhere. During the House Agriculture Committee legislative markup of the new Farm Bill legislation, COOL provisions were offered as an amendment and discussed at length. Eventually, COOL provisions that were amended to include mandatory animal identification were voted down in whole and did not become part of the House version of the Farm Bill until the final hours of floor debate noted above.

But even before the House Agriculture Committee debate for the 2002 Farm Bill, COOL had been discussed time and again. In fact, debate and analysis of earlier versions of COOL and related provisions stretch back at least to the 1980s, when the General Accounting Office was mandated by the *Food Security Act of 1985* to study the issue of chemical residues and foreign matter on imported meat and live animals. The report, issued in September, 1987, addressed the rationale and feasibility of country-of-origin labeling on meat and meat food products as well as eating establishments that served imported meat

items (U.S. GAO, 1987).

The COOL debate continued over the years, with additional reports and testimony to Congress from the General Accounting Office on fresh produce (U.S. GAO, 1999) and beef and lamb (U.S. GAO, 2000) and from the United States Department of Agriculture USDA) Food Safety and Inspection Service on beef and lamb (FSIS, USDA, 2000). Various agricultural commodity groups and farm organizations also testified to Congress on numerous occasions, along with representatives of processing, retailing, and consumer groups.

The end result of years of debate on COOL is that the 2002 Farm Bill formalized voluntary and mandatory requirements for labeling of included commodities, but left much of the specific interpretation to the Agricultural Marketing Service (AMS) in USDA to propose through rule-making procedures.

Legislation

Section 10816 of the 2002 Farm Bill official amends the *Agricultural Marketing Act of 1946* with the statutory requirements of COOL. The *2002 Supplemental Appropriations Act for Further Recovery From and Response to Terrorist Attacks on the United States* modified the COOL language slightly as it relates to the definition of wild fish. But both pieces of legislation left much of the interpretation to AMS, which published voluntary COOL guidelines in the *Federal Register* on October 11, 2002 (AMS, USDA, 2002a). Selected statutory provisions are noted below:

> *"The term 'covered commodity' means -*
> *(i) muscle cuts of beef, lamb, and pork;*
> *(ii) ground beef, ground lamb, and ground pork;*
> *(iii) farm-raised fish;*
> *(iv) wild fish;*
> *(v) a perishable agricultural commodity; and*
> *(vi) peanuts."* (Section 281(2)(A))
>
> *"...a retailer of a covered commodity shall inform consumers, at the final point of sale of the covered commodity to consumers, of the country of origin of the covered commodity."* (Section 282(a)(1))
>
> *"A retailer of a covered commodity may designate the covered commodity as having a United States country of origin only if the covered commodity -*
> *(A) in the case of beef, is exclusively from an animal that is exclusively born, raised, an slaughtered in the United States (including from an animal exclusively born and raised in Alaska or Hawaii and transported for a period not to exceed 60 days through Canada to the United States and slaughtered in the United States);*
> *(B) in the case of lamb and pork, is exclusively from an animal that is exclusively born, raised, an slaughtered in the United States;"* (Section 282(a)(2))
>
> *"Any person engaged in the business of supplying a covered commodity to a retailer shall provide information to the retailer indicating the country of origin of the covered commodity."* (Section 282(e))
>
> *"The Secretary shall not use a mandatory identification system to verify the county of origin of a covered commodity."* (Section 282(f)(1))
>
> *"Not later than September 30, 2002, the Secretary shall issue guidelines for the voluntary country of origin labeling of covered commodities based on the requirements of section 282."* (Section 284(a))

"Not later than September 30, 2004, the Secretary shall promulgate such regulations as are necessary to implement this subtitle." (Section 284(b))

Exemptions

According to the statutory language, retailers are responsible for providing country-of-origin information on covered commodities. However, not all retailers will be subject to the requirements. The statute specifically exempts food-service establishments from the requirements. And, by virtue of the specific definition of which commodities are subject to the rules, those commodities are excluded from the rules when they are considered ingredients in a processed food item.

Even the definition of retailer is limited in scope. Officially, the statute refers to "retailers" as defined by the Perishable Agricultural Commodities Act of 1930. That act defines a "retailer" as any person who buys or sells perishable agricultural products (fresh or frozen fruits and vegetables) solely for sale at retail with an annual invoice value of more than $230,000. According to testimony from USDA officials, this definition narrows the scope of the COOL regulations to approximately 4,200 licensees with 31,000 retail outlets nationwide (Lambert, 2003). Under this definition, butcher shops, fish markets, and small grocery stores that do not handle $230,000 of fresh and frozen fruits and vegetables are exempt, as are the food-service establishments mentioned above. And, of course, many other food products are not listed in the regulations as covered commodities and are not affected by the labeling requirements.

The exemptions provide the basis of one of the first policy questions:

Who should officially be required to label products as to country-of-origin?

If the policy goal of COOL regulations is to satisfy the "right-to-know" of consumers regarding their food purchases, can that be met with just the limited number of "retailers" and limited number of products officially subject to regulations? And, if the implied goal of COOL regulations is to improve "food safety," will the limited scope of labeling requirements be sufficient?

Information

Based on the statutory language, retailers of covered commodities are responsible for labeling the products as to country of origin, but persons who supply those covered commodities to the retailer must also provide the country-of-origin information with both potentially subject to penalties and fines. Thus, for example, processors are responsible for providing country-of-origin labeling on the beef, pork, and lamb products they provide to retailers such that the retailers can comply with the statute. However, because producers do not provide beef, pork, and lamb to the processors, but rather officially provide live cattle, live swine, and live sheep, they are officially not responsible for providing this information.

