

HOW FAR CAN AGRICULTURAL POLICIES CONTRIBUTE TO ACHIEVING RURAL DEVELOPMENT OBJECTIVES IN SEMI-URBAN AREAS?

Dimitris Diakosavvas *

*Policies and Environment Division
Trade and Agriculture Directorate
OECD*

“Traditional economics will tell you that as a society develops into a service and knowledge economy, agriculture is the first thing to go. Not so. The most important thing is for traditional agriculture to regenerate as urban agriculture through its integration with the urban”

| Peter Smeets, Research Scientist, Alterra, Wageningen |

1. RURAL AREAS - URBAN FRINGE

Rural areas in OECD countries have undergone and continue to undergo major adjustments. These changes are partly the result of agricultural policies, but there are other driving forces such as spatial, sectoral and global. OECD rural areas are lagging behind in aggregate terms (OECD, 2006b). Rural areas are diverse and “rural” is not a synonym for economic decline. Not only does the term “rural” have different meanings in different countries, but many different types of rural areas also exist also within various regions. Rural areas are characterized by a very large diversity of situations, ranging from remote rural areas, where access is difficult, and suffering from depopulation and decline, to peri-urban areas under increasing pressures from urban centers.

The peri-urban interface is a transition zone between city and countryside, where urban and rural activities meet. Semi-urban areas generally have an important role in providing food for urban consumers, with proximity to the urban centre reducing the costs of transport.

* Corresponding author
E-mailaddress: Dimitris.Diakosavvas@OECD.ORG

Also peri-urban areas are not necessarily homogenous: high- and middle-income residential developments may dominate one section, while other sectors may host industrial estates and or provide cheap accommodation for low-income migrants. There are areas close to airports, such as the “*Belgian endive region*” (Brussels endive is *witloof* in Flemish), where the impact of urbanization is prominent. Today, few farmers continue to persist in these areas, but some still operate quite successfully. There are areas such as those situated *between Brussels and Leuven*, where it is unclear to a visitor as to whether one *is walking out of the city ... or into the city*. Then there are areas such as those situated *south-east of Brussels*, with a very specific form of city-oriented farming deeply rooted in the local economy and culture. It is in the peri-urban areas that the processes of urbanisation are at their most intense and where some of the most obvious environmental impacts of urbanisation are located. In such areas:

- *Land markets* are subject to competitive pressure as urban centres expand and speculation is frequent.
- *Pressure on natural resource systems*: Most cities draw heavily on their surrounding regions for freshwater resources.
- *Cities’ ecological footprints*: Most urban wastes end up, either officially or illegally, in the region surrounding the city. Peri-urban areas may also be affected by urban air pollution.

However, to consider peri-urban regions merely as areas under urban pressure would not do justice to the vital role peri-urban areas play as interfaces between the urban and the rural world; they play a crucial role in bringing these worlds together. This duality implies that peri-urban regions face a continuous challenge to strike a balance between the demands of the cities and the preservation of the multi-functional characteristics of the countryside. The intermediate position therefore offers both challenges and opportunities.

2. AGRICULTURE IN SPACE

2.1. Links to the non-farm economy

The agricultural sector is directly linked to the non-farm economy through its input purchases and output sales to other industries. These linkages are complementary: the more agricultural activity, the more purchases, sales, employment and activity up- and down-stream. The sector is also directly linked to the non-farm economy through its employment of land, labour, and capital. But those links are competitive: the more land, labour and capital used by agriculture, the less is available for other economic activities.

Agriculture is also *indirectly* linked through revenue and spending relations. Farm income and spending provide a complementary indirect link to non-farm sectors. There are also indirect links which are competitive: the more people and governments spend on food or fibre or farm subsidies, the less there is to spend on non-farm goods, services, or income support.

At the 2005 OECD Workshop on the Coherence of *Agricultural and Rural Development Policies* (OECD, 2006a), which reviewed the role of agricultural policy in rural development and rural development policies on agricultural performance through country experiences, three of the main areas for which there appears to be a broad consensus were:

- “Rural” is not synonymous with agriculture; neither is agriculture synonymous with “rural”.
- Agriculture can contribute to sustainable rural development mainly through the provision of rural, land-based amenities.
- Although agriculture's direct economic contribution to job creation in rural areas is small and declining, its importance is seen to be greater when its indirect effects are taken into account (e.g. agri-tourism, up-stream and down-stream linkages, and land management).

