



Black Locust: Adored and Despised Tree Species

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Living lab of regenerative agroforestry with black locust and lavender

Black locust (*Robinia pseudoacacia* L.), was introduced to Europe in the seventeenth century from North America. Firstly was planted as an ornamental tree species in parks and arboreturns. It is a typical early successional plant, a pioneer species. It specializes in colonizing disturbed areas and edges of woodlots before it is eventually replaced with taller or more shade-tolerant species. The flowers are important sources of food for honeybees. The high-density wood is one of the most rot resistant wood making it an ideal material for fenceposts, outdoor furniture and other projects that require weatherproof materials. Moreover it is an excellent firewood in both heat value and coaling ability. In agroforestry, black locust is suitable to create windbreaks, riparian buffers or silvopasture grazing systems. An original living lab of regenerative agro-forestry was established in the Mlyňany Arboretum, Institute of Forest Ecology, Slovak Academy of Sciences four years ago. Nitrogen-fixing black locust (*Robinia pseudoacacia* L.) and aromatic lavender (*Lavandula officinalis* Mill.) represent economically attractive skeleton of this low-input system. Furthermore, wheat was sown between woody plants in the autumn 2024 as a first crop in an optimal rotation. The main aim of this experiment is to test hypothesis on better production conditions for crops and final economical result compared to conventional farming. Simultaneously, next plan is to evaluate climate change-resistance of this model as well as its contribution to the climate change mitigation (carbon sequestration).

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