Conclusions of session 2

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Topics discussed

Risk assessment

The derogation is based on a risk assessment for human health and environment and an assessment of scale of use. The FWD does not give any clear instruction and/or indication on these assessments. Nevertheless the MS will have to carry out these ones if they want to introduce derogation. Without clear protocols, uneven situations may occur between the MS.

The inspection of the spray lance/gun and soil disinfection equipment in Belgium may be an example. The Belgian sprayer inspection is mandatory for boom and orchards sprayers since 1995. In 1997, the authorities studied the opportunity to inspect also the spray lance or gun. These sprayer types are quite common in glasshouses for fresh vegetables (tomato, pepper, salad, strawberry…) and ornamental crops production. One estimate in Flanders shows that more than 2800 glasshouses (70.5 % of total) are sprayed by using a gun (Goossens E. and Sonck., 2006). Moreover a great quantity of active ingredient (a.i.) was used in glasshouses. Following national statistics established in 1997, (one or several growers or the growers) used on average 27 kg a.i./ha for strawberry, 45 kg a.i./ha for flowers, from 20 to 260 kg a.i./ha for pot plant… which could cause a potentially high risk of pesticides residue on food plants. Thus the Belgian authorities mandated the ILVO Research Centre to undergo studies on the opportunity to proceed to the inspection of the spray lance/gun.

The main results of this research (Langenakens J. & al, 2001) showed that the applicator using a spray lance/gun has a greater influence on the spray quality than the equipment itself, the inspection of this type of sprayer has a restricted added value regarding the residue, the training and the vulgarisation seem to be the best tools to improve the use of spray lance/gun. On the other hand, Nuyttens & al (2004) showed that the spray lance used in glasshouses is certainly the worst equipment in terms of operator exposure. At the end, even the risk assessment especially for the human health could be quite wrong. Even the scale of use is quite great, Belgian authorities decided in 2004 to exclude the spray lance from the inspection scope, considering that the inspection is not the right tool to improve the situation.

Also in several other European countries a similar situation is detected. The use of lance and/ or spray gun is frequently used instead of horizontal spraying booms because of the flexibility, e.g. easily adapting the spray volume due to different plant type and growt stage and only where plants are gathered avoiding spray to go between tables and on empty parts of the table. The spray gun, pressure, nozzle position and especially the movement of gun and operator are keyfactors in obtaining an optimum result (Bjugstad & Hermansen, 2008).

The soil disinfection equipment used to disinfect the soil by injection before the planting (vegetable, strawberry…). Pesticides used among others are Chloropicrin, Dichloropropene and Methyl Bromide are dangerous (T+, T, N), but the number of equipment in use is low in Belgium (30-40 units). Although any risk assessment for human health and the environment, and even if the scale of use is very low, the soil disinfection equipment have been introduced in the mandatory inspection scope.

These two examples show how opposite decisions can be taken without clear instructions in how to carry out a risk assessment for human health and the environment, and an assessment of scale of use. This issue should need a harmonization or at least clarify.

Analysing these experiences, another question arises; are the risk assessment and the assessment of scale of use the only argumentation to introduce derogation? Other reasons could be valuable as; the real added value of the inspection, the implementation of other more appropriate means or tools (training, information…) to improve the situation, the availability of the inspection protocols, and the inspection capacity of the workshop…

Different timetable and inspection intervals

The MS can apply a different timetable and/or different intervals and then derogate from the paragraph 1 and 2 of the article 8:

- Paragraph 1 request that the PAE has to be inspected at regular intervals that don't exceed five years until 2020 and three years thereafter. By derogation these intervals would be lengthened.
- Paragraph 2 requests that the PAE has to be inspected at least once within 7 years after the date of entry into force of the FWD. By derogation this deadline (= timetable) would be postponed. If the FWD enters into force yet in 2009, the first inspection of certain types of PAE may realize ('within' due to the sentence above??) 2016.

The application of different timetable and inspection intervals will be possible only for the following types of PAE "defined" and listed by the FW:

- PAE not used for spraying pesticides.
- The handheld PAE.
- The knapsack sprayers that is defined by the ISO 5681 (1992) as « Self-contained sprayer carried on the operator's back by means of shoulder straps ».
- Additional PAE that represent a very low scale of use.

The scale of use of one specific type of PAE will depend on the MS. >From one MS to another, the scale of use would strongly vary. Hence, the timetable and inspection intervals of some PAE would vary from one MS to another. For instance in Italy, knapsack sprayers would be a priority because of its intensive use in greenhouses. That would be not the case in Belgium or Germany. Also in the same greenhouse plant the grower will operate a wide range of spraying equipment. Thus, it should be considered to have a kind of quick test and information about correct instruction and calibration (article 5) for equipment also not included in the test in order to ensure a proper use of all kind of equipment at the plant. Practically, the inspection and the training part should be carried out at the same time. This will ensure fully control and proper use, saving of time and optimal correspondence between people carrying out inspection and training and the operator himself.

