

The use of phytosanitary products in wine grape 2009-2010 crop year

Istat has made available, for the 2009-2010 crop year, the main results of its sample survey regarding the use of plant protection products in wine grape. Starting from 1998, the survey has been conducted annually and concerns, on a rotation basis, various crops (grapes, apples, olives, corn, soft wheat, durum wheat, barley, oats, potatoes and maize¹) that are relevant in Italy both in terms of cultivated land area and quantity of plant protection products used.

From this year onwards the survey will be conducted in accordance with Regulation (EC) no. 1185/2009 of the Parliament and of the European Council of 25 November 2009 concerning statistics on pesticides. This regulation stems from the need, expressed by the Sixth Environment Action Programme of the European Community, to reduce the impact of pesticides, in particular those used in agriculture, on human health and on the environment. The European Commission has therefore acknowledged the need to have detailed, harmonised, up-to-date statistics on the use of pesticides at the European Community level.

The data tables are available at <http://agri.istat.it>.

Main results

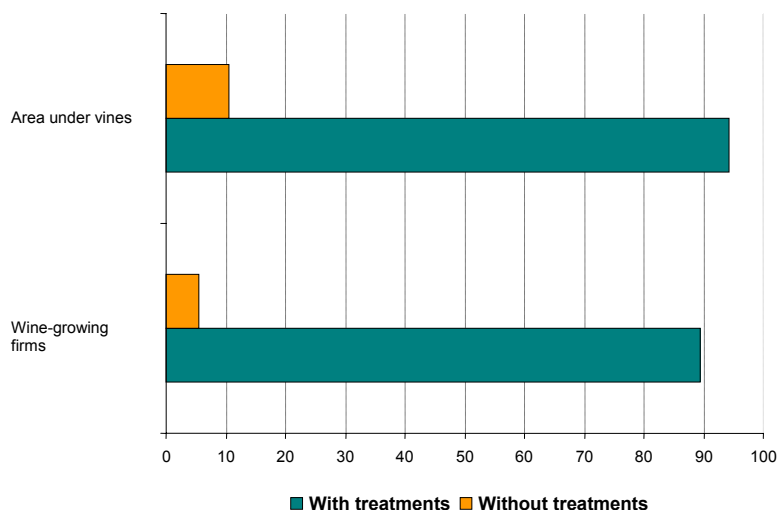
The series of negative seasonal weather patterns which occurred during the 2009-2010 crop year made several interventions necessary in order to defend wine grapes. In total 2.7 million treatments were carried out, an average of 12.3 treatments per hectare of area treated. To carry out these interventions 19.1 million kilograms of plant protection products were used and an average of 26.6 kilograms was distributed per hectare of area treated.

From a comparison between the various crop years in which the survey was conducted on wine grapes (1998-1999, 2004-2005 and 2009-2010) a decrease in the quantity used of active ingredients emerges (-8.6 per cent compared with the 1998-1999 crop year), as well as an increase in area treated.

The percentage of enterprises that carried out these types of phytosanitary defence treatment was 89.6 per cent of the total and, on average, they treated 94.3 per cent of the area under wine grapes (Figure 1). The average size of enterprises which treated their wine grapes (0.6 hectares) was substantially lower than that of enterprises that did not treat them (1.7 hectares).

¹ Previous surveys of the use of phytosanitary products on crops regarded the following crop years and species cultivated: 1998-1999 grapes; 1999-2000 apples; 2000-2001 olives; 2001-2002 corn; 2002-2003 bread wheat, durum wheat, barley and oats; 2003-2004 potatoes; 2004-2005 grapes; 2005-2006 olives; 2006-2007 maize; 2007-2008 bread wheat and durum wheat; 2008-2009 potatoes.

Figure 1. Wine-growing firms and cultivated land area with or without treatments – 2009-2010 crop year (percentage)



Phytosanitary treatments

During the 2009-2010 crop year, 89.4 per cent of wine-growing enterprises carried out fungicidal treatments, 17.7 per cent insecticidal and acaricidal treatments, and 12.2 and 5.9 per cent, respectively, herbicidal or mixed treatments. Specifically, fungicidal interventions (87.5 per cent of total treatments) were carried out on 97.8 per cent of the area treated, while insecticidal treatments (6.9 per cent of total treatments) were carried out on 37.5 per cent of the area subjected to phytosanitary defence interventions. 3.3 per cent of treatments consisted of herbicidal or weedkilling interventions, which were carried out on 36.6 per cent of the area treated, while 2.3 per cent of mixed treatments were carried out on 46.5 per cent of the land area treated (Figures 2 and 3).

Compared with the 2004-2005 period, against a slight increase in the land area treated, an increase in the number of treatments was recorded, from 2.2 to 2.7 million (+25.9 per cent). Fungicidal treatments grew by 15.1 per cent, insecticidal and acaricidal treatments by 178 per cent, and mixed treatments by 162.5 per cent; during the previous period herbicidal treatments had not been carried out (Table 1).

Table 1. Phytosanitary treatments carried out on vine growing by type 2004-2005 and 2009-2010 crop years (in thousands)

| TYPES OF PHYTOSANITARY TREATMENT | Treatments | | | |
|----------------------------------|---------------------|---------------------|-----------------------------|-------------|
| | 2009-2010 crop year | 2004-2005 crop year | Changes 2009-2010/2004-2005 | |
| | | | absolute | percentage |
| Fungicides | 2,399 | 2,085 | 314 | 15.1 |
| Insecticides and acaricides | 189 | 68 | 121 | 177.9 |
| Herbicides or weedkillers | 91 | - | 91 | - |
| Mixed | 83 | 24 | 39 | 162.5 |
| Total | 2,742 | 2,177 | 565 | 25.9 |

Information notes

The survey, which was conducted during November and December 2010, was based on a sample of approximately 1,800 statistical units; the survey unit was the agricultural enterprise. The sampling plan was of the stratified type (the stratification variable was the area under wine grapes) and the sample size to observe in each stratum was defined considering the marked asymmetry which

characterises the distribution of Italian agricultural enterprises in relation to their size. This distribution is in fact characterised by a comparatively high number of small and medium-sized units and a relatively far smaller number of large enterprises. The expected sampling error was 3 per cent.

The response rate of valid interviews was 84.7 per cent.

The data were collected using the CATI (Computer Assisted Telephone Interviewing) technique and regarded the land area treated, the type of phytosanitary products used, the substances and active ingredients contained in them and the number of treatments applied.

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