

## **Actual survey about inspection of sprayers in the European countries**

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### **Summary**

During the summertime of the year 2009 a survey in most of the European countries was carried out. In view of the publishing of the Frame Work Directive this survey deals among other with some points regarding the implementation of inspection systems. To get this information the responsible colleagues of all countries - where a contact person is known - got a short questionnaire.

### **Introduction**

On the occasion of the first both SPISE workshops in the year 2004 and 2007 similar surveys were carried out. 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 countries in Europe. 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 to 2008.

Furthermore there are some further questions regarding

1. the inspection interval,
2. the average inspection costs,
3. the procedure for brand new sprayers,
4. the indication by stickers,
5. the procedure for sprayers where a defect is stated?
6. the availability of subsidies for the implementation of inspection sites
7. the body which is responsible for implementing the inspection systems
8. the kinds of sprayers inspected at current and planned for next years

26 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 to 3 summarize most of the collected data separated for field sprayers and air-assisted sprayers for bush and tree crops.

**Tab. 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)	Number of sprayers inspected (average 2006-2008)	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	35.000		2012-15	1983	9.367	10.529	3	50-160	No	No
Belgium	19.031	1995	-	1989	6.344	6.344	3	12 - 142	yes	yes
Bulgaria	4.005		2015		0	0				
Czech Republic	6.500	1997		1980	1.150	1.437	3	100-350	No	Yes
Denmark	30.000	1993	-	-	151	61	-	-	No	No
Estonia	?	2000	-	-	218	234	3	48 + transp	No	Yes
France	200.000	2009	-	1990	0	0	5	100-250	-	-
Germany	131.200	1993	-	1976	73.090	72.806	2	55 - 341	Yes	Yes
Greece	45.089	2009	-	-	0	0	-	-	-	-
Hungary	35.000	2005	-	-	0	0	2	?	No	Yes
Ireland	12.000	-	in future	-	0	0	-	-	-	-
Italy	200.000	1999 - 2001	-	1988 - 2006	2.300	2.333	2 to 5	100 - 200	No	Yes
Latvia	2.300	-	in future	-	0	-	-	-	-	-
Lithuania	15.000	2001	-	-	421	805	3	28-86	Yes	Yes
Norway	16.800	2006	-	1991	1.950	1.000	5	180-300	Yes	Yes
Poland	307.250	1999	-	-	55.941	46.465	3	33-42	Yes	Yes
Portugal	28.000	-	2015	2.007	0	0	3 to 5	33+transp.	No	-
Romania	5.876	-	in future	-	0	0	-	-	-	-
Serbia	18.800	2007	-	-	0	0	2	?	Yes	?
Slovakia	3.600	2003	-	-	605	685	2	160 - 350	No	Yes
Slovenia	16.003	1995	-	-	7.172	10.053	2	40	No	Yes
Spain	70.000	-	2010?	1990	300	1.433	5	25-100	No	Yes
Sweden	14.500	-	In future	1987	1.700	1.750	2	~ 300	No	No
Switzerland	13.300	1993	-	-	2.980	3.530	4	60 - 90	Yes	Yes
The Netherlands	13.000	1997	-	1976	5.751	6.580	3	120-200	Yes/No	Yes
Turkey	259.475	-	-	-	-	-	-	-	-	-
United Kingdom	44.000	2003	-	1997	11.424	13.447	1	100 - 650	Yes	Yes

**Tab. 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)	Number of sprayers inspected (average 2006-2008)	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	17.000	-	2012-15	1983	6.000	6.500	3	20-140	No	No
Belgium	2.187	1995	-	1989	729	729	3	12,5 - 62,5	yes	yes
Bulgaria	1.707		2015		0	0				
Czech Republic	1.500	1997	-	1980	74	280	3	100-250	No	Yes
Denmark	?	1993	-	-	0	0	-	-	No	No
Estonia	50	2000	-	-	?	11	3	48+transp	No	Yes
France	150.000	2009	-	1990	0	0	-	100-250	No	-
Germany	41.800	2002	-	1983	20.957	18.679	2	25 - 139	Yes	Yes
Greece	107.005	2009	-	-	0	0	-	-	-	-
Hungary	15.000	2005	-	-	0	0	2	No data	No	Yes
Ireland	100	-	in future	-	0	0	-	-	-	-
Italy	350.000	(1997 - 2001)	in future	1988 - 2006	5.967	4.933	2 to 5	100 - 200	No	Yes
Latvia	20	-	in future	-	11	14	-	-	-	-
Lithuania	150	2001	-	-	8	8	3	35-85	Yes	Yes
Norway	1.000	2006	-	1995	55	50	5	180-300	Yes	Yes
Poland	24.324	1999	-	-	3.843	3.194	3	33	Yes	Yes
Portugal	28.000	-	2015	2.006	180	430	3 to 5	30+transp.	No	-
Romania	2.230	-	-	-	0	0	-	-	No	-
Serbia	2.000	2007	-	-	2	2	2	130	Yes	?
Slovakia	700	2003	-	-	80	102	2	132-250	No	Yes
Slovenia	6.605	1995	-	-	2.881	2.958	2	40	No	Yes
Spain	140.000	-	2010	1990	1.133	933	5	25-100	No	Yes
Sweden	500	-	In future	1995	50	50	2	~ 300	No	No
Switzerland	3.000	1993	-	1987	675	769	4	80-100	Yes	Yes
The Netherlands	2.000	2002	-	1995	831	671	3	120-180	Yes/No	Yes
Turkey	103.490	-	-	-	-	-	-	-	-	-
United Kingdom	46.000	2003	-	1997	9.360	13.055	1	100 - 650	Yes	Yes

