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Agriculture and ISO 14000

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Abstract

Many agricultural firms are now considering the environmental consequences of their activities as a means to obtain a competitive advantage. The shift is highlighted by the significant interest in standardized private codes such as those found in ISO 14000. These standardized codes are characterized by signatory firms voluntarily agreeing to abide by a given set of environmental management principles with monitoring conducted by an outside party. Government policy makers are also interested in the ability of such codes to address environmental concerns related to agriculture. This paper examines the feasibility of ISO 14000 for agricultural producers and the policy issues surrounding its application. The costs to an individual firm largely depend upon the availability of an environmental management system and the extent of the changes required under the system. The potential rewards are related to lower costs from reduced input use or lower premiums and increased revenue from new customers or market premiums. Net benefits to ISO 14001 certification will be greater for producers marketing food products than for firms selling a bulk commodity far removed from final consumption. Policy concerns related to ISO 14000 include providing institutional support for promotion and training, tying environmental regulations to the code, and the lack of public accountability in the setting of standards. © 2000 Elsevier Science Ltd. All rights reserved.

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Introduction

The agricultural sector has traditionally produced generic, homogeneous commodities primarily for feed use. However, as we enter the 21st century the sector is changing to one that manufactures products increasingly for food and industrial use. The process, termed the industrialization of agriculture, is due largely to information and production technological advances that permit an increasingly segmented consumer market to be linked with agricultural producers. The linkage allows producers to supply products with specific attributes as demanded by the particular end-use market as opposed to the traditional means of supplying a generic commodity sold on an open spot market. The attributes desired could be associated with any number of features including chemical composition, volume, timing, texture and/or characteristics of the production process. For example, the demand could be for crop products that do not contain genetically modified organisms (GMOs) or are pesticide free, or for livestock products that have been raised in a certain manner. For such demands to be met successfully, there must be a means of ensuring the products contain the specific attributes desired by the end-use markets. Although the product supplied by farmers can be readily tested for qualities such as protein or texture, characteristics of the production process cannot be easily verified *ex post*. A voluntary or regulatory code is necessary to provide such assurances.

In response, partially to customer demands and public expectations, many firms outside of the agricultural sector are also considering the relationship between their production activities and their markets particularly the previously ignored environmental consequences of their activities (Esty and Chertow, 1997; Morelli, 1999). The shift is highlighted by the significant interest in standardized private codes such as those found in ISO 14000. These standardized codes are characterized by the voluntary agreement from signatory firms to abide with a given set of environmental management principles that are monitored by an outside party. Many business analysts believe that registration with codes verifying a firm's adoption of environmentally responsible actions will become a necessary condition to be successful, particularly when trading internationally (Office of Consumer Affairs, 1998; Webb, 1998). However, because the ISO environmental initiative is so recent, little is known about its applicability and potential for such voluntary standardized codes, especially in the agri-food sector.

There are also unanswered public policy questions whether business-led initiatives such as ISO 14000 can achieve environmental objectives efficiently. Appropriate environmental policy that will garner public support and lead to environmental improvements remains a challenge for all sectors but particularly for agriculture given the non-point or diffuse source nature of many of its emissions (Weersink et al., 1998). In general, policy designed for agriculture and policy for the environment had been treated as antithetical until events and concerns in the 1960s and '70s led to their convergence into what can be broadly termed agri-environmental policy (Swanson and Clearfield, 1994). These agri-environmental policies have evolved toward micro-managed programs that have demonstrated environmental value (Potter, 1998) and include the trend toward market-based, business-led initiatives

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