plants

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Between eco-philosophy and conventional agriculture the role of fungicides from the perspective of climate change

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Abstract:

This research investigates a set of factors that can lead to the natural imbalance of plants and provides an overview of the agricultural economy in terms of innovative agricultural development, especially in the field of plant protection, taking into account the effects of climate change. Environmental protection and sustainable management of natural resources, vulnerabilities regarding fertilizer application techniques are current individualized concerns in the work on development areas. The excessive and intrusive development generated by mega-tourism, causes degradations of the environment and society and the reorientation of the methods applied to plant protection in order to protect the biosphere is back today. Climate change involves the reduction of greenhouse gas emissions and the adaptation of agricultural systems and in our opinion they are closely related to the use of various types of plant protection, especially fungicides.. During the research we tried to highlight issues that, in our opinion, are important for the development of the agricultural sector as part of the economy return to local methods in traditional farms premises that will reduce fertilizer consumption and thus contribute to pest control.

Keywords:

- plant
- pesticide
- sustenable
- input

The theories of eco-philosophy

The plant-soil interdependence in agricultural practice is also highlighted in the paper. Thus, we found that the products (chemicals) that are used to control diseases in agricultural crops grow in agricultural areas highlighted especially fungicides. The amount of fungicides sold in solid form in 2018 increased compared to the previous year by 5.7%. One of the main objectives in the field of agriculture is to maintain a low level of greenhouse gas emissions from the agricultural sector. The emergence of modern agriculture in the 60's with harmful pesticides and chemical fertilizers, caused danger to the field ecosystem.

This research uses the theories of eco-philosophy, the role of research and studies has shown an important factor in reducing the carbon footprint per ton of food produced from organic farming compared to conventional agriculture, mainly due to the abandonment of the use of chemical fertilizers and pesticides.

The novelty of this research is the amalgamation of local village wisdom and traditions and inherited value as progressive tools for the application of a plant protection system in response to climate change and the pressure of diseases and pests

Introduction

Most agricultural soils contain too little natural nitrogen available to meet growing requirements during the growing season. As a result, it is necessary to supplement the nitrogen naturally contained in the soil every year. Applying the right amount of nitrogen at the right time is the basic requirement for good fertilizer management. Agricultural use of nitrates in organic and chemical fertilizers is a major source of water pollution in Europe. Consumption of mineral fertilizers first fell sharply in the early 1990 and stabilized over the last four years in the EU-15, but in all 27 Member States nitrate consumption increased by 6%. In general, animal husbandry remains the main cause of over 50% of total nitrogen discharges into surface waters activities related to livestock and fertilizer management release nitrogen oxide (N2 O) and methane (CH4), greenhouse gases with a global warming potential of 310 and 21 times higher than CO2, respectively. If fully implemented, the Nitrates Directive could reduce, by 2020, for example, N2 O emissions by 6% compared to 2000 levels and help combat climate change. The Common Agricultural Policy (CAP) supports the Nitrates Directive through direct assistance and rural development measures. For example, a number of Member States have included among agri-environmental initiatives for which farmers can receive payments for nutrient management measures, such as the creation of larger buffer zones around watercourses.

Bentham defined as the "fundamental axiom" of his philosophy the principle that "it is the greatest happiness of the greatest number that is the measure of right and wrong."

He has also become known as an early advocate of animal rights. Though strongly in favour of the extension of individual legal rights, he opposed the idea of natural law and natural rights (both of which are considered "divine" or "God-given" in origin), calling them "nonsense upon stilts."[4][15] Bentham was also a sharp critic of legal fictions.

Being contemporary with Bentham, the German philosopher Immanuel Kant brings several rules, and these become a "powerful ethical tool" (Johnson, 2012, p.25).

Bentham is widely regarded as one of the first advocates of animal rights. He argued and believed that the ability to suffer, not the ability to reason, should be the landmark or what he called the "insurmountable line." This shows us that there was a similar approach in various fields, even in agriculture, plants, vegetables, the fruit of the earth being the resource of daily food and if the plants are "not happy" they are stressed by needs such as water, pests, etc. it does not mean that there is no stress of the plants, the diseases of the plants being diverse, but the cry of the plants is not heard even though they wither. Here the philosopher also looks like But suppose the case were otherwise, what use would it be? The question is not, can it resonate? no, can I talk? but, can I suffer? What else should the insurmountable line follow? Is it the faculty of reason or perhaps the faculty of discourse? thus the philosopher manages to transpose the suffering of animals.

Reducing the risk of contamination of soil, air, as well as surface and groudwater

Multifunctional protection zones must be recognized as an integral part of agricultural areas or parcels, as they maintain the ecological balance and contributes to the conservation of biodiversity: increasing the number of species, a pollinating insects, predatory insects, and other organisms non-target, providing corridors for wildlife, reducing the runoff and risks of pollution with plant protection products of water sources adjacent to agricultural fields, while avoiding the phenomenon of soil erosion.

Multifunctional protection zones are a major component of the rural landscape, being important for the protection of natural resources, such as water and soil, the conservation of biodiversity and for obtaining a sustainable and competitive agricultural production.

The different types of multifunctional protection areas between agricultural plots can be grass strips, wild flower strips as a source of pollen and nectar for pollinating insects or bird seeds.

There are also those protection areas with the role of natural barrier, such as forest curtains - hedges, ditches. The interaction between this natural barrier and the adjacent protection zone may be a source of biodiversity.

