involves the adoption of modern irrigation technologies, the use of drought-tolerant crop varieties, changes in crop rotation, and the improvement of agricultural practices. In addition, the development of climate change monitoring and weather forecasting systems plays a crucial role, helping to mitigate risks and enhance production efficiency.

In addition, an important aspect of the impact of climate change is the economic instability of the agricultural sector. Fluctuations in temperature and precipitation directly affect crop yields, which, in turn, determine the revenues of agricultural enterprises and their investment attractiveness. Research shows that climate instability, water scarcity, and soil degradation can reduce agricultural productivity and create additional risks for businesses. As a result, this complicates long-term planning and hinders the development of the agricultural sector.

It is also important to note that climate change affects the structure of agricultural production. In particular, there is a gradual shift in agroclimatic zones, leading to changes in the geography of major crop cultivation. In the southern regions of Ukraine, the risk of crop loss due to drought is increasing, while in the northern regions, opportunities are emerging for growing more heat-loving crops. Such transformations require a reevaluation of traditional approaches to agriculture and the adoption of new technologies and crops.

Equally important is the impact of climate change on food security. Declining crop yields, production instability, and increased risks could lead to a reduction in agricultural output. According to researchers' forecasts, further deterioration of climatic conditions could negatively affect food supply and increase dependence on imports. In this regard, the issue of adapting the agricultural sector to climate change is of strategic importance for the country's economic and food security.

Overall, climate change has a complex impact on the agricultural sector, bringing both negative and positive consequences. It is altering traditional farming conditions, requiring agricultural producers to adopt new approaches and strategies. Effective adaptation to climate change is a key factor in ensuring food security and the sustainable development of the agricultural sector in the future.

References:

1. Maidanovich, N. On the Impact of Climate Change on Ukraine's Agricultural Sector: A Review. URL: https://www.ndipvt.com.ua/zbirnyk_2020_v2_15.html (accessed March 27, 2026).
2. Taranova N., Kilchitsky I., Onufrak N. The impact of climate change on the agricultural sector of Western Ukraine. URL: https://nzg.tnpu.edu.ua/article/view/331269 (accessed: 03/27/2026).
3. The Impact of Climate Change on the Agricultural Sector of Ukraine. URL: https://blog.glendeal.com/ua/blog/vplyv-klimatychnyh-zmin-na-agrarnyj-sektor-ukrayiny/ (accessed: 03/27/2026).
4. Prospects for the development of Ukraine's agricultural sector in the context of climate change. URL: https://niss.gov.ua/publikatsiyi/analitychni-dopovidi/perspektyvy-rozvytku-ahrarnoho-sektora-ukrayiny-v-umovakh (accessed: 03/27/2026).

УДК 811.111

Лазаренко А.В.
Саламатіна О.О.

PLANT-INDUCED TOXICITY IN FARM AND DOMESTIC ANIMALS: (РОСЛИННО-ІНДУКОВАНА ТОКСИЧНІСТЬ У СВІЙСЬКИХ ТА ДОМАШНІХ ТВАРИН)

У публікації розглянуто проблему отруєнь рослинами у свійських та домашніх тварин. Проаналізовано основні ризик-фактори, зокрема вид тварини, її раціон, та наявність токсичних рослин на пасовищах або у кормі. Паралельно розглянуто методи лікування та клінічні прояви отруєнь; особливу увагу приділено запобіжним заходам.

Ключові слова: *отруєння, рослини, тварини.*

The article addresses plant poisoning in both farm and companion animals, examining key risk

factors such as species, diet, and the occurrence of toxic plants in pastures and feed. It also outlines typical clinical signs and treatment approaches, with particular attention given to preventive strategies.

Keywords: *plant poisoning, animals, toxic plants, prevention.*

Incidents of animals consuming toxic plants are fairly common and can result in prolonged exposure to hazardous compounds. Plants produce a wide array of secondary metabolites that primarily function to protect them from damage caused by insects, parasitic plants, fungi, and other environmental pressures, as well as to support reproductive processes [1].

Some of these chemicals act as attractants, aiding in pollination, while others serve as natural defenses to discourage herbivory. Since cattle and sheep did not evolve alongside many of these plant species, the attractive or repellent properties are often aimed at other herbivores, such as insects or small mammals [2].

Poisoning generally occurs when livestock consume toxic plants during periods of feed scarcity or when grazing for extended durations, increasing the risk of toxic exposure [3].

Dogs are most frequently involved in poisoning cases, but cats appear to be more susceptible to plant toxins, and young animals are more frequently affected than adult ones. Poisoning of large animals by plants is uncommon and typically occurs only when alternative feed is unavailable or when hay or silage is contaminated [4].

When diagnosing plant poisoning, factors such as plant availability, evidence of consumption, clinical signs, necropsy findings, and stomach content analyses should be considered. Glycoside exposure should be suspected if gastrointestinal upset is accompanied by cardiac arrhythmias or persistent heart block in young animals. Treatment involves removing the animal from the toxic source and preventing further absorption. Epsom salt (magnesium sulfate) can help treat poisoning by drawing water into the intestines, which dilutes and expels toxins via diarrhea. While specific antidotes exist for some poisonings, such as prussic acid, most cases require symptomatic management of clinical signs [5].

Even though the threat of poisoning from toxic plants cannot be entirely prevented, several management practices may help lower the probability of such incidents. Livestock that are born and raised in the same environment often develop an adaptive behavior that allows them to recognize and avoid potentially harmful plants growing in that area. As such, newly introduced cattle or young stock tend to be more prone to plant toxins [6].

When it comes to dogs and cats, the most effective preventive measure is to ensure that potentially toxic plants are kept out of their reach. It is cautious about where plants that might contain harmful substances and place them in areas those animals cannot access, and consider using artificial plants instead [7].

References:

1. Siroka Z. Toxicity of House Plants to Pet Animals. *Toxins*. 2023. Vol. 15, no. 5. P. 346. URL: https://doi.org/10.3390/toxins15050346

2. Protecting Our Livestock From Poisonous Plants : USDA ARS. *ARS Home : USDA ARS*. URL: https://surl.li/rnvosd.

3. Poisonous Plants Seem to Affect Livestock in the Borana, Southern Ethiopia: An Ethnic-Toxicological Approach / A. Kumbe et al. *Veterinary Medicine: Research and Reports*. 2024. Volume 15. P. 31–38. URL: https://doi.org/10.2147/vmrr.s437231.

4. Emerging Plant Intoxications in Domestic Animals: A European Perspective / A.-L. Nagy et al. *Toxins*. 2023. Vol. 15, no. 7. P. 442. URL: https://doi.org/10.3390/toxins15070442.

5. Plant Poisoning | Infonet Biovision Home. *Home | Infonet Biovision Home*. URL: https://surl.lt/vputtn.

6. Rules of thumb to minimise the risk of plant poisoning – FutureBeef. *FutureBeef*. URL: https://surl.li/usnprc.

7. Protecting your Cat from Poisonous Plants During the Holidays. *Veterinarian in Bloomington, IL | Fairway Knolls Veterinary Hospital*. URL: https://surli.cc/pncqvn.