

Review

Comparison of nutritional quality between conventional and organic dairy products: a meta-analysis

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- Abstract
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Abstract

As a contribution to the debate on the comparison of nutritional quality between conventional *versus* organic products, the present study would like to provide new results on this issue specifically on dairy products by integrating the last 3 years' studies using a meta-analysis approach with Hedges' *d* effect size method. The current meta-analysis shows that organic dairy products contain significantly higher protein, ALA, total omega-3 fatty acid, *cis*-9,*trans*-11 conjugated linoleic acid, *trans*-11 vaccenic acid, eicosapentanoic acid, and docosapentanoic acid than those of conventional types, with cumulative effect size (\pm 95% confidence interval) of 0.56 ± 0.24 , 1.74 ± 0.16 , 0.84 ± 0.14 , 0.68 ± 0.13 , 0.51 ± 0.16 , 0.42 ± 0.23 , and 0.71 ± 0.3 , respectively. It is also observed that organic dairy products have significantly ($P < 0.001$) higher omega-3 to -6 ratio (0.42 vs. 0.23) and $\Delta 9$ -desaturase index (0.28 vs. 0.27) than the conventional types. The current regulation on organic farming indeed drives organic farms to production of organic dairy products with different nutritional qualities from conventional ones. The differences in feeding regime between conventional and organic dairy production is suspected as the reason behind this evidence. Further identical meta-analysis may be best applicable for summarizing a comparison between conventional and organic foodstuffs for other aspects and food categories. Copyright © 2012 Society of Chemical Industry

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