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APELOR ȘI PĂDURILOR



MINISTERUL AGRICULTURII
ȘI DEZVOLTĂRII RURALE

SUMMARY OF THE CODE OF GOOD AGRICULTURAL PRACTICES FOR WATER PROTECTION AGAINST POLLUTION WITH NITRATES FROM AGRICULTURAL SOURCES

Integrated Nutrients Pollution Control



The Code of good agricultural practices for water protection against pollution with nitrates from agricultural sources.

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Integrated Nutrients Pollution Control Legal framework

The Directive 2000/60/EC sets out a framework for the commune policy in the water sector (Water Framework Directive). It was transposed into the national legislation by the Law on Waters no. 107/1996 as amended. The Water Framework Directive (2000/60/EC) is the main legislative tool for the water protection aiming at reaching a «good» state of water quality.

The Directive 91/676/EC on the protection of waters against pollution caused by nitrates from agricultural sources (Nitrate Directive) was transposed into the national legislation through the Government Decision no. 964/2000 on the approval of the Action Plan for water protection against pollution with nitrates from agricultural sources.

According to the provisions of the Action Plan for water protection against pollution with nitrates from agricultural sources, every four years the following actions must be taken:

- Designation (re-designation) of vulnerable areas to nitrate pollution from agricultural sources or, as the case may be, application of a single Action Programme at national level;
- The development/revision of the Code of Good Agricultural Practices for water protection against pollution with nitrates from agricultural sources, in order to be used by farmers;
- The development for each vulnerable area, group of vulnerable areas with similar characteristics or at national level, as the case may be, of an Action Programme including concrete measures for implementing the Code of Good Agricultural Practices.

Taking into account the criteria of water protection, including the principle of prevention which is applied at European Union level and, considering the presence of eutrophication at Black Sea level and the fact that all the national water resources drain into the Black Sea, during the last evaluation of the stage of implementing the Nitrates Directive, it was decided to apply an action programme for water protection against pollution with nitrates from agricultural sources at the level of the whole Romanian territory.

By applying a single action programme for water protection against pollution with nitrates



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Measures for preventing and combating the pollution with nitrates from agricultural sources set out in the Code of good agricultural practices

Farmers must comply with the measures set out in the Code of Good Agricultural Practices for water protection against pollution with nitrates from agricultural sources. The most important measures are related to:

- The storage of manure from agricultural farms;
- The application of nitrogen fertilisers;
- The documents needed for monitoring the agricultural farms.

Manure storage may be done on individual platforms, communal platforms or on the field close to the land used for its spreading.

In case of farms with less than 100 animal units, the storage and processing of animal manure may be done on individual or communal platforms, according to the measures set out in the Code of Good Agricultural Practices.

For the farms with more than 100 animal units, the storage and processing of animal manure are done according to requirements of the Environmental Permit. If the farm has to comply with the provisions of the Directive 2010/75/EU on industrial emissions (integrated pollution prevention and control) (IED), the storage and processing of animal manure are done according to the requirements of the Environmental Integrated Permit, needed for a compliant farm operation. An animal unit means the equivalent of the nitrogen content from the manure produced within a year by a dairy cow.

The facilities should have a manure storage capacity which sustains the storage for an additional month after the end of the interdiction period for land application of animal manure.

from agricultural sources at the level of the whole Romanian territory, the objectives of the Nitrate Directive are achieved. This action is an exception from the obligation of designation (re-designation) of vulnerable areas to nitrate pollution. In this way no vulnerable areas to nitrate pollution were designated.

The requirements of compliance with the provisions of the Nitrate Directive are also included in the Common Agricultural Policy, as cross-compliance regulations within the subsidizing schemes and measures for farmers.

Cross-compliance regulations are grouped as legal requirements in terms of environmental management and climate changes (SMR) and good agricultural and environmental conditions of land (GAEC) which are set out in the Order of MADR/MMAP/ANSVA no. 352/636/54/2015 for approving cross-compliance regulations within the subsidizing schemes and measures for farmers according to on-going legislation.



Individual platforms for manure storage

The individual platforms for manure storage must be placed by taking into account the requirements regarding the access to and distance from stables and houses.

The individual platform is placed:

- on a horizontal or slightly sloping surface, having a low slope;
- at a distance of at least 100 m from channels, rivers, lakes or other water bodies;
- if it is not possible to respect this distance, it will be placed at the furthest point upstream of the water source;
- on a waterproof material such as concrete slab or a waterproof bed (high density polyethylene).

Where possible a permanent vegetation strip of at least 2 or 3 meters width is established around the facility for uptaking the leakages from the storage area.

The required storage capacity is established by considering the species and number of animals, type of produced manure and the storage period.

Communal platforms for manure storage

The aim of the communal platform is to temporarily store the manure in good conditions, mixed or not with other organic residues such as household or vegetal residues, before spreading it on the agricultural land.

