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Markets in Tradition – Traditional Agricultural Communities in Italy and the Impact of GMOs

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Abstract

This paper considers the relationship between traditional agricultural communities, regional development, and the uptake of agricultural biotechnologies, through an examination of Italian traditional agriculture in the context of attempts to introduce genetically modified organisms (GMO) to the agricultural market. Of critical interest to this paper is the cultural and economic significance of Italian traditional agricultural knowledge and national cultural identity with respect to farming practices, organic trade, and resistance to GMOs. This paper considers the interaction in Italy between traditional agriculture and GMOs (particularly in the context of international trade and intellectual property protection), and suggests some political and cultural factors that are perhaps limiting the commercial and agricultural potential of biotechnology in Italy, but at the same time triggering particular consumer preferences, thus facilitating growth in regional and local economies and effective competition in an international market.

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1. Introduction

European consumers are characteristically resistant to the entry of genetically modified foods (GM) onto the European market.[1] The case of GM food presents a critical insight into the way in which regulatory frameworks might intervene to "create" public confidence towards achieving the marketability of certain products. In this regard, intellectual property protection applied to agricultural biotechnologies, and the relationship between intellectual property, consumer acceptance, and the market for these technologies is of significance. In particular, the interaction between traditional agricultural communities and systems, and the impact of agricultural biotechnologies, is of critical interest. Importantly, what consumer responses and indeed this paper describe are not necessarily the technical realities of GM vs organic with respect to environmental impact and so on, but rather the possible legal and commercial realities (and speculations), with respect to markets and possible recognition of traditional agricultural systems.

In particular, GM food has provoked strenuous debate and has attracted a great deal of concern and suspicion from the general public, particularly articulated as an anxiety over possible environmental damage and irreversible harm to organic farming initiatives. On the technological and social promises of GM, many have lauded the potential role of genetic engineering in achieving food and agricultural security in the developing world, although this has been tempered by concerns over access to that technology being limited by intellectual property monopolies.

Research on the entry of GM into the agricultural marketplace has largely emphasised questions of consumer confidence and trust, product liability, and the market. However, the relationship between GM, free trade, and questions of culture and traditional knowledge, has received less consistent attention. In particular, in the context of current international discussions towards the recognition, identification, and protection of traditional knowledge, the relationship between culture and technology must be considered more closely.

In this context, this paper examines the relationship between traditional agricultural communities, regional development, and the uptake of agricultural biotechnologies, through an examination of Italian traditional agricultural communities in a "knowledge economy." In particular, the significance of cultural diversity and knowledge diversity to innovation in Italy and international competitiveness will be examined as a potential motivation for alternative strategies for protection, commercialisation, and revitalisation of traditional agricultural communities in Italy. Italy presents a complex and critical focus for the current international debate over traditional knowledge protection and access to knowledge, the stimulation and generation of innovation, international competitiveness, and debates concerning the knowledge society more broadly.

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[1] The most recent Eurobarometer on Biotechnology, based on a survey of 25 000 participants in 2005, shows a growing confidence in biotechnology, but nevertheless a persistent rejection of GM food. See Gaskell G et al (2006) *Europeans and Biotechnology in 2005: Patterns and Trends, Final Report on Eurobarometer 64.3*. Report to the European Commission's Directorate-General for Research. The Eurobarometer is a European Union public opinion survey on a broad range of topics, available at http://ec.europa.eu/research/biosociety/public_understanding/eurobarometer_en.htm.

In particular, there are four main areas of which discussion provides insight into the interaction between political and social responses to agricultural biotechnologies in Italy, the uptake of GM in Italian agriculture, and the impact on traditional lifestyles and traditional knowledge, as national and regional cultural concerns. These are:

- Response to GM
- Political influence
- Traditional agriculture communities and cultural diversity
- International competitiveness in the global knowledge economy.

Each of these will be discussed in more detail below, but by way of introduction, an overview might be as follows.

1.1. Response to GM

Italy is one of several countries criticised for its laws pertaining to the production of GM, described as protectionism and illegitimate restrictions upon the free trade of goods.

