

NEW REQUIREMENTS ON CONTROL OF ORGANIC FARMING IN THE EU NEED HELP FROM AGRICULTURAL RESEARCH AND TESTING

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Summary.

Organic farming (OF) has become an integral part of the EU Common Agricultural Policy. For subsidies for farmers and support of sales of organic food it is essential that since 1992 there has been a binding legal regulation in the EU (first 2092/91, later Council Regulation (EC) No 834/2007), which has included, inter alia, positive lists that exactly define which inputs are allowed for this type of farming practices. So, all other inputs such as fertilizers or chemical-synthetic pesticides cannot be used. Organic farming practices are subject to a special control, which has been redefined by Commission Implementing Regulation (EU) No 392/2013. The new regulation defines the number of routine and risk samplings in the whole process of organic farming. It does not provide any guidance on how to deal with the data found and how to interpret them to prove potential fraud. This new emphasis on sampling and analysis in the absence of a uniform interpretation reduces the importance of the existing traditional methods of control, and may cause uncertainty of all stakeholders. To solve this problem at national level, the control organizations in the Czech Republic, Bioinstitut and FiBL Switzerland established a guideline for the use of pesticide analysis in organic inspection. This approach might be useful also for other states and also at EU level.

To evaluate any potential findings on organic farms, it will be necessary to define limit values for normal application of pesticides by crop and by most important active substances. This will facilitate the proof of the pesticide application, which will be useful also for phytosanitary service for the control of pesticide use in conventional and integrated plant production. The establishment of a comprehensive data set and conclusive methods that would eliminate fraud requires substantial research efforts. Subsequently it will be possible to amend Council Regulation (EC) No 834/2007 on the interpretation of the results of analyses of samples that is required in Regulation No 392/2013.

Key words: controls of organic farming, residues of pesticides, Organic Regulation

Introduction.

Organic farming (OF) has already become an integral part of the EU Common Agricultural Policy. Its dynamic development, especially in the new EU Member States, was caused mainly by support programmes of the second pillar of the CAP. This support of OF will continue also after 2015 in the form of a separate measure. Also, European and national educational programmes to promote sales of organic food can help to reduce dependence on subsidies and transfer part of the higher costs of organic farming directly to consumers. Both subsidies and sales of organic food need an efficient and reliable control system. This has been the basis of organic farming from the very beginning, and it is also reflected in the European Organic Regulation. In times when no subsidies were paid and the control system was not subject to state supervision, it was, paradoxically, easier than today to revoke the organic status of problematic operators. Without subsidies and high prices the motivation for potential fraud was also not as high as today. Council Regulation (EC) No 834/2007 redefined the obligations of control of OF and the Member States were obliged to put the entire control system of OF under the Regulation (EC) No 882/2004. But that was not sufficient, the Member States have dealt with this request differently and it did not completely prevent fraud, leading to negative publicity for OF. The findings of residues of unauthorized pesticides in organic food have become a very important new issue. On one hand it is still true that organic farming is a guaranteed complex process "from farm to fork" and this is also inspected. On the other hand, there are no conclusive methods and in particular their interpretations for proving violations of these processes. These include especially proof of the use of pesticides and fertilizers prohibited in OF. EU Member States were anticipating a specification of methods of OF control from the European Commission, which had long been prepared. Recently, the Implementing Regulation (EU) No 392/2013 was adopted, which, inter alia, requires that sampling for analyses has to be done at least at 5% of controlled operators, and it also clarifies the definition, i.e. that it is necessary to control the entire process and not only the final products (organic food). However, what is still missing is the interpretation of how to proceed if the residues of prohibited substances are found during control of OF. We have dealt with this complex issue in the Czech Republic and in cooperation with FiBL we have developed a "Guideline for handling pesticide residues in organic

production in the Czech Republic", which could become part of the European debate on a common interpretation of the findings of residues of prohibited substances in organic food / farming.

Current analyses of prohibited substances are focused mainly on food.

