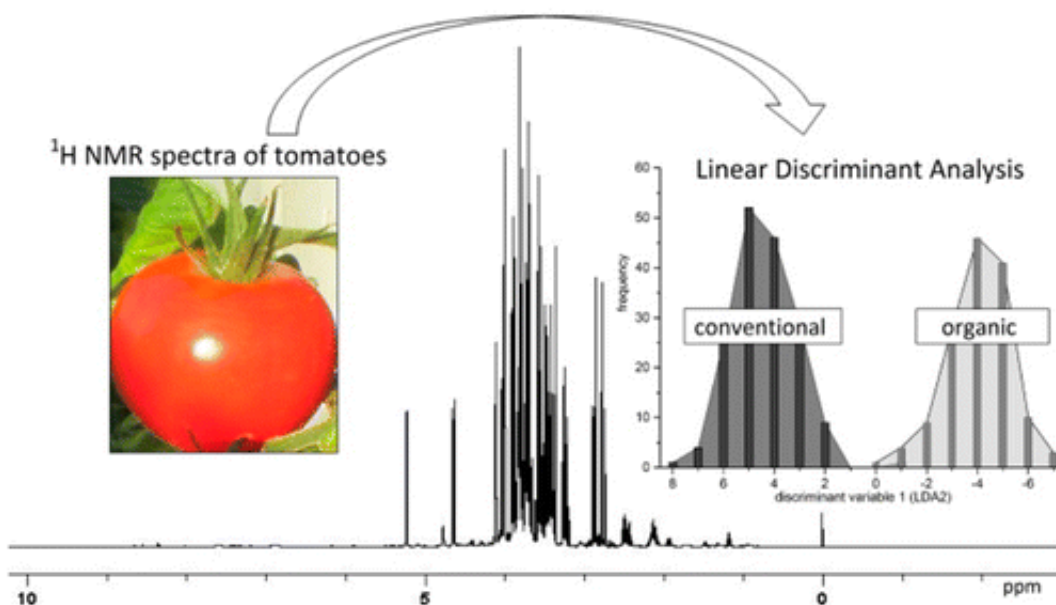


# How to prevent organic food fraud

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A growing number of consumers are willing to pay a premium for fruits, vegetables and other foods labelled "organic", but whether they're getting what the label claims is another matter. Now scientists studying conventional and organic tomatoes are devising a new way to make sure farms are labelling their produce appropriately. Their report, which appears in *ACS' Journal of Agricultural and Food Chemistry*, could help prevent organic food fraud.

Researchers from the Bavarian Health and Food Safety Authority and the Wuerzburg University note that the demand for organic food is

growing at a rapid clip. Its global market value nearly tripled between 2002 and 2011, when it reached \$62.8 billion. But because [organic food](#) can fetch prices often twice as high as conventionally produced [food](#), the risk for fraudulent labelling has grown just as fast. However, figuring out whether a fruit or vegetable was grown under organic conditions is fraught with complications. Currently, the most reliable authentication technique analyzes the stable isotope composition of nitrogen, but it is not fool-proof. Monika Hohmann and her colleagues decided to take a stab at developing a new method.

They looked to a technique called nuclear [magnetic resonance spectroscopy](#), which has been used to authenticate foods, including honey and olive oil. They analyzed tomatoes grown in greenhouses and outdoors, with conventional or organic fertilizers. Their data showed a trend toward differentiation of organic and conventional produce. The researchers conclude that the test is a good starting point for the authentication of organically produced tomatoes, and its further refinement could help root out fraudulently labelled foods.

**More information:** "1H NMR Profiling as an Approach To Differentiate Conventionally and Organically Grown Tomatoes" *J. Agric. Food Chem.*, 2014, 62 (33), pp 8530–8540. [DOI: 10.1021/jf502113r](#)

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