The communal platform will be placed:

- at 500 m from individual households according to the Order of the minister of health no. 119/2014 for approving the hygiene and public health regulations regarding the population's living environment;
- on an easily available land for the means of transportation (by considering distance and costs);
- on a flat surface;
- on a land with no flooding risk;
- at least 100 m away from any type of water body.

At the same time, the communal platforms will not be placed close to, or in areas with water table at a depth lower than 2 meters.

The size of the platform must be established according to the manure quantity which is estimated to be produced.

The communal platforms may be also built in communes with individual platforms. These two types of platform do not exclude each other, they may complete each other.



The temporary storage of manure

Animal manure may be temporarily stored on field after verifying that there is no risk of polluting the water bodies and drains from the field, by complying with the following requirements:

1. it is stored only on the field used for its spreading;
2. the quantity stored may not exceed the total amount of animal manure which has to be applied on land, established according to the maximum standards for fertilizer application;
3. it may not be stored in temporary piles more than a year;
4. every year the temporary piles are placed in different locations.

The temporary storage facilities are placed according to the provisions of the Law on Water no. 107/1996 as amended and of the Government Decision no. 930/2005 for approving the special regulations relating to the type and size of sanitary and hydrogeological protection areas, as follows:

- at least 20 m from water bodies (including lakes and water reservoirs), open drains or any type of drain covered by materials with high permeability (sand, gravel);
- at least 50 m from hydrogeological drilling, wells or springs;
- at least 250 m from any drilling or well used for public drinking water supply.

It is recommended to place a waterproof sheet covered by a bed of straw or other organic matters at the base of the temporary storage manure pile, especially when the manure has a high moisture content. It is also recommended to place a layer of straw around the storage pile (especially for those placed at the base of a slope).



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The manure management plan at farm level

For an appropriate management of fertilizers at farm level, a fertilization plan is needed. The fertilization plan establishes the maximum amounts of nitrogen which may be applied on field.

The fertilization plans are developed in two ways: based on agro-chemical studies or using standards on maximum amounts of nitrogen fertilizers which may be applied on field.

In case of farms practicing irrigated agriculture or having a planned crop production which needs higher amounts of nitrogen than the maximum standards, the fertilization plans are developed based on agrochemical studies. The agrochemical study must be carried out by specialized bodies of the Ministry of Agriculture and Rural Development according to the requirements of the Environmental Permit and/or Environmental Integrated Permit.

By considering the agrochemical study, the local pedoclimatic conditions, the previous and the foreseen crop yield, the organic fertilizers applied during an agricultural year, it is determined the mineral fertilizer rate which may still be applied for obtaining the estimated crop yield, without exceeding the limits imposed by Nitrate Directive (170 kg N from organic fertilizers/ha/year).

If the fertilization plan is not based on an agro-chemical study, the application of nitrogen fertilizers may be done by using the standards referring to the maximum amounts of nitrogen fertilizers which may be applied on field.



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Maximum standards on manure application

The maximum standards correspond to the maximum amounts of nitrogen fertilizers (mineral+organic) which may be applied under a balanced fertilization.

The maximum amount of organic fertilizers applied must not exceed 170 kg N/ha/year.

The maximum amounts of nitrogen required for obtaining crop yields equivalent with the national level average over the last 10 years, for the main agricultural crops under a balanced fertilization were determined. The maximum standards were also developed for slopes lower than 12 % and higher than 12 %, respectively.

Standards on maximum amounts of nitrogen fertilizers which may be applied on fields with slopes lower than 12%

Wheat	Corn	Other cereals	Sun flower	Rape	Potato	Sugar beet	Legumes	Pastures
Kg N / ha / year	Kg N / ha / year	Kg N / ha / year	Kg N / ha / year	Kg N / ha / year	Kg N / ha / year	Kg N / ha / year	Kg N / ha / year	Kg N / ha / year
120	130	100	100	100	140	170	160	100

Standards on maximum amounts of nitrogen fertilizers which may be applied on fields with slopes higher than 12 %

Wheat	Corn	Other cereals	Sun flower	Rape	Potato	Sugar beet	Legumes	Pastures
Kg N / ha / year	Kg N / ha / year	Kg N / ha / year	Kg N / ha / year	Kg N / ha / year	Kg N / ha / year	Kg N / ha / year	Kg N / ha / year	Kg N / ha / year
120	130	100	100	100	140	170	160	100



Interdiction period for manure application on an agricultural field

The animal manure is not applied on field during the interdiction periods.

The interdiction periods for fertilizers application on field are defined as the time interval when the average air temperature is lower than 5°C. During this interval the crop requirements for nutrients are lower or there is a high leaching/surface runoff risk.

The animal manure storage capacities must be designed to sustain the storage for an additional month after the end of the interdiction period for land application of animal manure

By taking into account the land use (arable land, meadows), crop type (winter or spring crops) and the fertilizer type (mineral, solid organic and liquid organic), the dates related to the beginning and ending of interdiction periods were established.