1.2. Political Influence

Italy is significant as a portal to the Northern African countries, and increasingly for Eastern Europe (particularly relevant in the context of increased activity towards accession to the European Union throughout countries in Eastern Europe). Italy's presence is relevant from both economic and political perspectives, whereby legal and policy developments in Italy are likely to have relevant impacts on such countries. Furthermore, developments in Italy will be significant to debates concerning food security and the confidence in GM technology and products in the abovementioned regions and elsewhere in the world.

1.3. Traditional Agricultural Communities and Cultural Diversity

The nature of traditional agricultural knowledge and traditional agricultural communities is the critical focal point of this paper and arguably for these issues. Indeed, the national cultural identity with respect to regional cultural diversity and traditional farming practices, organic trade, and resistance to GM, provides significant insight for other regions, particularly Eastern Europe (in the context of accession to the EU).

1.4. International Competitiveness in the Global Knowledge Economy

Increasingly, as discussed, this debate is taking place not only within the agenda of international and free trade, but also from the perspectives of cultural diversity and national integrity within an expanding Europe and throughout the international knowledge economy.

2. Italy and Traditional Agriculture

Traditional agricultural methods and organic means of production have emerged as genuine commercial alternatives to GM industries, presenting significant opportunities to facilitate regional and local development in the context of exploiting real advantages for national economies through international trade. It is critical at this time for governments to understand how to enhance cultural and economic diversity through regional development, secure national branding of unique outputs, and recognise legitimate competitive advantages in a global economy.

This is certainly seen in attempts in Europe to devise a suitable scheme of co-existence laws in order to moderate the interaction between GM and organic and traditional forms of agriculture. The European Directive on the deliberate release into the environment of genetically modified organisms[2] (GMOs) gives Member States the power to introduce co-existence measures with respect to agricultural markets. This is provided in Article 26a, "Measures to avoid the unintended presence of GMOs," which was inserted by the 2003 EC Regulation on genetically modified food and feed.[3] However, the potential for a regulatory framework to intervene in what is seen to be unpredictable and incalculable environmental risk has met with much criticism. In this context, the commercial and developmental value and potential of traditional agricultural knowledge, methods, and production, and the potential for such traditional knowledge to present genuine advantages is seen to be at stake and at risk. And so, the dynamics of organic and traditional markets, both culturally and commercially, demand greater understanding not only legally and commercially, but also from the point of view of European cultural attitudes to food and agriculture, in order that the value of such traditions can be appreciated, preserved, and utilised. Indeed, there is critical cultural, and arguably commercial value and advantage to be found in the strong recognition and protection of traditional knowledge, diversity in the development of knowledge, and the promotion of local and regional capacity through the innovation to be found within traditional communities. This potential must be examined in order to understand the possible role of traditional knowledge and traditional knowledge protection in consolidating the competitive position of Italy within an international market of agricultural biotechnologies and products. In particular, the competition from organic products must be acknowledged, not only in the domestic market but also in the uptake of agricultural biotechnologies, where entry of the latter may be seen to compromise organic products as otherwise unique entry points in the global market.

3. The Important Case of Italy

As introduced earlier, Italy presents a complex and critical nexus of issues in the current international debates over traditional knowledge, innovation, and international competitiveness in the global knowledge economy. The critical points of interaction in the unique case presented by Italian agriculture and legislative responses demonstrate a significant opportunity to address these questions. Furthermore, it is an opportunity to understand and encourage regional innovation and capacity-building

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[2] European Directive 2001/18/EC of 12 March 2001 on the deliberate release into the environment of genetically modified organisms and repealing Council Directive 90/220/EEC.

[3] Regulation (EC) No 1829/2003 of 22 September 2003 on genetically modified food and feed. Art 43.

through the recognition and awareness of diversity in methods of innovation and the development of knowledge (including traditional methods) as distinct from registering innovation simply through diversity in products.

So to return to the four main areas of interest introduced earlier, it is necessary to expand on these fundamental qualities or concerns.

3.1. The Response to GM

First, Italy was one of several European countries cited by the United States in May 2003, in its request to the World Trade Organization (WTO) for consultations with the EC on its dealings with biotech products. In particular, the US was concerned with what was claimed to be illegitimate prohibition of the import of GM for use in primary agricultural production or as ingredients in foods. Italy has been criticised for protectionism and illegitimate restrictions upon the free trade of goods, criticisms directly related to the stimulation and protection of traditional agricultural method and culture.

