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# Global Change in Agrifood Grades and Standards: Agribusiness Strategic Responses in Developing Countries

**ABSTRACT:** The role of G&S has shifted from a technical instrument to reduce transaction costs in homogeneous commodity markets to a strategic instrument of competition in differentiated product markets. The nature of G&S has shifted from performance (realized characteristics of the product) to process standards. In developing countries, these changes have tended to exclude small firms and farms from participating in market growth, because of the implied investments. The three strategic responses to G&S change by agribusiness firms and farms include: (1) by large firms and multinationals, to create private G&S and private certification, labeling, and branding systems; (2) by medium-large domestic firms, to lobby governments to adopt public G&S similar to those in export markets in developed regions; (3) by small firms and farms, to ally with public and nonprofit sectors to form G&S and certification systems to access export markets and to bring institutional change to nontradable product markets. Governments

should build the capacity of the poor to invest to "make the grade" implied by the new G&S.

## INTRODUCTION

International agrifood trade and domestic markets liberalized globally in the second half of the 1980s and the first half of the 1990s. Markets shifted from homogeneous commodities toward differentiated products. Consumers increasingly demanded product quality and safety, and the communication of those characteristics through grades and standards (G&S) reflected in certification and labels. Developing countries in Africa, Asia, Eastern Europe, and Latin America were and are not immune to the increase in the importance and the change in roles of G&S. Trade with the developed world increased, foreign direct investment by multinational firms skyrocketed, and local rural economies became increasingly linked to both urban and export economies.

The literature has tended to focus on the public sector issues related to changes in G&S on and in the developing regions. Several strands stand out: (1) use of public G&S as nontariff trade barriers against tropical products (e.g., see ECLAC, 1998, for Latin America, and Henson and Loader, 2001, in general); (2) trends, and in particular, difficulties in harmonization of public G&S in developing regions (e.g., see Stephenson, 1997); (3) an incipient literature on the rise of process G&S and their costs of implementation for poor countries and small firms (e.g., see Diaz, 1999 in general, and Deodhar and Dave, 1999, for India).

Relatively neglected has been study of the private-sector response to and participation in changes in the role and nature of G&S. The responses have been varied because the developing countries are varied, and their private sectors are heterogeneous: from large players linked closely to the world market to small firms mainly serving domestic markets. This article focuses on this neglected area in the literature, in particular on the following: (1) the definition of G&S, and major changes in their role and nature over the past decade; (2) three private-sector strategic responses to and participation in those changes in developing countries; (3) implications for governments and managers. The sections follow that order.

## DEFINITION OF AND RECENT CHANGES IN THE ROLE AND NATURE OF G&S

### Definition of G&S

G&S consist of standards ("rules of measurement established by regulation or authority") and the grades thereof ("a system of classifications based on quantifiable attributes") (Jones and Hill, 1994). We use a relatively broad definition of standards, and highlight several distinctions.

First, G&S can pertain to performance or processes. Performance specifies characteristics the product is expected to have when it reaches a certain point in the agrifood chain. An example is the maximum amount of pesticide residue permitted on apples bought by a processor. Process standards pertain to any process—production of the raw product, processing into intermediate or final goods, or marketing. They specify the characteristics that the processes are expected to have, either to produce a given level of performance of the product (e.g., an organically grown apple, or meat that is safe to consume), or to create or maintain certain conditions for the environment, workers, and so on. An example of a process standard is HACCP (see Unnevehr and Jensen, 1999).

Second, G&S can pertain to various characteristics of a product: (1) quality (e.g., appearance, cleanliness, taste); (2) safety (e.g., pesticide or artificial hormone residue, microbial presence); (3) “authenticity” (guarantee of geographical origin or use of a traditional process); (4) the goodness of the production process (e.g., with respect to worker health and safety, or to environmental contamination). These characteristics are becoming increasing mixed and linked, especially in private standards and management systems to implement them, which we discuss below. An example is that Chiquita Brands International, responding to the Rainforest Alliance, introduced a Better Banana Project that required meeting environmental and social G&S by suppliers to Chiquita in Latin America (Murray and Johnson, 2000).

Third, the G&S formulating entity can be private or public. The G&S can be enforced as either mandatory or they can be voluntary.

