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Actual survey about inspection of sprayers in the European countries

Summary

During the last months of the year 2006 a survey in most of the European countries was carried out. The aim of this survey was to compile information concerning the actual situation of sprayer's inspection. To get this information the responsible colleagues of all countries - where a contact person is known - got a short questionnaire.

1. Introduction

On the occasion of the first SPISE workshop in the year 2004 a similar survey was carried out by the colleagues from Italy. With that information it was pointed out that the situation regarding sprayer inspections in the Member States and other European countries was marked by great differences between the Member States and other European countries. At that time, sprayer's inspections were mandatory by law only in some European countries.

With this present survey the colleagues were asked for data (separate for field sprayers and air-assisted sprayers) regarding

1. the number of sprayers in use,
2. the kind of inspection (mandatory, voluntary, experimental state or no inspection),
3. the number of inspections carried out in the years 2004, 2005 and 2006.

Furthermore there are some questions regarding special characteristics

4. the inspection interval,
5. the average inspection costs,
6. the procedure for brand new sprayers,
7. the indication by stickers,
8. what to do with sprayers where a defect is stated?

27 of 30 asked countries returned during the last months their filled questionnaires. Exactly these countries sent their delegates to attend this workshop. And therefore I would like to take the opportunity to thank all these colleagues for the fruitful cooperation and for their important contribution. I can imagine that especially the determination of the number of sprayers in use and the number of yearly carried out inspections was combined with some problems.

The tables 1 and 2 summarize most of the collected data separated for field sprayers and air-assisted sprayers for bush and tree crops.

Table 1 Inspection of field sprayers in the European Countries

Current status of the inspections	Number of sprayers in use	Inspections mandatory from	Will be mandatory from	Voluntary from	Number of sprayers inspected (average 2004-2006)	After how many years the inspection must be repeated?	Average inspection cost (Euro) from...to...	Brand new sprayers have to be inspected?	May serious defects lead to a prohibition of use?
Austria	38.000			1983	9.800	3	50-160	No	No
Belgium	19.031	1995	-	1989	6.344	3	12 - 142	yes	yes
Bulgaria	4.480				0				
Czech Republic	3.500	1997		1980	1.150	2	100-350	No	Yes
Denmark	30.000	1993	-	-	151	-		No	No
Estonia	?	2000			218	3	32...+transp	No	Yes

Current status of the inspections	Number of sprayers in use	Inspections mandatory from	Will be mandatory from	Voluntary from	Number of sprayers inspected (average 2004-2006)	After how many years the inspection must be repeated?	Average inspection cost (Euro) from...to...	Brand new sprayers have to be inspected?	May serious defects lead to a prohibition of use?
France	200.000	-	2009	1990	0	-	100-250	-	-
Germany	130.100	1993	-	1976	72.809	2	55 - 341	Yes	Yes
Greece	45.089	-	-	-	0	-	-	-	-
Hungary	30.000	-	2007	-	0	2	110-130	No	Yes
Ireland	12.000	-	in future	-	0	-	-	-	-
Italy	200.000	1999 - 2001	-	1988 - 2006	2.300	1 to 5	0 to 206	Yes	Yes
Latvia	2.300	-	in future	-	0	-	-	-	-
Lithuania	15.000	2001	-	-	281	3	28-86	Yes	Yes
Norway	16.800	2006	-	1991	1.950	5	180-300	Yes	Yes
Poland	299.399	1999	-	-	60.500	3	33-42	Yes	Yes
Portugal	56.000	-	-	2.007	0	-	-	No	No
Romania	14.832	-	-	-	0	-	-	-	-
Serbia	18.800	-	2007	-	0	2	?	Yes	?
Slovakia	3.700	2003	-	-	605	2	205 - 230	No	Yes
Slovenija	20.000	1995	-	-	7.172	2	33,00	No	Yes
Spain	70.000	-	2010?	1990	300	4	25-100	No	No
Sweden	19.000	-	-	1987	1.700	2	1740,00	No	No
Switzerland	25.238	1993	-	-	2.980	4	-	-	-
The Netherlands	13.000	1997	-	1976	5.751	3	120-200	Yes/No	Yes
Turkey	-	-	-	-	-	-	-	-	-
United Kingdom	44.000*)	-	-	1997	8.790	1	100 - 650	Yes	Yes

