Low Greenhouse Gas Agriculture: Farming to mitigate climate change

- Organic farming systems may sequester 200 - 1200 kg carbon per ha and year (0.7 - 4.4 t CO_2-eq.) (Pimentel et al. 2005; Fließbach et al. 2007)
- Organic farming provides ecosystem services and co-benefits to the environment and plant, animal and human health (Mäder et al. 2002; Pfiffner, 1996, Bengtsson et al 2005)
- Organic farming uses 30 – 40 % less fossil energy per area and 10 – 20 % less energy per yield dry matter (Mäder et al. 2002; Nemecek et al. 2005, Pimentel et al. 2005)

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Low Greenhouse Gas Agriculture: Farming to adapt to climate change

- Organic farming concepts and practice build on bio-diversity of crops, livestock and natural elements. Yield of organic farming systems can be lower by 10 – 20 % than under some high input conditions (Mäder et al. 2002)
- Organic corn and soybean production systems at Rodale Institute and Iowa State University can be equal to conventional management and exceed it in drought years (Pimentel et al., 2005, Lotter et al., 2002)
- Soil quality effects of organic systems not only render them more productive under extreme weather conditions but also increase water charging of aquifers, reduce soil erosion, improve surface water quality, and build up soil fertility (Pimentel et al. 2005)

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