On the surface, this disconnect in responsibility for tracing back the origin of a covered commodity would seem to be an obstacle to compliance with COOL regulations. The statutory language in Section 282(f)(1) even seems to further this obstacle with a prohibition on USDA from using any mandatory identification system. The AMS voluntary COOL guidelines address this issue by requiring retailers and other suppliers of covered commodities to have a verifiable recordkeeping audit trail. To the extent that the retailers and other suppliers demand recordkeeping or traceability mechanisms of their suppliers, the guidelines do not prohibit such requirements. The guidelines only prohibit USDA from implementing such a traceback system. Possible documentation systems range from full traceability and individual animal identification to producer affidavits of country of origin or even limited labeling and identification of only imported animals or products.

This traceability and recordkeeping issue as it relates to animal production represents another of the many unresolved questions:

What will officially be required from producers, processors, and retailers to document country of origin in compliance with COOL regulations?

If the implied goal of COOL regulations is "food safety," a full traceability and individual animal identification system would likely provide the most desirable system, particularly in the wake of the recent *bovine spongiform encephalopathy* (BSE) case documented in a beef cow in Canada and the resulting ban on beef and cattle trade with Canada for safety purposes. Without full traceability, a "U.S. origin" claim is only an indicator of "food safety" as long as a major food safety scare does not occur in the United States. But, much of the support from agricultural groups for COOL is premised on not requiring extensive recordkeeping or individual animal identification. At the other end of the spectrum, some supporters of COOL are calling for a presumption of "U.S. origin" unless records demonstrate the product or animal is imported. While this approach would substantially reduce the cost of compliance for producers, it would also create a perverse incentive to import animals and fraudulently supply them to processors as "U.S. origin" animals without any paperwork. Whether such problems could be policed effectively is subject to question. The middle ground may very well be a production record trail that producers will need to keep that is sufficient for third-party verification or self-verification in the normal course of market transactions. The ultimate decision on this required documentation could very well be the key factor in determining the economic feasibility of the whole COOL regime.

Labeling

While the statutes explicitly spell out only what qualifies for a label of "United States country of origin," the implication is a complex system of labeling depending on the product and its origin. According to AMS voluntary guidelines, the labeling regime for covered meat products would address the following situations:

Domestic Origin

For whole products from animals born, raised, and slaughtered in the United States, the labeling can signify "United States Country of Origin"

Mixed Origin

For whole products of mixed origin in production steps, the labeling must identify the production processes in each county (e.g. born in Canada, raised and slaughtered in U.S.A.).

For blended or mixed products (such as ground beef), the labeling must identify the applicable country of origin for each raw material source and must identify the raw material sources by order of prominence by weight (e.g. born in Mexico, raised and slaughtered in U.S.A.; born and raised in Canada, slaughtered in U.S.A., product of U.S.A., product of Australia)

Foreign Origin

For whole products completely of foreign origin, the labeling must specify the country of origin as determined at port of entry.

The voluntary labeling regime presents a challenge to suppliers and retailers of meat products, particularly for mixed origin products. Not only could the approved labeling requirement for mixed products be cumbersome or even confusing, the standard industry practices in producing blended or mixed products could result in constant changes to the required label based on source material origin and composition. Interestingly, many products wholly of foreign origin will already satisfy the proposed labeling regime, as they are imported in their retail form or package and are labeled as to origin at their port of entry. The resulting policy issue is:

What exactly should the label say and what should it not say?

Beyond the recordkeeping requirements, simply determining the appropriate language for a label will be a challenge. Labels on food products are already filled with substantial information, including brand, nutrition, and cooking information. In continually adding more information to the label, retailers will need to be careful not to overwhelm consumers

Implementation

The voluntary COOL guidelines were published by AMS in the *Federal Register* on October 11, 2002. While the voluntary guidelines serve as an indicator of what the mandatory regulations could be, AMS is tentatively set to publish proposed mandatory COOL provisions in late 2003 or early 2004 and receive comments from the public before final rules are published and implemented on September 30, 2004. That schedule is tentative because of recent action in the U.S. House of Representatives. House Resolution 2673, the *Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriates Bill, 2004*, stripped appropriations for fiscal year 2004 for the implementation of the COOL provisions as they relate to meat and meat products. The appropriations bill without the COOL funding passed the House and awaits conferencing with its corresponding U.S. Senate Bill 1427. The Senate bill emerged from its appropriations committee markup with COOL funding included, but awaits floor action as of this writing. Whether a conference committee will restore or strip funding for COOL in a final version of the appropriations bill remains to be seen. And, whether stripping the funding would prevent USDA from proposing mandatory provisions or whether it would simply prevent it from implementing any provisions before October 1, 2004 remains to be seen. The ultimate question in this debate, at least as it relates to meat and meat products, is:

Should voluntary COOL guidelines become mandatory, or should they remain voluntary?

Given that the current voluntary guidelines continue to be debated as the model for what the mandatory provisions would be, the question becomes should they even become mandatory. While much of the debate is focusing on exactly what the voluntary guidelines imply for mandatory rules and the resulting impacts, the overall debate reflects back to the abstract issue of whether the rules should be mandatory or voluntary. While the arguments for and against making the provisions mandatory revolve around several issues, the status of voluntary labeling regimes is very informative. The voluntary COOL guidelines have been in place since October, 2002 and to date, no individuals or entities have proposed or implemented labeling systems in accordance with the guidelines. Further, voluntary labeling programs for U.S.-origin meat have been offered through USDA's Food Safety and Inspection Service for some time with no interest or participation from firms or organizations. (Collins, 2003). On the other hand, proponents of mandatory COOL provisions note the absence of any voluntary actions only further demonstrates the need for mandatory rules, given that individuals or entities in the market have not done so voluntarily.

Economic Impacts

Much of the controversy over the COOL provisions revolves around disagreement on the potential benefits and costs of mandatory provisions. Ultimately, some of the arguments over costs cannot be resolved until USDA publishes final rules regarding labeling, recordkeeping, and other issues. And, potential benefits have only been estimated through surveys and economic research. Whether all of these factors will result in a net benefit or net cost to producers and consumers remains to be seen. Following is a review of available data and literature as it relates to supply and demand issues surrounding the COOL debate in the beef and pork sectors.

