FOOD SECURITY

Food standards: the cacophony of governance

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Abstract

Although long distance trade in food goes back at least as far as Columbus, the recent wave of food globalization is unprecedented in human history. But despite the existence of the Codex Alimentarius, the Food and Agriculture Organization, and the World Trade Organization, there is no central authority that governs the many facets of food. Instead, we have arrived at a food network that is governed by a plethora of public and private standards including those for productivity, food safety, food quality, packaging, and nutritional value. However, standards are both epistemological and ontological devices; they ‘make’ the realities that they claim to describe. Moreover, once accepted they tend to become ‘second nature’, often obscuring growing problems and conflicts, including (perhaps especially) those arising out of the very standards themselves. On the one hand, standards for productivity obscure the weak and rapidly eroding premises on which current productivity is based. On the other hand, standards for quality tend to rigidify production regimes. Both tend to inhibit innovations of the sort necessary for us to realize food security globally.

Until recently, most food was grown close to where people lived. Hence, diets tended to reflect what was available locally and seasonally. In recent years, due to (i) declining tariffs and quotas, (ii) declining costs and increased speed of long-distance transport, (iii) growing middle classes, and (iv) the use of information technologies to manage long supply chains and provide just-in-time deliveries, those who can afford it have become accustomed to relatively cheap, diverse, and abundant supplies of not only grains, but fresh fruits, vegetables, meats, and fish. According to one report, in the United Kingdom food travels 50% further than it did just two decades ago (Lazaroff, 2002).

The current food network is governed by a plethora of standards, laws, and regulations (Sarris and Morrison, 2009) that reflect (i) differing national and regional histories, (ii) a patchwork of strategic (and sometime conflicting) actions by individual firms and groups of firms, (iii) a general shift away from direct State-sponsored regulation, and (iv) differing expectations of consumers. Moreover, given the heavy dependence on cheap fossil fuels (Roberts, 2004), the vagaries of climate change, and the limited supplies of phosphorus, huge post-harvest losses, and substantial and growing distributional issues with respect to food (Lawrence et al., 2010), the likelihood of breakdown is all too high (Foresight, 2010).

In this short paper there is hardly room to examine all the various nuances, permutations, and exceptions that make up the current food regime. Instead, I focus on two areas of particular concern, especially in light of the hurdles facing us all as noted above. First, the history of agricultural research, focusing on standards for and measures of productivity, is examined and then the recent growth in the private regulation of production and distribution. However, before doing that, a few words about standards are in order.

Key words: Food security, food system, standards, productivity.

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Standards

Standards, whether in the form of physical objects, reference materials, written codes or laws, or widespread practices, are the means by which we judge persons, processes, and things to be superior, acceptable, or unacceptable. Our contemporary science and society are both built on standards. Standards are at once technical, theoretical, political, economic, social, and ethical phenomena. Standards tell us what is relevant, what is valued, what is important; and, by implication, they tell us what is not important (Busch, 2011).

Moreover, standards have a peculiar character: once instituted, they tend to become taken-for-granted, unnoticed, natural. Put differently, standards are ‘ontological’ devices; they bring into being certain (almost always partial) orderings of aspects of the world and tend to make them appear obvious and unworthy of reflection. This, in turn, allows us to get on with other aspects of our lives. Hence, when I buy a can of peas, I can and do take for granted the thousands of standards implicated in its production, distribution, and sale. Of course, it is quite possible that a particular can will not meet one or another standard, in which case it will be rejected, downgraded, or discarded. However, there are also times—generally far more rare—when continuing to take a given standard for granted will lead us astray, i.e. when a standard or set of standards itself must be questioned. Two contemporary sets of standards where this is arguably the case are the well-established standards for productivity and the more recently developed complex of standards, certifications, and accreditations that has been called the Tripartite Standards Regime (Loconto and Busch, 2010).

Productivity standards

Standards for productivity have a very long history. For at least the last 300 years, increased productivity has been the ‘Gold Standard’ for agricultural research. It has been assumed that increased productivity leads to increased production which leads, in turn, to more food, fewer hungry people, and greater food security. Indeed, Jacques Diouf (2009), Director-General of the Food and Agriculture Organization, recently argued that ‘Agriculture will have no choice but to be more productive [by 2050]’.

