

Impact of feeding pattern and feed purchase on area- and cow-related dairy performance of organic farms

Guido Haas, Christine Deittert and Ulrich Koepke
Institute of Organic Agriculture, University of Bonn, Katzenburgweg 3, D-53115 Bonn, Germany

Key words: Dairy; Milk yield; Productivity; Concentrates; Roughage; Feed type; Feed purchase; Organic farming

ABSTRACT

Livestock production and ruminants in particular are an integral part of the organic mixed farming concept. In this paper, the feeding patterns of 26 organic dairy farms in two different regions in Germany are analysed, with particular emphasis on the amount and proportion of concentrates and purchased feed related to the dairy performance expressed per cow and hectare.

Calculated on an energy basis (MJ NEL), the annual average milk yield of 6,737 kg cow⁻¹ is derived from roughage (74 %), concentrates and cobs (23 %), and commercial processing by-products (e.g., spent grains) (3 %). Per cow and year, 937 kg dry matter (DM) (range: 0 - 2,724 kg) of concentrates are fed with an intensity of 135 g kg⁻¹ milk (range: 0 - 378 g kg⁻¹). Approximately 65 % of the concentrates and commercial processing by-products are purchased.

The area-related milk yield is almost 7,000 kg ha⁻¹. For fodder production, 0.96 ha per cow is needed, of which 0.85 ha is farm land. The equivalent production area for purchased fodder is 0.11 ha.

In the analysed region in North-Western Germany, most correlations between milk yield and analysed feeding parameters are close and significant. This is in contrast to the region in the south, where the variability of amount and proportion of the different feed types is predominantly independent of the milk yield.

Intensification of dairy production to increase milk performance using a higher proportion of concentrates and purchased feed at some of the analysed farms needs to be carefully assessed according to the organic farming profile.

Full papers file copy for personal scientific use only on request.

Dr. Guido HAAS

AgrarIngenieurbuero Haas

www.agrarhaas.de Email g.haas@agrارhaas.de
Oekologischer Landbau - Wasserschutz - Oekobilanzen - CO₂ Klimawandel
Beratung - Planung - Umsetzung - Gutachten - Studien - Vortraege

Organic AgroExpertise Consultancy

www.agroexpertise.de Email g.haas@agroexpertise.de
Organic Farming - Watershed Management - Ecobalances - Climate Change
Advice - Development - Evaluation - Feasibility studies - Training