Current Trade Patterns

Given the overall political environment that led to calls for COOL legislation, it is instructive to look at actual animal and meat import data and trends. Using data available from USDA's Foreign Agricultural Service, we can analyze trade patterns over time and gain some understanding of the impetus behind the COOL legislation.

First, consider cattle and beef production in the United States. Approximately 36.7 million head of cattle and calves were slaughtered in commercial operations in 2002, yielding 27.2 billion pounds of meat production, according to the USDA Economic Research Service (ERS, USDA, 2002). A percentage of these animals included in the U.S. commercial slaughter statistics were either imported from foreign countries as calves for feeding in the United States or as finished cattle to be slaughtered in U.S. plants.

Figure 1. Imports of Feeder Cattle 440 - 700 Pounds (USDA-FATUS)

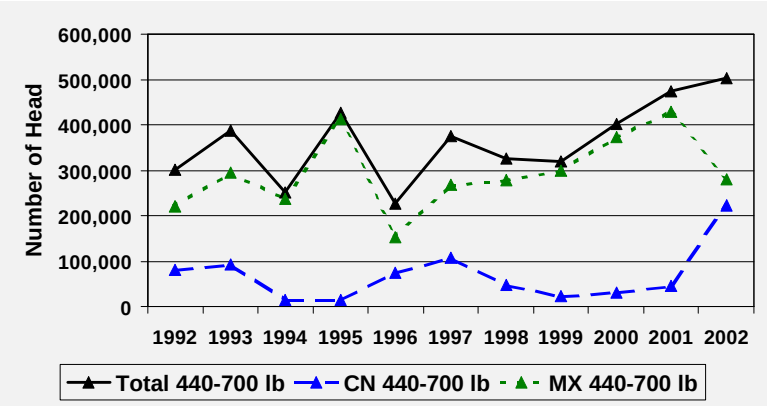


Figure 1 shows the total number of feeder cattle from 440 to 700 pounds in weight, as well as the number from Canada and Mexico, that were imported over the last decade to be fed in the United States. Figure 2 shows the same breakdown of imports of cattle over 700 pounds that were imported into the United States for either immediate slaughter or further feeding. The data show that Mexico and Canada together account for more than 99 percent of cattle imports to the United States, which totaled 2.5 million head in 2002. Moreover, the data demonstrated in Figure 1 shows that Mexico is the dominant source of imported feeder cattle, although numbers for 2002 suggest a substantial shift in sourcing from Mexico to Canada. For heavy feeder cattle and finished cattle ready for slaughter, the numbers in Figure 2 show Canada is essentially the sole import provider to the United States. The importance of these trade numbers is the noted increase in imports of both feeder cattle and heavy cattle in the past three years, adding to U.S. cattle supplies and supplying a focal point for political pressure.

Figure 2. Imports of Cattle Greater Than 700 Pounds (USDA-FATUS)

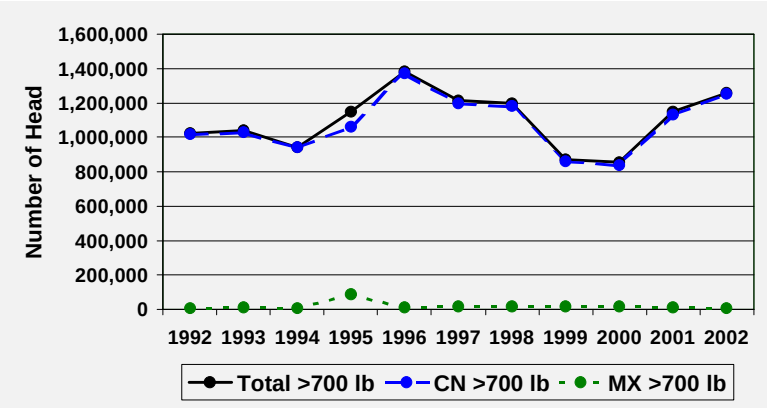
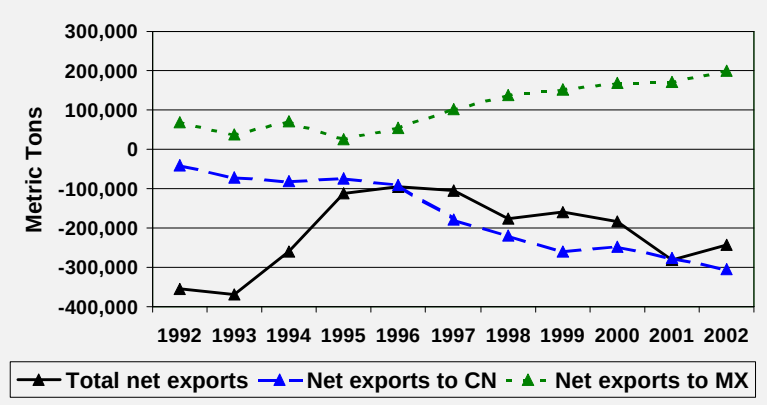


Figure 3. U.S. Net Exports of Beef and Veal (USDA-FATUS)



The increase in cattle imports to the United States comes at a time when net exports (exports minus imports) of beef and veal products from the United States have declined. From a growth trend in the early 1990s, net exports of beef and veal have declined from a level of approximately 100,000 metric tons of net imports to approximate 250,000 metric tons net imports in 2002 (Figure 3). As noted by the Canada and Mexico numbers in Figure 3, net imports to the United States from Canada more than offset a positive trade with

the rest of the world. These trends in import supplies of cattle from Mexico and Canada and beef and veal from Canada are a major part of the political climate in which COOL legislation was considered. However, it is worth putting the animal and meat import numbers together in a combined picture to see what the true impact on U.S. meat supplies at the retail level really is. Figure 4 shows the breakdown of the U.S. supply of muscle cuts of beef by origin by production step (B = born, R = raised, S = slaughtered). After accounting for all imported animals and meat, U.S. born, raised, and slaughtered beef amounts to nearly 89 percent of the U.S. supply of steaks and roasts (Plain and Grimes, 2003).

