How do consumers assess the eco-friendliness of food products?

A recent Swiss study compared consumer perceptions of the environmental friendliness of vegetables with the results of scientific assessments of the vegetables’ environmental impact. The two did not always tally and findings from this study can provide useful information for sustainable consumption campaigns.

Food consumption has been estimated to contribute 20 to 30 per cent of total environmental impact in developed countries. Consumers can substantially contribute to sustainable development through their food choices. Recently, the EU’s Eco-label, a voluntary labelling scheme that helps distinguish environmentally friendly production, has been revised to simplify procedures to increase its use.

The researchers conducted a survey of 79 consumers in and around Zurich to examine how consumers judge the environmental friendliness of vegetables. Ten vegetable products, including green beans, tomatoes and potatoes, were presented in different varieties as found in grocery stores. The consumers’ assessment was then compared with results of life cycle assessments on the products, which calculate the environmental impact associated with production, packaging, conservation and transportation.

The results revealed that most consumers thought the production methods (organic production) and transportation (transportation distance from origin) were the main criteria for environmentally friendliness. In contrast to the LCA method, consumers placed most emphasis on transport distance rather than means of transport. Additionally, consumers seemed to overestimate both the environmental benefit of organic production and the environmental harm of packaging.

Supporting previous research, the country of origin had a strong influence on the consumers’ evaluation of environmental friendliness. Consumers generally rated domestic products more favourably and tended to believe products from less developed countries were lower in quality and environmental performance. Organic production dominated consumers’ minds when thinking about green characteristics. This was to be expected since organic products are visibly labelled in Switzerland, and retailers and farmers actively promote these products as the green alternative.

The findings indicated that current product information for vegetables is insufficient for judging their environmental friendliness. The authors suggest that a simple communication tool, similar to labels used to communicate nutrition, would be beneficial to facilitate eco-friendly food consumption. A labelling scheme that indicates a product’s environmental merits may need to be implemented through legislation, as it is unlikely that producers and retailers would voluntarily label their products as environmentally harmful. As the eco-friendliness of vegetables is subject to seasonal changes, consumers would need to be informed about the reasons why the eco-friendliness of the same product varies throughout the year.

There are environmental benefits to consuming seasonal and domestic vegetables and avoiding air transportation, heated greenhouse production and refrigeration, which could be highlighted in information campaigns. In addition, educational information with criteria, such as the environmental harm from air transportation and greenhouse production methods, could also help consumers avoid such products. These measures should also be implemented for organic products, which consumers already tend to view as eco-friendly.


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