

Study sheds new light on organic fruit and vegetables

May 27 2011

(PhysOrg.com) -- Organic fruit and vegetables contain on average 12 per cent more health-promoting compounds than conventionally grown produce, scientists at Newcastle University have found.

The study, published in the academic journal *Critical Reviews in [Plant Sciences](#)*, reveals that organic crops contain significantly higher levels of secondary metabolites - compounds that are believed to protect us against a range of diseases including [obesity](#) - than conventionally-grown crops.

The team, based in the university's School of Agriculture, Food and Rural Development, reviewed all the published research on secondary metabolites and vitamin C in fruits and vegetables produced using organic or conventional methods.

Secondary metabolites are said to help guard against cancer, diabetes and heart disease and include alkaloids, carotenoids and salicylates as well as polyphenols such as tannins, flavanones and resveratrol.

Study lead Dr. Kirsten Brandt explains: "Organic and conventional production methods result in small but highly significant differences in composition of fruits and vegetables.

"We therefore used these foods for a preliminary study designed to generate discussion about methodology in the scientific community.

"We made the assumption that increasing the content of biologically active compounds by 12 per cent would be equivalent to increasing your daily intake of [fruit](#) and veg by the same amount.

"Using an existing model for calculating the benefits to health of increasing the consumption of vegetables and fruits, we calculated that switching from conventional to organic fruits and [vegetables](#), without changing the amount consumed, could result in estimated average increases in life expectancy of 17 days for women and 25 days for men."

Dr. Brandt adds: "There is increasing interest in how organic farming affects the composition of foods compared with conventional agriculture." Further work is being carried out by the team in this area.

Provided by Newcastle University

Citation: Study sheds new light on organic fruit and vegetables (2011, May 27) retrieved 24 April 2024 from <https://phys.org/news/2011-05-fruit-vegetables.html>

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