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Problems of Ensuring the Protection of Bees in the Management of Plant Protection Products in Ukraine and the EU: Comparative Legal Aspects

If the bee disappears from the surface of the earth,
man would have no more than four years to live.

Albert Einstein

Favorable climatic conditions, large areas of honey fields, millennial traditions of keeping bees have provided Ukraine with a leading position on the global honey market. Today the country is on the first place in honey production among European countries and on the fourth in the world after China, India and Argentina.¹ An important economic indicator of the industry is the production of additional bee products – propolis, pollen, royal jelly, bee venom, etc., which are the basis for manufacturing of a number of valuable medicines and food.² Beekeeping plays one of the leading roles not only in

¹ Explanatory Note to the Draft Law of Ukraine on Amendments to Certain Legislative Acts of Ukraine on Beekeeping Protection, No. 10052 of 14 February 2019, <http://w1.c1.rada.gov.ua> [access: 15.10.2019].

² *Agrarian Law of Ukraine*, red. V.M. Yermolenko, Kyiv 2010, p. 361.

the economic development of the country, but also performs environmental and social functions. It is important in natural ecosystems, since bees provide pollination of about 80% of the total volume of honey plants. This is the only way to increase the harvest of these crops without disturbing the ecological balance.³ The social function of the industry is to help solve the problem of unemployment in rural areas, providing opportunities for rural population to obtain an additional source of income by creating a small apiary.

However, in recent years, numerous deaths of bees have been increasingly reported in the media. Thus, in 2017, Rivne, Zhytomyr, Cherkasy, Sumy regions, suffered, where hundreds of bee colonies were killed and people were poisoned.⁴ In 2018, about 45,000 bee colonies across Ukraine were killed.⁵ The mass death of bees was also reported in 2019.⁶ According to the official data of the State Service of Ukraine on Food Safety and Consumer Protection (hereinafter referred to as the State Consumer Service), 1,066 bee families were affected in 2017; in 2018, there were 1,408 apiaries in which 12,800 bee families were killed.⁷ There is no official data for 2019, although according to preliminary information from the Union of Beekeepers of Ukraine, the number of bee deaths this year is much lower. The reason for this was the poisoning of bees with pesticides – chemical toxicosis. Moreover, in 95% of cases, the chemical toxicity of insect pollinators is caused by insecticides,⁸ in 4% – herbicides, and 1% accounts for other poisonous chemicals, provided during the flowering of plants without informing beekeepers.⁹ Unfortunately, the problems of legal protection of bees in the process of plant protection products implementation have not received enough attention in the native agrarian legal literature.

In addition, Association Agreement between the European Union and its Member States, of the one part, and Ukraine, of the other part, ratified by the Law of Ukraine of 16 September 2014 (hereinafter referred to as the Association Agreement) stipulates Ukraine's obligation to approximate its legislation on animal health and phytosanitary measures to EU legislation (Art. 64, para. 1).¹⁰ Given the above, focusing on these issues is particularly relevant.

³ T.O. Kovalenko, S.I. Marchenko, *Legal Regulation of Economic Activity in the Agro-Industrial Complex of Ukraine*, Kyiv 2015, p. 296.

⁴ *Pesticides: Great Harm, Little Benefit*, <http://epl.org.ua/environment/pestytsydy-velyka-shkoda-ma-la-koryst> [access: 10.10.2019].

⁵ Explanatory Note...

⁶ *Warning! In the Stavishchensk and Volodarsky Districts of Kyiv Region There Have Been Registered Cases of Mass Death of Bees*, <http://oblvet.org.ua/novini/uvaga!-u-stavishchenskomu-ta-volodarskomu-rayonah-kivschiini-zareestrovano-vipadki-masovo-zagibeli-bdjil/> [access: 10.10.2019].

⁷ *The Main Cause of Death of Bees in Ukraine Is Established*, <https://www.bbc.com/ukrainian/news-44826366> [access: 23.10.2020].

⁸ "Insecticides" – a chemical substance made and used for killing insects, especially those that eat plants, <https://dictionary.cambridge.org/dictionary/english/insecticide> [access: 07.10.2019].

⁹ Explanatory Note...

¹⁰ Association Agreement between the European Union and its Member States, of the one part, and Ukraine, of the other part, ratified by the Law of Ukraine of 16 September 2014, No. 1678-VII, No. 40, p. 2021.