Figure 4. Beef and Cattle Imports as a Percent of U.S. Supply of Steaks and Roasts. (Plain and Grimes, 2003)

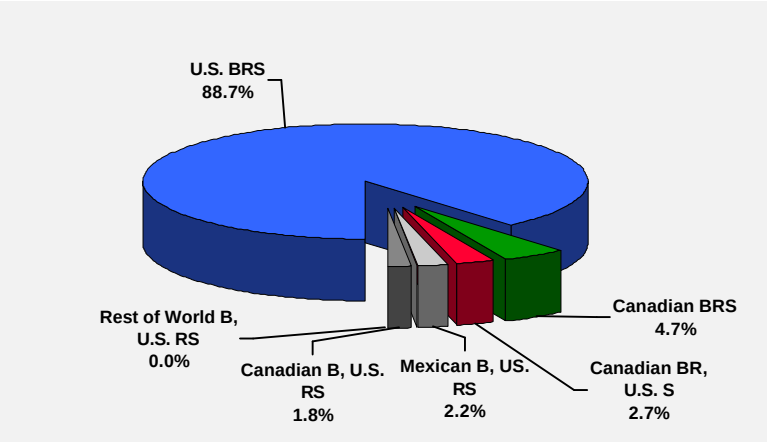
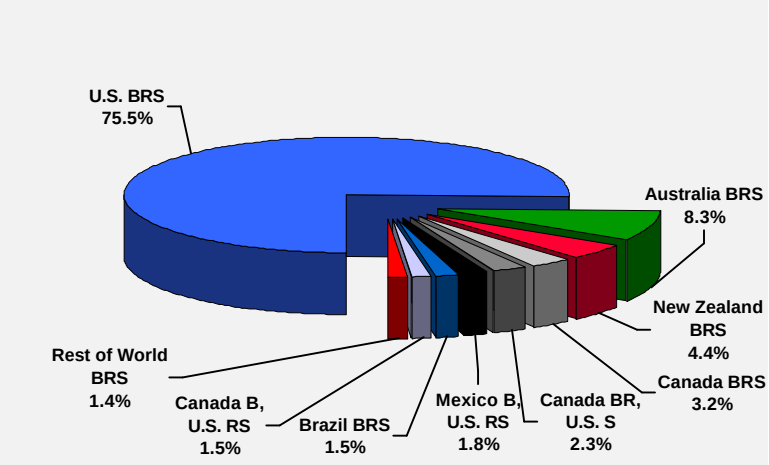


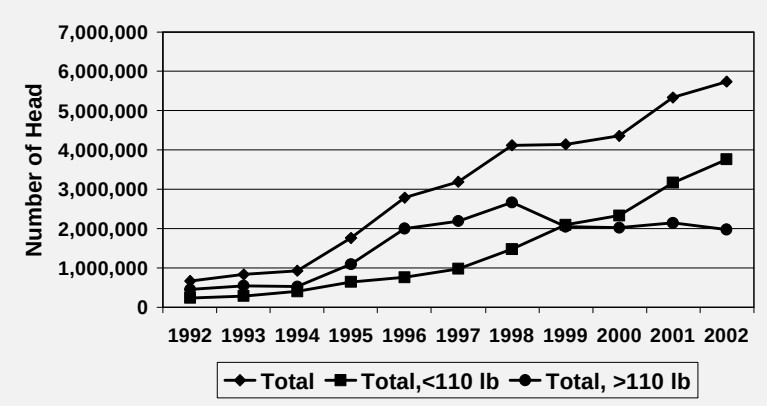
Figure 5 shows a similar breakdown for imported cattle and meat that are processed as beef trimmings for ground beef. While there are additional import sources of beef product for trimmings, United States-origin product still accounts for more than 75 percent of the total U.S. supply (Plain and Grimes, 2003).

Figure 5. Beef and Cattle Imports as a Percent of U.S. Supply of Beef Trimmings (Plain and Grimes, 2003)



In short, the data show that a significant number of cattle are imported into the United States to be slaughtered immediately or to be fed for future slaughter. Combined with net imports of beef products, there is a significant share of the U.S. supply of beef that is a product of imported cattle or beef. However, U.S.-origin beef still maintains an overwhelming share of the overall U.S. beef supply, amounting to nearly 89 percent of steaks and roasts and over 75 percent of beef trimmings for ground beef.

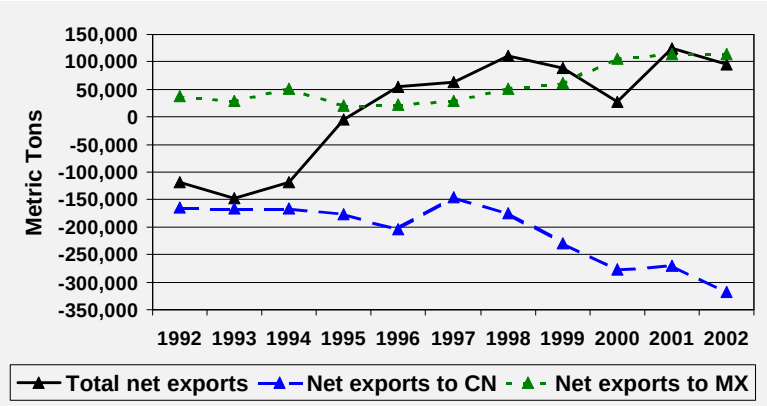
Figure 6. U.S. Imports of Hogs and Pigs (USDA-FATUS)



If we analyze hog and pork imports, we will get a similar result as with cattle and beef. A total of 100.3 million head of hogs were slaughtered in commercial operations in the United States in 2002, producing 19.7 billion pounds of dressed pork. Again, live hog and pig imports accounted for a portion of this total. Figure 6 shows the total imports into the United States of the total number of hogs and pigs, the total number of feeder pigs (<110 pounds), and the total number

