

RESEARCH ON INVASIVE INSECT COMPLEXES IN SOYBEAN CROP IN THE ENVIRONMENTAL CONDITIONS OF THE REPUBLIC OF MOLDOVA

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Under the conditions of the Republic of Moldova, geographically located in an area with unstable conditions in terms of temperatures and precipitation, often affected by droughts, it is more effective to cultivate some species of food cultures of the family Fabaceae in accordance with their bioecological requirements and response to such factors as heat, lack of precipitation and attacks of invasive pest and. Based on the actuality of the topic and the goal set by us, we have established the following objective for the research: making records of biological and phytosanitary control establishing the degree of phytosanitary impact, highlighting the response reactions and the most invasive species of pests in the studied crop species. Soybean cultivation holds significant agri-food, fodder, and industrial value for the Republic of Moldova. Its economic potential can be fully realized by promoting key activities aimed at improving crop quality and maximizing the yields of grains and pods. However, soybean crops are annually threatened by invasive insect species, highlighting the need for thorough research into the impact of certain highly damaging pests. Phytosanitary monitoring, conducted across different phenological stages of the crop, revealed the presence of 15 particularly harmful invasive insect species from 4 orders and 8 families. The most notable ones, based on assessments of population density, frequency, and intensity of crop damage, were coleopteran insects detected in the soil since the germination phase. These include the wireworm larvae of click beetles: *Agriotes lineatus* L. and *Agriotes ustulatus* L., such species as *Agrotis segetum* Schiff. and *Autographa gamma* L. As the crop matures, weevil species like *Sitona lineatus* L. and *Tanimecus dilaticollis* L. become prevalent. In later growth stages, adult plants are attacked by several aphid species - *Myzus persicae* Sulzer, *Aphis fabae* and *Aphis gossypii*, as well as by flies (*Liriomyza huidobrensis* L., *Liriomyza trifolii* L., *Delia platura* L.), pea thrips (*Kakothrips robustus* Uzel), and the soybean moth (*Helicoverpa armigera*, *Cydia nigricana* Fabr, *Etiella zinckenella*). The results of this research, carried out in the north, central and south-eastern regions of Moldova, contribute to understanding the parasitic impact on soybean crops and support the development of forecasts and integrated pest management strategies. This complex study of the phytosanitary monitoring contributed to elucidating the degree of entomological damage and brought new evidence in favor of applying sustainable pest control measures suitable for all fabaceae agroecosystems.

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