Some aspects of legal protection of bees, including when using pesticides, are raised in the works of such Ukrainian specialists in the field of agrarian, land and environmental law, as: S. Bugera, V. Yermolenko, S. Marchenko, K. Sakadzhi, Yu. Superson, V. Urkevich and others. The purpose of this article is to undertake a systematic theoretical and legal analysis of bee protection legislation in the application of plant protection products. Particular attention is paid to addressing issues related to the adaptation of Ukrainian legislation in this field to the EU law.

First of all, it should be noted that the legal regulation of beekeeping is an important sub-institution that is part of the institute of legal regulation of animal husbandry within the framework of agrarian law.¹¹ It consists not only of agrarian norms, but also of other branches of law, such as environmental, land, civil, administrative, financial, etc., in other words, it is complex. Accordingly, the legislation in the field of bee protection is characterized by complexity. The main document which regulates the relations on breeding, use and protection of bees is the Law of Ukraine of 22 February 2000 on Beekeeping.¹² Considering the protection of bees in the process of using plant protection products, the provisions of the Law of Ukraine of 2 March 1995 on Pesticides and Agrochemicals should be taken into account.¹³

Returning directly to the consideration of the issue related to the protection of bees, it should be noted that the Law of Ukraine on Beekeeping contains Section VI, devoted to these issues. One of the measures to provide the protection of bees is the process of plant protection products implementation in agriculture and forestry, using pesticides and agrochemicals included in the list established in accordance with the procedure of the Ministry of Agrarian Policy and Food of Ukraine (hereinafter referred to as the Ministry of Agrarian Policy) (Art. 31). Interestingly, the Law of Ukraine on Pesticides and Agrochemicals provides that such lists are approved by the Ministry of Ecology and Natural Resources of Ukraine (hereinafter referred to as Ministry of Environment), and agrees with the State Sanitary and Epidemiological Service (Art. 12). In practice, the list of pesticides and agrochemicals allowed for use in Ukraine is being developed by the Ministry of Environment and approved by the Ministry of Health of Ukraine (hereinafter referred to as the Ministry of Health) and the Ministry of Agrarian Policy.¹⁴ Unfortunately, the State Register of Pesticides and Agrochemicals permitted for use in

¹¹ A.M. Stativka, *Legal Regulation of Agricultural Production*, Kharkiv 2015, p. 178; Y.V. Superson, *Legal Regulation of Beekeeping in Ukraine*, Kyiv 2013, p. 6.

¹² Law of Ukraine No. 1492-III of 22 February 2000 on Beekeeping (Bulletin of the Verkhovna Rada of Ukraine of 2000, No. 21, p. 157).

¹³ Law of Ukraine No. 86/95-BP of 2 March 1995 on Pesticides and Agrochemicals (Bulletin of the Verkhovna Rada of Ukraine of 1995, No. 14, p. 91).

¹⁴ The Ministry of Environment is now renamed "the Ministry of Energy and Environmental Protection of Ukraine"; The Ministry of Agrarian Policy was reorganized by joining the Ministry of Economic Development, Trade and Agriculture of Ukraine, based on the resolution of the Cabinet of Ministers of Ukraine No. 829 of 2 September 2019 "Some Issues of Optimization of the System of Central Executive Bodies", <http://zakon1.rada.gov.ua> [access: 16.10.2019].

Ukraine (updated regularly, last updated on 2 April 2019), which is available on the official website of the Ministry of Environment,¹⁵ contains active substances that are toxic to bees and banned in the EU. These are insecticides such as neonicotinoids (also known as neonics) and fipronil.¹⁶

According to the European Food Safety Authority (EFSA), neonics such as clothianidin, thiamethoxam and imidacloprid are particularly harmful to bees.¹⁷ A temporary ban on their use was introduced from 1 December 2013 by Commission Implementing Regulation (EU) No. 485/2013 of 24 May 2013 amending Implementing Regulation (EU) No. 540/2011, as regards the conditions of approval of the active substances clothianidin, thiamethoxam and imidacloprid, and prohibiting the use and sale of seeds treated with plant protection products containing those active substances (hereinafter referred to as Commission Implementing Regulation (EU) No. 485/2013).¹⁸ This document provided that seeds of crops treated with plant protection products containing these substances should not be used or placed on the market, except for seeds used in greenhouses (Art. 2). A similar ban was also imposed on the use of fipronil by Commission Implementing Regulation (EU) No. 781/2013 of 14 August 2013 amending Implementing Regulation (EU) No. 540/2011, as regards the conditions of approval of the active substance fipronil, and prohibiting the use and sale of seeds treated with plant protection products containing this active substance.¹⁹