Several major changes have occurred recently in the role and nature of G&S, including: (1) a shift in center of gravity from technical norms to reduce transaction costs in broad homogeneous commodity markets, to strategic instruments of product differentiation, agrifood chain coordination, market creation and share growth; (2) a concomitant shift from public toward private standards; (3) a shift from communicating experience characteristics toward reassuring consumers about credence characteristics such as food safety, worker conditions, and location authenticity; (4) a concomitant shift from performance toward process standards. These are discussed in the next two subsections.

### **Role Change: From Homogenizers to Differentiators**

Traditional G&S are geared to homogenizing and standardizing a commodity to create economies of scale and broad markets (Jones and Hill, 1994). The shift from “mass markets” with broad commodities to markets with differentiated products and niches serving the consumers with relatively high incomes induced a shift from broad to differentiated G&S. Hence, the new role of G&S is increasingly to develop and differentiate markets, with standards being used as strategic tools for market penetration, system coordination, quality and safety

assurance, brand complementing, and product niche definition. This shift is supported on the demand side by richer consumers with sophisticated and varied tastes. It is supported on the supply side by production, processing, and distribution technologies that allow product differentiation and market extension and segmentation. Codron (1992) illustrates this with the case of Chilean apples and pears in the world market.

### **Role Change: From Communicators of Experience Toward Communicating Credence, and From Performance to Process**

The composition of the diet has shifted in developing countries in urban areas and the richer rural areas, and in developed countries, in three ways: (1) in functional terms, from unprocessed or lightly processed products, toward processed and prepared foods, and value-added fresh foods (such as packaged and shipped fresh fruit); there appears to be a U-curve, with the poorest consuming the least processed diet, middle-income consumers eating a more-processed diet, and high-income consumers having a less-processed but more value-added diet (from packaging and shipping); (2) in characteristics terms, toward more food safety, packaging, taste and flavor, freshness, intrayear stability of access, "exoticness" (greater distance from origin), paradoxically combined with greater demand for authenticity (local and traditional); (3) in product terms, toward diet diversification from staples (cereals, pulses, roots, tubers) toward fruits and vegetables and meat, fish, and dairy products, as predicted by Bennett's Law when incomes increase.

The changes mentioned above together imply a shift from "search/experience goods" toward "credence goods." A credence good is a complex, new product with quality and/or safety aspects that cannot be known to consumers through sensory inspection or observation-in-consumption (Darby and Karny, 1973).

The newness for the consumer (whether in urban areas of developing countries or in developed countries) is because of the diversification of products and the increased distance from consumer to producer. Hence, the consumer is encountering many new brands and varieties of familiar general categories of product that are spilling in from the global market or made by new firms locally. An example is baby food shifting in many urban areas of developing countries from being a traditional home-made product to being purchased from companies such as Gerber. Developed region consumers are buying far more tropical products, many items for the first time. An example is the recent appearance of mangoes and chirimoyas (custard apples) from Latin America on supermarket shelves in the U.S. Midwest.

The quality and safety characteristics that constitute credence attributes include the following: (1) food safety; (2) healthier, more nutritional foods (low-fat, low-salt, etc.); (3) authenticity; (4) production processes that promote a safe

environment and sustainable agriculture; (5) "fair trade" attributes (e.g., working conditions).

Developed countries, and increasingly, developing countries (see Salay and Caswell, 1998, for Brazil) have responded to the need to create and communicate the credence characteristics listed above. Many have recently instituted process G&S such as HACCP for exports to the U.S. of meat and fish, and soon, for fruits and vegetables (Unnevehr and Jensen, 1999). Agribusiness firms aimed at export markets or newly regulated domestic markets have thus begun to adopt HACCP or ISO 9000. HACCP is in fact sometimes mandated by governments to strategically position domestic exporters (Diaz, 1999).

## **PRIVATE SECTOR RESPONSES TO AND PARTICIPATION IN G&S CHANGE**

### **The Context and the Challenge in Developing Regions with Respect to G&S Change**

First, developing country situations are extremely heterogeneous. There is a large variation in wealth and in degree of "modernization" and external openness and thus exposure to "globalization" of their agrifood systems over countries, zones, and products. Thus, the issues and challenges related to G&S development differ greatly between nontradables produced by small firms and farms in a hinterland zone of a low-income country (such as cowpeas in Niger), and international tradables produced by large firms and farms in favorable zones of a middle-income country (such as soybeans in Brazil). To simplify the discussion in the face of this heterogeneity, our discussion below of private-sector strategies uses three categories of firms: (1) giant multinationals (whether based in the developed world or in the developing country region); (2) medium-large domestic firms; (3) small firms.