The *de facto* moratorium on new approvals for biotech products, the central concern of the WTO complaint, was imposed by member states in view of a lack of adequate European rules on labelling of GM food. However, after labelling requirements were introduced in 2004,[4] the moratorium remained. While the final ruling of the WTO Panel is yet to be published, the interim report suggests that the *de facto* moratorium in effect caused the EC to act with "undue delay" in approvals of biotech products.

The moratorium is an important indication of the critical risk factors in the agricultural marketplace: consumer confidence and trust, and product liability. The results of research conducted by Marianne McGarry Wolf, Paola Bertolini, and Jacob Parker-Garcia into consumer acceptance of GM food in Europe more widely suggest that some of the negative perception and consumer rejection of GM food has been based on the notion that it is unhealthy, and that GM food and GM agriculture are themselves health hazards.[5] Similar motives as to health and food safety were also found by Zanoli and Naspetti, at least for the Northern part of the country.[6] Indeed, the use of GM seeds in open fields has been forbidden in Italy on the basis that such use poses health hazards. This is reflected in the substantially larger commitment to organic farming in Italy, which has the largest organic sector in Europe.[7]

This may also be linked to the implementation of agri-environmental programmes under Council Regulation (EEC) No 2078/92 of 30 June 1993, on agricultural production methods compatible with the requirements of the protection of the

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[4] Regulation (EC) No 1830/2003 of the European Parliament and of the Council of 22 September 2003 concerning the traceability and labelling of genetically modified organisms and the traceability of food and feed products produced from genetically modified organisms.

[5] McGarry Wolf M et al, "A Comparison of Consumer Attitudes Towards GM Food in Italy and the USA," in RE Evenson & V Santaniello (eds), *Consumer Acceptance of Genetically Modified Foods*, Wallingford Oxon, CABI Publishing, 2004: 131.

[6] Zanoli R & Naspetti S, "Values and Ethics in Organic Food Consumption," in Paquali M (ed), *Preprints of the Third Congress of the European Society for Agricultural and Food Ethics: Food Safety, Food Quality, Food Ethics*, Florence, 3-5 October 2001, Milan: A & Q. See also Dabbert S et al, *Organic Farming: Policies and Prospects*, London, Zed, 2004: 21.

[7] Dabbert S et al, *Organic Farming: Policies and Prospects*, London, Zed, 2004: 10-11.

environment and the maintenance of the countryside.[8] Although this Regulation is no longer in force,[9] at the time these programmes provided financial support for most certified land, thus supplementing the income of organic farmers. Further, the strength of the organic farming sector in Italy reflects not only the domestic market, but also the significant market for organic exports from Italy to other parts of Europe. McGarry Wolf et al have also shown that Italian consumers have a better understanding of organic food and the market itself than consumers elsewhere in the world (namely, the USA).[10]

This is where the more positive attitude to organic foods presents a critical nexus with the rejection of GM food, in that organic food is often perceived and marketed as more favourable to the environment. That is, organic food and agriculture is promoted on an environmental platform, precisely the issues on which the marketing of GM food has been unable to achieve much success to date. Significantly, organic farming has been described as developing as a movement, rather than within mainstream agricultural establishments.[11] Since the development of organic farming in Italy, as discussed, the industry gained State support and thus received institutional legitimacy through the implementation of the agri-environnmental programmes under the now repealed Council Regulation (EEC) No 2078/92.[12]

The significance of the environment may also prove to be significant in the marketing of traditional agriculture. In other words, there is a relationship to be understood between the imperative towards recognising cultural values and integrity in traditional agricultural communities and traditional agricultural practices, the linking of such practices to environmental security and safety, as well as to individual health, and the subsequent harnessing of commercial value in what is largely a means by which the local cultural integrity of traditional groups may be sustained. Thus, traditional knowledge may indeed be commercially viable and of significant importance to regional development, and the entry into the unique market presented by traditional knowledge may be achieved by promoting the relationship between traditional agricultural practices and environmental health.

