

# Improving organic market data collection by using the supply balance sheet approach

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**Abstract – Analyses of national markets for organic agricultural products are constrained by the lack of official statistics on production, consumption or international trade in any European country. As a result there are several, often very contradictory and inconsistent estimations on the amount of the organic production or consumption in the EU or even in individual EU countries. The main sources for market data estimations are surveys with market actors and sometimes extrapolations of household or retailer panel studies. One possibility to reduce the problem of inconsistent market data for a geographical region is to use the method of supply balance sheets (SBS). By using SBS which compare the resources and uses of a product, it is easier to detect inconsistencies between production, consumption or foreign trade data. Additional quality checks can support the identification of inconsistencies between organic and conventional market data.<sup>1</sup>**

## INTRODUCTION

Although organic farming plays a growing role in the agricultural policy of the EU, it is still virtually impossible to obtain accurate data about the organic market from official statistics. The published data often do not go beyond the number of organic farms and area under organic production since official statistics on organic agricultural production, consumption, imports, exports and prices do not exist. Without such market data market actors and policy makers cannot identify where there are deficits and oversupply in the market and thus cannot respond adequately to important market developments. Moreover, entrepreneurial and political decisions are based on great uncertainty which leads not only to suboptimal but also decelerated decisions.

There are continuous publications of market data by different national agencies in many European countries. However, most of them cannot draw a complete and consistent picture of the national organic markets as important market data, e.g. on foreign trade, are missing or as data on production and consumption do not fit together. On a supra-national level, e.g. on EU level, the data are also inconsistent as e.g. one country reported high im-

ports from another country, while the exporting country notified only small exports to this country.

The approaches to collect these market data are also very different between the countries, some include different panel data (household and/or retailer panels of private market research institutes), others data from certification bodies or organic farmers' organisations and others surveys of organic market actors. There is only one European country, Denmark, in which organic market actors (processors and traders) are obliged to deliver some organic market data to the national statistical office (Larsen, 2004). However, due to lacking market channels (e.g. direct marketing, catering) and difficulties in collecting foreign trade data, the Danish organic statistics are also incomplete.

## SUPPLY BALANCE SHEETS

Supply balance sheets (SBS) provide combined information on domestic production, foreign trade, stock changes and domestic uses (Weiler, 2006). They are a key source of information for policy makers, stakeholders and market actors. The basic equation is: production + imports – exports + stocks input – stocks output = domestic uses. Domestic uses is the sum of human consumption, industrial uses, animal feed, market losses and raw products for the next production cycle (seeds, eggs for hatching or animals for breeding). The strength of SBS lies in their consistency. If the equation does not work out even, fault diagnostics process can be started.

Generally, the method of calculating SBS is the same for organic products. However, there is one important difference: As it is not given that the total domestic production can be sold on the market for organic products, the equation for the organic market balance must be enlarged on the production side by subtraction of the amount of organic products which are sold on the conventional market.

## EXPERIENCES WITH ORGANIC MARKET DATA COLLECTIONS USING SUPPLY BALANCES SHEETS

In 1998, the first comprehensive organic market data collection took place in the framework of the EU-funded research project "Effects of the CAP-reform and possible further development on organic farming in the EU (OFCAP)" in all 15 EU countries plus three non-EU countries (Michelsen et al., 1999). The data collection method was a broad survey of national market experts, market actors, certification

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bodies and organic farmers' organisations. However, statistical information received was incomplete and often inconsistent so that the results of the survey did not lead to consistent SBS for most of the countries. In 2000 and 2002 two further organic market data collections were done in the framework of the EU-funded research project "Organic marketing initiatives and rural development (OMIaRD)" in 15 EU countries plus four other European countries (Hamm et al., 2002; Hamm and Gronefeld, 2004). Having learnt from mistakes in the first market study, the survey used the method of SBS for all interviews and included an extensive calculation section with many cross-checks between the different data to obtain consistent data. Cross checks were included not only within the different data for the organic markets, but also between the data on organic and the conventional markets (in tons and in terms of market shares). As a result too high or low organic shares became obvious to the interviewers and thus could be further discussed with experts. In 2003, another attempt was made within the EU funded project European Organic Farming Policy (EUCEOFP) to use SBS in researching organic markets in Central and Eastern European EU new member states (Zakowska-Biemans, 2005). Due to very limited information and low expertise on organic markets in these countries it was impossible to use SBS as effective as within the OMIaRD project. However, the SBS approach proved to be a very useful tool in analysing emerging organic markets, too.