The relationship between agricultural and rural development policies is evolving as the structure of rural economies changes. An important consequence of the process of structural change witnessed in many OECD countries over the past several decades is that agriculture is no longer the main source of economic activity in rural areas (although there is considerable variation across and within countries). The contribution of agriculture to rural economies across most OECD area rural regions is small and declining (the primary agricultural sector represents around 20% of employment in remote rural areas).

In the majority of the OECD countries, farming is now a minor source of income and employment, even in rural areas. For many farmers and their families agriculture is no longer the only source of income and, quite often, is no longer the most important one. In the EU, for example, less than 14% of employment in rural areas is in farming; and 95% of rural GVA comes from non-farming.

Notwithstanding the decline in the direct contribution of agriculture to economic activity in rural areas, agriculture remains the predominant user of rural space and thus plays a key role in the sustainable management of land in rural areas. For example, agriculture occupies 60% of rural land in Australia, while in EU-25 88% of the 10 million farms and 89% of the agricultural area lie in rural areas. In many EU member states the share of agricultural land in rural areas is larger than 90% (e.g. Austria, Denmark, Finland, France, Greece, Ireland, Portugal and Sweden). These data also suggest that in many OECD countries (e.g. Germany, the Netherlands, Spain, United Kingdom), a significant part of agricultural activity still takes place in areas designated as “urban”, highlighting the role of land use in peri-urban areas.

Moreover, the majority of the populations are now more urban and wealthier than at any time in history. In such an environment, it is not surprising that there are growing questions about the role that agriculture plays in each society. In some cases farming

practices provide a positive contribution to the urban visitor's experience. This is generally the case for low-intensity livestock operations that allow animals to graze in a pastoral setting, or where there is a variety of field crops. In other cases, farming provides a less desirable landscape (e.g. intensive animal feeding operations or where monoculture crop systems dominate an area). To the extent that agricultural policies are responsible for undesirable landscapes, there is a mismatch between what society wants from its farm policy and what is now provided.

Changing values and attitudes towards the environment and property rights have led to the implementation of policies aimed at the conservation and restoration of the natural environment and ecosystems in several OECD countries. Farm operations in general have been affected by an increasing number of environmental regulations. In many OECD countries agricultural policy is now influenced by animal welfare advocates, environmental activists and rural residents whose livelihoods and lifestyles are influenced by farming practices, even though they are not personally engaged in farming.

2.2. Farming in the city's shadow - challenges

It is well known that farmers in peri-urban regions face different problems from those experienced by more rural farmers. First, in many regions, change at the rural-urban interface threatens the viability of farming. Significant acreage of farmland has been converted to residential development and other suburban and urban uses. Second, farmers may face increased pressure from water- and land-use restrictions and higher real estate tax restrictions. One possible result is increased costs for farmers and the potential loss of profitable agricultural land and, consequently, loss of the amenities associated with certain farm types in these areas.

Third, as a result of urban to rural migration, farmers increasingly have non-farming neighbours who unaccustomed to the sights, sounds and smells of modern agriculture. These demographic shifts, combined with strong public preferences for protecting the environment, raise important questions: do those who move to the semi-urban areas actually get what they paid for? That is, does moving into the "countryside" ultimately destroy the good things that prompted that move?

Fourth, the local institutional environment is also influenced by conditions imposed by the increasing number of non-rural inhabitants. Examples of this institutional influence are more restrictive rules on farming (e.g. environmental regulations, licenses) and other policy priorities for open zones resulting in fewer zones available for farming.

However, the impact of urbanization on farming is not necessarily only negative but rather a combination of opportunities and threats which the farmer has to deal with. Urbanization creates opportunities for farming, such as:

- A larger pool of seasonal or part-time labour available, particularly at peak periods.

- Greater off-farm employment opportunities for the farmer (or his/her family may help support the farming operation). Opportunities from urban employment run in both directions. People in urbanizing areas may work part-time on the farm or start recreational farms that eventually develop into full-time, part-time, or retirement businesses.
- Opportunities for farmers to grow new crops and to market them in new ways. High-value crops, such as fresh fruits and vegetables, can be sold through restaurants or directly to consumers in roadside stands or pick-your-own operations.