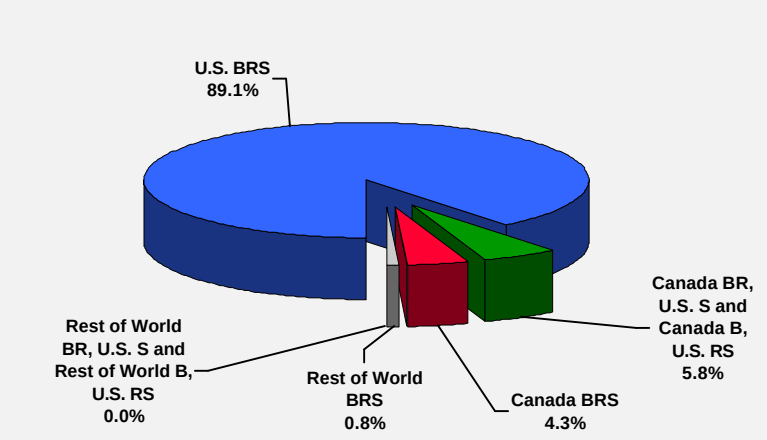
of heavy hogs ready for slaughter or additional feeding (>110 pounds). Only totals are shown, because Canada alone accounts for virtually all of the hog and pig imports. Notably, imports of Canadian feeder pigs have increased steadily over the last decade to nearly 3.8 million head in 2002. In sum, total U.S. imports of hogs and pigs reached 5.7 million head in 2002.

Figure 7. U.S. Net Exports of Pork (USDA-FATUS)



If we extend the analysis to pork trade however, we get a different answer on the net effect of trade. Figure 7 shows the net exports of U.S. pork products. Over the past decade U.S. net exports have steadily grown from approximately 150,000 metric tons of net imports to approximately 100,000 metric tons of net exports. As with beef, although we are a net pork exporter to Mexico Canada again is a major net exporter of pork to the United States.

Figure 8. Pork and Hog Imports as a Percent of U.S. Supply of Pork (Estimated from USDA Numbers Excluding Death Losses)



What is the net effect of this trade in hogs and pork?. Using USDA numbers on trade, slaughter, dressed weight, and commercial pork production, we can roughly estimate the proportion of imported animals or pork products represented in the U.S. supply of pork ignoring death losses among imported animals. Figure 8 provide a picture of this impact. Similar to the situation for beef, U.S.-origin pork represents the vast majority of the available U.S. pork supply, at approximately 89 percent.

In short, the data for hogs and pork tells much the same story as that for cattle and beef. Imports of live animals from neighboring countries have been increasing over the past decade, particularly from Canada. At the same time, Canada has also substantially increased its net exports of beef and pork to the United States. Thus, there is a significant impact from imported animals and meat on the total U.S. meat supply and correspondingly, a potentially significant effect on U.S. livestock prices and profitability. This result alone provides enough impetus to explain the political support in some agricultural circles for implementation of COOL provisions. The important questions however is:

Are U.S. consumers willing to a premium for U.S.-origin beef and pork products?

Are enough U.S. consumers willing to pay a premium for U.S.-origin meat products to demand all of the U.S.-origin supply?

It is relatively easy to discuss the potential impact of imports on the U.S. supply of beef and pork products and the resulting pressure on producer prices. While U.S. production might command a higher equilibrium price in the absence of import supplies, it doesn't automatically follow that U.S. consumers would prefer U.S..-origin supplies and would be willing to pay a premium for U.S.-origin products. Even if some

consumers were in fact willing to pay a premium for U.S.-origin beef and pork, the issue is not just one of a willingness to pay. Given U.S.-origin supplies in excess of 75 percent of beef trimmings for ground beef and approximately 89 percent for beef roasts and steaks and also pork, will an excess supply of U.S.-origin product exist to try and serve a presumed premium market? If so, will there be any premium in the market that is sustainable over the long run.

Supply Impacts

Estimating the impact of COOL regulations on the production and marketing cost of live animals and meat is a difficult task. Cost estimates are an integral part of the overall debate on the merits of COOL, but due to disagreement on what exactly will be required in terms of animal identification and recordkeeping (see earlier questions), there is a great deal of disparity in the estimates of increased costs due to COOL regulations.

In issuing the voluntary COOL guidelines, AMS published a table of documents and records that might be useful in verifying animal origin at various stages of the production, processing, and marketing system. The examples offered by AMS are meant to be representative of the types of information on the origin and ownership of all animals necessary to satisfy a third-party audit-verification process.

In the voluntary COOL guidelines, the beef sector is delineated along the lines of (1) the seed stock/cow-calf phase, (2) the stocker/backgrounder phase, (3) the preconditioning/feedlot phase, (4) the slaughter/fabricator phase, (5) the fabricator/processor phase, and (6) the distributor phase. While the last three phases of the sector might be regulated directly as suppliers of covered commodities, they may also be regulated indirectly in terms of required business-to-business requirements from retailer-customers who are regulated directly by COOL. On the other hand, the first three phases of the beef sector listed above produce live animals, not beef products, and therefore do not directly come under COOL regulations. However, they do face the costs of meeting business-to-business requirements of their customers further up the system who are in turn facing their own requirements or regulations. Thus, every phase of the system faces additional costs in terms of meeting the requirements. Whether the requirements might include animal identification systems such as ear tags or electronic identification, or whether records on purchases, inventories, and other documents is heavily dependent on what final regulations AMS implements for COOL as well as the methods of compliance that directly-regulated levels of the system demand of their suppliers.

In the voluntary COOL guidelines, the pork sector is similar, with the different phases identified as (1) the sow/farrow phase, (2) the nursery phase, (3) the feeder/finish phase, (4) the slaughter/processor phase, (5) the processor phase, and (6) the distributor phase. Records similar to those kept in the beef sector are needed in the pork sector. Unique characteristics of each sector - more mixed-source pens of cattle in the feedlot, more single-source pigs in a finishing building - might lead to different approaches towards recordkeeping, but the ultimate responsibility is the same. The information must be sufficient to satisfy a third-party audit-verification system.

