Second European Workshop on Standardized Procedure for the Inspection of Sprayers in Europe

SPISE 2

Report of the SPISE 2

Group portrait of the SPISE 2 participants; Straelen, April 10-12, 2007
Structure of report

• Conclusion to the keynotes

• Conclusions to the different sessions

• Recommendations of the workshop

• Expression of thanks / Acknowledgement
• Conclusions to the Keynotes

  • *Ganzelmeier, H.*: **Thematic Strategy on sustainable use of ppp …**: The participants of SPISE 2 welcomed the Framework Directive where the introduction of an obligatory inspection in the MS has been stated as one of the main measures (Questions were gathered to be answered by the EC)

  • *Moeller, K.*: **Implementation of SPISE features in EUREPGAP**: Spise features are considered in EurepGap guide line. (How to continue the cooperation with EurepGap have to be discussed in SWG)

  • *Oldenkamp, P.*: **The need for harmonized inspection of sprayers**: CEMA: High interest on an EU-harmonized inspection in the MS. (Multiple inspections should be obsolete)

  • *Wehmann, H.-J.*: **Actual survey about inspection of sprayers in MS**: Actual picture about the current situation and trends in the MS are very important. (Repetitions are required)
• **Conclusions to the different sessions**

• **Session 1: Info packages**

**Discussion**

• Information packages of BE, DE and NL were presented

• There were 14 questions addressed to the experts who presented the situation on inspection systems in Germany, Netherlands and Belgium

• Main questions were about
  - simplified procedures for new sprayers in the period of first seasons after purchase,
  - possibilities of mutual recognition of approved sprayers between neighbouring countries,
  - standardisation of length of intervals between inspections and
  - improvement of quality assurance management results and systems
Session 1: Info packages

Results and conclusions

• The level of implementation of EN 13790 in the national rules for sprayers inspection is high in countries with long tradition of testing sprayers, but still not 100% in none of the countries.

More precise instructions – guidelines on the following topics are needed:

• Additional specific and clear enough criteria (types of faults) for rejecting the sprayers are needed

• Clear guidelines for training of inspection personal (testing operators), SPISE shall define the frequency and methods of regular education for testing operators, proposals for common European training system shall be prepared.

• Some modifications in basic rules for authorisation (recognising) procedures for workshops shall be proposed by SPISE (exact proposals for information transfer between the authorities and the workshops, agreement samples, rules for withdrawal of licences, …).

• Additional guidelines for carrying out the inspection (monitoring) of workshops (random visits of workshops, visual observation of work carried out by operators and additional checks of accuracy of measurements performed by operators,…) are necessary.
Session 1: Info packages

Results and conclusions

- New proposals for unified quality assurance systems should be prepared by SPISE.
- The procedures for performance of quality assurance activities shall follow the scheme of ISO standards valid for similar authorised organisations for technical inspection.
- The development of procedures for mutual recognition of sprayer inspections is necessary to enable farmers and contractors to use the equipment in neighbouring countries without need to perform the inspection twice.
- In order to insure the additional high quality of sprayer testing some recommendations should be prepared to define the optimum number of tested sprayers per year per testing team.
- In the future (a few year time scale) some amendments of EN 13790 will be needed to improve above mentioned topics and to suite to the needs of many new types of equipment for application of PPP.
Session 2.1: Mandatory inspection *(Koch, Huyghebaert, Kole)*

**Discussion**

- Which sprayers will be inspected?
  - Other sprayers than boom sprayers and orchard sprayers?
  - Only sprayers for professional or commercial use? Limit to tank size?

- What will be inspected on the sprayer?
  - How to inspect band sprayers?
  - How to handle minor defects?

- Who will do the inspection?
  - Objectivity of the inspections necessary.
  - Inspection and need to repair sprayers
  - What about inspection by trained/authorised persons, not employed in workshops

- When the inspection will be done?
  - Recently the time interval in Europe is 1 to 5 years
  - Problems with mutual recognition in border regions. Harmonising of frequency?
  - Differences between contractors and others?

- Where the inspection will be done?
  - Central location, local workshop or farm site?
Session 2.1: Mandatory inspection (Koch, Huyghebaert, Kole)

Results and conclusions

• It should be clarified what is meant by “all sprayers” in the draft European guideline. For instance, inspection of knapsack sprayers should be avoided. It is necessary to consider the amount of chemicals that is applied with and the risk caused by several kinds of sprayers.

• EN 13790 gives good information on subjects to be inspected.
  - For field sprayers still cross distribution or flow rate measurement possible.
  - Method for band sprayers not yet clear.

• When inspection system is introduced inspection by public institutions may be appropriate but not necessary. Private workshops with trained personal and authorisation are useful to ensure an appropriate density of inspection points. Inspection by other trained and authorised persons may be useful for sprayers with specific inspection requirements (e.g. spray booms in glass houses, equipment with hand held lances, helicopter spraying equipment). Objectivity of the inspection must be provided. Inspectors must be trained and authorised.

