**What Lessons Can an Agroecological, Self-Sufficient Farm in Northern Israel Teach Us About Food Security?**

Alon Shepon

Tel Aviv University and the Israeli Forum for Sustainable Nutrition

**Abstract**

Providing food security for a growing population equitably with reduced environmental impacts and resilient to climate change shocks is an ongoing challenge. Here, we detail a low-input subsistence Mediterranean agroforestry farm (0.1 ha) in a high-income country that is based on traditional annual crop rotation and perennial shrubs and trees. The farm provides nutritional self-sufficiency across an array of macro- and micro-nutrients with limited labor, no synthetic fertilizers or herbicides and with zero waste, in effect closing a full farm-table-farm cycle. The agricultural produce was more nutrient-dense than average agricultural output in the region, and needed less land to produce the same equivalent produce using conventional methods due to spatial and temporal overlapping. Life cycle assessment highlighted major improvements in environmental performance of the agroecological farm compared to conventional production across a range of environmental metrics. Situated within a semi-arid region that is a climate change ‘hotspot’, this food system serves as a case study to further examine nutrition-sensitive food production systems that provide healthy diets with lower environmental impacts and greater agrobiodiversity and resilience than conventional industrial farming practices.