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False Labeling and its Ramifications for Organic Food Product Markets

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Market Report	Yr Ago	4 Wks Ago	10/11/02
Livestock and Products, Average Prices for Week Ending			
Slaughter Steers, Ch. 204, 1100-1300 lb Omaha, cwt	$68.20	$64.40	$63.58
Feeder Steers, Med. Frame, 600-650 lb Dodge City, KS, cwt	87.90	*	*
Feeder Steers, Med. Frame 600-650 lb, Nebraska Auction Wght. Avg	96.01	87.00	85.50
Carcass Price, Ch. 1-3, 550-700 lb Cent. US, Equiv. Index Value, cwt	108.48	98.27	97.95
Hogs, US 1-2, 220-230 lb Sioux Falls, SD, cwt	38.50	31.50	32.75
Feeder Pigs, US 1-2, 40-45 lb Sioux Falls, SD, hd	32.00	14.50	*
Vacuum Packed Pork Loins, Wholesale, 13-19 lb, 1/4" Trim, Cent. US, cwt	112.90	84.57	99.45
Slaughter Lambs, Ch. & Pr., 115-125 lb Sioux Falls, SD, cwt	*	71.87	75.75
Carcass Lambs, Ch. & Pr., 1-4, 55-65 lb FOB Midwest, cwt	122.99	164.92	154.68
Cash Truck Prices for Date Shown			
Wheat, No. 1, H.W Omaha, bu	2.79	4.69	4.79
Corn, No. 2, Yellow Omaha, bu	1.78	2.63	2.34
Soybeans, No. 1, Yellow Omaha, bu	4.05	4.43	5.08
Grain Sorghum, No. 2, Yellow Kansas City, cwt	3.37	4.94	4.57
Oats, No. 2, Heavy Minneapolis, MN , bu	2.06	2.11	2.10
Hay, First Day of Week Pile Prices			
Alfalfa, Sm. Square, RFV 150 or better Platte Valley, ton	115.00	135.00	130.00
Alfalfa, Lg. Round, Good Northeast Nebraska, ton	77.50	92.50	77.50
Prairie, Sm. Square, Good Northeast Nebraska, ton	105.00	120.00	115.00

* No market.

Consumer concerns regarding the health and environmental effects of inputs used in conventional production systems (i.e., fertilizer, pesticides, etc.), coupled with rising living standards and/or subsidization of organic agriculture (i.e., case of the European Union (EU)), have resulted in the development of fast growing markets for organic food in several countries around the world. "Organic" refers to food produced through a *process* characterized by mandatory "soil building" crop rotations and absence of synthetic inputs. The lack of synthetic inputs results in reduced yields and, when compared to conventional food production, the production of organic food is more labor intensive.

Despite the increased costs associated with the production of organic food there has been a significant supply response to the expressed consumer demand for organic products. In countries like Austria and Switzerland, organic produce accounts for 10 percent of food production while the organic sector's annual growth rate in the United States (U.S.), Canada, France and Japan exceeds 20 percent. The reason behind this supply response lies mainly with price premiums enjoyed by organic food producers. Premiums paid for organic food products have been estimated to average at around 20 percent.

Organic products are what economists call *credence* goods, and the information about the nature of the product is asymmetric; while producers know whether the product is organic or not, in most cases the presence or absence of the organic characteristics are not detectable by consumers even after purchase and use of the product. Put in a different way, consumers do not know whether a product is organic unless they are told so. In the absence of information regarding the nature of the product, conventional and organic products are marketed together and the price received by producers is the same regardless of which product is produced. The absence of a premium for organic products when those are not segregated, coupled with the increased costs of organic food production, result in the profitability of the organic food being lower than that of its conventional counterpart. In this case, the supply of organic food is not economically rational; market forces lead to failure of the market to satisfy expressed consumer demands.

The supply-side market failure that emerges when organic and conventional food are marketed together can be avoided by

solving the information problem faced by consumers. Certification and labeling of organic food can serve as a signal of the nature of the offering.[1] In fact, labeling based on third party certification is *the only* feasible alternative to circumventing supply-side failures of markets for organic food since, in its absence, organic food suppliers are not capable of signaling the nature of their product. Specifically, the inability of consumers to observe the organic characteristic even after purchase and use of the product (and thus, their inability to "draw" from past experience) deems "alternative" methods of quality signaling such as the provision of warranties and reputation building mechanisms, ineffective.