In general, the better the agroclimate and infrastructure of a zone, the larger the agribusiness or farm, and the more tradable the product, the greater is the exposure to the changes in markets and G&S discussed above. The capacity to respond to market opportunities and G&S requirements increases with firm scale, although there tend to be pockets of smaller firms in more favorable zones and firms operated by managers with more education, that also are capable of responding. By contrast, the small poor firms and farms in the rural hinterlands, producing nontradables, are least able to respond to the new opportunities and requirements.

Moreover, public infrastructure, governance structures, and institutions (including G&S but also property rights) are generally poorer in developing countries. This causes a drag on business adjustment and flexibility in the face of new opportunities and a relative lack of incentive for innovation and investment. Competitiveness and market access is hampered by developing countries' relative

lack of public G&S. For nontradable and traditional products, there tends to be a lack of G&S. Product quality is judged on the spot and regulated by face-to-face contact and informal institutions. Oral contracts are enforced by multilateral reputation mechanisms, just as in pre-industrial Europe (Milgrom and North, 1985). In that setting, compared to the ensuing stages of either mass market creation with broad G&S or differentiated market creation, transaction costs and risk in the agrifood chain are relatively high. These costs and risks are exacerbated by the lack of G&S, which reduces the volume and geographic range as well as income level of targeted consumers.

Even for those who can swim, the waters are rough. For those firms with the incentives and capacity to invest and compete, the competition is fierce, as prestructural adjustment and pre-GATT barriers to trade and foreign direct investment have been greatly reduced with the liberalization reforms of this past decade. Farina and Reardon (2000) provide illustrations of this in the Mercosur area of South America. Keeping costs low and keeping quality and safety high requires tight coordination in agrifood chains, and firms seek to reduce the spillover effects of their investments to their competitors outside of their supply chains. G&S, and concomitant certification programs and management meta-systems, can be crucial instruments for such coordination (Caswell et al., 1998). The average profit per unit sold may increase because of greater efficiency in the agrifood chain because of coordination and to the greater intrafirm efficiency of resource use (Mazzocco, 1996). The market scope could also increase, compensating for per-unit profit decreases arising from costs incurred to meet the standards. Capturing these private benefits is one of the driving forces behind the privatization of G&S and certification and label schemes that we discuss below.

Meeting new, more stringent G&S implies changes in production practices and investments, such as reducing pesticide use and increasing IPM use on farms, or investing in "electric eyes" in packing sheds and cooling tanks in dairies. Some of these investments are quite costly, and are simply unaffordable by many small firms and farms. It is thus not surprising that the evidence is mounting that the changes in G&S, and the implied investments, have driven many small firms and farms out of business in developing countries over the past 5 to 10 years, and accelerated industry concentration. For example, thousands of small dairy operations have gone out of business in the past five years in the extended Mercosur area because they were unable to meet new quality and safety G&S for milk and milk products that implied large investments in equipment and buildings and coordination and management (see Jank et al., 1999, for Brazil, Dirven, 2001, for Chile, and Gutman, 1999, for Argentina). Alvarado (2000) tells a similar story for small poultry operations in Central America. We could cite many other cases recently documented.

The sharp differentiation of potential effects of G&S change according to size

of firm presages the sharp three-way differentiation of private sector responses to and participation in G&S change in developing countries, as discussed below.

### **The First Strategic Response: Large Agribusiness Firms Privatize G&S**

In the 1990s there was a rapid concentration and “multinationalization” of agrifood systems in many developing countries. This occurred especially in the downstream segments of the system, with a spectacular rise of supermarkets and large-scale processors in Latin America (see Reardon and Berdegué, 2001), as well as in parts of East Asia, South Asia, and Southern Africa. Preceding but accelerated by this concentration was the increasing use of contracts between agroprocessors and farmers (Maluf and Wilkinson, 1999). Global and regional multinational agrifood firms acquired large numbers of medium-large domestic firms (see Jank et al., 2001, for the Brazil case), and operated simultaneously in local, regional, and global markets.

As the large firms competed in national and regional markets and attempted to differentiate their products to protect and gain market share, they found that: (1) the public G&S needed for that differentiation did not exist; or (2) relatively undifferentiated public G&S existed, inherited from the protected, homogeneous commodity markets that were common before market liberalization and structural adjustment. The latter were inadequate either to meet consumer demand for product differentiation and quality differences, or to reward producers for their investments in quality.

