

Distribution of plant protection products for agricultural use 2009

Istat has made available the main results of its survey, with reference to 2009, of the distribution of plant protection products for agricultural use. The survey was carried out in all enterprises which distribute such products in Italy, either under their own brand or foreign brands.

Plant protection products (also known as agricultural pharmaceuticals, phytomedicines or phytosanitary products) include active substances designed to protect plants or products of plant origin from harmful organisms or prevent their effects, to boost or regulate plants' vital processes, to preserve products of plant origin, to eliminate unwanted plants, to eliminate parts of plants and to hold back or prevent their unwanted growth.

Their spread is assuming increasing interest as a result of greater concern, on the part of public opinion and institutions, with health, food and water quality, and environmental protection.

In general, recent agronomic trends and EU policy guidelines have tended not to increase the quantity of plant protection products distributed and used in crops, instead giving priority to the defence of plants through integrated, organic farming methods as well as maintaining the qualitative characteristics of agricultural produce. Against this background, the statistical data presented make it possible to analyse the potential harmful residues contained in agricultural produce and in water.

Main results

In 2009 the quantity of plant protection products distributed for agricultural use (equal to 147.5 thousand tons) fell by 1.6 percent compared with 2008 (Table 1, in Italian only and Figure 1). The quantity of active ingredients contained in preparations distributed for agricultural use also fell, from 80.7 thousand tons in 2008 to 74.2 in 2009 (-8.0 per cent). At the same time, the concentration of active substances also decreased, from 53.8 to 50.3 percent.

Fungicides accounted for 63.1 percent of the total quantity of active ingredients, while insecticides and acaricides accounted for 10.6 percent, herbicides 10.7 percent, various 15.1 percent and organic products 0.5 percent. With reference to toxicity class, 3.6 percent of phytoiatric substances were very toxic or toxic, 18.7 percent were harmful, while 77.7 percent were defined as unclassifiable. The quantity of toxic and very toxic products distributed decreased by 12.4 percent compared with 2008. There was also a less marked decrease in unclassifiable produce (-1.9 percent), while harmful products recorded a slight increase (+1.8 percent) compared with the previous year.

The quantity of active ingredients allowed in organic farming and contained in plant protection products (56.3 percent of total active substances) fell by less (-6.7 percent) than active ingredients overall (-8.0 percent).

44.9 percent of plant protection products were distributed in the North of Italy, 13.7 percent in the central regions and 41.4 percent in the South (Table 2, in Italian only).

Trends in the distribution of phytosanitary products during the 1999-2009 period

During the ten years from 1999-2009 the quantity of plant protection products distributed for agricultural use fell overall by 10.7 thousand tons (-6.8 percent). Specifically, there was a decrease in fungicides (-13.1 percent), insecticides and acaricides (-23.2 percent) and herbicides (-3.2 percent), while the various categories increased by 79.6 percent (Table 5 in Italian and Figure 2). Very toxic and toxic products by over half (-63.5 percent) and unclassifiable products by 8.4 percent; conversely, harmful formulations increased by 47.6 percent, confirming the positive trend of recent years (Figure 3).

During the 10-year period under consideration the quantity of active ingredients contained in phytosanitary products fell by 7.9 thousand tons (-9.6 percent) overall; specifically, active insecticidal, herbicidal and fungicidal substances decreased (by 34.7, 18.6 and 11.5 percent respectively), while the various category doubled (+52.2 per cent) (Table 5, in Italian only).

An initial analysis of distribution by category of plant protection product shows that the decrease in quantities was generalised. Specifically, and especially for very toxic and toxic products, the decrease was due above all to the use of agronomic practices, encouraged by European and national agro-environmental policies, geared towards reducing the use of technical and chemical means used in agricultural crops.

In addition, it should be pointed out that in recent years plant protection products have undergone significant development which has led to the substitution of molecules conceived a relatively long time ago with new-generation active ingredients, although climate conditions during the various years and crop type constitute a further factor that influences the distribution of the different types of products.

During the ten years in question the concentration of active ingredients in plant protection products decreased by 1.6 percentage points (from 51.9 percent to 50.3 percent) (Table 5, in Italian only and Figure 4). This decline can be ascribed to technological (product and process) innovations as well as to unfavourable weather conditions and the reduction in the surface area under cultivation.

Products of organic origin saw strong growth over the period, from 68.9 to 410.6 tons, while traps rose from 601,000 to 863,000 units. The spread of products of organic origin and of traps constitutes the most innovative segment of distribution, although the quantities produced for consumption are still limited.

