



*International Food and Agribusiness Management Review*  
*Vol 6 Iss 2 2003*

## Executive Summaries

---

---

### **Communicating Nutritional Information to the Global Consumer: Adapting to Shifting Consumer Attitudes toward Nutrition**

*Natalia Usmanova and Eric Thor*

An important research and practical question caused by globalization and consumption trends is food labeling in different markets in the Americas and Europe. This paper analyzes the factors affecting the choice of a reference amount in nutrition labeling. The two most common reference units are compared that reflect European and U.S. standards: a serving and 100 grams. The study and survey U.S. and international respondents suggest that consumers with different country and ethnic backgrounds tend to prefer the system that they are accustomed to; understanding of labeling may not be complete, but most respondents have some knowledge about using food labels.

Choice of a reference unit is often dictated by existing labeling traditions and the prevailing system of measurements. The authors recommend that international harmonization of food labeling continue to be based on general principles that allow flexibility rather than provide specific recommendations on the label components and format. This approach can preserve and further the labeling traditions to which consumers have become accustomed.

Food labeling expresses efforts by governments and the scientific community to ensure that consumers can make informed decisions about safety and healthfulness of foods. Labeling standards also reflect current and historic health and nutrition concerns. The original purpose of labeling was to protect consumers from unsafe foods. Although still important, there is a major shift toward nutrition on food labels. Now, the labeling requirements usually include the food's name, ingredients, quantity, and the manufacturer's name and location. Some countries require quantitative listing of ingredients, nutrient content; expiration, production, or freshness date.

Harmonization of food labeling facilitates trade and ensures that consumers have adequate information on which to base their choice. Codex is the international body established by the Food and Agriculture Organization and the World Health Organization to develop such standards.

The choice of a reference unit, to a large extent, is a matter of tradition rather than science. For instance, countries using British measurements tend toward the serving size (e.g., United States), while those that adopted the metric system use the 100g/100ml reference (e.g., Former Soviet Union countries). Some countries provide nutrient information per 100g and per serving (e.g., United Kingdom).

In developed countries, many consumers now understand the relation between diet and health and choose products based on this. The reason is the growing amount of data that links diet with health and diseases that plague Western societies, such as cancer, heart disease, diabetes, and obesity. These trends increase the importance of nutritional labeling to help consumers better manage their diets.

For management and policymakers, the implications are clear, trade negotiations need to address these differences, and food labeling understanding should to be improved at the average consumer level. The paper considers the advantages and disadvantages of using the most common reference amounts – a serving and 100 grams – and discusses factors to be considered by policymakers in selecting a reference amount.

## **Strategic Alliances and Sustainable Coffee Production: The Shaded System of Baturite, State of Ceara, Brazil**

*Maria Sylvia M. Saes, Maria Celia M. Souza, Malimiria N. Otani*

The recent interest and the growing demand of healthy and social and environmentally-sound products have fostered the presence of some of these attributes in the foods displayed on the shelves of main supermarkets worldwide and have been relevant factors influencing product differentiation and its competitiveness.

There is a wide array of quality concepts for coffee, which ranges from physical characteristics - origin, varieties, color and size - to sensorial characteristics - body and aroma - to social and environmental concerns, such as the production systems adopted and the labor conditions under which coffee is grown.

This study aims to evaluate entry strategies for coffee growers into socially and environmentally differentiated segment. The case study depicts the experience of shaded coffee growers participating in the Projeto Café Ecológico, which has been carried out since 1995 by the CEPEMA Foundation in the Baturite Mountains Environmental Protection Area (EPA), a region of the Atlantic Forest in Ceara State, Northeastern Brazil.

Emphasis is placed on the strategic alliances among production actors involved in the production, processing and distribution of ecological coffee. A special

highlight is given to the articulation between public and non-governmental organizations.

The theoretical approaches are grounded on the transaction costs economics (TCE) and the agency theory (AT). Branches of the New Institutional Economics, they share the hypothesis that the governance framework choice aims at economic efficiency. The ex-ante principle of contractual relations (AT) prioritizes efforts to overcome incentives deficiencies in both traditional contractual relations and property rights definition. Furthermore, contract enforcement (TCE) admits that ex-post institutions supporting contracts are important. There is also the need for designing governance structures that not only solve conflicts, but also prevent their emergence.