The definitive ban on the use of these outdoor substances (only possible to be used in permanent greenhouses) is linked in particular to the adoption in 2018 of the following Commission Implementing Regulations (EU): 1) No. 783 of 29 May 2018 amending Implementing Regulation (EU) No. 540/2011 as regards the conditions of approval of the active substance imidacloprid;²⁰ 2) No. 784 of 29 May 2018 amending Implementing Regulation (EU) No. 540/2011 as regards the conditions of approval of the active substance clothianidin;²¹ 3) No. 785 of 29 May 2018 amending Implementing Regulation (EU) No. 540/2011 as regards the conditions of approval of the active substance thiamethoxam.²²

Interestingly, the aforementioned active substances continued to be applied in agricultural practice under temporary bans. This took place due to the possibility of obtain-

¹⁵ State Register of Pesticides and Agrochemicals permitted for use in Ukraine, <https://menr.gov.ua/content/derzhavniy-reestr-pesticidiv-i-agrohimiaktiv-dozvolenih-do-vikoristannya-v-ukraini-dopovnennya-z-01012017-zgidno-vimog-postanovi-kabinetu-ministriv-ukraini-vid-21112007--1328.html> [access: 16.10.2019].

¹⁶ *Pesticides and Bees*, https://ec.europa.eu/food/animals/live_animals/bees/pesticides_en [access: 16.10.2019].

¹⁷ *Neonicotinoids*, https://ec.europa.eu/food/plant/pesticides/approval_active_substances/approval_renewal/neonicotinoids_en [access: 16.10.2019].

¹⁸ https://eur-lex.europa.eu/eli/reg_impl/2013/485/oj [access: 16.10.2019].

¹⁹ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32013R0781> [access: 16.10.2019].

²⁰ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32018R0783> [access: 16.10.2019].

²¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32018R0784> [access: 16.10.2019].

²² <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32018R0785> [access: 16.10.2019].

ing special emergency permits for their use by individual EU Member States. According to the report of the Institute of Agrarian Economics on the implementation of research on the “Assessment of Potential Losses of the Domestic Agricultural Sector in the Case of Prohibition of the Use of Neonicotinoids”,²³ since 2013, 1,812 such permits were granted in the EU. Their annual number exceeds 300 units for 28 EU countries (Fig. 1).

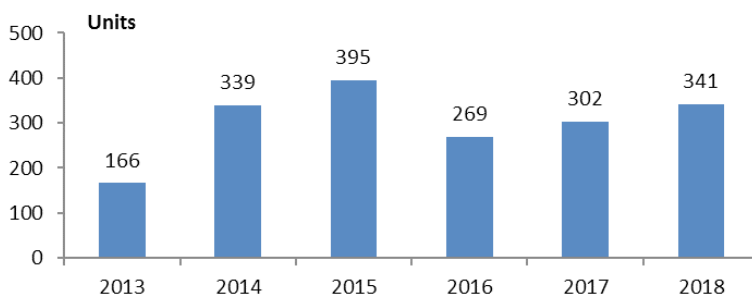


Fig. 1. Emergency (special) authorizations for the use of provisionally banned insecticides in the EU (2013–2018)

Source: The report of the Institute of Agrarian Economics on the “Assessment of Potential Losses of the Domestic Agricultural Sector in the Case of Prohibition of the Use of Neonicotinoids”.

As can be seen in Fig. 2, Spain (405), France (287), Portugal (256) and Greece (225), are the leaders in obtaining such permits despite the existing ban in the EU.

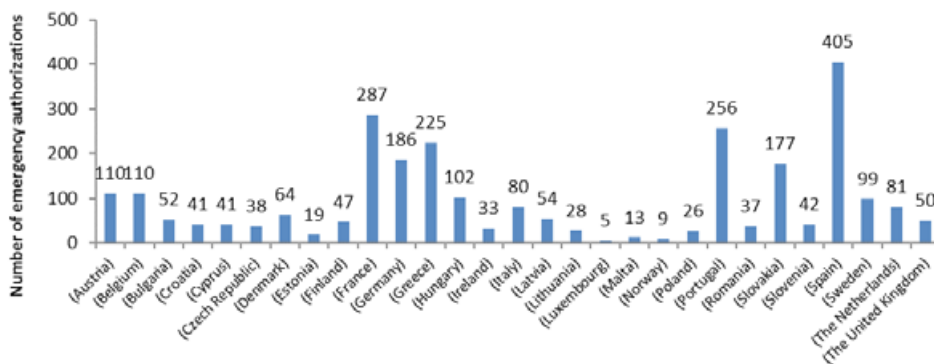


Fig. 2. Emergency (special) authorizations for EU Member States to apply temporarily banned insecticides (2008–2018)

Source: See Fig. 1.