Table 2 Inspection of air-assisted sprayers in the European Countries

Current status of the inspections	Number of sprayers in use	Inspections mandatory from	Will be mandatory from	Voluntary from	Number of sprayers inspected (average 2004-2006)	After how many years the inspection must be repeated?	Average inspection cost (Euro) from...to...	Brand new sprayers have to be inspected?	May serious defects lead to a prohibition of use?
Austria	20.600	-	-	1983	6.500	3	20-140	No	No
Belgium	2.187	1995	-	1989	729	3	12,5 – 62,5	yes	yes
Bulgaria	304	-	2010	-	0	-	-	-	-
Czech Republic	2.500	1997	-	1980	600	2	100-250	No	Yes
Denmark	?	1993	-	-	0	-	-	No	No
Estonia	?	2000	-	-	?	3	32...+transp	No	Yes
France	150.000	-	2009	1990	0	-	100-250	-	-
Germany	50.900	2002	-	1983	22.405	2	25 - 139	Yes	Yes
Greece	107.005	-	-	-	0	-	-	-	-
Hungary	10.000	-	2007	-	0	2	90	No	Yes
Ireland	100	-	in future	-	0	-	-	-	-
Italy	350.000	1997 – 2001	-	1988 - 2006	5.967	1 to 5	0 to 206	Yes	Yes
Latvia	20	-	in future	-	0	-	-	-	-
Lithuania	150	2001	-	-	8	3	28-58	Yes	Yes

Current status of the inspections	Number of sprayers in use	Inspections mandatory from	Will be mandatory from	Voluntary from	Number of sprayers inspected (average 2004-2006)	After how many years the inspection must be repeated?	Average inspection cost (Euro) from...to...	Brand new sprayers have to be inspected?	May serious defects lead to a prohibition of use?
Norway	1.000	2006		1995	58	5	180-300	Yes	Yes
Poland	23.702	1999	-	-	4.155	3	33	Yes	Yes
Portugal	38.000	-	-	2.006	220	1	30-60	No	No
Romania	5.640	-	-	-	0	-	-	-	-
Serbia	2.000	-	2007	-	2	2	130	Yes	?
Slovakia	750	2003	-	-	80	2	215	No	Yes
Slovenija	8.000	1995	-	-	2881	2	33	No	Yes
Spain	140.000	-	2010?	1990	1133	4	25-100	No	No
Sweden	500	-	-	1995	50	2	1800	No	No
Switzerland	3.000	-	-	-	550	-	-	-	-
The Netherlands	2.000	2002	-	1995	828	3	120-180	Yes/No	Yes
Turkey	-	-	-	-	-	-	-	-	-
United Kingdom	2.000*)	-	-	1997	366	1	100 - 650	Yes	Yes

2. Special information

Some special information given by the colleagues responsible in their countries shall be given in the following part:

AUSTRIA: Since many years Austria performs the voluntary inspection of sprayers using an interval of 3 years. The result here is remarkable.

BELGIUM: Belgium has also much experience with the inspection of sprayers. The inspection interval is also 3 years.

BULGARIA: Bulgaria has at present no inspection but plans a mandatory procedure with start in the year 2010.

CZECH REPUBLIC: The Czech Republic introduced the mandatory inspection in the year 1997 and in the meantime there is inspected a considerable part of sprayers in use. The inspection follows in total the requirements given in the EN 13790.

DENMARK: Introduced the inspection of sprayers long time ago. There were inspected only some sprayers per year.

FRANCE: France will change from the voluntary inspection system to a mandatory in future. Unfortunately there are at the moment no recent data concerning the yearly performed inspections available.

GERMANY: Since 1993 for field sprayers and 2002 for air-assisted sprayers the mandatory system is prescribed here. The governments of the Federal Countries are responsible for the inspections. Due to the fact that a valid sticker is relevant also in the frame of the Cross Compliance Regulation there are very good results regarding the participation of the farmers. In the year 2005 in this connection there were carried out 10 700 checks like that and this led only to 35 complaints, that means there were found only 35 sprayers without any inspection sticker. Of course for these certain farmers this leads to cut backs of the subsidies.

GREECE: In Greece at present there exists an inspection system only for brand new knapsack sprayers in the frame of representative samples.

HUNGARY: Hungary introduced a mandatory inspection this spring. All sprayers with a nominal volume with more than 100 litres shall be subject to a periodic system. The EN standard 13790 will be the basis of the organisation. The Plant and Soil protection service will be authorized as supervisor.

IRELAND: The contact point with Ireland is still new and Ireland attends the first time this year. In Ireland at present the state agriculture research, advisory and training institution provides a sprayer operator training course, and in this course the students learn how to inspect and calibrate their own sprayers.

ITALY: The country with the highest sprayer frequency is Italy. Here 1,83 sprayers per square kilometre (whole area of Italy) are to be found. The reason for this is high percentage of air-assisted sprayers for bush and tree crops – 350 000 of such sprayers are used here. In Italy there are different regions with different governments. And these governments didn't introduce the inspection systems at the same time and furthermore different intervals were laid down. Therefore some information are given as range.