The study's main hypothesis is that the higher the degree of asset specificity, the higher the tendency for contractual governance structure. If one is concerned with intangible assets, such as the environmental and social attributes, the measuring up of information by consumers is more complex. Support institutions are thus necessary to promote both strategic alliances and traceability to avoid information losses throughout the coffee chain. They may guarantee the desired attributes besides a better allocation of property rights by means of premium prices.

The case of Baturite clearly exemplifies the role of strategic alliances in fostering contractual arrangements concerning differentiated products. The institutional changes observed with the strengthening of the growers' organization turned the vicious cycle into a virtuous one. Nevertheless, relational contracting reveals the importance of flexibility for new contingencies governing transactions with specific attributes.

The high cost of the certification became a strong entry barrier in the international market. The recent internal market strategy reorganized the role played by support institutions thus reducing uncertainty. It also led to changes in the enforcement of property rights, reducing risks and increasing growers' margins. However this transfer from external to internal market did not shift the governance structures: relational contracting still prevails. Also, the proposals are orientated to a new ethical and consistent way of placing coffee in differentiated markets.

## **Constraints and Limitations to the Design and Implementation of Origin and Quality Assurance Systems for Argentine Beef**

*Hernán Palau and María Inés Jatib*

This paper examines the current status of quality beef trade in Argentina together with production and marketing value-adding alternatives. In Argentina origin and quality assurance systems for beef have been developed as a way of differentiating products designed to satisfy increasingly demanding European and North American consumers. These consumers are awarded about food safety and wellness attitude –animal welfare. The three cases in study take the

origin and quality assurance systems in order to gain new markets and obtaining higher prices and profit margins. Such systems are based on institutional, organizational and technological innovations that are ultimately co-innovations, since they derive from generally accepted collective action processes. The object of this paper is to demonstrate that under a distorted institutional environment where the rule of law is not fully enforced and where the business culture is informal and lacks clear rules of the game, it is difficult to implement and maintain origin and quality assurance systems. With New Institutional Economics (NIE) analysis the paper shows how three different cases, with different trading strategies, could obtain extra profits, only with clear rules of game, and offering exactly what consumers want. NIE analysis is important in order to explain that the strong influence of path dependency and opportunism, particularly within informal institutional and organizational environments, threatens any possibility of widely applying and developing these new designs. As a result, rather than differentiating themselves through continuous improvement processes and added value, players in the meat chain employ tools that reduce competitiveness of the systems involved and increase transaction costs. Finally, the present study shows that despite the existence in Argentina of new alternatives in the beef market that could be implemented at a profit -as is the case of origin and quality assurance systems-, their application is limited. The Argentine stockbreeding sector appears irremediable, since institutions and organizations involved are reluctant to change or refuse to encourage change.

## **Land Rights and Their Impacts on Agricultural Efficiency, Investments and Land Markets in Zimbabwe**

*Maxwell Mutema*

The study summarizes results of a study carried out in Zimbabwe recently to find out the relationship between land rights and agricultural efficiency, investment and land markets in the smallholder agricultural sector. The main research question being investigated is: do current land rights arrangements in the smallholder sector of Zimbabwe adversely affect agricultural investment, land markets and agricultural productivity? Security of property rights to land can be used to gauge the security of other forms of private investments in any given country, and this is important for agribusiness managers as well. The research methodology was in the form of Panel Group Discussions and Case Studies, which were carried out at five sites in Zimbabwe, two communal areas, two resettlement areas and one small-scale commercial farming area in 2001/2002. Results indicate that primary land user rights holders in the three perceived land tenure categories studied do not see security of tenure as a major problem. The major limiting factors cited as reasons for failure to realize full agricultural production potential include lack of or a problem with one of the following: draft power, labor, credit, rural-urban migration and the AIDS pandemic among others. The opposite is true of secondary user rights holders such as adult sons living with parents, some women and other social weak groups who indicate tenure insecurity as a problem of equal magnitude to the

other limitations stated above. The results also show some relationship between investment and land rights between the small-scale commercial farming sector and the other two sectors (resettlement and communal). Total credit received is not significantly related to the form of land rights enjoyed by landowners. Land markets in the three categories are thin and 'transaction costs' are high limiting the amount of agricultural land that changed hands. Women access to and control over land, and their bargaining power with their husbands and relatives about land are weak across the three studied categories. In a more broad sense, the importance of the nature of a country's land rights is underscored by the fact that if anything is wrong with them, every facet of economic activity in that country including smooth running of businesses is affected.