²³ <http://uacouncil.org/uk/post/za-visnovkami-ekspertiv-neonikotinoidi-odni-z-najbils-bezpecnih-pesticidiv> [access: 16.10.2019].

Given the experience of the EU, and the fact that bee deaths in Ukraine are largely attributable to the use of this pesticide group, the question of the need to introduce a similar ban in our country and strengthening control over compliance with plant protection products regulations is quite acute. But, for this, according to experts, the methods of testing plant protection products should be unified in terms of implementation of the principles of good laboratory practice in research institutions with the aim of mutual recognition of data and uniformity in assessing the level of danger to human health and the environment.²⁴ It should be noted that the implementation of Commission Implementing Regulation (EU) No. 485/2013 (action 69) had to be done in 2018, as set out in the Comprehensive Strategy for the Implementation of Chapter IV (Sanitary and Phytosanitary Measures) of Annex IV “Trade and Trade Issues” Association Agreement between the European Union and its Member States, of the one part, and Ukraine, of the other part, ratified by the Law of Ukraine on 16 September 2014, adopted by the Government on 24 February 2016 (hereinafter referred to as the Comprehensive Strategy for the Implementation). That is, the imposition of a temporary ban on the use of the aforementioned neonicotinoids. Unfortunately, this action has not been completed so far.

Additionally, with the Comprehensive Strategy for the Implementation, Commission Implementing Regulation (EU) No. 540/2011 of 25 May 2011 implementing Regulation (EC) No. 1107/2009 of the European Parliament and of the Council as regards the list of approved active substances should be implemented by 2020²⁵ (hereinafter referred to as Commission Implementing Regulation (EU) No. 540/2011) (para. 67). This is particularly important as this document contains an official list of pesticides authorized in the EU. The necessity of its obligatory use in Ukraine was drawn by Katerina Sakadzhi. In her opinion, this will allow to restrict and, to some extent, stop the penetration into Ukraine of untested or banned plant protection products in the EU.²⁶

The use of pesticides in the EU gives priority to ensuring a high level of safety. The registration of plant protection products is based on the precautionary principle, which ensures that the active substances or products placed on the market (pesticides) do not adversely affect the health of humans, animals or the environment. This principle may be applied by Member States where there is scientific uncertainty as to the risks posed by humans, animals and the environment to the plant protection products allowed in their territories (Art. 4(1) of Regulation (EC) No. 1107/2009 of the European

²⁴ M.G. Prodanchuk, I.V. Lepeshkin, O.P. Kravchuk, A.P. Grinko, M.V. Velychko, M.V. Babyak, M.I. Leposhkina, *Statutory Regulation of Pesticide Studies under Conditions of World Economy Globalization: The International Experience*, <http://protox.medved.kiev.ua/index.php/ua/categories/emergency-situation-toxicology/item/562-statutory-regulation-of-pesticide-studies-under-conditions-of-world-economy-globalization-the-international-experience> [access: 16.10.2019].

²⁵ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32011R0540> [access: 16.10.2019].

²⁶ K. Sakadzhi, *Legal Regulation of the Application of Agricultural Plant Protection Products*, Kharkiv 2012, p. 4.

Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products on the market and repealing Council Directives 79/117/EEC and 91/414/EEC,²⁷ [hereinafter referred to as Regulation (EC) No. 1107/2009]). By the way, this document should also be implemented in 2020 (para. 67 of the Comprehensive Strategy for the Implementation).

The consolidation of this principle eliminates the adverse effects of pesticides not only on humans but also on animals. Unfortunately, there is no such principle among the basic principles of state policy in the sphere of activities related to pesticides and agrochemicals, which are stipulated in the Law of Ukraine on Pesticides and Agrochemicals (Art. 3). EU legislation provides for the need to take into account the effects of pesticides on certain species of animals, including bees. Thus, the active substance may be approved for use only following an appropriate risk assessment on the basis of Community or internationally agreed test guidelines, that the use under the proposed conditions of use of plant protection products containing this substance: will result in a negligible exposure of honeybees (3.5% to 7% magnitude; reduction in colony size),²⁸ or has no unacceptable acute or chronic effect on colony survival and development taking into account the effects on honeybee larvae and their behavior (para. 3.8.3. of Annex II “Procedure and Criteria for the Approval of Active Substances, Antidotes and Synergists” in accordance with Chapter II).

