

# An economic evaluation of the Organic Farming Scheme

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## ABSTRACT

This paper describes a review commissioned by DEFRA into the operation of the Organic Farming Scheme. In particular the review examines the rationale of the Scheme, and its effectiveness and efficiency in meeting its objectives, and makes recommendations for improvements to the Scheme.

*Keywords: economics; conversion; policy; path dependence*

The main arguments for public sector intervention to assist the conversion to organic farming practices are reviewed under three broad headings:

- public good benefits
- information and institutional failures
- path dependence/technological lock-in

We provide empirical evidence for (or against) each of these market failure arguments and assess whether they provide an economic justification for ongoing support to organic production after the conversion period. We link this with discussions on trade liberalisation and the WTO compatibility, or otherwise, of such maintenance payments. The following highlights some of the issues considered important to this study.

Recent studies on the environmental benefits of organic farming are reviewed and consideration is given to whether alternative (agri-environmental) policy measures would have achieved the same benefits in a more cost-effective and efficient way. In terms of the environmental effects of organic farming in relation to biodiversity, we show from comparative studies of organic and conventional systems, that in general, organic farming practices have characteristics that are both beneficial to fauna and flora in terms of provision of habitat and abundance of food. By converting more land to organic management, the high levels of endangered or declining species, which has been attributed to modern intensive farming practices, may be to some extent reverted. Since rural areas are considered a major amenity resource and tourist attraction, consideration is given to the aesthetic value of the farming landscape. A question addressed is whether organic farming generates the same type and level of environmental benefits everywhere or whether benefits are location-specific, varying with the type of land or the farming system.

The cost-effectiveness of the Scheme in meeting its objectives is also considered. These value-for-money considerations build upon the qualitative insights regarding alternative pricing systems (flat-rate payments, tendering, competitive flat rates) reported in the Review of Organic Aid Scheme (MAFF, 1998). We try to establish farmers' attitudes to alternative pricing systems and consider whether the more complicated systems would create a barrier to participation. A price testing exercise is undertaken to examine whether current rates are appropriate

and a supply curve for organic conversion as a function of the payment level offered is derived.

Organic production levels in the UK are somewhat lagging behind those of other European countries. This could be due to a number of contributing factors including information failure, social obstacles, lack of processing and marketing infrastructure, industrial barriers, lack of profitability, risk and reasons for re-conversion. Part of this research involves examining the reasons why farmers are not willing to convert to organic farming. The research also attempts to identify the characteristics of people who take up organic farming and why they do so.

The conversion to organic farming is clearly related to the farm level profitability of organic systems compared to conventional systems. In turn this is dependent on the size and the type of enterprise(s) and/or enterprise mix, cost levels and the level of price premiums. To gain an insight into these issues, each is considered separately. Other factors taken into account include the cost levels and premium prices and the effect they have on the overall profitability of an organic system. To gain an overall picture, the costs of converting to an organic system are considered by looking at empirical studies that have already been undertaken across the EU and analysing the relative financial performance of organic agriculture. An attempt to quantify the impact of the Scheme on the output of surplus commodities is made. The latter results from a combination of three forces: reduced yields, changes in the product mix, and reorientation to the 'real' markets.

One factor that needs to be addressed within the agricultural sector has been the steady decline of employment. Organic farms tend to have higher labour requirements that depend very heavily on the type of enterprise(s) and/or enterprise mix that is involved. We examine whether conversion of more land to organic status could provide more employment opportunities in rural areas.

The dynamics of competition between conventional and organic farming systems and the possibility of technological lock-in of agricultural technologies is discussed. The main issues and arguments which will be explored are the concepts of path dependence. That is, a system whose history has implications for current allocations and secondly, the causes of increasing return in organic agriculture.

A final objective of the evaluation is to assess any 'knock-on' or unintentional side effects resulting from the Scheme. This assessment focuses on 'spill-over' effects from newly converted farms to adjoining conventional farms. Whether the scheme has had any impacts on those farms that applied unsuccessfully is also considered.

The review concludes with recommendations as to how the Scheme might be improved in the light of DEFRA's objectives, the limitations and difficulties of the present scheme, developments in other EU countries, and WTO requirements.