## **Evaluation of Alternative Coordination Systems between Producers and Packers in the Pork Value Chain**

*Michael Poray, Allan Gray, Michael Boehlje and Paul Preckel*

Consumers are demanding a greater diversity of products with specific characteristics that challenge the ability of traditional food systems to respond. Flow and quality controls necessary to satisfy consumers' suggest a possible role for closer coordination from genetics through processing and retailing than in the past. Previous research has primarily focused on describing the changes in information and linkages in the value chain and the potential impacts of these changes on consumers, producers, processors, and system performance. This research seeks to expand the literature by quantifying the risks and rewards of alternative coordination systems in the hog producer/packer sub-sector.

A dynamic decision-making model is developed to estimate impacts of different information flows on product and financial flows between producers and packers. Empirical models for feeder pig supply, live hog prices, and primal cut prices are parameterized with state-space time series methods and are used to simulate the market environment for three alternative vertical coordination systems. The model optimizes returns for the decision-makers in each of the coordination systems. The first system is an open market system where producers and packers optimize returns individually. The second system is a contract system where packers purchase a call option from producers and maximize returns by calling market ready hogs from the producers in the least-cost manner. The final coordination system is a vertical coordinated system where live hog and packing decisions are made jointly to maximize expected profits for the vertical integrator.

The results of this empirical analysis of various coordination mechanisms (spot market, contract, vertical integration) between producer and packer in the pork industry suggest a number of conclusions. First, coordination systems that are more closely aligned do not necessarily result in more hogs marketed and slaughtered, but they do provide the information and incentives to produce

and market hogs that yield more usable pounds of primal cuts than the spot market system. The choice of coordination mechanism does not alter total system performance dramatically as measured by margins and their volatility, but the coordination mechanisms differ in how they distribute the risks and returns to producers and the packer.

The results suggest that the primary benefit from more tightly aligned coordination or governance systems is risk reduction. The reduction in risk results from more accurate information transmission between the primal cut market and the live hog market. Primal cut prices transmit information that helps reduce risks in packer/producer systems only if the system is aligned to use this information; the spot market does not allow for accurate information sharing which results in sub-optimal solutions for both producers and packers. Clearly, the results indicate that there is potential to negotiate the sharing of risks and rewards in a more tightly coordinated system. Thus, the impacts of different forms of coordination on both physical and financial flows (both in terms of levels and volatility) suggest significant motivation for further development of vertical coordination in the producer/packer sector of the pork industry.

### **The impact of downstream network subgroups on collaboration and performance. A survey of buyer-supplier relationships in the Dutch flower sector**

*Danny Pimentel Claro, Geoffrey Hagelaar, Ron Kemp, S.W.F. (Onno) Omta*

No firm works in a vacuum. In the complex business world of today, information has become essential. Managers are continually on the look out for opportunities or challenges, using their relationships with other firms in their supply chains to obtain valuable information for their decision making. Starting from supply chain management literature, and following the idea of the importance of chain reversal for receiving real time market information, we may expect that the information that flows in the downstream network subgroups is more important than that in the upstream subgroups. In this paper, we aim to identify the network subgroups that enhance the collaborative governance in a focal buyer-supplier relationship. We argue, that partners in a focal buyer-supplier relationship can be seen as embedded in a broader network of business relationships with network subgroups, (e.g. other buyers, buyers customers), which provide information that can support the collaborative governance. This governance is assessed by the flexibility, joint planning and joint problem solving. By obtaining information from the network subgroups, firms can reduce the level of information asymmetry in the focal relationship and will be more inclined to collaborate.

Empirical evidence was gathered through a mailed questionnaire returned by 175 Dutch suppliers of potted plants and flowers. In order to test unidimensionality of our measurement instrument, an examination of the item inter-correlation was used to purify the reflective scales (i.e. flexibility of adjustments and joint problem solving). The scale composite reliability values

of the reflective scales all exceed the recommended value .70, which reflects the good quality of the measurement instruments. The hypotheses were tested based on structural equation modeling with Lisrel 8.50.

Our results show the importance of the information provided by the network subgroups to manage the focal buyer-supplier relationships and ultimately the impact on performance. Interestingly, although five network subgroups were mentioned in the questionnaire, suppliers only obtained valuable information for their focal relationship from the downstream subgroups of other buyers (i.e. merchant-distributors) and buyer's customers (i.e. supermarkets and flower shops).