In our view, given the effects that plant protection products may have on animals, the experience of legal regulation of the above relations in the EU should be taken into account. Let us consider how legal regulation of bee protection in the process of chemical treatment of agricultural land is carried out in Ukraine. First of all, it should be noted that the obligation to ensure the protection of bees relies on legal entities and individuals who carry out activities that affect or may affect their condition. For example, legal entities and individuals who use plant protection products are obliged to adhere to the current normative legal acts providing protection of bees from poisoning (Art. 30 of the Ukrainian Law on Beekeeping). If these persons use plant protection products for the treatment of melliferous plants, they must, not later than 3 days before the beginning of the treatment, through the media, warn the beekeepers, whose apiaries are within 10 km of the cultivated areas. The date of cultivation, the name of the pesticide, the degree and duration of its toxicity (Art. 37) are reported. These provisions are stipulated in the by-laws. However, it should be noted that in some cases, they are contrary to this Law. For example, the Instruction on the Prevention and Elimination of Bee Diseases and Poisoning, approved by the order of the Chief State Inspector of Veterinary Medicine of Ukraine of 30 January

²⁷ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32009R1107> [access: 16.10.2019].

²⁸ A. Rortais, G. Arnold, J.L. Dorne, S.J. More, G. Sperandio, F. Streissl, C. Szentes, F. Verdonck, *Risk Assessment of Pesticides and Other Stressors in Bees: Principles, Data Gaps and Perspectives from the European Food Safety Authority*, <https://www.sciencedirect.com/science/article/pii/S0048969716320587> [access: 16.10.2019].

2001 No. 9 (hereinafter referred to as the Instruction),²⁹ reduced the distance of apiaries, holders of which must be warned, to 7 km (subpara. 7.1.2, para. 7.1), and State Sanitary Standards 8.8.1.2.-001-98 “Transport, Storage and Use of Pesticides in the National Economy”, approved by the Order of the Ministry of Health of 3 August 1998 No. 1 (hereinafter referred to as SSS8.8.1.2.-001-98),³⁰ allow the possibility of warning beekeepers at least 2 days before the start of each chemical treatment (subpara. 6.1.7, para. 6.1). Thus, the risk is increased by harming bees in the process of carrying out appropriate agricultural work. Of course, such a state of affairs is unacceptable, and the mentioned normative legal acts must be brought into compliance with the provisions of the Law of Ukraine on Beekeeping.

According to the Instruction, chemical treatments are carried out during the absence of bee flight in the morning or evening. In addition, it is not allowed to treat the flowering bee plants during the mass bee flight (para. 7.1). SSS 8.8.1.2.001-98 states that all work with pesticides and agrochemicals must be carried out in the morning (up to 10) and in the evening (18–22) hours with minimal rising air flows. As an exception, it is possible to treat trees during daylight hours in cloudy and cool days with ambient temperatures below +10°C. During the period of such operations within the radius of 200 m from the boundaries of the treated areas, warning signs must be installed (para. 6.1). But in practice, all these conditions are often not provided. As a rule, the perpetrators cannot be held liable or the fine is a minimum amount. So, the Law of Ukraine on Beekeeping provides disciplinary, administrative, civil or criminal responsibility for failure to notify (concealment), the provision of false information about a rising of the threat to bees in process of using of plant protection products (Art. 38). How are these rules implemented?

The Code of Administrative Offenses³¹ does not mention this offense. It is possible to bring to administrative responsibility for: 1) breaking the rules relating to the use of pesticides and agrochemicals (the amount of the fine for citizens is from 3 to 7 non-taxable minimum income and for officials from 7 to 10 non-taxable minimum) (Art. 83); 2) breaking the plant protection legislation, in particular, failure to comply with the requirements of legal acts in the sphere of plant protection, which led to environmental pollution (a warning may be applied or a fine may be imposed, its amount for citizens is from 5 up to 10 non-taxable minimum and for officials from 10 to 18 non-taxable minimum) (Art. 83-1). It should be noted that the size of the non-taxable minimum is UAH 17 (63 euro cents) (para. 5 subsection 1 section XX of the Tax Code of Ukraine).³² So, the amount of fines is about from UAH 51 (nearly EUR 2) to UAH

²⁹ <https://zakon.rada.gov.ua/laws/show/z0131-01#Text> [access: 16.10.2019].