The result was that many large firms, especially multinationals, created private G&S. Most common was for them to create private standards and sidestep public G&S, as Zylberstajn and Neves (1997) and Farina and Furquim de Azevedo (1997) illustrate for coffee and wheat products in Brazil. These private standards included quality, food safety, and environmental standards, with variations based on their market strategy and the extent to which public G&S were missing or inadequate. Examples include Nestle’s and Carrefour’s Quality Assurance standards and certification systems. Nassar (2000), in his discussion of Carrefour in Brazil, notes that it is most common for private standards to be imposed by downstream actors (supermarkets and large processors), and rarely by agricultural producers. This is because of relative leverage in the chain and differences in degree of concentration. The advantages of private G&S, hence the inducement to their adoption, are the following.

First, private G&S imposed by a supermarket chain or processor on its suppliers regardless of location reduces coordination costs of sourcing from diverse locations and of operating in diverse markets, without having to submit to specific national regulations. These standards are worked into contracts with suppliers, such as the Chiquita example above. Sometimes suppliers can even use

evidence, such as certification, of their meeting quality and safety standards for well-known processors or retailers to increase their leverage in negotiations with other buyers. Farina et al. (2000) shows this for coconut first-stage processors supplying to Nestle in Brazil and obtaining the Nestle Quality Assurance certificate.

Second, where public G&S are missing (which is common in developing countries, see Stephenson, 1997), private G&S replace the missing institution. Where private G&S meet or exceed the stringency of public G&S, this affords "domain defense," limiting exposure to penalties from public regulations (Caswell and Johnson, 1991). Communicating to the urban or developed country consumer that the private G&S exceed the stringency and enforcement of public G&S encourages consumers to buy products from countries that they may see otherwise as having lax quality standards and safety regulations.

Third, consistent implementation of private G&S, plus certification, labeling, and branding systems that link high quality and safety standards to the product and the company in the consumer's mind, produces reputation and competitive advantage. This is especially important for credence goods. Private G&S make product differentiation easier and more flexible, allowing companies to take advantage of new market opportunities ("domain offense," Caswell and Johnson, 1991). Firms complement private G&S with other elements of a "metasystem of quality control" (Caswell et al., 1998), adding elements such as branding to the system governance structure. Building trust and reputation around the visible symbol of a brand name and label make G&S systems credible to consumers (Northen and Henson, 1999). To build consumer confidence by consistency in G&S implementation, tight vertical coordination is needed, especially for process G&S. This implies the need for a combination of mechanisms complementary to the standards themselves (bilateral and multilateral, contractual and relational, built-in procedures, private and public ordering).

To reap these benefits, however, requires capacity: (1) for the imposer of the private G&S, to have sufficient size and thus leverage, and the capacity to monitor the standards; (2) for the supplier, to have the capacity to make the investments needed to meet the private G&S. These can be costly, and sometimes few indeed make the grade. This is illustrated in several case studies: (1) Farina et al., 1999, for the Nestle Quality Assurance standards and certification system for shredded coconut in Brazil; (2) Jank et al., 1999, for dairy products sold to supermarkets in Brazil; (3) Farina and Machado (1999) for fresh fruit and vegetables sold to supermarkets and fast-food chains in Sao Paulo state in Brazil.

The "supermarket effect" can also work between developed country firms and developing country suppliers. Ngige and Wagacha (1999) illustrate this for European supermarkets buying Kenyan fruits and vegetables. Similarly, in 1999, an association of European supermarkets created quality, safety, and environmental standards and "good agricultural practices" (process standards) for their

suppliers of fruit and vegetables in developed and developing regions ([www.eurep.org](http://www.eurep.org)).

### **The Second Response, by Domestic Medium-Large Agribusiness Firms and Farms: Collective Lobbying for Public G&S and Best-Practice Codes**

Large and medium domestic firms in developing countries press for domestic public G&S for tradable goods. They seek standards in harmony with the G&S and tastes of the developed region markets to which they export. Just as these domestic producers are usually “price takers” in global markets, they are also “G&S takers.” They lobby for: (1) G&S that help them build market share, perhaps domestically, but especially internationally (olives in Chile, asparagus in Peru, fish in Kenya); (2) certification programs that help communicate this institutional change to foreign buyers. The latter often create a public-private mix on the commissions overseeing the formulation and implementation of the standards, as illustrated below.

