

Integrated production of cereal crops and sunflower

Author(s): Растителна защита
Date: 26.12.2024 *Issue:* 12/2024



The Ministry of Agriculture has published a **Guidance for Integrated Production of Cereal Crops and Sunflower**. The main cereal crops included are wheat, barley, rye, oats, maize, as well as sunflower.

The document is the result of joint work by a team of scientists and experts from the Agricultural Academy (AA) from the institutes: N. Poushkarov Institute of Soil Science, Agrotechnologies and Plant Protection (ISSAPP) - Sofia, Institute of Agriculture (IA)–Karnobat, Dobrudzha Agricultural Institute (DAI)–General Toshevo, Institute of Field Crops (IFC)–Chirpan, Maize Research Institute (MRI) –Knezha, as well as experts from the Ministry of Agriculture and Food.

The main objective of the guidance is to provide directions for the management of integrated production of the groups of crops covered by the intervention “Support for the cultivation of varieties resistant to climatic conditions through integrated production practices” under the Strategic Plan for the Development of Agriculture. Through the information and guidelines provided, producers will be able to reduce the negative impact on the environment, optimise their production costs and increase the resilience of crops to climate change and pests.

For the convenience of users, the guidance includes links to documents and lists of basic substances, low-risk active substances, active substances that are candidates for substitution, authorised plant protection products, pheromones, biological control agents, and those authorised for use in Bulgaria.

Integrated production is a system for the production of plants and plant products through the application of the specific principles of integrated pest management. In integrated production of plants and plant products, priority is given to biological control agents, basic substances, plant protection products based on micro-organisms, low-risk plant protection products and pheromones.

Integrated Pest Management (IPM) is a careful consideration of all available plant protection methods and the subsequent integration of appropriate measures that discourage the development of populations of harmful organisms, maintain the use of plant protection products and other forms of intervention at economically and ecologically justified levels, and reduce or minimise risks to human health and the environment. Integrated pest management is aimed at the production of healthy crops with the least possible disruption of agro-ecosystems and the promotion of natural mechanisms for pest control.

The guidance sets out eight key principles for pest management. Below are some of the key aspects:

1. Prevention and suppression of harmful organisms through crop rotation, agrotechnical measures, sanitary measures, the use of resistant/tolerant plant varieties and standard/certified seeds and planting material, balanced fertilisation, liming, irrigation and drainage practices, and the conservation and maintenance of beneficial organisms.
2. Monitoring of harmful organisms with the help of scientifically based systems for forecasting and early diagnosis.
3. Decision-making based on monitoring, using established economic threshold levels of harmfulness.
4. Preference for sustainable biological and physical methods instead of chemical ones, where possible.

5. Use of selective plant protection products that have minimal impact on the environment.
6. Limiting the use of plant protection products (PPPs) to the necessary minimum.
7. Strategies to prevent resistance in harmful organisms, including rotation of products with different modes of action.
8. Evaluation of the effectiveness of the measures applied, based on data from monitoring and use of PPPs.

The guidance has been published on the website of the Ministry of Agriculture and Food, and the useful information extends over 200 pages.