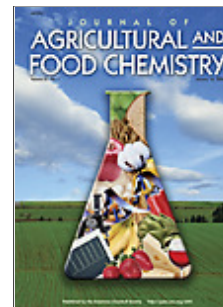

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JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY

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In the News Press Release

[Nitrogen Isotope Composition of Organically and Conventionally Grown Crops](#)

Bateman, A. S.; Kelly, S. D.; Woolfe, M.

J. Agric. Food Chem.; **(Article)**; **2007**; 55(7); 2664-2670. DOI: [10.1021/jf0627726](https://doi.org/10.1021/jf0627726)

Verifying The Authenticity of Organic Foods

The supermarket sign in the produce aisle says "organic" and the higher price lends credence. But is that organically grown fruit or vegetable authentic or a mislabeled version of some conventionally grown crop?

In a report scheduled for the April 4 issue of ACS' [Journal of Agricultural and Food Chemistry](#), a bi-weekly journal, scientists in the United Kingdom are reporting development of a test that could help answer that question. Simon D. Kelly and colleagues point out that authentication of organic food products currently is based on enforcement of production standards through certification and inspection—a paper trail from farm to fork.

The new test, in contrast, checks for the amount of a certain isotope, or form of nitrogen in the food. Researchers found differences in the nitrogen isotope composition of tomatoes, lettuces and carrots grown organically and conventionally—an indication of whether the crop was grown with synthetic nitrogen fertilizer. That fertilizer, widely used in conventional agriculture, is forbidden in organic farming, the report notes.

Researchers indicate that such a test could be important in providing evidence on authenticity, helping to protect both consumers and honest organic growers. However, they emphasize that the test is not unequivocal, but may be used to provide supplementary 'intelligence' in an enforcement situation. Consequently, the authors

also stress the importance of the existing organic certification and inspection programs.

Release Date: April 4, 2007

Research discussed in *UPI* (April 9, 2007); *Norfolk Eastern Daily Press (England)* (April 11, 2007).

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