



Geographical scope: Austria, farms within the 'Von Herzen Biobauern' organic fruit producer platform



Organisation name: BOKU (University of Natural Resources and Life Sciences, Vienna), FiBL



Number of participating farmers: 8 (4 formalized network farms, 4 additional farms in cooperation or starting the system)



Total budget: MIXED project
Funding: Horizon 2020

A bit more about the Case Study

The "Apple Hens" case study, implemented in Austria, focuses on integrating poultry production into organic apple orchards. Coordinated by BOKU and FiBL, this innovative mixed farming system seeks to enhance sustainability by utilizing mobile hen houses within fruit orchards.

The project involves eight farms, aiming to strengthen the synergy between livestock and fruit production. This initiative also addresses regulatory challenges, marketing, and farm-level resilience, promoting knowledge-sharing among farmers.



Apple-Hens in the in the early winter apple orchard



Apple-Hens and -farmers and MIXED project team at Field-WS 2

Highlights



Integrating poultry in orchards restores natural cycles, improving soil health, reducing pests, and lowering dependency on synthetic inputs



Mobile poultry units distribute manure more evenly, enhancing nutrient absorption and reducing localized soil degradation



Farmers aim to balance organic apple and egg production while exploring marketing strategies to strengthen their supply chain presence

Website and project information

<https://projects.au.dk/mixed/network-s-national-teams/austria/>

<https://projects.au.dk/mixed/>



Key outcomes and insights

Innovative features

The Apple Hens project integrates mobile poultry housing within organic apple orchards, combining egg and fruit production to enhance farm sustainability. Hens naturally forage for pests, reducing infestations, improving soil fertility, and lowering reliance on external inputs. This approach revives traditional mixed farming, increasing productivity, promoting biodiversity, and strengthening the resilience of organic orchards



Environmental and socio-economic benefits

Integrating mobile hen houses in orchards improves soil fertility, enhances biodiversity, and promotes natural nutrient cycling by ensuring even manure distribution. This reduces reliance on chemical inputs, making farming more sustainable. Additionally, the project diversifies farmer incomes, creates new market opportunities, and strengthens collaboration between farmers and researchers



The main characteristic of the Apple hens is that they are animals that can cope well with extensive husbandry. The basic idea is therefore to give priority to post-use animals (hens after the first laying period) whose requirements are better suited to extensive management, but which still have a good laying performance

Good practices & Lessons learned

Problem 1. High nutrient concentration near barns due to insufficiently structured outdoor runs for poultry

Uneven poultry distribution leads to excessive manure buildup near barns, causing soil degradation and potential nitrate leaching into groundwater



Solution 1. Mobile housing for hens was introduced, enabling even manure distribution across the orchard. This improves soil fertility and reduces environmental impacts while maintaining orchard health

Problem 2. Regulatory challenges regarding poultry grazing in orchards before harvest

Current regulations are unclear about how long before harvest hens must be removed from orchards, creating legal uncertainty for farmers



Solution 2. Farmers collaborated with food safety authorities to discuss current practices. This included adherence to a grazing exclusion period before harvest to ensure compliance and maintaining sustainability

Problem 3. High input costs, such as mobile hen houses and feed

The high cost of mobile barns and organic feed makes adoption difficult for small farmers



Solution 3. Efforts focus on cooperative purchasing, developing lower-cost modular housing, and identifying alternative protein sources for poultry feed

Problem 4. Lack of knowledge about animal-orchard interactions

Farmers lack knowledge about optimal poultry stocking densities, orchard grazing cycles, and potential impacts on soil microbiome



Solution 4. Workshops and field trials provide practical guidance on integrating poultry effectively, ensuring both animal welfare and orchard productivity



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