Thus, along with the demand for organically grown food also came the pressure for the establishment of standards for, and labeling of, organic products. Governments in the U.S., the EU and elsewhere have responded to this exigency by introducing regulations concerning the standardization, certification and labeling of organic food.[2]

While certification and labeling of organic food products purport to prevent market failures by providing information about the nature of the product to consumers, truthful revelation of the type of the product is not a given. When mislabeling of conventional food as organic is profitable, rational economic agents' compliance with the provisions of the labeling regime is by no means assured. Suppliers of conventional food can misrepresent the nature of their product (i.e., label it as organic) and take advantage of the price premium paid for organic food, while enjoying the cost savings associated with the production of its conventional counterpart.

Cases of detected mislabeling are often reported by the European press. It is alleged that, in the southern states of the EU, mislabeled conventional products account for between 15 percent and 40 percent of the organic labeled produce. Anecdotal evidence on detected misrepresentation in the U.S. includes the cases of Glacial Ridge Foods Company that mislabeled conventional beans and barley as organically grown, and Petrou Foods Inc. that was caught selling conventional olives, olive oil and vinegar as organic. Presumably, consumer deception through mislabeling can affect consumer behavior and thus, the market acceptance of organic food.

Despite the increasing importance of organic agriculture and the incidence of fraudulent behavior, a systematic economic analysis of organic food product markets in general, and mislabeling in particular, is virtually nonexistent. In almost all studies of organic food products the possibility of mislabeling is "conveniently" assumed away, granting (implicitly) the certification and labeling process sufficiency in circumventing failures of organic food product markets. In fact, the assumption of perfect certification (and thus, truthful labeling) is present in most economic studies of markets for credence goods.

In a recent article published in the *Canadian Journal of Agricultural Economics*, I address the issue of mislabeling in organic food product markets by systematically analyzing the economic causes and consequences of consumer deception for the purchasing decisions and welfare of consumers. My analysis indicates that fraudulent behavior and mislabeling of organic food products cannot be a matter of indifference - the effects of (the conventionally ignored) mislabeling can be very significant.

In particular, my analysis shows that labeling based on third party certification *can* mitigate asymmetric information problems born from the credence nature of organic food, correct supply-side market failures and enhance consumer welfare. Contrary to what is traditionally believed however, the analysis shows that while certification and labeling are *necessary*, they are *not sufficient* for alleviating organic food market failures. The market efficiency and consumer benefits from labeling of organic food vary with the level of product type misrepresentation (mislabeling) in the food supply chain. Consumer deception through mislabeling affects consumer trust in the labeling process and can have detrimental consequences for the market acceptance of organic products.

Specifically, the incidence of mislabeling creates uncertainty about the true nature of the organic labeled product, which reduces consumer welfare and drives part of consumers out of the market for organic food. The greater the extent of mislabeling, the greater are the losses in consumer welfare, and the greater the likelihood that the organic product market will fail. Thus, while certification and labeling might correct supply-side market failures by providing economic incentives for the supply of organic food, an imperfect enforcement of the labeling regime might generate demand-side market failure.

The detrimental welfare effects of mislabeling and the market failure that emerges when consumer trust in the certification and labeling system is relatively low underline the need for reliable information transmission to consumers. An extensive publicity of detected cheaters that can put reputation effects at work and (reasonably) high penalties for mislabeling could be moves in the right direction. At the same time, the potentially significant costs associated with effective monitoring could be recouped through increased user-fees (in cases where consumer willingness to pay is high) and/or federal or state taxes (when the distortionary costs of taxation are relatively low).

The role of private and governmental institutions in enforcing producer compliance and guaranteeing the accuracy of information conveyed in the label is crucial. This is especially true for countries like the U.S., where a reduction in consumer trust in the food inspection system due to incidents of mislabeling could jeopardize the otherwise great prospects of the fast-growing organic sector.

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[1] Certification is a process through which unobservable product characteristics (such as the process through which they have been produced) are "guaranteed" to consumers through a label. To avoid conflicts of interest, the guarantee is usually issued by a third (private or public) independent party whose ability to verify producer claims is greater than that of an individual consumer.

[2] For the specifics of the National Organic Program in the U.S. and the EU regulation on organic production see *http://www.ams.usda.gov/nop* and *http://europa.eu.int/eur-lex/en/lif/dat/1991/en_391R2092.html*, respectively.