In order to avoid redundancy, managers in seeking information should not consider the entire network, but rather the downstream network subgroups. Two managerial implications of our study appear to be most critical. First, managers may use our study and its empirical evidence as a check on the adequacy of their existing business network in terms of the information provided by the network subgroups. Second, it is important for managers to have an accurate perception of the value of the information of each individual network subgroup. Without this, any evaluation of the costs and benefits of alternative governance responses based on market forces (e.g. market-based governance) or collaboration (e.g. relational governance) would be vague.

## **Towards a National Agribusiness System: A Conceptual Framework**

*Eduardo de Oliveira Wilk, Jaime Evaldo Fensterseifer*

In recent years, increasing worldwide academic attention has been devoted to the agribusiness theme. Multiple pressures have stimulated these efforts. On the market side, the sector faces an increasing presence of global players associated with sophisticated consumer demands. On the firm side, the sector is changing from family owned, small-scale production, to large firms embedded in production and distribution chains.

Agribusiness is becoming a complex multidimensional sector that cannot be planned without a systemic view and an interdisciplinary approach. We argue in this paper that the coordination of strategic resources, both tangible and intangible, like land, water, technology and knowledge, which are the ultimate sources of competitiveness in agribusiness, requires a national strategy, whose aim is the achievement of alignment between the actions of multiple stakeholders, like firms, research centers, consumers, government, and society in general.

The study presents an overview of the traditional agribusiness concepts, key stakeholders and competitive dimensions. The national competitiveness theme is explored, followed by a discussion of the fundamentals of a resource-based approach to strategy. From these themes, some critical questions and links are discussed towards the objective of designing a National Agribusiness System.

The main ideas advanced in the paper are synthesized in a framework, which highlights the components of a National Agribusiness System. Implications of the proposed system for public managers are discussed.

## **Consumer's Attitude towards Labeled and Unlabeled GM Food Products in Italy**

*Claudio Soregaroli, Stefano Boccaletti and Daniele Moro*

The development of biotechnology in the agricultural sector and in the food industry has offered the opportunity to increase crop and animal productions, to decrease production costs and to improve food quality and food safety. In Europe, the recent food scandals decreased the consumer's trust in science and public institutions and increased the coverage of media on food safety problems.

As a response to public concern about food safety, regulations in the European Union require labeling of genetically modified (GM) foods when containing more than 1% of GM ingredients. At the same time some agribusiness firms and retail chains decided to voluntarily label their products as free of genetically modified organisms (GMO free). Consumers are likely to react differently to the two-labeled products and the agribusiness firms' decision to sell GM or GMO free products becomes crucial for future success.

This study wants to add some insights to such a crucial problem, and its main purpose is to evaluate the consumer's attitude towards GM foods and those labeled as "GMO free", where the measure of this attitude entails the elicitation of the individual Willingness To Pay (WTP) for both branded and unbranded products.

The analysis is based on data available from a survey, conducted in October 2002, with personal interviews on a sample of 500 Italian consumers. Data refer to the assessment of the degree of individual knowledge about biotechnologies, risk perception towards biotechnology, trust in institutions, WTP for "GMO free" and "GM" labeled product, socio-demographic characteristics.

WTP was elicited applying an assisted continuous method, where respondents were initially asked if they would buy the product. If so, respondents were asked to rate their WTP choosing among 5 classes of price premiums for "GMO free" products: less than 5%, 6 to 10%, 11 to 15%, 16 to 20%, greater than 20%. In the case of GM products, price classes ranged from -30% to +10%. The inclusion of a possibility for a price premium in the last case was determined by a preliminary test of the questionnaire: although the question was remarking the lower cost of the ingredient, some respondents were willing to pay more, since they associated the GM ingredient to new characteristics of the product and/or a higher quality of the food.

An econometric analysis of the results is conducted applying an ordered probit method to four models: branded/unbranded GM and GMO free foods.

The results show that the probability to purchase GM products is lower for individuals more adverse to risk, older, with higher education and less confident in institutional guarantees.

On the other hand, respondents with higher information, presenting high risk aversion, therefore perceiving GM products as risky ones, who trust government producers and scientists in their activities of control and monitoring, are willing to pay more to buy a product guaranteed as GMO free. Clearly, this position becomes weaker for individuals who explicitly agree with the application of genetic technologies.

When WTP elicitation refers to branded products, the degree of risk aversion and individual trust in institutions do not play a significant anymore, with brands working as a sort of insurance for individuals. With this scenario, the enforcement of control systems to avoid the presence of unwanted GMO may become strategic for agribusiness firms and retailers in order to increase market shares through consumer's loyalty.