Over the centuries just what counts as productivity, i.e. how the standard should be measured, has changed markedly. Initially, productivity was measured by the hypertrophy of the edible parts (Bannerot, 1986). This measure is still honoured at agricultural fairs where the largest apple, squash, or other edible part is awarded a prize.

By 1600 modern botanic gardens began to be developed, the first wave of formal agricultural research. Botanic gardens were nearly all state-supported, mainly by the colonizing European powers. A major function of the gardens was to take the practices developed by farmers to produce a given crop successfully and to replicate those practices in a similar climate elsewhere, usually under plantation conditions. Most of the major industrial (rubber, jute, indigo) and stimulant (coffee, cocoa, tea, sugar, tobacco) crops were distributed in this manner. As a result, the colonial project was furthered (Brockway, 1979).

Somewhat later, beginning about 1850, agricultural experimental stations were developed. Nearly all were, and remain, state-sponsored entities. There, Liebig’s discoveries of the three plant macronutrients, N, P, and K, were fine-tuned for particular crops and soils. Equally important, standards for field experiments, standard units of yield per unit of area, standard variables in experiments, and standard statistics for analysis were developed, such that today there are c. 2000 such institutions around the world (Busch and Sachs, 1981).

More recently, starting about 1980, the landscape for agricultural research shifted once again. Intellectual property rights were extended to plants and, more or less simultaneously, massive private investments in plant research began (Busch et al., 1995). By 2000 36% of global research expenditures, and 54% of expenditures in high-income nations, came from the private sector (Pardey et al., 2006). The public research establishment changed as well as experimental stations and agricultural institutes shifted from block grants to competitive grants, from a wide range of outputs to a focus on journal articles, and even to measuring productivity by counting citations to journal articles. Some nations even let their public agricultural research infrastructure wither away, on the assumption that the private sector could do the job more effectively and efficiently. As a consequence of these shifts, today the public sector no longer controls the research agenda. Research leading to discrete (patentable) products has arguably been overvalued, while public sector research is often far removed from the needs and wants of farmers and other practitioners. Put differently, much public sector research now must pass through the private sector before it can be put in a form utilizable by farmers.

In short, the productivity standard was initially based on a fairly simply syllogism as follows. Most people are farmers. They eat what they produce. If they are shown how to produce more, they will eat more. Today, however, the syllogism has been extended. A new major premise has been added: It has been assumed that the production of more articles, more citations, more patents, and more profits will lead to greater productivity.

Indeed, until very recently, the first major premise of this syllogism was true. However, today this is clearly no longer the case. Most people live in cities; even more no longer produce their own food, but rely on markets to purchase it. Whether the new major premise is valid is, at best, debatable. However, the shift in population away from direct production invalidates, or at least severely limits (to those who remain subsistence farmers) the conclusion of the syllogism.

More recently, however, in addition to the long-standing upstream standards that have emphasized one or another
version of productivity, a new stream of standards has developed. This latter stream emanates largely from the burgeoning supermarket sector (and to a lesser extent from processors). Moreover, unlike the older standards for productivity, the new standards include a much broader range of product attributes gathered together under the name of ‘quality’. In addition, it includes a new form of enforcement mechanism that includes certifications and accreditations. It is to these standards that I now turn.