• A quality management system is useful.

• Time interval between inspections should be uniform across EU.

• Location for inspection should fulfil basic technical requirements (see EN 13790). Environmental aspects should be considered.
Session 2.1: Mandatory inspection (Koch, Huyghebaert, Kole)

**Further actions**

- To establish a system of processing, administration and reporting of data concerning inspection considering the privacy of data for each member state.

- To define a uniform inspection interval for all member states.

- To establish guidelines for evaluation of observation of the requirements of EN 13790 in order to obtain uniformity, quality and objectivity of inspections.
Session 2.2.1: Calibration of sprayers (Nilsson & Planas)

• **Discussion**
  
  Main point of discussion was the question whether the calibration should be a voluntary part of the inspection or not. This is not only a problem of organisation but also of legal authorisation, training of personnel and costs:
  
  • Different guidelines for calibration of field crop sprayers and orchard sprayers?
  
  • Is it useful to calibrate the sprayer without operator training or at least recommendations on dose and volume rate adjustment, nozzles (flow rate, droplet size, drift potential) or drift reducing measures?
  
  • Where should the calibration be done: At test station or on farm?
  
  • Should the calibration be done by inspectors or by other staff? How can inspectors be trained?
  
  • Should farmers pay for calibration or can it be financed by other sources like environmental support (Cross Compliance advising) or national support?
Session 2.2.1: Calibration of sprayers (Nilsson & Planas)

- **Results and conclusions**
  - Calibration of sprayers as task of the advisory service is necessary separately from and prior to the inspection.
  - Uniform (European) guidelines are necessary for calibration. Farmers should be trained in using the right set-up of the sprayer for different growing situations.
  - Farmers should record sprayer set-up for each treatment.
  - Sprayer manufacturers should help to increase the technical knowledge of operators by appropriate manuals.

- **Further actions**
  - To establish a working group within SPISE/ CEN to develop guidelines with minimum requirements for calibration.
  - To work on national levels/EU-level for mandatory operator training, with regular refresher courses.
  - To work on national levels/EU-level for systems with voluntary operator training and calibration.
• **Session 2.2.2: Options of very old / brand new sprayers**  
  (Holownicki & Hermansen)

• **Discussion**
  • Very old sprayers:
  • Definition of “very old” sprayers: Age? Sprayers which do not fit to EN 13790 or EN 12761?
  • Is it necessary to define special criteria for very old sprayers or do they just have to be modernised?
  • Main technical problems with very old sprayers and ways to solve them.

  • Brand new sprayers:
  • Is it necessary to perform a complete inspection according to EN 13790 to new sprayer?
  • Main technical problems with brand new sprayers.
Session 2.2.2: Options of very old / brand new sprayers
(Holownicki & Hermansen)

Results and conclusions

- It is not necessary to have specific procedures; even very old sprayers have to fulfill the requirements according to EN 13790 but it is not necessary to retroactively meet EN 12761.
- Main problems with very old sprayers are insufficient pump and agitation, anti drip devices, filters, worn booms and missing protective guards.
- If necessary the sprayer should be modernized by high qualified staff and the inspection is to be repeated.
- Brand new sprayers have to be inspected before selling or they have to be manufactured in such a way to fulfill the EN 13790 standard.
- Inspection of new sprayers may be of reduced extent compared to sprayers in use because of no wear and tear.

Further actions

- To define the minimum requirements from EN 13790 valid for brand new sprayers.
Session 2.3: Inspection of sprayers not mentioned in EN 13790 (Breakman & Herbst)

Discussion
- Justification of need and use of an inspection methodology for non EN 13790 sprayers considering environmental risks linked to machine and operator.
- Discussion about proposed test protocols and methodologies.
- Listing non EN 13790 sprayers and figures of occurrence and of use in the different countries. Preventing economical losses by means of inspection of this types of spraying equipment.

Results and conclusions
- It is necessary to inspect also equipment not mentioned by EN 13790 to achieve sufficient application quality, minimizing environmental risks and to ensure operator and consumer safety.
- Operator safety may be a more important issue than for other sprayers.
- Visual inspection is sufficient to prevent environment from major sources of pollution.
- Start with a very simple approach just to fill the gap and improve the system step by step.