However, poor producers are often left out of the negotiations setting the domestic public G&S as they are either not part of the export producer associations or have relatively little weight in such negotiations if they are members (Porras, 1999). Moreover, consumers are often left out. Whereas in developed countries, there is a plethora of consumer groups, fair trade advocates, and environmentalist lobbies, these are scarce in developing countries. Poor consumers themselves are less aware and demanding of food safety (Salay and Caswell, 1998) and poor markets have lower quality differentiation.

Given the importance of this phenomenon in terms of G&S change and its institutional context, we present several illustrations that show a pattern of public/private collaboration in G&S formation and implementation, mainly for export products.

#### **Kenya**

The (public) Kenyan Bureau of G&S handles the formation of public G&S and certification requirements that correspond to CODEX and ISO. The (private) Fresh Produce Exporters Association (FPEAK) creates a code of practice that is in line with those G&S and concords with requirements of importers in OECD countries, such as the German Flower Label Program. Several private companies are contracted for certification and training to help companies adopt the practices and technologies corresponding to the process or performance G&S (Ngige and Wagacha, 1999).

#### **Argentina**

A recent innovation in G&S implementation involves the collaboration of a private and a public entity, IRAM and the Fundacion ArgenINTA. IRAM (the

Argentine Institute of G&S), a private nonprofit institute, provides certification of implementation of G&S by companies, and also has some delegated public G&S responsibilities. The Fundacion ArgenINTA is a public institution, an initiative of INTA (the National Technology Service) to link business management, market promotion, and technology innovation. They now work in tandem to provide certification for agrifood firms and farms in Argentina, combining this service with promotion of product and service differentiation, identification of domestic and international markets, and certification of quality and safety G&S in agroindustry and in farm machinery manufacture (Fundacion ArgenINTA, 1999).

### **Brazil**

In a “rare case” of collective action across large and medium firms in the milk products sector, a lobby has been created for the establishment and strict enforcement of G&S where there is now a vacuum at the public level. A main goal is to differentiate quality and challenge the informal sector that has 44% of the market; success would spell further concentration of the sector. Another goal is to better meet the needs and pressures of supermarkets (Jank et al. 1999). In addition, the Brazil Coffee Association has recently set up its own certification program for G&S implementation (Saes and Farina, 1999).

### **Chile and Peru**

Medium/large fruit producers and exporters and the Chilean government have created a multidimensional strategy of market promotion and G&S implementation with the formation of the Coordinating Committee for Fruit and Vegetable Producers and Exporters (linking two associations). That committee, plus the National Agricultural Association, recently formed a “code of good practice” for production, processing, and distribution of fruit for export. They are working with the Ministry of Agriculture and the national CODEX entity to influence Chilean health and safety laws, infrastructure provision (better road, port, and storage facilities), and also to influence international CODEX discussions. The committee is also seeking to be an interface with powerful supermarket chains that dominate the domestic market. The goals of the committee are to differentiate Chile’s fruit product, creating a clear international identity, and to raise quality, hygiene, and the storability of the fruit (which occasion tradeoffs and thus the need for continuous adjustment and debate and thus a forum that reflects needs along the chain) (Mercurio, 1999; 1999b). There are also discussions under way with the private nonprofit Fundacion Chile to set up certification systems (Eugenio Muchnik, personal communication, May, 1999).

One finds such public-private mix in Peru, with some of the same themes—a public or semipublic body that interfaces with national and international CODEX and ISO organizations, and has links with committees or bodies from export-

oriented agribusiness firms and farmers (e.g., asparagus, with a link between the public INDECOPI and the industry-level PROMPEX, with feedback from the two to the national CODEX body; Diaz, 1999).

Hence, this intermediate level of firms, and their public/private alliances, are literally fighting for their businesses in a fiercely competitive environment. G&S and certification have become paramount tools of the struggle. The government then becomes an important ally for these firms, helping them to redress the system coordination and product reputation problems that they had in the absence of such systems. Where G&S are not well established in an agrifood system, by contrast, the price can be high coordination costs, as noted for the grain system by Jones and Hill (1994), and for example, for the domestic milk system in Brazil by Jank et al. (1999).

