

Which do consumers value more the reduction of carbon dioxide emissions or the appearance of foods?: Evidence from a buying experiment in Japan

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Abstract

In 1997, the Kyoto Protocol set a greenhouse gas (GHG) emissions reduction target for developed countries for the period 2008–2012 as compared to levels in 1990. In Japan, environmentally friendly products were manufactured by several corporations and environment protection laws enacted by the government. Beginning the spring of 2009, an ecolabel, “the carbon footprint,” will be attached to certain food products. The value that consumers attach to carbon dioxide (CO₂) emissions is investigated with the help of a consumer choice experiment in Japan using the Satsuma mandarin orange—one of Japan’s leading foods in terms of production and consumption. Following results are obtained: (i) Many respondents choose Satsuma mandarin oranges based on their appearance; (ii) the willingness-to-pay (WTP) estimate per reduction of 100 g CO₂ is 0.47 JPY; (iii) the WTP estimate of selecting CO₂ as the reason for the choice is higher than that for appearance; and (iv) the consumer demographics corresponding to CO₂ emissions level-based purchase preference are age, occupation and ecological purchasing behavior. This study shows consumer’s value for environmentally friendly foods and some factors such that consumer has environmental consciousness to them.

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