To adapt to rising land values and increasing contact with new residents, farmers may have to change their operations to emphasize higher-value products, and create enterprises that fit better into an urbanizing environment and a more urban marketing orientation.

2.3. Land use conversion issues

Land provides particular values that go beyond commodity outputs. Aside from the direct economic use of land in rural areas, amenities are provided that cannot be measured in the marketplace. Individuals may derive pleasure from the use of land for recreational purposes, they may enjoy viewing the land from a distance, or they may derive pleasure from knowing that the land is being protected from development. Thus, even if active farming as an economic activity is no longer profitable, conserving rural land uses may continue to provide rural amenities.

In recent decades, the spatial differentiation of rural areas in terms of economic, social and environmental outcomes has been increasing. Several rural areas – due to a combination of natural and economic factors which have conferred a substantial competitive advantage for agricultural production – have experienced intensification and specialisation of farmland management practices (OECD, 1998). Other rural areas, particularly the most economically vulnerable remote areas – which are often characterised by predominance of small-scale farm holdings – have experienced marginalisation or abandonment of land from agriculture.

Alongside the changes in agricultural practices which have affected agricultural land use, urban growth, recreational uses and afforestation are contributing to the shifting land-use patterns in several rural areas across OECD countries. Further, in some OECD countries, although the total amount of land in agricultural production has remained relatively stable, its spatial distribution and composition have varied over time (*e.g.* United States).

The relationship between the management and use of land, and the development of rural economies is complex. Increased demand for land-based environmental goods and services may result in conflict between farm and non-farm activities in some rural areas. Intensification and specialisation of rural land management practices on environmentally-good land in economically integrated rural areas, could be threatening to the provision of ecological services, although it could improve eco-efficiency (as it uses

smaller amounts of chemical inputs per unit of output). On environmentally-sensitive land in economically marginal remote rural areas, low input and production could preserve the diversity of the cultural landscape, but could also lead to: neglect of land management; abandonment; and afforestation, with consequences for the provision of farmland-based environmental amenities and the viability of the rural economy.

Change in farmland use entails management choices either to move land in/out of agricultural production (i.e. choices at the *extensive margin* of production); or to allocate land to the production of different crops – such as maize versus soybeans, or intensification – more inputs per unit of land (i.e. choices at the *intensive margin*). For example, switching land out of cropping and into urban use and changes in the type of agricultural production (such as from pasture and rangeland to cropland) are extensive margin changes. Switching land from cropping to urban use results in impacts on the environment that are different from those provided when switching land from cropping to forests or abandoning farming altogether.

In remote rural areas – those defined by low density of socio-economic relations and considerable distance from markets – traditional farming practices may contribute towards safeguarding certain environmental amenities, such as natural and semi-natural habitats. When the less economically viable farms are concentrated in agricultural areas of high nature value, land abandonment and the withdrawal of traditional land management put the provision of such amenities in jeopardy. In such areas, however, the land can be re-converted back to farming, should economic conditions warrant an increase in the extensive margin (OECD, 2006a; EEA, 2004; Hellegers and Godeschalk, 1998).

In contrast, development at and beyond the urban fringe affects agricultural land use in different ways. On the one hand, land values rise, while on the other hand, the “amenity value” of farmland also increases. These amenities are often a by-product of the agricultural production process (OECD, 2000; Heimlich and Anderson, 2001). Pressure for the conversion of land from farming to residential and commercial purposes is usually intense, but this form of land conversion is likely to be irreversible and any shift from farmland to urban use tends to be permanent. Moreover, while land subject to abandonment often has a low agricultural production potential, land that is converted to urban use is often highly productive commands higher prices than does less productive land – with implications for food production and for the rural economy. Farmland in semi-urban centres is highly valued largely because of its proximity, which allows ready access.

In the rural-urban fringe, different agricultural policy measures could significantly influence the mix of commodity and non-commodity outputs provided. For example, a reduction in the value of commodity (relative to non-commodity) outputs could lead to reduced incentives to farm and might lead to demands that governments pay farmers for the production of non-commodity outputs. Consequently, information about public demand for individual farmland-based environmental amenities is necessary for analysing the effectiveness of policies (Nickerson and Hellestein, 2003; Hellerstein *et al.*, 2002).