³⁰ <https://zakon0.rada.gov.ua/rada/show/v0001282-98#Text> [access: 16.10.2019].

³¹ Code of Administrative Offenses of 7 December 1984, No. 8073-X (Bulletin of the Verkhovna Rada of the Ukrainian SSR of 1984, p. 1122).

³² Tax Code of Ukraine of 2 December 2010, No. 2755-VI (Bulletin of the Verkhovna Rada of the Ukraine of 2011, No. 13–17. p. 112).

306 (EUR 12). Such sanctions are insignificant for any business entities. In order to resolve this issue, it is proposed in the scientific literature to supplement the Code of Administrative Offenses in the following wording: “Article 83²: Hiding or providing false information about the threat to bees when applying plant protection products. Failure to report (conceal) or provide false information about the threat to bees when applying plant protection products will result in a fine of fifty to one hundred non-taxable minimum and of two hundred to five hundred non-taxable minimum”³³

As for criminal responsibility, the Criminal Code of Ukraine³⁴ (hereinafter referred to as Criminal Code) also lacks an article that would provide responsibility for breaking of beekeeping legislation. Given the massive cases of bee deaths and impunity of guilty persons, the Draft Law of 14 February 2019 “on Amendments to Certain Legislative Acts of Ukraine on Beekeeping Protection”³⁵ proposes to supplement the Criminal Code with Art. 247-1 – Bee Poisoning. According to it, criminal responsibility comes for:

1. Failure to notify (conceal) or provide false information to individuals or legal persons engaged in beekeeping and to the local self-government authority about the threat to bees in the process of using of plant protection products or agrochemicals, if this has led to the poisoning (death) of bee colonies and caused substantial damage.³⁶ Such an offence is punishable by a fine of UAH 51–85 thousand non-taxable minimum or custodial restraint for a term of up to 2 years, with deprivation of the right to occupy certain positions or engage in certain activities for a term of up to 2 years or without such.

2. Breaking of plant protection products or agrochemicals using regulations by a business entity or an individual, if this has caused the poisoning (death) of bee colonies and caused significant damage.³⁷ Punishable by a fine from 5 thousand to 10 thousand non-taxable min. or custodial restraint for a term of up to 3 years, or imprisonment for the same term, with deprivation of the right to occupy certain positions or engage in certain activities for a term of up to 3 years.

In our opinion, the amendments to the Code of Administrative Offenses and the Criminal Code are, first of all, aimed at implementing the final provisions of the Beekeeping Law, which stipulate that the Cabinet of Ministers of Ukraine must

³³ S. Bugera, *Problems of Legislative Support for the Beekeeping Industry. Land, Environmental, Agrarian Law: Environmental Impact Assessment: Proceedings of the All-Ukrainian Round Table*, Kyiv 2018, pp. 40–42.

³⁴ Criminal Code of Ukraine of 5 April 2001, No. 2341-III (Bulletin of the Verkhovna Rada of the Ukraine of 2001, No. 25–26, p. 131).

³⁵ Draft Law on Amendments to Certain Legislative Acts of Ukraine on Beekeeping Protection No. 10052 of 14 February 2019, http://w1.c1.rada.gov.ua/pls/zweb2/webproc4_1?pf3511=65508 [access: 16.10.2019].

³⁶ “Substantial damage” – material damage caused to the beekeeper, 5 times more than non-taxable minimum.

³⁷ “Significant damage” – material damage caused to the beekeeper, 50 times more than non-taxable minimum.

submit proposals to the Verkhovna Rada of Ukraine within 6 months from the day this Law enters into force on bringing Ukrainian legislation into line with it (para. 3). Second, the establishment of responsibility for offenses in the beekeeping sector will force economic operators to use plant protection products, given their impact on the activity of bees.

With regard to property responsibility, there are examples in the case law where the court compensated for the damage caused by the death of bees as a result of breaking of the legal requirements when using plant protection products. For example, on 13 February 2019, the Romany City Court of Sumy region made a decision,³⁸ according to which the lawsuit for damages was partially satisfied. The Court drew attention to the need to comply with the provisions of the Law of Ukraine on Beekeeping, according to which apiaries are subject to mandatory registration at the place of residence of the individual or at the location of the legal entity engaged in beekeeping, in local state administrations or village, settlement, city councils (Art. 13). So, during litigation the petitioner was unable to prove that he owned the claimed amount of bee families.