We conducted a research into current approaches to control of residues (particularly pesticides) in organic farming in the whole EU and we have noted that they are focused on sampling and testing of the final product, i.e. food. The basis of all methods is BNN's directive, which deals with the detected pesticide residues in organic food from the orientation value of 0.01 mg/kg. Only when a higher level is found in the product, measures follow that lead also to revocation of organic certification status for the organic product. In some countries (e.g. Switzerland, Belgium, Italy ...) this approach was further developed and beside the decertification of the product they also search for the cause of contamination at the farm (or food business). However, we have not found a country with clear methodological approach on how to interpret the findings of pesticide residues in agricultural processes, such as the cultivation of plants (in the leaves, soil, bodies of weed ...). Analyses of the residual substances in food are an important part of controls of organic farming, but they cannot replace the control of processes. Originally, inspections of organic farming with sampling took place only sporadically. An experienced inspector was often able to detect unauthorized use of pesticides and fertilizers in OF visually, or in combination with other control tools for obtaining direct and circumstantial evidence. This, however, is currently insufficient. There are cases where inspection revealed clear signs of use of the herbicide glyphosate. However, the certification body and then the state administrative authority refrained from sanctioning that farmer, because photographs and testimony of inspectors were not considered as sufficient evidence. Currently, the evidence required is –sampling and detected residues of unauthorized active substances or their metabolites. And here we are at the root of the problem. Some pesticides are very quickly decomposed and analysis cannot cover all possible cases of fraud. If an inspection of OF finds residual substances in the process, it is not clear what level of measured values proves intentional use of unauthorized inputs or when the contamination is so serious that the integrity of the whole organic farm is in danger. That was the reason why ÚKZÚZ in cooperation with FiBL prepared this methodological approach for the Czech competent authority (Ministry of Agriculture of the CR).

Draft guideline for proving residues for the Czech Republic. Controls of OF should remain focused on the control of processes, not only on the control of the final product. Traditional methods of control (visual, inspection of accounting, warehouses...) must be combined with samplings and analyses. The draft guideline includes procedures for risk analysis and sampling methodology. What is new is a draft interpretation method for evaluation of detected residues. It uses "orientation (indicative) value" and "critical level (limit)" of detected residues. An approach which is similar to the ones used e.g. by BNN or Bio Suisse for food. The method works on the principle that if the orientation value of residues (0.01 mg / kg) is exceeded an investigation follows. If the "critical level" is exceeded the decertification and sanctions automatically follow.

A major problem regarding this approach is that there are no binding general limits (comparable to MRL) for pesticide residues in plant material and soil, as is the case with food. Therefore, in order to address this issue it is necessary to involve agricultural research and testing institutes to establish a methodology and to carry out monitoring of the level of residues of active substances (metabolites) in plants and soil after normal application (according to the methodology for conventional pesticides). These values (limits) can then be compared with any findings of prohibited residues in organic farming. This creates the basis for the decision making process of certification bodies and authorities that impose sanctions or decide on withdrawal of subsidies.

Based on the findings of prohibited residues in the OF process, the following measures are proposed:

- in-depth investigations, including unannounced inspections and analyses of further samples;
- preliminary blocking of foods during investigations;
- de-certification of farms and/or foods;
- improvements to prevent future contaminations;
- blocking/reclaiming of direct subsidies;
- penalties (according to penalty regulations – e.g. fine).

For several years already, ÚKZÚZ Brno has carried out experiments and monitoring of the grapevine and based on the interpretation made in this way, penalties for unauthorized use of fungicides in OF were already imposed. This is only the first step, because it is necessary to monitor the behavior of different types of pesticides on different cultures. This methodological approach will be used to detect unauthorized applications in plant production in general. For example, subsidized integrated methods (fruit-, vegetable-, wine-growing) are also

prohibited from using any pesticides. Monitoring of compliance with this obligation now means mainly control of records and that is insufficient in times when some pesticides are used illegally (without a record of it by the farmer).

Conclusion.

Inspection of OF should remain focused on the control of processes, not only the control of the final product. Traditional methods of control (visual, inspection of accounting, warehouses...) must be combined with samplings and analyses. It is necessary to prepare guidelines (methodology) for proving the use of prohibited substances in OF. In case of certain pesticides (e.g. herbicides) also evidence obtained by traditional (visual) method should be recognized.

- Guideline is urgently needed for the interpretation of residues on leaves, soil or other agricultural materials, because control of OF primarily guarantees to consumers and taxpayers an organic production process (avoiding the use of prohibited pesticides in the whole production process (from farm to fork).

- A separate guideline needs to be developed for such materials (plants and soil). It should be formally similar to the guideline for foods.

- For such materials, no MRLs are defined, and it is unclear whether the orientation value of 0.01 mg/kg is also applicable.

- For the time being, the interpretation guideline can therefore not work with fixed numerical threshold values. However, it is desirable to define such values in the future.

Numerical threshold values for application of pesticides by crop and most important active substances need to be defined both on the EU level and in Member States. This will facilitate the proof of the pesticide application, which will be useful also for phytosanitary service for the control of pesticide use in conventional and integrated plant production. The establishment of a comprehensive data set and conclusive methods that would eliminate fraud requires substantial research efforts. Practice-oriented research into this issue (at EU level) would be desirable. Subsequently it will be possible to amend Council Regulation (EC) No 834/2007 on the interpretation of the results of analyses of samples that is required in Regulation No 392/2013.

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