Figure 1 – Plant protection products distributed for agricultural use by type – 2009
(percentage change on previous year)

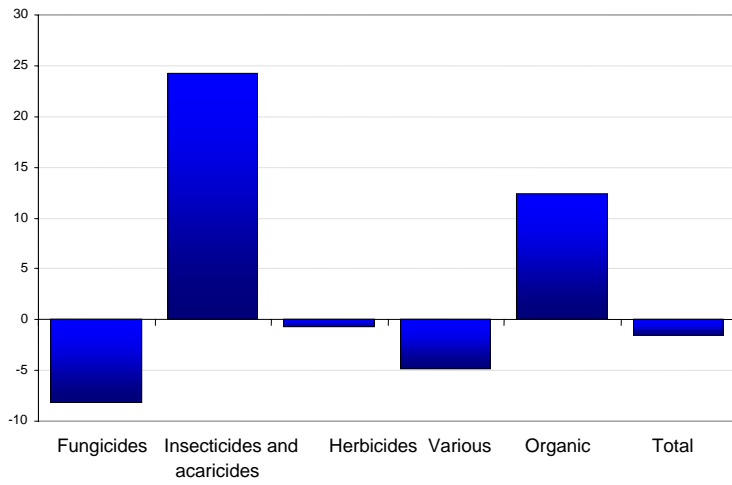


Figure 2 – Plant protection products distributed for agricultural use by category – 1999-2009 *(thousands of tons)*

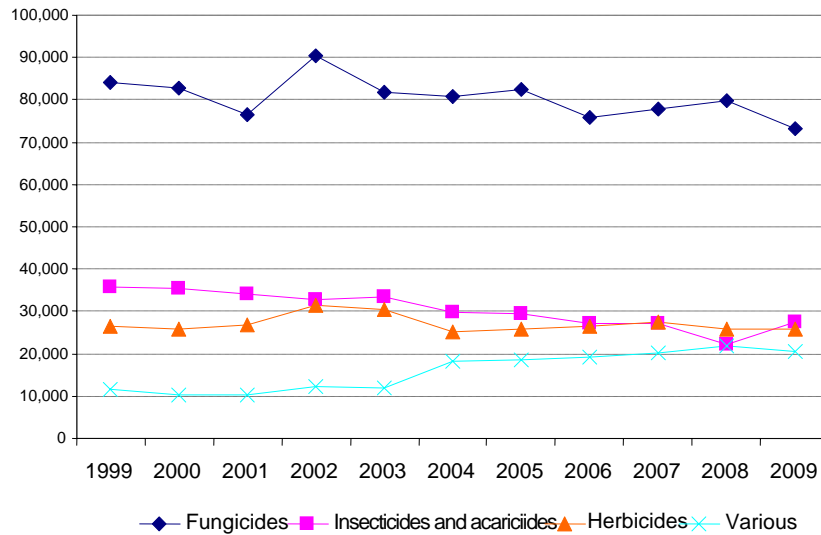


Figure 3 – Plant protection products distributed for agricultural use by toxicity class – 1999-2009 *(thousands of tons)*

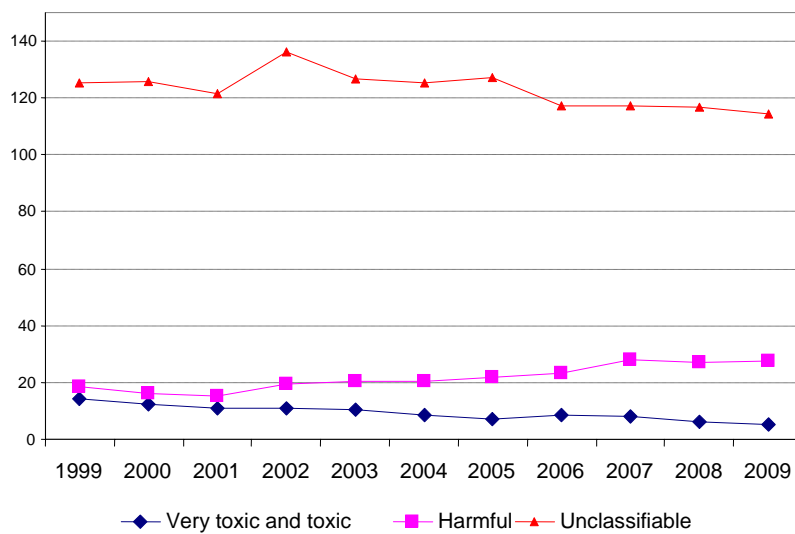
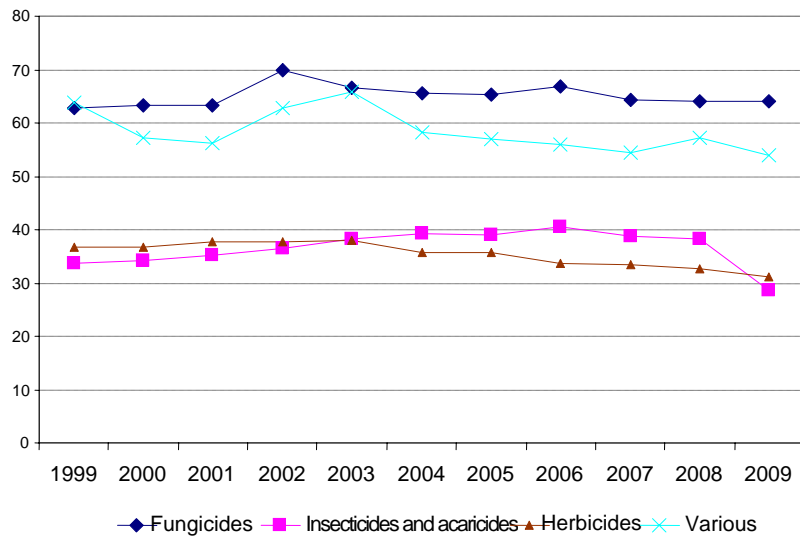


Figure 4 – Concentration of Plant protection products distributed for agricultural use by category – 1999-2009 (percentage)



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