Works related to aerial application of pesticides are particularly dangerous for bees since, as a rule, the insects get into the spraying zone. It should be noted that Directive 2009/128/EC of the European Parliament and of the Council of 21 October 2009, which sets limits for Union action to achieve a sustainable use of pesticides³⁹ (hereinafter referred to as Directive 2009/128/EC), with a view to minimize the environmental impact of pesticides, establishes a requirement for Member States to ban spraying of pesticides from an aircraft or a helicopter (Art. 3). These measures were taken in 2014 by France. Spain, by banning aerial spraying of pesticides in 2012, has allowed exceptions, in particular in cases where it is not possible to do so by land or to control pests of particular importance.⁴⁰ In Ukraine, the aforementioned Directive was to be implemented in 2018 (para. 67 of the Comprehensive Strategy for the Implementation). However, this question still remains unresolved.

It should be noted that EU legislation provides for exceptions only in special cases where pesticides cannot be applied by any other means for technical or economic reasons. Moreover, Member States should designate the authorities empowered to identify such causes, examine requests for the use of aerial spraying of pesticides and publish information on crops, areas, circumstances and specific requirements for their application, including weather conditions when aerial spraying may be permitted. The latter can only be done subject to a number of conditions: 1) there must be no viable alternatives, or there must be clear advantages in terms of reduced impacts on human health and the environment as compared with land-based application of

³⁸ The decision of the Romensky District Court of the Sumy region, No. 79818394 of 13 February 2019, <https://youcontrol.com.ua/ru/catalog/court-document/80138990/> [access: 16.10.2019].

³⁹ <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=celex%3A32009L0128> [access: 16.10.2019].

⁴⁰ *France Bans Aerial Spraying of Pesticides*, <https://www.freshplaza.com/article/121830/France-bans-aerial-spraying-of-pesticides/> [access: 16.10.2019].

pesticides; 2) the pesticides used must be explicitly approved for aerial spraying by the Member State following a specific assessment addressing risks from aerial spraying; 3) the operator carrying out the aerial spraying must hold a certificate as referred to in Art. 5. During the transitional period where certification systems are not yet in place, Member States may accept other evidence of sufficient knowledge; 4) the enterprise responsible for providing aerial spray applications shall be certified by a competent authority for authorizing the equipment and aircraft for aerial application of pesticides; 5) if the area to be sprayed is in close proximity to areas open to the public, specific risk management measures to ensure that there are no adverse effects on the health of bystanders shall be included in the approval. The area to be sprayed shall not be in close proximity to residential areas; 6) from 2013, the aircraft shall be equipped with accessories that constitute the best available technology to reduce spray drift (Art. 9).

Particularly promising for the conservation of honey bees is the gradual restoration of entomophile crops and the implementation of organic farming. In the process, such activities ensure a high level of animal welfare, including bees. Moreover, the Association Agreement provides for cooperation between the parties, which includes, *inter alia*, promoting modern and sustainable agricultural production, taking into account the need to protect the environment and animals, in particular by promoting the use of organic production methods and the use of biotechnology, *inter alia*, through the implementation of best practices in these fields (Art. 404).

Annex XXXVII to the Association Agreement, Council Regulation (EC) No. 834/2007 of 28 June 2007 on organic production and labeling of organic products repealing Regulation (EEC) No. 2092/91⁴¹ (hereinafter referred to as Council Regulation (EC) No. 834/2007) and Commission Regulation (EC) No. 889/2008 of 5 September 2008, laying down detailed rules for the implementation of Council Regulation (EC) No. 834/2007 on organic production and labeling of organic products with regard to organic production, labeling and control⁴² (hereinafter referred to as Commission Regulation (EC) No. 889/2008), are recognized as part of the legal standards considered by the Ukrainian side in the gradual approximation of sector or product legislation. Accordingly, the requirements contained in these beekeeping documents should be maximally reproduced in national law. According to Council Regulation (EC) No. 834/2007, apiaries should be kept at a sufficient distance from sources which may cause contamination of bee products or deterioration of bee health (Art. 14). This provision is specified in Commission Regulation (EC) No. 889/2008, which requires that the apiaries be placed so that, within a radius of 3 km from the apiary, nectar and pollen sources consist mainly of organically grown crops and/or wild animals, and/or crops to which low environmental impact methods are applied (Art. 13, para. 1). In addition, this document approved the list of pesticides that may be used in the

⁴¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32007R0834> [access: 16.10.2019].