LATVIA: Latvia gave the information that at this moment there isn't any sprayer inspections on any legal basis carried out. At present there exists a voluntary sprayer test carried out from some retailers. But in the future, in accordance to the Thematic strategy, there will be introduced a system of mandatory system.

LITHUANIA: Also in Lithuania there is a mandatory inspection system introduced. The interval is three years. The inspection is carried out by seven accredited private inspection centres.

NORWAY: Additional to the information you can see, the delegates from Norway informed us that since the first SPISE workshop, the Norwegian requirements have been harmonised due to the EN 13790-1/2. Furthermore they have included some earlier additional requirements in order to increase the technical level of recently new sprayers, especially due to environmental aspects and more user friendly equipment.

POLAND: Most European field sprayers are used in Poland. Nearly 300.000. All together, that means field sprayers and air-assisted sprayers, we find here more than 1 sprayer per square kilometre of the whole country area. Since 1999 here we have a mandatory inspection of sprayers.

PORTUGAL: The next country in our order today is Portugal. Portugal is also attending the SPISE workshop the first time. Here the inspection service began at 2006. Some inspections in different regions of the countries are carried out in the meantime – some bad results can be explained by wear and tear of the used sprayers – so the information of our colleague there.

ROMANIA: Romania up to now hasn't any regulation for sprayer inspection. But of course there exists concrete considerations concerning the adoption of the EN Standard 13790.

SERBIA: Introduced the mandatory inspection in this year following the requirements given in EN 13790. This is the reason that there aren't any data concerning the performed inspections are available at present.

SLOVAKIA: Slovakia introduced the mandatory inspection of sprayers in 2003 and carried out a certain number of inspections. Nearly 0.1 sprayers per square kilometre can be seen here.

SLOVENIA: Slovenia also has much experience with sprayers. Since 1995 mandatory inspections are existent here. The inspection interval amounts to 2 years. A remarkable part of sprayers is inspected during the last three years.

SPAIN: The situation in Spain is characterised by the planned introduction of a mandatory system in the year 2010. Up to now there are different systems for each local government and only a few inspections can be carried out.

SWEDEN: At the time of the SPISE conference in 2004 the Swedish participants thought that a mandatory testing programme of sprayers was going to be introduced in Sweden. This did not happen due to concerns for the farmers in sparsely populated areas. So we see that in Sweden the voluntary inspection is still seen as suitable.

SWITZERLAND: In Switzerland a mandatory inspection is to be performed every fourth year, related to the obtainment of cross-compliance in the frame of farm subsidies, which concerns 97% of all Swiss farms.

THE NETHERLANDS: Remarkable here is the result of the number of inspections carried out yearly. This can be declared by the fact that last year the Netherlands increased the inspection interval from 2 years to three years.

TURKEY: The colleagues from Turkey certainly returned their questionnaire, but at that time they only could give the information that no inspection is carried out.

UNITED KINGDOM: The United Kingdom, since 1997, carries out inspections of sprayers by a voluntary initiative - named the NSTS -. The NSTS is a voluntary test which is intended as annual test. Unfortunately the numbers of sprayers was not split by field or air-assisted sprayers so the percentage of both is estimated.

3. Conclusions

To sum up the collected data some final graphs are added.

Looking on the figure 1 it can be stated that the involved 25 countries reported an existence of more than 2 Millions of sprayers. In Italy, France, Poland and Spain are located about 75% of these sprayers.

