



Stakeholder perceptions of the most frequently used agroecological method of weed control in Pannonian Region (Hungary)

PROBLEM

What are the most effective agroecological strategies for weed management in horticultural crops in the Pannonian Region?

STAKEHOLDER PERCEPTIONS

Crop rotation followed by ploughing, stalk crushing, and ground cover crops are the most frequently used strategies. Most people are familiar with mechanical methods (like interrow cultivation) and crop rotation. Chemical weed control is widespread, efficient, and well-supported by industry lobbying, while agroecological methods are appreciated for their ease of integration into conventional farming. Participants emphasized the potential of mulching and cover crops to improve weed management efficiency. To minimize soil contamination and preserve fertility, stakeholders recommended limiting chemical treatments to crop rows and using medium-depth soil loosening instead of ploughing. Applying herbicides only once after seeding, using quality seeds and relying on delayed cultivation were suggested to reduce chemical use. Practices such as no-till and min-till, have gained traction during last decade as can increase humus content and reduce soil disturbance. Respondents suggested using mulch, cover plants and allelopathic crops to suppress weeds. Additionally, creating more diverse systems mixed with trees, such as agroforestry, was proposed to improve soil biology, employment opportunities, and farmer income.



*Figure 1: Mixed poplar and medicinal herb agroforestry plantation in Bajti
(Source: Katalin Tuba)*



RECOMMENDATION

Experiments should focus on mixed cropping systems, including agroforestry and medicinal herbs, combined with various soil covers to evaluate their weed-suppressing abilities. Reducing herbicide use through targeted application and mechanical methods, along with regenerative practices like no-till, should also be prioritized.

KEYWORDS

agroforestry, horticulture, medicinal, herb, weed, agroecological

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