

**Agrovoc descriptors:** agricultural policies, European Union, Czech republic, fertilizer application, nitrates, agricultural and rural legislation, water pollution

**Agris Category Code:** E10, C20, P35

## **Inspections in the agricultural practice from the Nitrate directive point of view**

Josef SVOBODA<sup>1</sup>

Received January 17, 2006; accepted February 14, 2006

Delo je prispelo 17. januarja 2006; sprejeto 14. februarja 2006

### **ABSTRACT**

Central Institute for Supervising and Testing in Agriculture (CISTA) is one of supervision bodies for checks of keeping conditions of Cross-Compliance (Council Directive 91/676/EEC and Council Directive 86/278/EEC). Based on results of inspections focused on the Nitrate directive, the main risk of water pollution is due to storage of farm fertilizers (manure, slurry, etc.)

**Key words:** supervision, cross compliance, nitrate directive, water pollution, farm fertiliser

### **IZVLEČEK**

#### **INŠPEKCIJA V KMETIJSKI PRAKSI S STALIŠČA IZVAJANJA NITRATNE DIREKTIVE**

Centralni inštitut za Kontrolo in testiranje v kmetijstvu (CISTA) je na Češkem eno izmed nadzornih teles, ki preverja, kako se kmetijska podjetja upoštevajo določil Navzkrižne skladnosti (Council Directive 91/676/EEC in Council Directive 86/278/EEC). Glede na opažanja inšpekcijske službe v zvezi z Nitratno direktivo, predstavlja glavni vir tveganja skladiščenje živinskih gnojil na kmetijah (gnoj, gnojnica itd.)

**Ključne besede:** supervizija, navzkrižna skladnost, nitratna direktiva, hlevski gnoj

## **1 INTRODUCTION**

The reform of Common Agricultural Policy (CAP), agreed in June 2003 by the summit of EU, established new rules in the field of environment protection, quality and safety of food and animal welfare. EU presses for connection of environment protection with agricultural production in the framework of CAP. It concerns mainly preparing new policy for protection of soil, water, biodiversity and other parts of environment, which are directly affected by agricultural production.

---

<sup>1</sup> Central Institute for Supervising and Testing in Agriculture, Brno

The main tasks of CAP are to integrate the protection of environment to agricultural technologies and to support environmentally more favourable ways of farming. The tool for the minimum ecological standards implementation is so called Cross-Compliance system. The principle of Cross-Compliance is to follow a set of legal provisions (19 Directives and Regulations) and a code of good agricultural and environmental conditions (GAEC), which is necessary condition for obtaining direct payment.

## 2 EXPERT AGRICULTURAL SUPERVISION

Following legal provisions, which farmers have to observe during their agricultural activities, is checked by official state bodies. One of these bodies is Central Institute for Supervising and Testing in Agriculture (CISTA), which is authorized to conduct expert agricultural supervision.

CISTA conducts expert agricultural supervision according to Act No. 156/1998 Coll. as amended (Act on fertilizers). It covers inspections of:

- manufacturers, importers and suppliers who place fertilizers on the market
- farmers (entrepreneurs in agriculture) who store and use fertilizers

In the framework of these inspections CISTA performs 1 100 – 1 200 checks per year. Breaking of law was found out in approximately 3 % of them (Table 1). The most serious faults are usually identified at placing of the fertilizers on the market and along at using of farmyard manure.

Table 1 Numbers and Results of Expert Supervision

| Years | Storage of fertilisers | Using of fertilisers and conducting of fertilizers evidence | Placing of fertilisers on the market | Total number of supervision | Law-breakings found |
|-------|------------------------|---|--------------------------------------|-----------------------------|---------------------|
| 2004  | 131                    | 898   | 235                                  | 1265                        | 24                  |
| 2005  | 137                    | 755   | 255                                  | 1147                        | 33                  |

CISTA is also responsible for inspections of farming in nitrate vulnerable areas (Nitrate directive - Council Directive 91/676/EEC) and conducts the expert agricultural supervision at using of treated sludge on farmland (Council Directive 86/278/EEC). These two directives are included in the list of provisions in the system of Cross-Compliance.

## 3 NITRATE DIRECTIVE

The implementation of the Council Directive 91/676/EEC was done in Act No. 254/2001 Coll. (Act on waters).

The tool for practical implementation of Nitrate directive in the Czech Republic is “Good Agricultural Practice Aimed on Waters Protection” and “Action Program”.

The Action Program was established by Government Ordinance No. 103/2003 Coll. on vulnerable areas establishment, storage and usage of fertilizers, crop rotation and erosion control in these areas. Farmers in vulnerable areas are obliged to follow the relevant measures.