Overview of main findings

The climatic changes faced by large commercial agricultural holdings being different from those of subsistence, of very small dimensions. Climate change is expected to affect farmers in the south and south-east region of Romania in general and individually.

Given that large farms usually have very specialized production, such as cereals and oilseeds, they are particularly vulnerable to the impact of frequent and long-term droughts, which affect their production and profit. But they are well-informed professionals, have the necessary technical and financial resources and have more options to adapt their agricultural systems to climate change through new technologies and irrigation systems.

A farm through the use of good soil pH management practices can bring alternative benefits such as improving the environment and stormwater management.

Protection zones established according to the provisions of the national legislation in force is a good solution to reduce the risk of water contamination surface with plant protection products, but also for conservation biodiversity.

Multifunctional protection areas can:

a) significantly increases biodiversity;

b) increase production yields as a result of better pollination;

c) become habitats for small mammals and birds;

d) represent measures to ensure soil and water protection.

Figures, Tables and Schemes

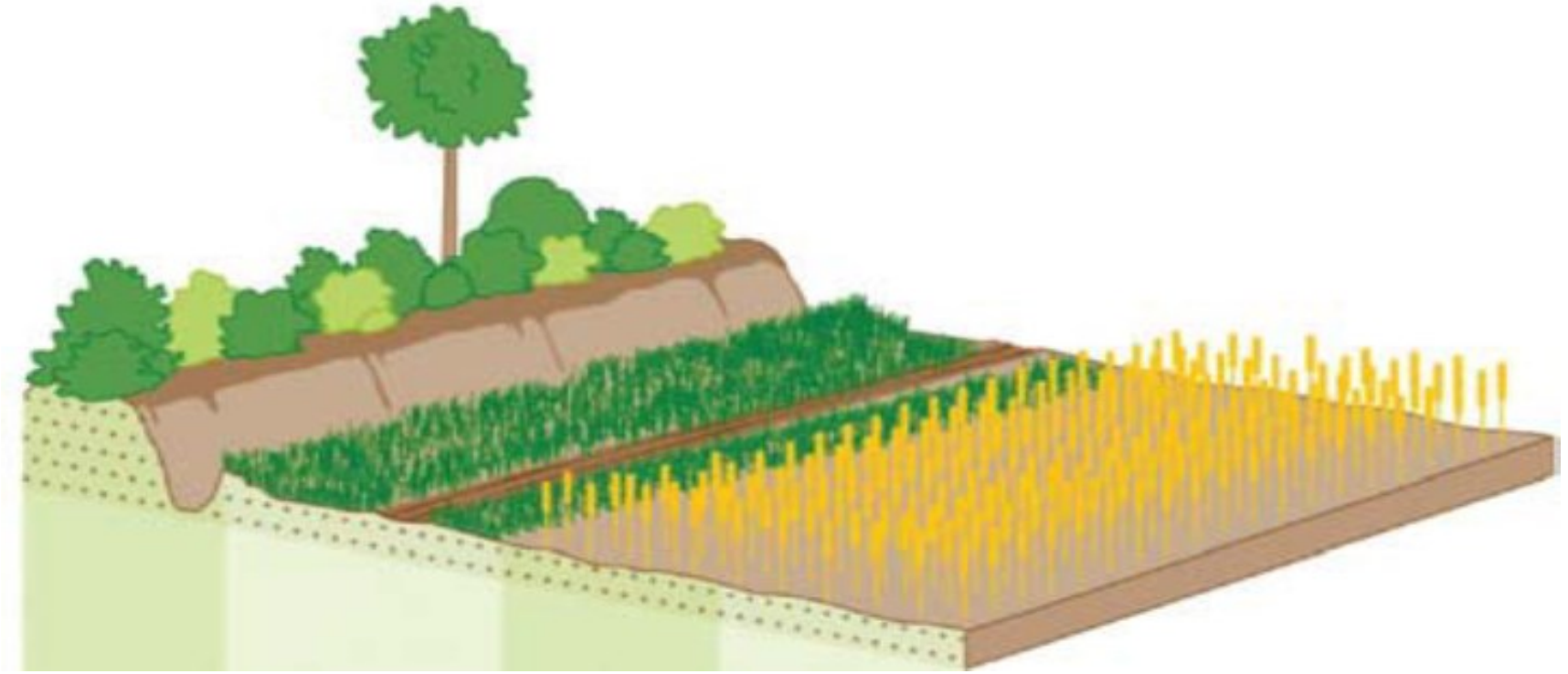

Figure 1. Multifunctional protection zones
Soutce MADR

Conclusions

The International Treaty on Plant Genetic Resources for Food and Agriculture (2004) and the Global Strategy for Plant Conservation (2011–2020) adopted by the Convention on Biological Diversity in 2002 emphasize the need for efficient conservation of plant genetic resources for food and agriculture as a means of counteracting the current rate of biodiversity loss at global, regional, national and local levels. It is vital to have improved agricultural systems that efficiently utilize nutrient resources, increasing not only the amount of carbon in the soil, but also the biodiversity and resistance of agriculture even to climate change. As a rule, carbon stocks in agricultural soils can be increased by adapting certain agricultural activities. Research also shows that carbon absorbers are just as important as reducing emissions. Maintaining and further improving the natural absorbents represented by soils, agricultural land and coastal wetlands are essential. The consumption of pesticides according to recent data provided by Eurostat is worrying and therefore our guidance must also include alternative methods to reduce the consumption of pesticides by switching to organic fertilizers, and here we are talking about grasslands that should not be neglected.

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