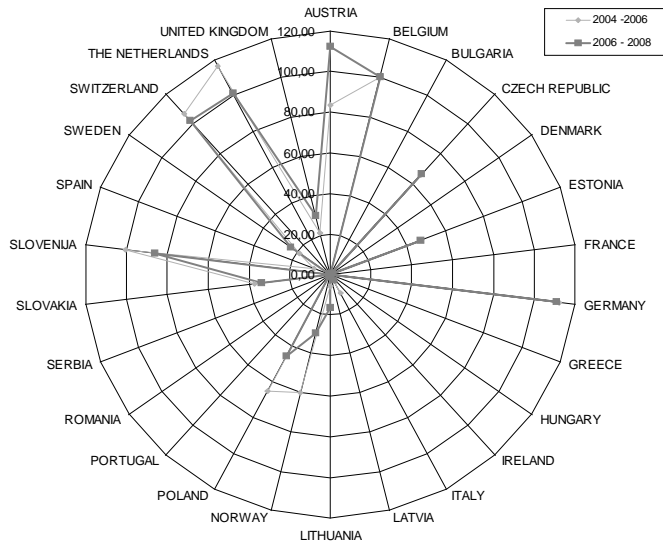
## Assessment

It can be stated that the involved 27 countries reported an existence of 2,5 Millions of sprayers. In Italy, France, Poland and Turkey are located about 75% of these sprayers.

A quite important point for managing the mutual recognition seems to be the inspection interval. Following the current survey it can be seen that the values range between 1 year in UK and up to 5 years in France, Spain and Norway. The average value in the meantime increased from 2.7 to 3.0 years.

To have an overview in which extent the farmers take part in the offered inspections the next two graphs are added. The calculation of these values is the following:

Yearly possible inspections means: Number of sprayers in use divided by the inspection interval. From this value the percentage of real performed inspection can be found out.



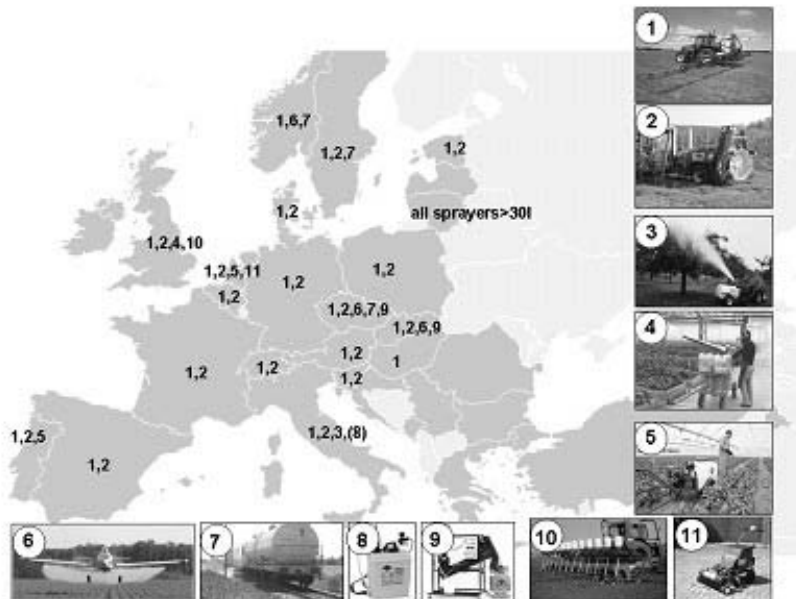
**Fig. 1** Inspections carried out yearly (average 2004 – 2006 and 2006 - 2008) as percentage of the prescribed or recommended inspections

For example the Czech Republic has about 6.500 field crop sprayers and an interval of 3 years so there are 2.166 inspections yearly possible. There are carried out 1.437 inspections and therefore the value reported is 66 %. With light green there are shown the results from the survey from 2006.

