WASTE MANAGEMENT PROBLEMS AMONG THE AGRICULTURAL PRODUCERS IN HUNGARY

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Abstract

Wastes, being sources of materials harmful to human health and the environment, represent a significant social problem nowadays.
Agriculture, as all production activities, requires inputs for production which can have a negative impact on the environment. These impacts are becoming increasingly controlled due to the changes in human behaviour and a more rational use of inputs (Mer,1999).
However, it is obvious that not only the inputs used in the production can have a negative effect on the environment, on human health and on animals. The materials remaining after the production, the used tools or packaging materials which the owner cannot or does not want to use at their place of origin can also be harmful depending on their origin and characteristics.

Key words: waste treatment, environmental risks

INTRODUCTION

The production activities of agriculture use inputs, as a result wastes are produced. While some of these can be easily reutilized such as manure from which the energy supply of e.g. pig farms producing liquid manure can be partially solved with a biogas producing system, others require special handling (Mézes et al., 2007). Although waste management receives increasing attention, proper waste management is still unknown to many people and to the agricultural profession in general. It is often considered a useless burden instead of a self-evident activity accompanying production and servicing.

In Hungary, about 3.5 million tons of agricultural waste is produced annually (Csőke-Bőhm, 2006). However, this number refers only to the organic agricultural wastes and does not include the other inorganic wastes resulting from the production process.

MATERIALS AND METHODS

Agricultural production is diverse, therefore many different kinds of wastes are produced in each sector. These wastes can be classified according to several criteria such as:

- their nature: organic and inorganic;
- their dangerous character: hazardous and non-hazardous;

- their origin, based on the type of production.

Depending on the production type, different wastes are formed the amount of which varies with the size of the farm. For example:

- in horticulture, foils for covering the soil and trunks, foil tunnels, other agrofoils and packaging materials of different colours and materials;
- in animal husbandry, veterinary wastes (medicines, syringes), remnants and packaging materials of disinfectants, foils for covering silage, bale strings;
- in crop production, remnants and packaging of pesticides, small (50 kg) and big (500-600 kg) bags of fertilizers.

Last but not least, wastes from maintenance should also be mentioned which can form in any branch during the maintenance of machinery or buildings. Such wastes include: refuse oil, oil sieves, batteries, roofing slate containing asbestos or neon tubes.

RESULTS

Farmers or farming organizations as producers and owners of the wastes should take care of the placement of the wastes according to the relevant laws. Hungarian laws are built upon the EU regulations and define the waste management obligations by horizontal (referring to all waste types) and vertical (referring to specific waste types) decrees.

The major horizontal laws are Act LV./1994 on the protection of agricultural land, Act LIII./1995 on environmental protection, they determine the obligations necessary for protecting the status of the environment and for sustainable production, while Act XLIII./2000 on waste management determines the order of waste management and the tasks of the participants of waste management. The two latter ones also define the principles of the collection and supply of information and its publishing and the tasks related to handling the data and information on waste management (Farkas, 2005).

As the inorganic wastes produced by agriculture are not defined by the law, the same horizontal laws apply to them as for all other production activities or services.

Although the act on waste management clearly states that the producer and owner of the waste is responsible for the destruction of it so that it does not have a negative effect on the environment, it is not always easy for the farmer to find the proper method. Therefore, the responsibility was extended to manufacturers and distributors in the case of certain wastes such as pesticides, tires, oil.

However, this is only a partial solution, as for example in the case of pesticides, the collection and disposal of wastes from pesticide use is to be performed by the co-ordinating organization founded by the manufacturers, but the collection and disposal of more than 300 tons of waste from expired pesticides is still to be done (Molnár, 2008).

In the case of other wastes, such as foils used in fruit and vegetable production, neither the collection of the newly forming wastes, nor the quantitative assessment of the already accumulated wastes is solved as there is no database available. This might be partly due to the fact that according to the governmental decree 164/2003 (X.18.) only those farms are obliged to provide data where the number of employees is above 10 or the total amount of wastes formed annually is above 200 and 2000 kg for hazardous and non-hazardous wastes, respectively.

However, the majority of farms/farmers do not meet these parameters in Hungary (primary producers, private entrepreneurs, farming on 44.5% of the arable land of Hungary in 2007), therefore, no data are available about them, although based on the principle of 'it is the numbers that pay', it would be worthwhile to pay more attention to this issue. This would probably assist in eliminating the illegal waste dumps and in preventing the creation of new ones, thereby promoting a cleaner agricultural production.

Although, there exists a subsidy for agricultural environmental management for farmers, it is not targeted at proper waste management, therefore, it does not serve as a positive incentive for the farmers.

The proper waste management services have expenses, therefore, waste management practice is not a priority (Molnár, 2008).

Currently, the Common Agricultural Policy of the European Union finances such measures which support extensive animal husbandry, switch-over to organic farming, young farmers or areas with unfavourable conditions. If subsidies such as subsidy for agricultural environmental management for farmers could be used for purchasing such means of production as biologically degradable plastics, the spread of the approach that the formation of wastes should be prevented would be promoted in the long run also in the agricultural sector. However, presently it is a great challenge for farmers, as the purchase of these would be an intolerable burden for them.

It cannot be neglected, however, that there is much room for improvement as regards the environmental awareness of farmers. This was also revealed by a study prepared in January 2008 among the growers of the settlements of the small region Mezőkovácsháza and Gyula in the southern part of Hungary, in the 'land of horticulturists'. The survey performed in the frame of the study revealed that only a negligible portion of the farmers

fulfill their obligation to supply records, more than ¾ of them do not have a contract with public-utility undertakings for the disposal of the formed wastes and that they deposit the wastes (except for refuse oil and metals) in public dumps or burn them (Molnár, 2008).

The phenomenon observed in the 'land of horticulturists' is far from being unique. The foreign farmers have a similar opinion on waste management. Waste management is a topic which most of the farmers prefer to avoid. The reason for this is that they see it rather as coercion and not as a part of the production process (Le Guen, 2001).

In spite of this or for that very reason, there is a need for a change in the attitude of farmers similarly to the campaign for the selective collection of wastes as indicated by the example of a survey carried out in the Pays de la Loire region of France.

A brochure intended for the farmers

- adapted to the different branches (animal husbandry, crop production, horticulture) which would provide information
- in addition to the relevant laws
- about the selective collection of wastes on the farm,
- about their proper temporary storage,
- about their final deposition, and
- the consequences of their improper treatment (negative environmental impact, fines) would be of valuable assistance.

CONCLUSIONS

It could help the achievement of the objectives of the National Environmental Protection Programme, which mentions the task of *determining the environmental load of the different sectors and their trends and the development of the structure of the supply of statistical data.* It could also contribute to the achievement of the objectives set by the National Waste Management Plan such as *the improvement of the level of waste treatment, the reduction of the environmental risks or the improvement of the reliability of data supply.*

Since presently, as stated by the writer of the study about the 'land of the horticulturists', the information available in the HIR system of the Ministry of Environmental Protection and Water Conservancy does not reflect the actual situation (Molnár, 2008).

Strengthening the environmental awareness among agricultural producers and the integration of the new tasks into the production process is a huge but not impossible task as illustrated by the example of the selective collection of wastes. Even if the results do not manifest immediately, the objectives can be achieved in the long run via the collaboration of the

organizations and institutions concerned (ministries, environmental authorities, chambers, educational institutions.

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