The first Action Program for vulnerable areas of the Czech Republic was proclaimed on 1<sup>st</sup> January 2004. Its observance and evaluation under condition of our country is expected till the end of 2007.

Expert agricultural supervision follows in main measures of the Action Program (of the Nitrate Directive) in the Czech Republic:

- period of ban on using of some types of fertilizers
- setting of minimal storage capacities for “farm fertilizers” (manure, slurry etc.) for the period of ban on using
- restriction of fertilizers application with regard to soil and climatic conditions (soil type, rainfalls, gradient etc.) of the site – based on this there are three application zones (I.,II., III.) for fertilizers in the Czech Republic (Table 2)
- ways of soil using and cultivation (crop rotation, erosion control etc.)
- the total average amount of nitrogen applied in organic fertilizers must not exceed the limit value 170 kg per hectare of the farm

Table 2 Application zones

| Application zones | Characteristic  |
|-------------------|---|
| I.                | Dry areas with deep, from medium weight to heavy soils. Non percolation moisture regime               |
| II.               | Areas with medium rainfall, from medium weight to light soils, Periodical percolation moisture regime |
| III.              | Areas with big amount of rainfall, soils are light, sandy, shallow and very pervious.                 |

Splitting of agriculture land into three application zones was based on climatic regions and above all on “main soil units”. There are most stringent restrictions for fertilizing in the zone III. (For example farmers can use for fertilizing of intercrops or for support of straw degradation only in maximum 40 kg N/ha in mineral fertilizers or 80 kg N/ha in liquid farmyard manure from 1<sup>st</sup> July to beginning of no-fertilizing period.)

In 2003 CISTA drew up the system of inspections and started its attestation in practise. As mentioned, 23 model inspections were conducted, which meant approximately 28 000 ha in vulnerable areas. In 2004 – 2005 inspections have been already based on valid regulation so with possibility of fines.

Table 3 Controls of Nitrate directive

| Years | Numbers of Supervision | Vulnerable areas (ha) |
|-------|------------------------|-----------------------|
| 2003  | 23                     | 28 000                |
| 2004  | 50                     | 66 000                |
| 2005  | 54                     | 77 000                |
| Total | 127                    | 171 000               |

There were 104 inspections of farmers in vulnerable areas in years 2004 – 2005. It represents approximately 143 000 hectares, which is about 8% of vulnerable areas. Roughly 11% of inspections is done at small private farmers.

It is obvious from obtained results that the main risk of water pollution is in the domain of farm fertilizers storage. Particularly there are problems with capacity and technical quality of these facilities due to lack of finance. Another problematic domain is storage of manure on agricultural land before its use. The main problems during inspections of small private farmers were storage of farmyard manure as well, particularly technical conditions of facilities.

#### **4 USING OF TREATED SLUDGE ON FARMLAND**

Act No. 185/2001 Coll. (Act on wastes) and Decree No. 382/2001 Coll. (Decree on conditions for using of treated sludge on farmland) cover the issue of using of treated sludge on farmland in the Czech Republic. CISTA conducts inspection activities at farmers who use sludge on farmland. It mainly means checks of keeping of program on sludge using, which has to contain:

- evaluation of possibility and suitability of sludge using on farmland
- list of plots which were chosen for application
- hydrological data of the area with plots for application
- insertion of sludge in a crop rotation
- suggested monitoring of sludge and soils
- scheme for sampling
- precaution for health protection during using of sludge

In the following CISTA checks keeping of duties related with application of sludge:

- surface uniformity of application
- keeping of maximal set doses
- defraying of sludge (ploughing into soil)

About 20 inspections focused on using of sludge on farmland were carried out in 2005. The main problem which is found at inspections is keeping of surface uniformity during application. The law braking during application of sludge can be fined according to Act on fertilizers. The fine can be maximum 100 000 CZE (circa 3 700 EUR) in case of serious insufficiencies.

#### **5 REFERENCES**

Council Directive 91/676/EEC

Council Directive 86/278/EEC

Act No. 254/2001 Coll., on waters, CZR

Act No. 156/1998 Coll., on fertilizers, as amended, CZR

Decree No. 382/2001 Coll., CZR

Government Ordinance No. 103/2003 Coll., CZR

Cermak, P./Hauerland, M./Mares, R./Nemec, P./Provazník, K./Svoboda, J./Trávník, K./ The draft of farming control system in vulnerable areas in the framework of implementation of Nitrate directive. CISTA, Final report 2003.