The Tripartite Standards Regime

Originating in the last half century, and only becoming commonplace more recently, the Tripartite Standards Regime (TSR) consists of the interrelated set of standards, certifications, and accreditations that are now commonly encountered by producers. TSRs have emerged largely in the last 30–40 years as a result of the reduction in tariffs and quotas and the opening of global markets for food products. Specifically, supermarket chains have very much enjoyed the greater ‘freedom to operate’ provided by the advent of neoliberal policies. This has allowed them to expand rapidly their operations in previously inaccessible areas of Africa (Weatherspoon and Reardon, 2003), Latin America (Reardon and Berdegue, 2002), Asia (Reardon et al., 2003), and Eastern Europe (Dries et al., 2004). At the same time, they have also been concerned by the instabilities, risks, and uncertainties that accompany ‘free’ markets. They have attempted to reduce their risks by (i) establishing supply chains that tie producers to particular buyers, and (ii) using standards to ensure consistency, timeliness, and quality of supply (Busch, 2007). Moreover, since supermarkets are generally loathe to engage in policing in addition to purchasing, they have required suppliers to engage a third-party certifier (i.e. one not a party to the exchange) to certify that the products in question meet the supermarket’s standards (Fulponi, 2006; Hatanaka et al., 2005; Qi Yamei et al., 2008). This also puts the cost of certification squarely on the shoulders of the seller. Finally, to ensure that the certifier can be trusted, supermarkets have required that certifiers be accredited. Indeed, in some instances, they have provided a list of acceptable certifiers to their suppliers.

This approach has also been adopted by nation-states (Krislov, 1997) and private voluntary organizations (PVOs) (Guthman, 2008). For example, nation-states have begun to employ this approach with respect to organic standards, which are often certified by accredited third-party certifiers rather than state agencies (e.g. the Soil Association). Similarly, PVOs have discovered that they can use TSRs to further their aims (e.g. environmental protection, fair trade). Indeed, they have found this often to be a more successful strategy than lobbying the state for new legislation and/or better enforcement of existing legislation. Thus, they have attempted, with more or less success, to impose standards on both buyers and suppliers.

Of particular note is that many of the TSRs have standards not only for the products exchanged but for other process-oriented aspects of those products. These include (i) specifying the use (or non-use) of certain agrichemicals, (ii) imposing specific planting, harvesting, and/or delivery dates, (iii) requiring the use of certain cultivars, (iv) imposing certain environmental requirements, and (v) insisting on certain kinds of packaging. The net effect of these process standards is to lock in certain technologies—nearly always those that fit with the existing food networks. For example, in many nations meat-processing standards inhibit market entry by smaller organic meat processors.

Consequences

Both the standards for productivity and those for TSRs are enforced by ‘market forces’. That is, in addition to their taken-for-grantedness, there is considerable pressure to produce according to both sets of standards in order to stay in business. Put differently, using innovative and/or non-conventional means to produce crops or raise livestock involves considerable risk and uncertainty, both with respect to the technical aspects of production and the marketplace. Moreover, all of these standards assume that the current situation will remain stable for the foreseeable future.

Recent events, including those prompting the convening of this conference, suggest to the contrary, i.e. that the current situation is both unstable and likely to change markedly in a relatively short time. Consider that, today, about one-fifth of the world’s population remains undernourished or malnourished (e.g. obese), despite increases in productivity and despite the fact that the world produces enough food to provide everyone with a nutritionally adequate diet. Moreover, the obsession with productivity has blinded us to (i) the degree to which we are heavily dependent on declining reserves of fossil fuels to maintain that productivity, (ii) limited and declining phosphate supplies, (iii) a wide range of environmental problems associated with the current dominant production system, and (iv) distributional problems including post-harvest loss, market speculation, and lack of the wherewithal of many to purchase adequate food (Chatham House, 2008; Food and Agriculture Organization, 2008; Tansey and Rajotte, 2008; Weis, 2007).

Both the focus on productivity standards and on TSRs largely ignore the four points noted in the previous paragraph. While increased productivity must certainly remain on the agenda if a growing population is to be fed, they do not address future shortages of inputs (fossil fuels and phosphates), or distributional or environmental issues. Similarly, standards embedded in TSRs tend to focus on a relatively narrow range of issues—different ones for

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1 Such requirements need not be positive. Beretti and Stuart (2008) report that buyers of leaf lettuce in California have encouraged growers to remove natural habitat in contravention of local laws.
different TSRs—but most fail to address post-harvest distribution or fossil fuel shortages.

Addressing these pressing issues will require adding to the range of standards to be met, but also probably revising some of the existing standards to measure progress toward distributional and environmental improvements better. This process will doubtless be long and fraught with conflict as it will involve considerable dislocations for many supply chain actors. The sooner it begins, the more likely it will be successful.

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References


