

Integruota augalų apsauga žieminių rapsų ir žieminių kviečių pasėliuose

1. Keywords: Plant protection, Winter wheat, Harmful organisms, Plant diseases, Winter rapeseed, Plant pests

2. Area: Crop production

3. Subarea: Integrated plant protection

4. Theme: Integrated plant protection in winter wheat and winter rapeseed crops

5. Year: -

6. Summary: Due to diversity and abundance of harmful organisms and the lack of information on the spread of diseases and pests in real time, the use of plant protection products by crop growers is inexpedient and spraying operations are carried out at the wrong time. Jug-handled and irresponsible use of plant protection products is associated with an increase in risk: there is a high probability of agro-ecosystem changes - biodiversity reduction and increasing pollution of plant production, in addition, the inefficient use of plant protection products at the national level increases crop losses, degrades the quality of agricultural production, increases the cost of production and reduces the competitiveness of farms.

7. More detailed version of the summary: LRCAF together with its partners conducted research and tested sustainable winter rapeseed and winter wheat growing technologies on 6 farms in different districts to use fewer pesticides and reduce the cost of production. Due to the lower use of pesticides less pesticide residues are found in the grown products and less pollution is caused to the environment. Trials were carried out on demonstration farms and in the fields using two types of technologies: usual and innovative integrated ones. In traditional technologies, with intensive cultivation measures, sprayings (with growth regulators, fungicides and insecticides) are carried out according to the stages of plant development, regardless of whether certain diseases and pests are already present in the crop. In addition, pesticide sprayings often add additional products that are not needed at the time. For example, when spraying with herbicides (pesticides for weed control), an insecticide (pesticide for pest control) is added even though the crop is free of pests or does not exceed the harmfulness limit. Having monitored the crop and found that the amount of pests in it already exceeds the harmfulness limits, such a mixture of products is economically viable as it reduces the number of runs. However, with a low spread of pests, such a solution is uneconomical and harmful to the environment. The basis of the integrated technology consists of the preparation of a suitable crop rotation plan and continuous monitoring of the crop, which was successfully performed by the advisers of the LAAS during the project implementation. Only when noticing that pests are spreading in the crop, after assessing their possible damage, a decision is made on the need to use pesticides, and a product suitable for spraying at a specific time is selected. By summarized scientific knowledge and production experience, recommendations have been developed (attached) that will enable farmers to better identify plant diseases, pests, weeds and optimally select the most appropriate plant protection products, methods, and tools, pesticide application time and the necessity without reducing crop yields. The information is useful for small, medium, and large commercial farms, cooperatives, farmers developing primary agricultural production, and those interested in

8. Effect: Agro-environmental protection, Economical, Sustainable Farming, Human health

9. Argumentation: It is calculated that while applying traditional technologies farmers have spent an average of € 111.8 on rapeseed plant protection. Integrated technology has reduced pesticide costs by an average of € 17.36. Using traditional technologies, an average of € 82.82 has been spent on winter wheat protection. The use of integrated technology on farms has led to an average reduction of € 20.17 in pesticide costs.

10. Project description: -

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12. URL: -

13. Images:

http://titris.lzukt.lt/uploads/multiforms/images/405x265_crop/1048_d090cf3240afb6ce75242e8cfad295de.png

14. YouTube: -

15. Documents: [1_GROWTH REGULATORS for winter wheat and rapeseed.pdf](#)
[2_CONTROL OF FUNGAL DISEASES in winter wheat and rapeseed.pdf](#)
[3_PEST CONTROL in winter wheat and rapeseed.pdf](#)
[4_WEED CONTROL in winter wheat and rapeseed.pdf](#)