While this may seem to suggest a certain failure for GM products in Italy, that is perhaps too simplistic. What is emerging is some useful insight into the way in which agricultural biotechnologies present particular values for Italy. As suggested, the relationship between the technology and the environment has emerged as a significant characterisation of the success or otherwise of particular agricultural markets in Italy. Indeed, uptake of GM foods in Italy will arguably depend on the perceptions of the relationship between GM agriculture and the environment. This may also suggest that

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[8] Regulation (EC) No 2078/92 of 30 June 1992 on agricultural production methods compatible with the requirements of the protection of the environment and the maintenance of the countryside. No longer in force.

[9] Repealed by Regulation (EC) No 1257/1999 of 17 May 1999 on support for rural development from the European Agricultural Guidance and Guarantee Fund (EAGGF) and amending and repealing certain Regulations. Art 55.

[10] McGarry Wolf M et al, "A Comparison of Consumer Attitudes Towards GM Food in Italy and the USA," in RE Evenson & V Santaniello (eds), *Consumer Acceptance of Genetically Modified Foods*, Wallingford Oxon, CABI Publishing, 2004: 134.

[11] Dabbert S et al, *Organic Farming: Policies and Prospects*, London, Zed, 2004: 28.

[12] Dabbert S et al, *Organic Farming: Policies and Prospects*, London, Zed, 2004: 61-62.

intermediate markets in agricultural seed and technology will also respond to similar concerns, making the environment a critical issue for marketing and public perception.

That same research showed that the only issue upon which Italians "maybe will" purchase GM food would be whether the use of GM technology would reduce the use of pesticides. Other factors such as pest resistance or better nutrition did not influence consumers, making clear that the use of pesticides, that is, the actual direct impact on the immediate environment, was of utmost importance in making the decision to purchase.

It would seem to be very important therefore to link the market for traditional agriculture and organic produce to the environment and thus, it would also be important to do the very same where possible in the context of GM foods. What must be addressed is the uncertainty of the consumer with respect to the environmental impact of agricultural biotechnologies.

3.2. Policy and Legal Influence

Secondly, Italy as long been recognised as a portal to Northern African countries and increasingly for Eastern Europe, from both economic and political perspectives, making it legitimate to hypothesise that legal and policy developments in Italy will have relevant impacts on such countries. Furthermore, developments in Italy will be significant to debates concerning food security and the confidence in GM technology and products in the abovementioned regions and elsewhere in the world.

With programmes in place towards accession for countries such as Bulgaria and Romania, questions of national identity and the survival of local markets are raised. In particular, the continued trade in local organic produce in Bulgaria (organic largely because of the lack of financial resources to use pesticides, rather than the recognition of a particular market), where individual market gardeners provide restaurants and so on, would seem to be doubt post-accession. This link to the environment would be relevant to the possible consolidation of such traditional practices and is suggested as possibly relevant to the maintenance of Bulgarian national identity within the European Union. And indeed, this same interest in traditional European groups is relevant when considering the importance of traditional knowledge and cultural diversity.

3.3. Traditional Agricultural Communities and Cultural Diversity

So thirdly, and of critical interest to the present discussion, is the cultural and economic significance of Italian traditional agricultural knowledge and national cultural identity with respect to farming practices, organic trade, and resistance to GM. Current discussions of the protection of traditional knowledge being undertaken within the World Intellectual Property Organization (WIPO) Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (IGC) continue to construct these concerns as questions for intellectual property laws. Broadly speaking, intellectual property laws protect, on the one hand, those knowledge goods that represent the commercial investment of research and development (such as patents, trade secrets, designs, and copyright) and on the other hand, those linked to product differentiation and branding (such as trade marks and geographical indications). To render the concerns of traditional agricultural

communities within the parameters defined by intellectual property laws introduces tensions between national and regional identities (whereby geographical indications become "national" property as distinct from local or traditional "community" assets) as well as between knowledge as an information product, and knowledge as integral to cultural diversity and identity.

