



Stakeholder perceptions of the most frequently used agroecological method of weed control in Continental Region (Ukraine)

PROBLEM

What are the most popular and frequently used agroecological methods of weed control among farmers in the Continental Region of Ukraine?

STAKEHOLDER PERCEPTIONS

Among surveyed farmers, high-quality seed material is considered the most important agroecological method, with 96% of farmers using it. Crop rotation (92%), tillage (94%), competitive cultivars and high planting density are also widely practiced by farmers and workers. However, methods like inter-row cultivation and hand weeding have seen a decline, with 47% and 37% of farmers, respectively, no longer using them. Practices like soil cover and flame weeding (53%), as well as mowing and grazing (51%), are known but underutilized. Some farmers are unfamiliar with these methods, with 43% unaware of mowing and grazing and 35% unfamiliar with cover crops or mulches. Respondents emphasize the importance of certified seed material to avoid weed spread from self-produced seeds. Mechanical methods like plowing, disking, and harrowing are seen as effective, while biological methods using natural enemies of weeds show promise. Stakeholders agree that herbicides should be used minimally and precisely.



Figure 1: Maize fields in continental Ukraine during the stem elongation phase in the investigation of agro-ecological solutions for weed management.



Figure 2: Maize fields in continental Ukraine during the early milk phase in the investigation of agro-ecological solutions for weed management.



RECOMMENDATION

A well-structured crop rotation system, including cereals and legumes and combined with mechanical tillage, is essential for effective weed management and soil health improvement. Research and training on the benefits of crop rotation, along with using certified seeds, should be prioritized to promote sustainable farming practices. Encourage community involvement in managing roadside weeds and explore biological methods to reduce reliance on herbicides.



Figure 3: Sunflower fields in continental Ukraine during the development of inflorescence phase in the investigation of agro-ecological solutions for weed management.



Figure 4: Sunflower fields in continental Ukraine during the flowering phase in the investigation of agro-ecological solutions for weed management.

KEYWORDS

tillage system, sunflower, maize, winter wheat, sowing density, inter-row cultivation, crop rotation, high-quality seed material

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