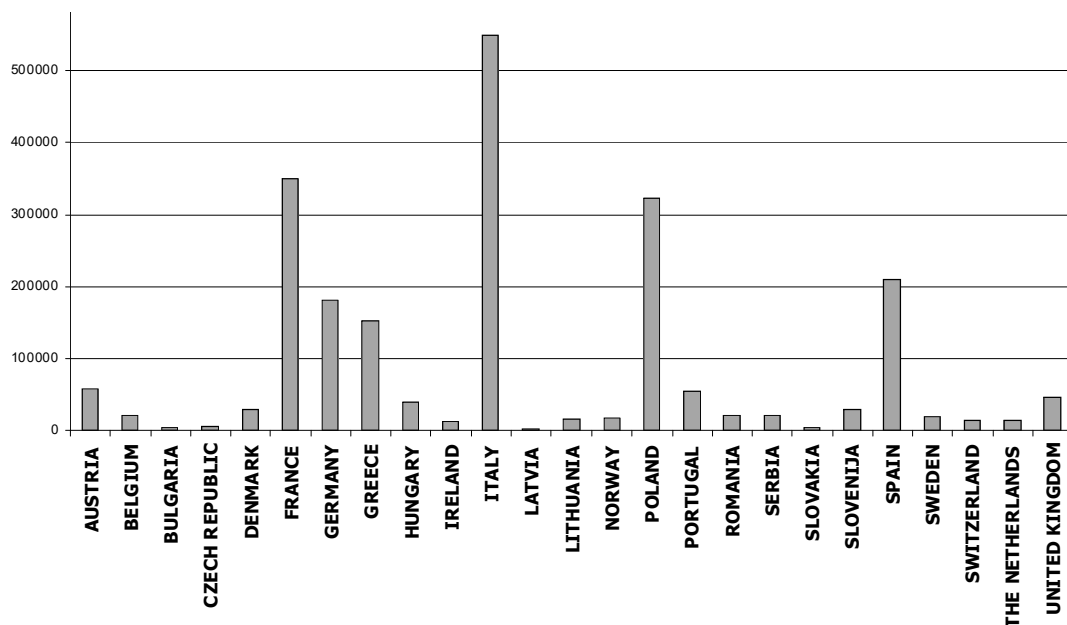


Figure 1 Number of field sprayers and air-assisted sprayers in use

To have an overview in which extent the farmers take part in the offered inspections figure 2 is added. To be able to show results from all countries where the data material was sufficient we had chosen the net graph.

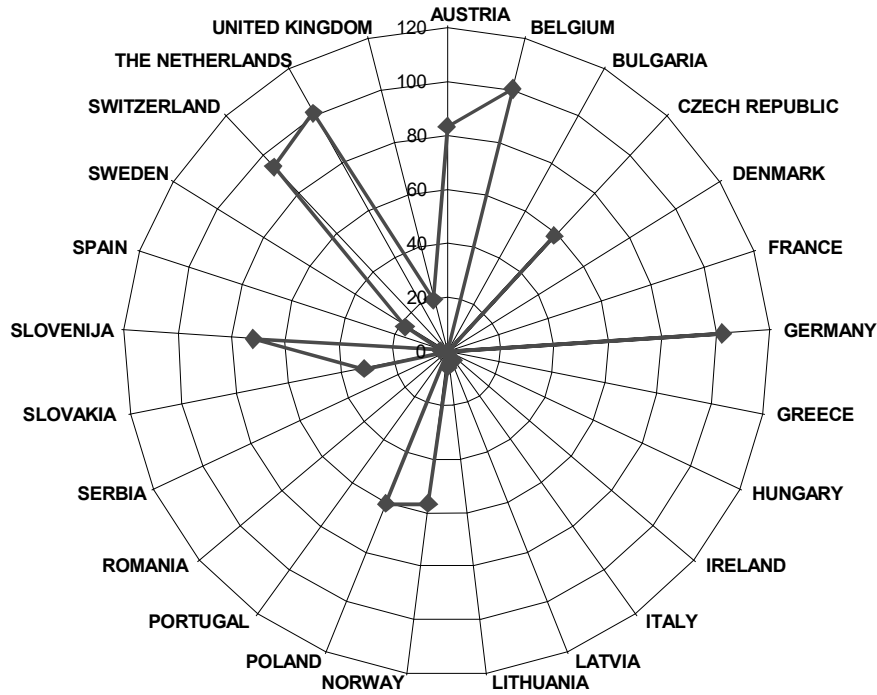


Figure 2 Inspections carried out yearly (average 2004 – 2006) as percentage of the prescribed or recommended inspections.

The calculation of these values is the following: Yearly prescribed or recommended inspections means: Number of sprayers in existence divided by the inspection interval. From this value the percentage of real performed inspections can be found out.

For example Belgium has 21.000 sprayers and an interval of 3 years so there are 7000 inspections yearly possible. There are carried out 7000 inspection and therefore the value reported is 100%.

Belgium, Germany and the Netherlands here are number one with about 100 %.

Finally I would like to show these developments which can be stated since the last SPISE workshop 3 years ago:



Figure 3 Development since SPISE 1 workshop

The number of attending countries shows the growing importance of our common intention!

The second value shows that the reservations against such survey and probably against the inspection of sprayers in general decreased during the last years.

Still two countries carry out no inspection – but today that are not the same countries as 3 years ago!

There are unchanged some countries in which a voluntary system is preferred.

Remarkable is the increasing number of countries where a mandatory sprayer inspection was introduced or will be introduced within the next time and furthermore the increasing number of yearly carried out inspections in the European countries.