

Challenges for Plant Protection in 2014

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The climatic depression in 2014 became a limiting factor for the phytosanitary storm that erupted in domestic agriculture. The infectious background, harmful insect populations, and the aggressiveness of weed associations reached particularly high levels. This unusual, dynamic, rapidly changing, and provocative epidemiological situation tested the professional qualities and competencies of the plant protection branch.

In this issue of the "Plant Protection" magazine, our authoritative scientific experts, in a broader context, assess and analyze what happened and the likely consequences of the wide-scale expansion of force majeure phytosanitary circumstances.

What, in general, did reality show following the overwhelming pressure from diseases, pests, and weeds? First and foremost, it must be emphasized that plant protection is a key factor for risk management, for increasing the degree of production stability in an uncertain abiotic environment.

Its model's ability to work successfully in an unusual, highly stressful situation depends on its intensity, creative charge, technological potential, and managerial and executive capacity. And this means that sufficiently reliable and quality mechanisms must be in place for maximally accurate forecasting and diagnosis, correct assessment of symptoms, and formulation of precise and optimally effective solutions for active measures and minimizing the risk and dangerous actions of pests. Plant health is a structure-determining element for forming the future yield. Every breach in this strategic point largely negates both breeding achievements and the optimal nutritional regime. The results from what happened with plant protection during the "fateful" 2014, an undoubtedly very special year that offered not one or two challenges, are, however, disappointing in many respects. And they prove that here, the concept of constantly protected spaces is an impossible mission, a mostly hollow phraseological construct without profile, vision, and content. The degree of surprise was exceptionally large-scale and shocking. And such a surprise, such a shock, can only be caused by the presence of deficits and deformations in the professional resource and its agronomic qualities. We are witnessing that plant protection has turned into a generator of speculations regarding the uncooperative, capricious, and willful Nature – the default scarecrow that constantly serves up turbulence and sets stress traps.

In the end, the inevitable happened. The battle against the harmful potential, activated by the unusual, in some cases, climatic anomalies, was lost! Examples to confirm this statement, as many as you want. Each one more compromising, paradoxical, and absurd than the last. Yellow rust became a "plague" for wheat crops. And the main reason it raged on such a wide front is the lack of knowledge of the pathogen's symptoms. Chief Assistant Dr. Zvezdomir Zhelev from the Agricultural University in Plovdiv is of the opinion that sufficient knowledge for modern and effective control of downy mildew on vines is still lacking, the action of different fungicides (note!) is still not well enough known by many viticulturists. Aphids this year, too, did not betray their great life potential, resistant forms to the applied insecticides quickly emerged in their populations, but nevertheless, the use of products from different chemical groups within one season continues not to be a mass practice, notes Prof. Stoyka Masheva from the "Maritsa" Vegetable Crops Research Institute in Plovdiv. The forecast models for the development of major diseases in cereal crops, successfully applied in the European agricultural space, are still very little known here. The fight against secondary weed infestation in root field and vegetable crops continues to be waged chaotically, in an old-fashioned and inefficient manner, states Prof. Shtelyana Kalinova from the Agricultural University in Plovdiv...

In short: the value characteristics of operational Bulgarian plant protection do not meet European standards and assessment criteria. Many good educational, informational, and production practices do not have a Bulgarian address. This year's stress test by nature proved convincingly that domestic plant protection lacks professional insurance and agronomic capacity, its mechanisms for minimizing phytosanitary risks are outdated and rusty. It does not function fully. Unclear why, seemingly somewhat without reason, expert presence in the national plant protection system is below a critical level. Large landowners and major tenants state and demonstrate with unwavering certainty and seriousness that they have no need for specialized agronomic presence.

These facts mean, among other things, that plant protection in its current form creates a sense of insecurity, cannot guarantee a longer production horizon in an uncertain climatic environment and the presence of natural anomalies, cannot participate in forming a sustainable model for achieving high yields, for profitable and competitive agriculture.

The new realities and pace impose a new way of thinking and a change in the behavioral model of plant protection in our country. This process requires creativity, involvement, and activity at all levels along the entire chain. 2014 gave a clear signal that this must happen, and very soon!