⁴² <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32008R0889> [access: 16.10.2019].

organic production process (Annex II). In Ukrainian law, these provisions are partially reproduced. Only the Law of Ukraine of 10 July 2018 on Basic Principles and Requirements for Organic Production, Treatment and Labeling of Organic Products was adopted,⁴³ which in this part complies with Council Regulation (EC) No. 834/2007. As for the requirements laid down in Commission Regulation (EC) No. 889/2008, they are enshrined in the resolution of the Cabinet of Ministers of Ukraine of 19 April 2019 on Approval of the Procedure (Detailed Rules) for Organic Production and Circulation of Organic Products (para. 103 and Annex 3).⁴⁴ Accordingly, no mechanism has been put in place to implement the provisions of the law. This situation makes it practically impossible to carry out activities in the field of production and circulation of organic bee products.

Conclusions

The agrarian legislation of Ukraine, which regulates relations on the management of plant protection products, is in the process of gradual transformation. It is due, *inter alia*, to the need to take into account EU standards for the safety of animals, in particular bees, when administering these preparations. According to the Comprehensive Implementation Strategy, the implementation of the following legal acts is envisaged: Commission Implementing Regulation (EU) No. 485/2013 (para. 69), Commission Implementing Regulation No. 540/2011 implementing Regulation (EC) No. 1107/2009 and Directive 2009/128/EC (para. 67). Moreover, the implementation of the first and last documents was to take place in 2018. As a result, using of insecticides of the neonicotinoid group (clotianidin, thiamethoxam and imidacloprid) as well as aerial spraying of pesticides should be prohibited at the legislative level. Unfortunately, these measures have not yet been implemented. This demonstrates Ukraine's non-compliance with its obligation to approximate its legislation on animal health and phytosanitary measures to EU legislation. In order to ensure a high level of safety in the use of pesticides, it is considered appropriate to enshrine in the Law of Ukraine on Pesticides and Agrochemicals the principle of precaution, which helps to eliminate the negative impact of active substances on the health of humans, animals or the environment.

Amendments to the Code of Administrative Offenses and the Criminal Code of Ukraine to establish administrative and criminal responsibility for violation of bee-

⁴³ Law of Ukraine No. 2496-VIII of 10 July 2018 on Basic Principles and Requirements for Organic Production, Treatment and Labeling of Organic Products (Bulletin of the Verkhovna Rada of Ukraine of 2018, No. 36, p. 275).

⁴⁴ The Resolution of the Cabinet of Ministers of Ukraine on Approval of the Procedure (detailed rules) for Organic Production and Circulation of Organic Products of 23 October 2019, <https://zakon.rada.gov.ua/laws/show/970-2019-%D0%BF> [access: 23.10.2019].

keeping legislation will encourage business entities to comply with regulations on the use of plant protection products. Organic farming ensures a minimum level of chemical use and therefore minimizes their negative impact on the activity of bees. Unfortunately, due to the lack of a mechanism for implementing the provisions of the Law of Ukraine on Basic Principles and Requirements for Organic Production, Management and Labeling of Organic Products, it is impossible to conduct activities in the field of organic beekeeping.

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Abstract: The article researches the issue of implementation of legal regulation of bee protection in the process of agricultural land cultivation by plant protection products in Ukraine, and a possible link of responsibility, both administrative and criminal, for violation of the beekeeping legislation and pesticides and agrochemicals, which will encourage agrarians to comply with the agrarian regulations and inform the beekeepers of the field. Thus, Ukrainian legislation must take into account EU standards for the safety of animals, including bees, when using plant protection products. The author also studies the level of implementation of the Ukrainian legislation in accordance with the obligations to the European Union in accordance with the Association Agreement between Ukraine and the European Union, which establishes the obligation of Ukraine to approximate its legislation on sanitary and phytosanitary measures for the protection of animals and regulation of the circulation of plant protection products in Ukraine to EU legislation. This includes the ban on the use of toxic pesticides to bees in the open air and the ban on air spraying of pesticides. In addition, the article examines the European experience of using the principle of reservation in the registration of plant protection products. The purpose is to ensure a high level of safety when using pesticides and to eliminate the adverse effects of the active substances on the health of humans, animals or the environment. Also particularly promising for bee conservation is the gradual restoration of entomophile crops and organic farming in Ukraine. Thus, the process of such activities ensures a high level of animal welfare, including bees and environmental protection.

Keywords: bees; pesticides and agrochemicals; plant protection products; precautionary principle; administrative responsibility; criminal responsibility; beekeepers; organic farming