### **The Third Response, by Small Producers and their Advocates: Seeking Provision of "Public Good" G&S for the Poor, their Products, and their Markets**

Left out of the above profitable actions are the small producers of nontradable traditional products, or small producers excluded by the above standards and certification systems because they cannot meet the requirements for inclusion. Of course, when the markets are purely rural and local and traditional, these producers are not excluded in that there are local, informal social mechanisms to control safety and quality, and social sanctions/reputations are the means of enforcement.

However, in general, lack of formal G&S increases the poor's transaction costs in the national and international markets and thus reduces the scope and profitability of their market. That increases their poverty and by extension, political clout. This vicious circle justifies public action. In practice, however, it is hard for governments of poor countries to address this need. Abstracting from sensitive issues of politics, it is costly to define, implement, monitor, and enforce G&S for the products bought and sold by the poor. This was already clear in the days of marketing boards for staples, which incurred deficits trying to administer such markets. It is even harder in an era of liberalized domestic markets in developing countries and after the elimination of the state marketing institutions. Moreover, one can surmise that the poorer the country, the greater the proportion of those excluded from the above G&S strategies.

Thus, efforts of international organizations and local NGOs are emerging as complements to developing country government efforts, in several ways: (1) Multilateral organizations such as FAO, NGOs, and emergent private certification companies such as Mayacert in Guatemala ([www.mayacert.org](http://www.mayacert.org)) help governments to establish domestic systems of G&S and enroll poor producers in certification programs. (2) International organizations plus local producer and

trader associations are forming innovative approaches to extending markets by forming and implementing G&S combined with new crop varieties. For example, Technoserve (of the U.S.), ICRISAT (of the CGIAR), and local producer and trader groups are working to improve the production and marketing of high quality pigeonpeas (dahl). These are targeted at high-value niche markets (for fresh and processed pea) differentiated by quality G&S, from Malawi, Tanzania, Kenya, and Mozambique to India and Europe. They have, however, experienced limitations on governments' capacity to participate, for reasons we discussed above (Jones et al., 1999).

### **POLICY AND MANAGERIAL IMPLICATIONS**

First, this article presented and justified a hypothesis, and discussed initial evidence, that the forces for formation and change in G&S in developing countries are to a large extent driven by the larger firms in the better infrastructural context, whose market is among the richer local consumers and the developed country consumers. These tend then to imply demanding requirements for coordination, changes in practices, and costly investments. These requirements are hard for small/medium players to meet.

The dilemma that firms and governments in developing countries face is that if they form G&S to be "inclusive" (for local firms and consumers), they will not force adjustment to the more dynamic source of demand (in the global market). But if they form or accept G&S that are more "exclusive," they stand a chance of equipping only a portion of their firms to participate in the global market. Clearly, privatization of G&S will continue simply because it holds such advantage in a competitive market. The best approach is for governments to increase the capacity of small firms and farms to meet the requirements implied by these private standards so as to participate in lucrative markets. Moreover, given the power of privatized G&S to exclude, just as international rules and dispute resolution mechanisms are being formed to deal with nontariff trade barriers that undermine competition and exclude, so such mechanisms are needed in a given developing country or region to reduce the anticompetition potential for G&S in a situation of increased privatization.

Second, we have showed that, at least where medium producers are involved or interested in dynamic markets, that public-private partnerships in G&S setting and implementation can present an attractive—and inclusive—intermediate ground between the privatized G&S of the large/multinational firms, and the near vacuum of G&S for nontradable products. Governments and producer associations and eventually consumer associations in developing countries would do well to study closely the successful cases and attempt to spread these practices. Information, technical assistance, and infrastructure appear to be the needs that

arise in these situations with which governments can help. This implies that domestic policy, in addition to trade negotiations, are key G&S issues for developing countries.

Finally, the greatest challenge is to create and implement G&S for the currently nontradable products of small players with the aim of increasing their tradability and raising the incomes of the poorest. This is the hardest challenge, as initiatives involving “peasant products” involve high transaction/administrative costs, and current efforts are typically highly subsidized and of ambiguous sustainability. Most useful will be to undertake analysis of cost/benefit to identify where the constraint to competitiveness and loss to producers and consumers is created by the lack of appropriate (or existent) G&S and what public or NGO action can be undertaken to facilitate their formation and sustainability in a competitive marketplace. Government action will be justified both because of the public goods aspect of this action, the low probability of effective organized consumer pressure for such G&S, for the poor political position of the producers, and for the poverty alleviation utility of the action.

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