Available estimates of costs of compliance with COOL regulations vary substantially. A comparison of published analyses is provided in Table 1. The initial estimate by AMS was published in the *Federal Register* on as the estimated cost of new federal information collection requirements (AMS, USDA, 2002b). The AMS estimate for all segments of the production, processing, and retailing system for all covered commodities was nearly $2 billion in first-year costs to establish and maintain a recordkeeping system sufficient to meet the voluntary COOL guidelines. Even if start-up costs are excluded, the estimated annual compliance costs amount to more than $1.4 billion per year.

The other comprehensive independent study noted in Table 1 is the Sparks Companies, Incorporated study done in conjunction with Cattle Buyers Weekly. This study summarized costs by segment by commodity and produced a total annual estimated cost of compliance of $3.7 to $5.6 billion per year (Sparks, 2003). This estimate is more than a 2 -fold increase over what AMS estimated. A smaller study

by Hayes and Meyer focused strictly on the pork sector and estimated compliance costs of $940 million per year, a significantly higher estimate that even the pork component of the Sparks study. These three studies lend support to the premise that COOL will be very costly to implement on an annual basis. By contrast, a fourth study by VanSickle, et al. offered a reassessment of AMS cost estimates based on a contrasting interpretation of the number of firms, the amount of information, the necessary recordkeeping systems, and the labor costs required to comply with the voluntary COOL provisions. Based on a reduced number of firms, a reduced recordkeeping requirement, and a reduced labor rate, VanSickle, et al. estimate total compliance costs at no more than $70 to $193 million per year.

Table 1. Estimated Costs of Compliance with COOL Regulations.

Source	Scope	Producers (Million $)	Processors (Million $)	Retailers (Million $)	Total First Year Cost ($)
AMS-USDA, 2002b	All covered commodities	Start-up costs $400 M On-going costs $600 M/year	Start-up costs $80 M On-going costs $260 M/year	Start-up costs $62 M On-going costs $565.75 M/year	$1,967,750,000
Sparks, 2003	Beef	Cow/calf producer, backgrounder $198 M/year Feedlot $109 - $167 M/year	Steers/Heifers $435 - $522 M/year Cows/Bulls $24 M/year	$805 M/year	$1,571,000,000 - $1,716,000,000
	Pork	Integrated Production/Processing System $12.5 M/year Large Scale Non-Integrated Closed System $18.75 M/year Small Independent Non-Integrated System $67.5 M/year Sows and Boars $6 M/year	$146 - $438 M/year	$263 M/year	$513,750,000 - $805,750,000
	Fish/Seafood (Wild Catch and Aquaculture)	$1 M/year	$15 M/year	$50 - $70 M/year	$66,000,000 - $86,000,000
	Produce	$20 M/year	$34 M/year	$1,500 - 3,000 M/year	$1.554,000 - $3,054,000
	Total				$3,660,000,000 - $5,615,000,000
Hayes and Meyer, 2003	Pork	$2.00/head * 92 M head/year = $184 M/year	$6.35/head * 92 M head/year = $584.2 M/year	$1.87/head * 92 M head/year = $172.04 M/year	$940,240,000
VanSickle, McEowen, Taylor, Harl, and Connor, 2003	All Covered Commodities	On-going costs $0 - 123.57 M/year	Start-up costs $0.52 M On-going costs $1.69 M/year	Start-up costs $6.67 M On-going costs $61 M/year	$69,860,000 - $193,430,000

As the table demonstrates, there is a wide range of costs estimates, primarily from a wide range of assumed information and recordkeeping requirements necessary for compliance with the voluntary COOL provisions. Once mandatory COOL provisions are proposed and the specific requirements for each segment are more clear, AMS will be required to conduct a more-detailed cost analysis. Until then, the key question to estimating cost is actually one of what exactly will be required in terms of information to comply with COOL provisions.. Until that question is answered, the question of cost will remain unanswered:

How much will it cost to comply with COOL regulations and who will pay for it?

The available costs estimates suggest that the actual cost could vary considerably based on the final interpretation of the COOL regulations. An important aside to the cost is the question of who will pay for it. It is clear that the compliance costs at the processing and retail level increase the overall market costs and will likely lead to larger marketing margins or price spreads between retail and producer prices.

If in fact there is a willingness to pay a premium for U.S.-origin meat and meat products, will the premium cover the cost of compliance and be transferred back to producers in the form of increased producer prices? On the other hand, if the costs are imposed through mandatory provisions, yet there is no willingness to pay on the part of consumers, will the full cost of compliance be transferred back through the market system to the producer in terms of an increased price spread between retail prices and producer prices.

The end result of the analysis of costs is that they can be significant. That leaves the ultimate cost-benefit question:

Are U.S. consumers willing to pay a large-enough premium for U.S.-origin beef and pork products to cover COOL compliance costs?

Demand Impacts

Whether enough consumers are willing to pay a premium for U.S.-origin products and whether they are willing to pay a large-enough premium are difficult questions to answer. Information from interest surveys, willingness-to-pay surveys, and experimental auctions can help to address this issue, but there is substantial room left for interpretation.

First, it is worth remembering some basic elements of consumer demand. Summarizing from Caswell and Mojduszka, when consumers demand product quality, they are really demanding a bundle of characteristics or attributes of that underlying product. The attributes could include food safety, nutritional value, packaging, and process attributes. Of note, some of these attributes can be determined at the time of purchase, some only after consumption, and some not even then. These differences are defined as search, experience, and credence attributes. In particular, credence attributes are those attributes which may be demanded by consumers, but can not be confirmed even after the consumer buys and consumes the product. A credence attribute may be important to the consumer, but if it does not affect the physical or sensory characteristics of the product, it cannot be confirmed through consumption, but only through segregation and labeling.