Interdiction period for manure application on field

Specification		Interdiction period	
Solid organic fertilizers	Arable field and pastures	November 1 – March 15	
Liquid organic fertilizers and mineral fertilizer	Arable field	Winter crops	November 1 – March 1
		Other crops	October 1 – March 15
	Pastures		



Special requirements for organic fertilizers application

It is forbidden to apply animal manure as well as other fertilizers during rainy, snowy and sunny periods and on fields with water excess or covered by snow. Additionally, it is not recommended to apply fertilizers on land if:

- the soil is frozen;
- the soil is cracked in depth;
- the soil is dug for placing drains or the soil is used for laying of some filling materials;
- the field was provided with drains or in the last 12 months subsoiling works have been applied.



Fertilizers application on fields located in the vicinity of water streams

Protection zones and buffer strips are arranged on fields located in the vicinity of water streams. In these areas it is forbidden to carry on agricultural practices, as well as to apply fertilizers and pesticides.

The protection zones are arranged according to the Law on Water, along the water streams. The width of the protection zones is established by taking into account the width of water stream, the type and use of that water resource or of the hydrotechnical facility. The appropriate sizes and the way of measuring are included in the Code of Good Agricultural Practices.

The buffer strips are grassy strips adjacent to the protection zones, established according to the Law on Water. It is forbidden to apply any fertilizers and pesticides on buffer strips. The minimum width of buffer strips must be of 1 m on fields with slopes up to 12 % and 3 m on fields with slopes over 12 %.

The width of buffer strips is measured from the limit of the physical block adjacent to protection zones. The field slope is the average slope of the physical block adjacent to water stream.



Restrictions related to fertilizers application on fields saturated with water, flooded, frozen or covered by snow

It is forbidden to apply any organic fertilizers of animal origin on soils saturated with water, flooded, frozen or covered by snow. In this way, the nitrate losses by leaching and surface runoff are avoided.

It is forbidden to store animal manure in flooded areas.

In case of rice crops, it is recommended to apply ammonium or amide nitrogen based fertilizers. These types of fertilizers must be applied 2 - 3 days before flooding the field.

In case of soils frequently saturated with water or in flooded areas, the time of fertilizers application depends on the time when the soil moisture corresponds to the field capacity.

It is forbidden to apply nitrogen based fertilizers on soil with slopes, which are frozen or covered by snow because there is a risk of nitrates leaching when the weather warms.



Documents needed for monitoring the agricultural farms

Documents are drawn up and completed at farm level, in order to allow the inspection and control authorities to ascertain:

- the farm area;
- the type and quantity of any chemical/organic fertilizers applied on field, the nitrogen content and time of application;
- the crop type, time of sowing and time of harvesting;
- the farm livestock, animal species, production categories, livestock identifying and recording, livestock registers, as well as the duration for keeping animals inside the farm;
- the quantity and type of any animal fertilizer exported/imported from/in farm, time of export/import, as well as the name and address of addressee/purveyor;
- the storage capacity of animal manure (at farm level and/or on communal manure platforms, permanent/temporary storages), correlated with the minimum requirements imposed by interdiction periods for fertilizers application on field.



Action programmes at commune level

The mayors of the administrative units develop and subject to approval of local councils an Action Plan for water protection against pollution with nitrates from agricultural sources. The Action Plan contains measures from the action programme, deadlines for fulfilling the measures and financial sources specification.

County Agricultural Directorates, through the Offices for Pedological and Agro-chemical Studies, County Agricultural Chambers and Water Basin Administrations provide specialized support to local public administrative authorities for developing the Action Plan for water protection against pollution with nitrates from agricultural sources at local level.



Cross-compliance regulations within the subsidizing schemes and measures for farmers (SMR requirements and GAEC standards)

Farmers applying for direct payments (single area payment – SAPS, redistributive payment, payment for beneficial practices for climate and environment, payment for young farmers, coupled subsidy, simplified schemes for small farmers), transitional national subsidies, compensatory support measures for rural development applicable on agricultural land, subsidies for the fruit-growing sector and the wine sector, as well as other subsidizing schemes/measures from European funds or from national budget must comply with cross-compliance regulations, according to national legislation.

Cross-compliance regulations include legal requirements in terms of environmental management (SMR) and standards on good agricultural and environmental conditions of land (GAEC), which are defined according to European legislation for the following areas:

- environment, climate change and good agricultural conditions of land;
- public health, animal health and plant health;
- animal welfare.

The obligations on water protection against pollution with nitrates from agricultural sources are included in the content of SMR 1 "Water protection against pollution with nitrates from agricultural sources" and GAEC 1 "Accomplishing and/or maintaining buffer strips close to surface waters", presented in annex 1 to the Code of Good agricultural Practices and Order MADR/MMAP/ANSVA no. 352/636/54/2015.



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