3. AGRICULTURAL POLICIES

Justification of agricultural support and reform often includes rural development objectives: slowing down population exodus, stimulating the economy, providing environmental goods. At the urban fringe, high levels of support for agriculture increase the returns to farming which will slow the rate of urban conversion. However, the value of land in urban uses is typically of an order of magnitude higher than its agricultural value. Thus in most cases agricultural support provides only a weak impediment to urban expansion.

A few counter-examples to this are apparent. On the Côte d'Or in France, the value of the quality of the vines is high enough to control urban expansion. Similarly, in Lexington Kentucky, in the US, thoroughbred farms are effective barriers to urban expansion because wealthy horse farm owners are prepared to pay more for farmland than most developers (Freshwater, 2007). However, in these cases it is not public policy that supports farm use but highly location-specific agricultural activities.

In 2004-06, support to producers in the OECD area was estimated at EUR 225 billion (OECD, 2007). There has been a reduction of support as a share of farm receipts in the period 2004-06, relative to 1986-88. As a share of gross farm receipts, the estimated level of support in the OECD area (%PSE) declined from an average 38% of receipts in 1986-88, to 29% in 2004-06.

Together with support for general services to agriculture such as research, infrastructure, inspection, marketing and promotion, total support to the agricultural sector (%TSE) was equivalent to 1.1% of OECD GDP in 2004-06, which is less than half of the 1986-88 average of 2.5%.

While support has declined compared with 1986-88, wide differences remain among countries in the level of support. Support to producers in 2004-06 was around 1% of farm receipts in New Zealand. It was 14% in the United States and 33% in the EU. Support equalled 55% of farm receipts in Japan and over 60% in Iceland, Norway, Korea and Switzerland.

Greater progress has been made in changing the way in which support is provided to producers. The share of the most production- and trade-distorting forms of support – those linked to outputs or variable inputs – declined from 86% of producer support in 1986-88, to 64% in 2004-06 in the OECD area.

Reductions in the most distorting forms of support have been accompanied by increases in payments based on area. For the OECD area as a whole, these payments increased by more than 400% between 1986-88 and 2004-06. However, these policies often differ in terms of the associated implementation criteria and their stated policy objectives. In recent years the payments not requiring any production grew in importance. Cross-compliance conditions (and especially environmental cross compliance conditions) are increasingly being attached to payments.

4. POLICY CHALLENGES

The rural/urban dichotomy is simplistic. Both rural and urban areas in any one country are too diverse and heterogeneous for any blanket-style policies to be of relevance. Sectoral measures have limited potential, although a territorial approach can take into account the diversity of rural areas. To many observers it is now clear that the long-term viability of rural areas can no longer be achieved simply by providing support for agricultural production, or compensatory measures alone. Traditional agricultural policy is also of very limited value in dealing with land conversion urban-rural interface as the levels of support that would be required to keep land in farming (instead of alternative uses) would be formidably high. Rural policies need to take a multi-sectoral approach within a territorial or spatial framework to enhance the competitiveness of the rural areas as a whole.

Rural development means population growth, but growth leads to urbanisation. Is conversion to urban the way we define rural development (the growth conundrum)? Peri-urban regions are not areas that are “lagging behind” in terms of economic development. Peri-urban areas are indispensable for competitive urban development. Peri-urban regions, particularly in Europe, are facing over-pressure on their rural areas. The spatial challenge consists in finding the right balance among: the concentration of economic activities in Europe’s highly urbanised areas (70% of general economic activities are undertaken in urban agglomerations); the increasing environmental pressures due to traffic; urban growth; and intensive agricultural use of the land.

The agricultural sector, particularly in peri-urban areas, becomes more and more confronted with pressures from inhabitants, environmental policy or stringent spatial planning. Nevertheless, agriculture in these areas plays an undeniable role in maintaining the landscape and increasing the socio-economic quality of local life. To maintain this role, agriculture needs to be competitive and sustainable. Pursuing the competitiveness aim on the one hand means an improvement of the market performance of agriculture (by factors such as reduction of production costs, introduction of innovation) and the provision of public goods on the other (remuneration for non-marketable agricultural services). From this perspective, both the support measures for physical investments (farm investments, processing/marketing; agricultural infrastructure) and the measures related to human capital (early retirement, young farmers, training and advisory services) must be rendered more effective.