Country-of-origin is a prime example of a credence characteristic. The country-of-origin does not change the underlying physical product in a way that can be searched out by the consumer before purchase. Nor can it necessarily be determined by experience in terms of being able to identify county-or-origin based on past consumption. Instead country-of-origin is a credence characteristic that consumers may attach to a product and may value highly, but they cannot determine the characteristics even after purchase or consumption.

For experience and credence characteristics, labeling can serve to identify the valued characteristics before purchase and allow the consumers to search for their purchase based on their demand for

credence characteristics. Thus, if consumers value country-of-origin, the identity of specific country-of-origin products can be preserved through production and processing and can be labeled to help consumers search for and purchase their preferred country-of-origin products even though the credence characteristics themselves are not identifiable in the end product.

All of this introduction to consumer demand and labeling simply sets up the case for country-of-origin labeling. If consumers desire specific country-of-origin products, the only way to satisfy their demand is to maintain the county-of-origin information through production and processing and label the consumer product to allow them to make a decision at purchase. The question however is whether in fact consumers desire country-of-origin information, and particularly to the case of U.S. COOL regulations, whether U.S. consumers prefer U.S. country-of-origin and whether they are willing to pay a premium for U.S. country-of-origin products.

While there have been many studies addressing consumer willingness to pay for various product attributes, only a few have addressed the interest in and willingness to pay for U.S. country-of-origin products. There are essentially three types of studies that can provide insight on the underlying question. First, consumer surveys can determine if there is an interest or preference for U.S. country-of-origin products. But, just because there is an interest or a preference does not mean there is a willingness to pay. At that point, willingness-to-pay surveys can assess whether consumers indicate that they are in fact willing to pay a premium. But, willingness-to-pay surveys don't actually force consumers to make monetary or budget decisions. Thus, a third class of studies, called experimental economics, force consumers to make a purchase decision between alternative products and actually offer cash for the purchase, usually after receiving a cash payment to offset costs and time of participating in the study. By analyzing the available literature on country-of-origin in the framework of these three methodologies, we can begin to assess the potential consumer benefits of country-of-origin labeling.

From an interest survey perspective, a consumer poll commissioned by the National Cattlemen's Beef Association and conducted by Wirthlin Worldwide in November 1998 and a follow-up poll in March 1999 provide some insight. The follow-up poll confirmed results of the first poll in "showing that 76 percent of consumers agreed with the statement that the U.S. should require labels on meat that show country of origin" (Swan, 1999). As a follow-up to the interest question, 91 percent of consumers said they would choose the U.S. product when "faced with a choice between beef with labels saying 'Product of the United States' and 'Imported Product'." A majority, 69 percent, of producers said they would buy U.S. beef because they prefer to buy American, because of loyalty to the U.S., and order to support U.S. business and U.S. farmers. A small percentage said they would buy U.S. beef because they thought it was "safer" (13 percent) or would be of "higher quality" (9 percent). The strong preference on the part of consumers corresponds closely with that of producers, who overwhelmingly prefer country-of-origin labeling in a national survey of producer preferences (Lubben, et al., 2001).

Although the survey results show strong interest in U.S. products, they by themselves don't pursue the question of whether consumers are actually willing to pay a premium for U.S. products. Willingness-to-pay surveys specifically ask consumers if and how much of a premium they would be willing to pay for various product attributes. Two recent studies of consumers led by economists at Colorado State University address the question of willingness-to-pay. The first study surveyed consumers in Chicago and Denver in 2002 and asked their willingness-to-pay for different beef products with labels identifying the country-of-origin where the beef was produced (Umberger, et al., 2003). When asked for their preferences, the survey of 273 consumers found 75 percent preferred to purchase a beef product with a U.S. county-of-origin label as opposed to a like beef product without a label. When asked to indicate the most they would be willing to pay for country-of-origin labeled beef, 73 percent of consumers were willing to pay a premium that averaged 11 percent for steak and 24 percent for hamburger. Stated reasons for the preference for U.S.-origin beef included food safety, further information, support for U.S. producers, and quality were commonly cited reasons for the preference for U.S.-origin beef. In a separate survey, Loureiro and Umberger surveyed 243 Colorado consumers about their willingness to pay for steak and hamburger. The econometric results of their survey suggested consumers were willing to pay a 38 percent and 58 percent

premium respectively for beef products that were “Certified U.S. Beef.” While both willingness-to-pay studies provide evidence of a strong preference for U.S.-origin beef and a substantial willingness-to-pay, the methodology of willingness-to-pay surveys does not allow the researcher to test whether consumers truly provide their honest assessment of their willingness-to-pay or whether the results are influenced by the fact that consumers did not have to make an actual purchase decision.

To test this premise, the Umberger, et al. study also conducted an economic experiment with the 273 Chicago and Denver consumers. Two steaks were offered in an experimental auction, one labeled “USA Guaranteed: Born and Raised in the United States” and the other unlabeled. After evaluating the steaks, 69 percent of the participants bid more for the labeled steak while 7 percent bid more for the unlabeled steak and 24 percent were indifferent between the two. The average premium for the labeled steak was 19 percent.

To put these studies in perspective, they are only initial attempts at quantifying an extremely complex and possibly dynamic variable. But, to the extent that these limited studies on beef can be generalized, they do offer some insight into the consumer willingness to pay for COOL. Generally speaking, more consumers will be interested in county-of-origin labeling than will actually state that they would pay a premium for U.S.-origin products. And, one may presume that more consumers will declare a willingness to pay for U.S.-origin products than will actually be willing to pay for U.S.-origin products when given the money and the option to do so. This seems a logical analysis of the situation, even given the Umberger, et al. study that found a greater percentage premium for country-of-origin labeled steak in the experimental auction (19 percent) than the willingness-to-pay survey (11 percent).

One other note on the studies discussed above. As mentioned, several factors may contribute to a consumer’s willingness to pay for U.S.-origin products, including perceptions of better food safety and better food quality. This leads to one of the final unanswered questions:

> **Will COOL on U.S.-origin products satisfy consumers as an indicator of better quality or safety, or will COOL simply indicate an average U.S. product?**

The answer to this question may go a long way towards determining the long-run potential of COOL to provide benefits to consumers and producers.

