

### **Sources for Organic regen graphics**

Page 3: As a defined system, organic delivers quantifiable outcomes

Modelling suggests that a wholesale shift to an organic food and farming system could see

- a reduction in greenhouse gas emissions of at least 40%
  - Poux, X., Aubert, P.-M. (2019) Agroecology and carbon neutrality in Europe by 2050: what are the issues? IDDRI, Issue brief N.05/19
  - Poux, X., Aubert, P.-M. (2018). An agroecological Europe in 2050: multifunctional agriculture for healthy eating. Findings from the Ten Years For Agroecology (TYFA) modelling exercise, Iddri-AScA, Study N°09/18, Paris, France, 74 p
- 25% more effective at storing carbon in soils
  - Ghabbour, E. A., et al (2017) 'National Comparison of the Total and Sequestered Organic Matter Contents of Conventional and Organic Farm Soils', Advances in Agronomy, 146, 1-35. [twice as spongy related to 44% higher humic acid]
- Organic farms are 50% more abundant in wildlife, with up to 34% more species
  - Bengtsson, J., Ahnström, J., & Weibull, A. C. (2005 'The effects of organic agriculture on biodiversity and abundance: A meta-analysis' Journal of Applied Ecology, 42(2), 261–269. <http://doi.org/10.1111/j.1365-2664.2005.01005.x>
  - Tuck, S. L., et al (2014) 'Land-use intensity and the effects of organic farming on biodiversity: a hierarchical metaanalysis', The Journal of Applied Ecology, 51(3), 746–755. <http://doi.org/10.1111/1365-2664.12219>
- Subject to dietary changes, can provide a nutritious and healthy diet for a growing population
  - Poux, X., Aubert, P.-M. (2019) Agroecology and carbon neutrality in Europe by 2050: what are the issues? IDDRI, Issue brief N.05/19
  - Poux, X., Aubert, P.-M. (2018). An agroecological Europe in 2050: multifunctional agriculture for healthy eating. Findings from the Ten Years For Agroecology (TYFA) modelling exercise, Iddri-AScA, Study N°09/18, Paris, France, 74 p
- Up to 100% more water storage
  - Lotter et al. (2003) The performance of organic and conventional cropping systems in an extreme climate year. American Journal of Alternative Agriculture, 18, 3
  - Muller et al. (2016) Organic farming, climate change and beyond. IFOAM EU and FiBL, p12: Water capture and retention capacity in organically managed soils is up to 100% higher than in conventional soils.
  - Vieweger A (2018) Practical soil assessment methods for different horticultural systems ORC Bulletin No.124 ORC124\_\_web.pdf (organicresearchcentre.com)
- Better flooding and drought resilience
  - Lotter et al. (2003) The performance of organic and conventional cropping systems in an extreme climate year. American Journal of Alternative Agriculture, 18, 3
  - Muller et al. (2016) Organic farming, climate change and beyond. IFOAM EU and FiBL, p12: Water capture and retention capacity in organically managed soils is up to 100% higher than in conventional soils.