The Italian Government has established an international research centre on traditional knowledge at Matera, Italy. The Italian Research Centre on Traditional and Local Knowledge, or IPOGEA, is recognised by the European Union for the safeguarding and enhancement of European Cultural Heritage, albeit largely archaeological protection and historic sites. However, given the links between the Centre's activities and environmental and ecosystem restoration, it represents clear institutional support for agricultural systems of particular relevance to environmental health, including traditional agricultural knowledge and the local and regional development of traditional agricultural communities. Also relevant are the activities of the International Plant Genetic Resources Institute, or IPGRI, based in Rome. The IPGRI is an independent and publicly-funded organisation, working under the aegis of the Consultative Group on International Agricultural Research (CGIAR) committed to the conservation and sustainable use of plant genetic resources. This may indicate an interest in traditional agricultural communities and the potential for in situ conservation of agricultural biodiversity and traditional varieties. Indeed, it would seem that an awareness and respect for traditional agricultural knowledge is explicit in the CGIAR's Ethical Principles on the Conservation and Use of Genetic Resources, particularly when considering the commitment in those principles to the social benefits of ethical use. Arguably, the social benefits from the local and regional development and integrity of traditional agricultural communities must be considered in this context and in the broader interests of market development, unique products, and international competitiveness.

Recalling the links between national identity and particular agricultural commodities, as illustrated by activities in the recognition and protection of geographical indications, the special significance of traditional agricultural knowledge may prove particularly relevant when considering the accession of countries in Eastern Europe. The identity and success of such countries cannot be measured simply in terms of purely economic competition in established markets. Traditional knowledge and its possible commercial potential and significance for national identities may indeed suggest important potential for pre-accession countries, currently working towards membership of the European Union. Recognition of traditional knowledge may be instrumental in at least two ways:

i. Pre-accession countries accede while striving to differentiate themselves in terms of unique products. Through the recognition of traditional knowledge in this way, their capacity to trade and sustain their national identity and cultural integrity in the European market may be strengthened. This is distinct from becoming merely a repository for the goods from other areas of the European Union. In other words, while in the past trade routes have been established physically through colonial forces, what we might see in the global knowledge economy is the strengthening of trade routes through a return of strengthened national identities.

ii. In joining the European Union, questions of national identity and cultural integrity are inevitably raised. Traditional knowledge presents strong

opportunities for the recognition of an ongoing unique development of nationally distinctive cultural, agricultural, and other products that are intrinsically linked to continued local and traditional cultural practices. This is of particular relevance to ongoing regional and local development possibly despite accession.

3.4. International Competitiveness in a Global Knowledge Economy

Finally, the protection and stimulation of traditional knowledge in agriculture (and in other industries and regional communities) may be of particular relevance to the achievement of international competitiveness in an increasingly globalised market. This is similar to the kinds of observations made in respect of the European Union, but becomes more critical when considering competition on an international level, such as that with China, India, and the United States.

The critical cultural and indeed commercial value of strong recognition of traditional knowledge, diversity in the development of knowledge, and promotion of local and regional capacity through the innovation to be found within traditional communities presents the potential to consolidate the competitive position of Italy within an international market.

Increasingly, competitiveness on an international scale may come to rely upon the integrity of products that may be offered, and indeed a realisation of national identity and "branding" through adequate protection and promotion of traditional knowledge. We have seen this in geographical indications for wines and spirits and the extension to certain agricultural products such as cheeses. In particular, such measures are likely to secure unique entry points in the global market, while stimulating community and cultural development and well-being, thus ensuring innovative responses to competition from countries such as China, India, and the USA, as well as competition within the European Union.

As discussed, while this has been recognised previously in the context of "national products" and the application of geographical indications, the relevance of traditional knowledge and the integrity and development of local and traditional communities is not as well understood. In the case of agricultural communities, traditional agricultural knowledge presents unique cultural and national value. Organic and traditional agriculture represent significant opportunities for Italy to achieve and strengthen access to the international market and compete strongly with genetically modified foods in the global forum, as well as other products of national and local cultural importance and significance. That is, branding of organic and traditional agriculture may indeed overcome the "physical" and financial obstacles to market access and ensure the sustainable development of traditional agriculture within an international trading environment.

4. Conclusion

A comprehensive analysis of the interaction in Italy between traditional agriculture and intellectual property protection (particularly in the context of international trade) presents a unique opportunity to characterise the impact of socio-cultural dimensions on regional economy and trade, in addition to the predominant perspectives upon consumer confidence and product identity. Furthermore, an understanding of the relationship between cultural identity and the unique branding of traditional

knowledge will generate important insight into harnessing the genuine competitive advantages in the agricultural market offered by traditional agricultural production.