

Organic vs. conventional: Which farming method produces consistently higher yields?

One of the primary challenges of our time is to enhance global food production and security. Most assessments in agricultural systems focus on plant yield. Yet, these analyses neglect temporal yield stability, or the variability and reliability of production across years.

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Organic agriculture has, per unit yield, a significantly lower temporal stability (?15%) compared to conventional agriculture. Thus future efforts should focus on reducing its yield variability.

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The estimated yield gap between organic and conventional agriculture in this study (16%) was slightly smaller than the 19% estimated by [other studies]. This is because we only used 41% of the observations (and 34% of the studies). In our analysis we only included comparisons with a minimum of 4 years of observation per crop explaining this lower number. This approach was necessary in order to calculate the year-to-year temporal variation, which is necessary for a robust assessment of yield stability.

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The assessment of yield stability and the resilience of cropping systems to environmental variability should receive increased attention because reliable agricultural production is a key issue in light of the growing world population and enhanced demands for food.

Read full, original article: [A global meta-analysis of yield stability in organic and conservation agriculture](#)