Participation in Governmental Programs for Organic Agriculture in Switzerland

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Introduction

In 1993, Swiss Federal Government introduced voluntary programs to promote organic agriculture (OA). The first aim of the paper is to find typical patterns of program participation. The second aim is to show how expensive this policy is for the government (tax payers) under Swiss circumstances. The latter consist in a *labour and capital intensive «micro» size farm structure* and *very high agricultural support for non-organic agriculture* on the one hand, and a *well-going economy with high salaries and low unemployment rate* on the other hand.[1]

Material and Methods

From microeconomic theory follows that farmers participate in voluntary programs only if payments compensate for foregone or unstable income and additional costs (opportunity costs). Income losses can occur because of lower yields and greater yield risks and because of higher costs, especially for labour. The central hypothesis is that opportunity costs of OA in Switzerland are high, because traditional Swiss farms are small and produce intensively, because overall support and protection of (non-organic) agriculture is high, and because labour costs are high in Swiss economy. In detail, we deduce the following hypotheses:

- Participation is expected to be generally low.
- Participation is expected to grow with an increase in compensation payments for OA and/or a decrease of support of non-organic production.
- Participation is expected to be higher in less favourable areas because potential income losses are lower than in favourable areas.
- Opportunity costs differ between individual farms. Therefore, significant differences between participating and non-participating farms are expected, concerning production and other farm characteristics as age or education of the farm operator.

These hypotheses were investigated with aggregate data for Switzerland in the time period 1991-1999 and with individual agricultural survey data (microanalysis) for all farms in the Canton Zurich in 1996.

Results and discussion

Hypotheses are confirmed by the analysis. Overall participation is with ca. 7% still modest (Switzerland, 1999). The increase in participation corresponds with the introduction and rise of payments and the fall of prices for the typical products milk, meat, and wheat (Switzerland, 1991-1999).

On the aggregate level, participation steadily increases from the most favourable areas (plains: 2.9%) to the less favourable areas (hills: 5.8%, mountains: 14.9%) (Switzerland, 1999). The disaggregate analysis with regional individual farm data for five production zones confirms this relationship (from plain to mountain: 1.8%, 3.8%, 6.3%, 8.2%, 12.7%; Canton Zurich, 1996).

In the microanalysis, significant differences between participating and non-participating farms, concerning age and education of farm operator, farm size, ownership, land labour ratio, intensity of crop and animal production, reservation of land for biodiversity etc. were found.

Conclusions

Despite being greatly subsidized, participation in OA in Switzerland has remained modest. For further promotion the relative profitability of OA has to be enhanced. The following changes in agricultural policy seem important:

1. Agricultural support for non-organic agriculture (direct payments included) has to decrease.
2. An additional liberalization of markets and reduction of agricultural protection would help to make OA economically more interesting.
3. Sufficient land resources are an important requirement for OA. In Switzerland, land is extremely scarce. This scarcity is politically enforced. Farm exits and farm growth are hindered through political regulations. Accepting structural change would provide a chance for remaining farms to increase their land resources at a reasonable price which would be a basic requirement for surviving on OA.

Such, costs for promoting OA on a voluntary basis with economic incentives would diminish. Policy would become more effective and efficient. And last but not least, more environmental quality could be reached at a cheaper price.

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[1] *Farm size structure*: In 1996, 93% of Swiss farms were smaller than 30 ha, the average size of full-time farms was 17.4 ha, and the average land-labour ratio was 7 ha per labour. *Support*: In 1998, just 1% of overall support for agriculture and less than 2% of direct income payments served to promote OA.