Further actions
- To define a priority list of equipment considering the amount of use and the experiences concerning importance and risks.
Second European Workshop on Standardized Procedure for the Inspection of Sprayers in Europe
SPI SE 2

• **Bus tour:**
  • Was extremely helpful to understand, how does the approaches in BE, DE & NL work in the practice
  • Well sophisticated approaches but several differences exist
  • Good examples for MS taking these procedures into account
Second European Workshop on Standardized Procedure for the Inspection of Sprayers in Europe
SPISE 2

Bus tour:

Bus tour locations:
- Horst (NL)
- Vlijtingen (BE)
- Grevenbroich (DE)
Recommendations of the workshop

The participants welcomed the initiative of the SPISE Working Group and expressed their expectations to continue efforts toward harmonising sprayers inspections with the following resolution:

Taking into consideration that

- plant protection is an essential instrument for ensuring sufficient high-quality and healthy food,
- justified demands of consumer- and environmental protection and nature conservation are to be implemented in the interests of society and politics,
- technical equipment is particularly important in complementing the use of authorised plant protection products according to good plant protection practice,
- the Member States (MS) and the European Commission (EC) are discussing measures for improving the sustainability of plant protection within the framework directive on the sustainable use of pesticides, where the introduction of obligatory inspection of plant protection equipment which is in use in the MS has been stated as one of the main measures,
- CEN has drafted several standards for new sprayers and sprayers in use; ISO carries out comprehensive work to improve and harmonise sprayer standards on an international level,
- with the publication of European standard EN 13790 'Agricultural machinery - Sprayers - Inspection of sprayers in use' - part 1: Field crop sprayers and part 2: Air-assisted sprayers for bush and tree crops - and the technical demands placed on equipment mentioned here, an important element for the harmonisation of equipment inspections has already been created,
- further requirements, on EU- and national level, are necessary for equipment inspections of a high technical standard and comparable quality throughout the MS,
- the EC offers the MS support within the TAIEX (Technical Assistance Information Exchange Instrument - DG Enlargement) when introducing equipment inspections,
Recommendations of the workshop

- it is welcomed by the participants of the SPISE-Workshop
- that it is intended to improve the sustainability of plant protection through suitable measures, and that at the same time the introduction of an obligatory equipment inspection in the MS is proposed as an important contribution to sustainable plant protection.

The participants of the SPISE-Workshop recommend:

- that there should be a clear reference to the EN 13790 standard (which was published back in 2004), in Article 8 “Inspection of equipment in use” of the proposed framework directive on the sustainable use of pesticides, for field crop sprayers and air-assisted sprayers for bush and tree crops – and that EN 13790 would be recognised as the current standard. If this is not possible, an explanation should be given in order to review EN 13790,

- that the EU Commission should clarify the types of application equipment to be inspected,

- that further criteria should be considered in the framework directive, for example, inspection frequency, inspection stickers, mutual recognition … with a view to high-quality inspections,

- that the information packages on plant protection equipment available on the internet (BBA website) were maintained and adapted to the needs of the MS by Belgium, Germany and the Netherlands,

- that it should be considered to develop further standards and inspection protocols for plant protection equipment not covered by EN 13790 but subject to obligatory inspections covered by the framework directive,

- that the SPISE working group should continue its work on promoting harmonisation and mutual recognition of equipment inspections in the MS, and that it may serve as a pool of experts for questions on plant protection equipment and would prepare a 3rd SPISE workshop in collaboration with the EU Commission in the near future.
• **Need for further action of the SWG (1)**

  Spise: appropriate platform for experts of MS for discussing & clarifying the rules/procedures for inspection of sprayers

  • Setting up an appointment with the EC explaining the Spise2 results/recommendation &
  • Clarifying how to deal with these questions of Spise2
  • Delivering the ppts and pictures to the participants (CD-ROM)
  • Preparing and printing the workshop proceedings
  • Underline the need to supplement chapter III, article 8 by essential issues and to take the EN 13790 in clear reference
  • How to continue the cooperation with EurepGap (Spise features are considered in the EurepGap guide lines)
  • How to consider CEMA demands for mutual recognition among MS (to avoid multiple inspections)
  • Continuing the survey about inspections and trends in the MS
  • Maintaining/updating the info packages (BE, DE, NL)
• **Need for further action of the SWG (2)**
  
  Spise: appropriate platform for experts of MS for discussing & clarifying the rules/procedures for inspection of sprayers
  
  • Definition of criterias/limits of acceptance, minor defects and rejection
  • What kind of equipment (PPE) should be inspected (What means “all”?)
  • Definition of minimum calibration package (Where should the calibration be done?)
  • Test procedures for new PPE (and already used PPE)
  • Definition of test procedures and EN standards for PPE not mentioned in the EN 13790 (priority list, to start with a simple approach)
  • Research on EN 13790-P2 – clarifying the gap between patternator and flow rate measurements for field crop sprayers
  • Research on EN 13790-P3 – concerning vertical test benches for air assisted sprayers
  • How can the recommendations of the participants be considered?
  • Preparing a third SPISE workshop in the near future.
  • …
  • How can the performance of the SWG be further developed?
• Expression of thanks / Acknowledgement

• A very great thanks to all of you
• to the members of SC & OC for organising & chairing
• to the staff of the Education Centre for excellent hosting
• to all of you for coming, giving presentations, for discussing and any kind of contribution
• ...
• ...
• ...
• ...
• Seeing you at the next SPISE workshop again