Increased competitiveness can also be achieved by taking advantage of the opportunities offered through diversification of economic activities, an orientation towards quality and value added-products that consumers demand, including non-food products, as well as cleaner and more environmentally friendly production techniques. Farmland retention programmes in the urban fringe zones and various agri-environmental programmes used in several OECD countries (*e.g.* US) are also important for the provision of public goods.

The large number of available measures may include some with partly contradictory objectives. Precise definition and quantification of programme objectives, a careful

selection of measures, and accurate targeting of beneficiaries are pre-conditions for successful programmes. The particularities of farming in the urban fringe underpin the demand for specific policies to be targeted on these kinds of zones. Such policies, however, need to be regularly monitored and evaluated.

Agriculture is not only an activity that produces tradable commodities for local, regional, national, or international markets, but it is also associated with the production of non-commodity outputs. Determining the “optimal” level of non-commodity outputs and rural amenities is a most difficult conceptual and empirical task. The policy challenge is to make sure that governments are not rewarding behavior on the part of farmers that should properly be considered as normal good stewardship of environmental resources. The difficulties involved in this should not be underestimated, as the task could be Herculean.

Often the clarity of a simple rule, which might be very appealing to policy makers, such as the Polluter-Pays-Principle, is clouded by operational realities. The heart of much environmental policy is the idea that the polluter should pay for the damages being caused. The difficulty, however, is to ascertain precisely who “causes” pollution. Agricultural activity implies noise and dust. When a particular region is exclusively agricultural and the dust and odours spread throughout the vicinity, the idea of “agricultural pollution” is probably an oxymoron.

An American case illustrates another aspect of “pollution” with a direct bearing on agriculture in the urban fringe (Bromley, 1997). Spur Industries created large feedlots some considerable distance northwest of the fast-growing metropolitan area of Phoenix, Arizona. When first constructed, the feedlots were very far out in the desert. However, Del E. Webb Corporation undertook the development of a housing complex in the immediate vicinity of the feedlots. The flies and odours associated with the feedlot were a serious impediment to the sale of Webb’s houses. The Webb Corporation sued Spur Industries for creating a nuisance. The court found in favour of the complainant on the grounds of a genuine nuisance that did indeed harm Webb’s financial prospects. But the court ordered Webb to pay the costs for the feedlots to move to a new location where the inevitable accompaniments of confined cattle feeding – flies and odour – would not constitute “pollution.”

REFERENCES

- Bromley, D. (1997), “Environmental Benefits of Agriculture: Concepts”, in OECD (1997), Environmental Benefits from Agriculture: Issues and Policies, Paris.
- European Environment Agency (EEA) (2004), High Nature Value Farmland: Characteristics, Trends and Policy Changes, Report No. 1.
- Freshwater, D. (2007), “Rural Development and the Declining Coherence of Rural Policy: An American and Canadian Perspective”, Paper presented at the Penn State ERS Workshop Design and Evaluation of Public Policies for Rural Development, Wye College, 25-26 June.
- Heimlich, R. and W. Anderson (2001), Development at the Urban Fringe and Beyond: Impacts on Agricultural and Rural Land, Agricultural Economic Report No. 803, Economic Research Service/USDA.
- Hellegers, P. and F. Godeschalk (1998), Farming in High Nature Value Regions. The Role of Agricultural Policy in Maintaining HNV Farming Systems in Europe, Onderzoeksverslag 165, LEI/DLO, Wageningen.
- Hellerstein, D., et al. (2002), Farmland Production: The Role of Public Preferences for Rural Amenities, Agricultural Economic Report No. 815, Economic Research Service/USDA.
- Nickerson, C. and D. Hellerstein (2003), “Rural Amenities: A Key Reason For Farmland Protection”, Amber Waves, Vol. 1, No. 1, Economic Research Service/USDA.
- OECD (1998), Agricultural Policy Reform and the Rural Economy, Paris.
- OECD (2000), Valuing Rural Amenities, Paris.
- OECD (2006a), Coherence of Agricultural and Rural Development Policies, Paris.
- OECD (2006b), The New Rural Paradigm: Policies and Paradigm, Paris.
- OECD (2007), Agricultural Policies in OECD Countries: Monitoring and Evaluation 2007, Paris.