References

2002 Supplemental Appropriations Act for Further Recovery From and Response to Terrorist Attacks on the United States. 2002. 107th Congress, 2nd Session. Public Law 107-206. August 2.

Agricultural Marketing Service, United States Department of Agriculture. "Cattle, Beef, Muscle Cuts of Beef, Ground Beef (Examples of Records that May Be Useful for COOL Verification Purposes)." Website: www.ams.usda.gov/cool/coolbeef.pdf. Accessed August 6, 2003.

Agricultural Marketing Service, United States Department of Agriculture. "Hogs, Pork, Muscle Cuts of Pork, Ground Pork (Examples of Records that May Be Useful for COOL Verification Purposes)." Website: www.ams.usda.gov/cool/coolpork.pdf. Accessed August 6, 2003.

Agricultural Marketing Service, United States Department of Agriculture. "Information on the Estimated Costs of the Annual Reporting and Recordkeeping Burden Associated with the Guidelines for the Interim Voluntary Country of Origin Labeling for Beef, Lamb, Pork, Fish, Fresh and Frozen Fruits and Vegetables, and Peanuts." Website: http://www.ams.usda.gov/cool/costs.htm. Accessed August 6, 2003.

Agricultural Marketing Service, United States Department of Agriculture. "Interim Voluntary Country of Origin Labeling Questions and Answers." Website: www.ams.usda.gov/cool/FAQ.htm. Accessed August 6, 2003.

Agricultural Marketing Service, United States Department of Agriculture. 2002a. "Establishment of Guidelines for the Interim Voluntary Country of Origin Labeling of Beef, Lamb, Pork, Fish, Perishable Agricultural Commodities, and Peanuts Under the Authority of the Agricultural Marketing Act of 1946." *Federal Register*, 67(198): 63367-63375. October 11.

Agricultural Marketing Service, United States Department of Agriculture. 2002b. "Notice of Request for Emergency Approval of a New Information Collection." *Federal Register*, 67(225): 70205-70206. November 21.

Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriation Bill, 2004. 2003. 108th Congress, 1st Session. House Resolution 2673. July 14.

Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriation Bill, 2004. 2003. 108th Congress, 1st Session. Senate Bill 1427. July 17.

Caswell, J. and E.M. Mojduszka. 1996 "Using Informational Labeling to Influence the Market for Quality in Food Products." *American Journal of Agricultural Economics*, 78 (December 1996): 1248-1253.

Collins, K. 2003. "Statement of Dr. Keith Collins, Chief Economist, U.S. Department of Agriculture before the House Committee on Agriculture." June 26.

Economic Research Service, United States Department of Agriculture. 2002. *Livestock, Dairy, and Poultry Outlook*. LDP-M-102. December 24.

Farm Security and Rural Investment Act of 2002. 2002. 107th Congress, 2nd Session. Public Law 107-171. May 13.

Food Safety and Inspection Service, United States Department of Agriculture. 2000. "Mandatory Country of Origin Labeling of Imported Fresh Muscle Cuts of Beef and Lamb." Communications to Congress. January.

Foreign Agricultural Service, United States Department of Agriculture. “Foreign Agricultural Trade of the United States.” Website: www.ers.usda.gov/Data/FATUS/. Accessed August 6, 2003.

Hayes, D.J. and S.R. Meyer. 2003. “Impact of Mandatory Country of Origin Labeling on U.S. Pork Exports.”

Lambert, C. 2003. “Statement of Dr. Charles “Chuck” Lambert, Deputy Under Secretary for Marketing and Regulatory Programs, U.S. Department of Agriculture Before the House Committee on Agriculture.” June 26.

Lubben, B.D., C.J. Simons, N.L. Bills, N.L. Meyer, J.L. Novak. 2001. “The 2002 Farm Bill: U.S. Producer Preferences for Agricultural, Food, and Public Policy.” National Public Policy Education Committee. Publication Number 2001-02. September.

Loureiro, M.L. and W.J. Umberger. 2003. “Consumer Response to the Country-of-Origin Labeling Program in the Context of Heterogeneous Preferences.” Paper forthcoming in the *Journal of Agricultural and Resource Economics*. August.

Plain, R. and G. Grimes. 2003. “Benefits of COOL to the Cattle Industry.” Department of Agricultural Economics, University of Missouri-Columbia. AEWP-2003-2. May 21.

Sparks Companies, Inc., 2003. “COOL Cost Assessment: Prepared for the Sparks/CBW COOL Consortium.” Comments on Guidelines for Voluntary Country of Origin Labeling Program. April.

Swan, G. 1999. Testimony Before the Subcommittee on Livestock and Horticulture, Committee on Agriculture, U.S. House of Representatives. April 28.

Umberger, W.J., D. M. Fuez, C.R. Calkins, and B.M. Sitz. 2003. “Country-of-Origin Labeling of Beef products: U.S. Consumers’ Perceptions” Submission to the *Journal of Food Distribution Research*. March.

United States General Accounting Office. 1987. “Imported Meat and Livestock: Chemical Residue Detection and the Issue of Labeling.” Report to Congressional Committees. GAO/RCED-87-142. September.

United States General Accounting Office. 1999. “Fresh Produce: Potential Implications of Country-of-Origin Labeling.” Testimony Before the Committee on Agriculture, Nutrition, and Forestry, U.S. Senate. GAO/T-RCED-99-200. May 26.

United States General Accounting Office. 2000. “Beef and Lamb: Implications of Labeling by Country of Origin.” Report the Chairman, Subcommittee on Livestock and Horticulture, Committee on Agriculture, House of Representatives. GAO/RCED-00-44. January.

VanSickle, J., R. McEowen, C.R. Taylor, N. Harl, and J. Connor, 2003. “Country of Origin Labeling: A Legal and Economic Analysis.” International Agricultural Trade and Policy Center, University of Florida. Publication Number PBTC 03-5. May.