It can be seen that in Austria and also in Germany a little bit more than 100 % were reported. Perhaps here the mostly estimated amount of sprayers in use can be the reason for these values. The decreasing amount of inspections in the Netherlands has to do with the changing of the inspection interval from 2 to 3 years.

One of the newer queries dealt with the kinds of sprayers which are to be inspected at present. The following map (Figure 2) shows the assignment of the inspected kinds of plant protection equipment to the countries. All kinds of sprayers which were reported by the contact persons are added as pictures and assigned by following numbers:

1. Field sprayers
2. Air-assisted sprayers,
3. Air-assisted sprayers with spray guns
4. Fogging machines
5. Hand-operated equipment, especially used in greenhouses
6. Sprayers used on aircrafts or helicopters
7. Spraying equipment mounted on trains
8. Knapsack sprayers
9. Seed treaters
10. Slug pellet applicators
11. Sprayers used on pavements



**Fig. 2** Kinds of sprayers inspected at current in the countries of Europe

It can be stated that field sprayers and also air-assisted sprayers are inspected in all answering countries. Furthermore up to 3 other kinds are objects of the inspection schemes.

Another question to this field of interest is the range of equipment in future. Here most countries answered that this is not decided yet. Austria named stationary equipment and combined equipment and others. In Belgium sprayers for soil disinfection and boom sprayers used under glass will be inspected additionally in future. Czech Republic reported handheld sprayers. Germany and the Netherlands announced that in future all sprayers according article 8 will be inspected. Following the proposed derogations in paragraph 3 hand held and knapsack sprayers will be except. In Poland and also in Slovenia the inspection of field crop sprayers and air-assisted sprayers shall not be changed within the next future. Romania announced that in future the field crop sprayers and the air-assisted sprayers shall be tested. In Spain sprayers on aircraft shall become additional subject of inspection.

To manage all that inspection work, the governments have to implement a corresponding amount of inspection sites. Our question in that direction was: "Are there any national or regional subsidies for the implementation of inspection sites available?" The only country where such funds are possible is Sweden. I assume that all countries from where no answer to this question was given will have no kind of subsidy here too.

The question concerning the indication of inspected sprayers by a kind of sticker nearly all countries answered by “Yes”. At the moment only Denmark, Lithuania and Bulgaria still use no inspection sticker.

In paragraph 6 of article 8 of the frame work directive is laid down that each Member State shall designate bodies responsible for implementing the inspection systems and inform the Commission thereof. In those cases where a decision already exists the following table lists the names of these institutions.

**Tab. 3** Responsible bodies following paragraph 6 of article 8

<b>Current status of the inspections</b>	<b>Which body is responsible for implementing the inspection systems?</b>
<b>Austria</b>	Bundesministerium Für Land- und Forstwirtschaft, Umwelt und Wasserwirtschaft (BMLFUW)
<b>Belgium</b>	Federal Agency for the Safety of the Food Chain
<b>Czech Republic</b>	the Ministry of Agric.
<b>Denmark</b>	Ministry of Agriculture and Ministry of Environment
<b>Estonia</b>	Estonian Plant Production Inspectorate
<b>France</b>	GIP PULVES
<b>Germany</b>	Federal Ministry of food, Agriculture and Consumer Protection/The Julius Kühn Institut
<b>Greece</b>	Benaki Phytopathological Institute
<b>Italy</b>	ENAMA/DEAIFA technical workgroup
<b>Lithuania</b>	State Plant Protection Service under Ministry of Agriculture
<b>Norway</b>	federal states
<b>Poland</b>	The authority of the state: among others: Plant Health and Seed Inspection
<b>Portugal</b>	Ministry of the Agriculture
<b>Slovakia</b>	- Agricultural Technical and Testing Institute (in Rovinka), - Central Controlling and Testing Institute in Agriculture (in Bratislava)
<b>Slovenia</b>	Phytosanitary administration RS
<b>Spain</b>	Spanish government and individually the 17 local governments
<b>Sweden</b>	not decided yet
<b>The Netherlands</b>	Dutch ministry of agriculture
<b>United Kingdom</b>	NSTS

## Conclusions

Since the last SPISE 2 workshop there are 2 and a half years gone. Within this time the following development can be stated:

The number of attending countries could not grow because of missing contacts to the not attending countries.

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

Still one country carries out no inspection and voluntary systems are not longer existent.

Remarkable is the increasing number of countries where a mandatory sprayer inspection was introduced or will be introduced within the next time. Following that the number of carried out inspections increased once more.