Experiences with the data collection method using the SBS approach in the OMIaRD project have been very good and the quality of data appears to be much better than in other studies on the organic market. By starting with the certified organic area or the number of animals multiplied with the organic yields, the figures on organic production and the respective organic production shares of the total production, a first source of mistakes and overestimation was eliminated. By further including on-farm uses (human consumption, animal feed, seeds or breeding, storage losses) and shares of organic production which must be sold on the conventional market into the calculation section, the amount of organic production which is available for the market supply is much lower than in previous estimations. Other important cross-checks were the calculations of organic imports as a share of domestic uses and the organic exports as a share of organic sales from domestic production. The problem with import and export data was nearly the same for all countries: Before cross-checking, imports were overestimated and exports were underestimated, so that the figures between exporting and importing countries did not match.

One of the main advantages of using the SBS approach is more realistic information about the amount and share of organic consumption (of total consumption) which tend to be continuously overestimated in many other studies. Consumption figures which are based on consumer panel data normally lead to a huge overestimation of total organic consumption. The main reasons are that i) many panel households confuse organic products with products from other production methods (e.g. free range eggs

with organic eggs); ii) the lower organic shares of out-of-home consumption are not incorporated; iii) foreigners and different ethnic groups who realise a lower organic consumption share are normally not included in household panel studies. Another common source of mistakes is that the share of organic consumption on total human consumption is also taken for total consumption. However, organic shares of human consumption reach much higher market shares than the organic shares of other domestic uses as industrial uses (for technical starch, alcohol or energy), animal feed and seeds or animals for breeding.

## CONCLUSIONS

Experiences with organic market data collections have shown that many inconsistencies and overestimations could be avoided by using the SBS approach. However, national statistical offices in the EU and Eurostat seem to be far away from introducing organic SBS into their statistical programme. As long as there are no reliable data on the organic market, political decisions on support measures for organic agriculture are based on very unsafe ground. However, inappropriate support measures can lead to further losses of public and private resources which may be much higher than the costs for building up SBS for the organic market.

## REFERENCES

- Hamm, U. and Gronefeld, F. (2004). The European market for organic food: Revised and updated analysis. Organic marketing initiatives and rural development vol. 5, University of Wales, Aberystwyth, United Kingdom.
- Hamm, U., Gronefeld, F. and Halpin, H. (2002). Analysis of the European market for organic food. Organic marketing initiatives and rural development vol.1, University of Wales, Aberystwyth, United Kingdom.
- Larsen, P.H. (2004). Detailomsaetningen af oekologiske foedevarer 2003. In: *Landbrug* (ed. Danmarks Statistik), 19:1-9.
- Michelsen, J., Hamm, U., Wynen, E. and Roth, E. (1999). The European market for organic products: Growth and development. Organic Farming in Europe: Economics and policy vol. 7, University of Hohenheim, Stuttgart, Germany.
- Weiler, F. (2006). Compiling supply balance sheets. In: Rippin, M., Willer, H., Lampkin, N. and Vaughan, A. (eds.): Towards a European framework for organic market information. Research Institute of Organic Agriculture (FiBL), Frick, Switzerland, p. 184-197.
- Zakowska-Biemans, S. (2005). Report on organic markets in Central and Eastern European EU new member states within the 5<sup>th</sup> FP project 'Further Development of Organic Farming Policy in Europe with particular Emphasis on EU Enlargement'. QLK5-2002-00917, unpublished.