It would be necessary to clarify the different PAE under derogation. For instance "PAE not used for spraying pesticides" cover certainly equipment applying pesticides in gas, powder, granulate… form. But are the foggers (hot/cold) also covered by this definition or not? Moreover, it does not exist any clear definition of this PAE for the moment. Finally "additional PAE that represent a very low scale of use" is definitively a not clear definition that would constitute a black box which the MS may abuse.

The deadline derogation will give time to the CEN/TC144/SC6 to develop the needed new inspection standards.

Exemption from the inspection

The MS can exempt from inspection the following two types of PAE: handheld PAE and knapsack sprayers. That means for these two PAE types, the MS have two options: inspection with another timetable and interval (§ 3 a) or an exemption from the inspection (§ 3 b).

This pure exemption is a bit mitigated by the fact that the user must be informed on the need to change regularly the accessories, on the specific risks linked to that equipment, and that operators are trained for the proper use of that PAE in accordance with article 5.

This exemption based on a mandatory training and information would be more efficient for handheld PAE and knapsack sprayers than an inspection. Indeed the inspection for that PAE could give a false impression of security and mask the needed good calibration.

The operator training is well described in the article 5 and the knowledge having to be acquired by the users is listed into the Annex 1. On the other hand the FWD is not so clear on the way to inform the users. Will it be a part of the user's training, or will it be a part of the handbook of the PAE? Moreover "change regularly the accessories" is certainly not sufficient. All components should be replaced if necessary.

Therefore, it is still open and has to be clarified how and in which cases the operators have to be informed on the need to change the accessories regularly and how to train the operator according to article 5 of the FWD.

PAE that shall never derogate from the inspection

The § 3 allowing to derogation from mandatory inspection contains a sub-§ that cancels the derogation. Considering the spraying equipment mounted on trains or aircraft and the boom sprayers larger than 3 m (including those mounted on sowing equipment) as never constituting a very low scale of use, the FWD requests for these PAE the mandatory inspection without any derogation (timetable, inspection intervals, exemption).

PAE types and inspection

Analysing the three first § of the FWD, we could define three categories of PAE:

- the PAE that are exempted from inspection,
- the PAE that have to be inspected, but with some derogations,
- the PAE that have to be inspected without any derogation.

a) PAE that are exempted from inspection: The FWD defines already two PAE that would be exempt from inspection: handheld PAE and knapsack sprayer. Nevertheless, this exemption shall be justified by a risk assessment and an assessment of the scale of the use of the equipment that could be varying among MS. The knapsack sprayers are well defined in the ISO 5681 (1992). On the other hand, it does not exist any clear definition of the handheld PAE.

b) PAE that have to be inspected, but with some derogations: The FWD defines already several PAE that would derogate from inspection: PAE not use for spraying pesticides, handheld PAE, knapsack sprayer and the PAE listed in the NAP (National Action Plan) and representing a very low scale of use. Nevertheless, this exemption shall be justified by a risk assessment and an assessment of the scale of the use of the equipment that could be varying among MS.

c) PAE that have to be inspected without any derogations: The Article 8 (3) of the FWD defines clearly two PAE that have to be inspected according to the timetables and inspection intervals defined in Articles 8 (1) and (2): spraying equipment mounted on trains or aircraft, and boom sprayers larger than 3 m. Taken into account the possible derogation, the sprayer types to be inspected could be varying among MS. MS inspect already other sprayer types (orchard sprayers, aircraft sprayers, greenhouse sprayers…).

Conclusions and draft proposal supplementations

The article 8/3 of the FWD is certainly very important. It allows the MS to derogate to the inspection certain PAE under certain conditions. Without calling into question the fully justified of the inspection of the most current PAE (e.g.: boom and orchard sprayers), this Article will give time to the MS to implement the FWD for particular PAE. Moreover, this Article will give also time to the CEN/TC144/SC6 to develop the needed new inspection standards. To remind, until now, only the boom and orchards sprayers are covered by the EN 13 790 standards.

On the other hand, the article 8/3 will certainly introduce an uneven situation within EU. The activation of the derogation will be up to the MS and considering the particularities of the Agriculture and the mentality within the MS, the article 8/3 will apply differently within EU. That is the consequence of the basic principles of a Frame Work Directive. Nevertheless, to equalize the potential unevenness between the users of PAE within EU, some clarification and/or harmonization would be needed as the risk assessment protocols, the listing of the additional PAE of very low scale of use, the proposition of a classification scheme of all the PAE regarding the inspection, the definition of the information and training package for the user of handheld and knapsack sprayer.

List of subjects to be dealt with by SWG

Considering the discussion made during the SPISE III conference and the conclusions around the article 8/3 of the FWD, the SPISE working group is asked to clarify the concept of Risk Assessment, to improve and feed the classification scheme of the sprayer and to establish a kind of list of priority concerning the development of new inspection standards.