



D A T A Overview L A B



Overview of sales and purchases of crop protection products in France in 2020

MARCH 2022

Over the course of the 2010s, crop protection products' sales have remained high. Of these, however, there was a fall in sales of active substances not falling under organic farming practices or biocontrol (-10% between 2009-2011 and 2018-2020). This is also the case for sales of molecules classified as being of highest concern. The proportion of active substances classified as carcinogenic, mutagenic and reprotoxic (CMR) fell from 28% to 12% between 2009 and 2020. 44% of substances sold are herbicides. The maps of sales largely reflect local agricultural specialisations.

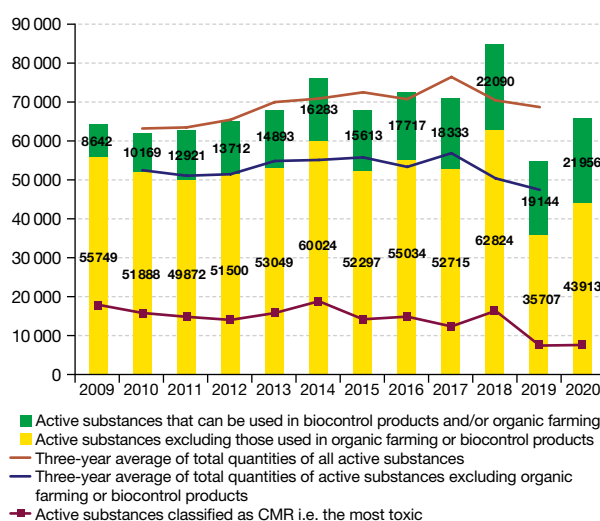
The data in the national data bank of sales by distributors of crop protection products (in French : Banque Nationale des Ventes de produits phytopharmaceutiques par les Distributeurs agréés (BNV-D) relate to quantities of active substances contained in crop protection products and do not include additives (see methodology). The quantities of active substances sold or purchased do not necessarily reflect the place or period of application of the treatments, or the quantity applied (potential build-up of stock, link between purchaser and postal code of their place of business).

DROP IN SALES OF ACTIVE SUBSTANCES NOT FALLING UNDER ORGANIC FARMING PRACTICES OR BIOCONTROL SINCE 2009

During the 2010 decade (between 2009-2011 and 2018-2020), the total quantity of active substances sold in France increased by 9%, while utilised agricultural area (UAA) remain stable (-0.8%). Close to 64,000 t over the 2009-2013 period, sales are about 70,000 t since 2014, with marked annual fluctuations linked to climate effects and storage habits (*graph 1*). Sales of active substances peaked in 2018 (85,000 t i.e. an increase of 20% compared to 2017), followed by a significant drop in 2019 (-55,000 t i.e. a 35% reduction compared to 2018), primarily due to purchases in late 2018 in anticipation of the increase in the tax on agricultural non-point pollution in early 2019. In 2020, sales

Graph 1: change in total quantities of active substances by type of use

In tonnes



Coverage: France as a whole.

Sources: BNV-D, sales data by INSEE distributor municipality code, extracted on 25 November 2021. Processing: OFB (French Biodiversity Office), 2021 and SDES (Data and Statistical Studies Department), 2022

settled at 66,000 t, a level slightly below the average level since 2015.

The evolution of sales by type of use allows us to differentiate between 'traditional' substances on the one hand, for which efforts are under way to reduce their use, and substances that can be used in organic farming and on the other biocontrol products, whose use should increase.

Globally, the quantities of active substances sold that are not used in organic agriculture or biocontrol decreased between 2009 and 2020. An analysis of the three-year average shows a drop in quantities sold of almost 10% between 2009-2011 and 2018-2020, with the 2018-2020

Overview of sales and purchases of crop protection products in France in 2020

three-year value being the lowest in the series, at 47,000 t. As regards sales of active substances that can be used in organic farming and/or biocontrol products, these almost doubled between the same two periods, rising from below 11,000 t to more than 21,000 t.

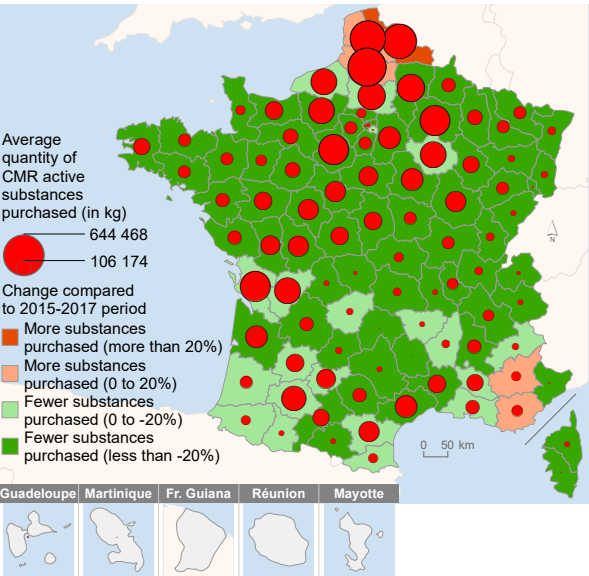
In 2020, 2.6% of sales related to products ‘authorised for use in gardens’ (see methodology).

12.2% OF SALES RELATE TO SUBSTANCES OF HIGHEST CONCERN

The change in the proportion of substances of highest concern to human health has been showing a general downward trend since 2009. Between 2009 and 2020, the share of active substances classified as CMR fell by over 50%, from 28.4% to 12.2% (graph 1).

In France, quantities of the most toxic active substances fell by 23% between the periods 2015-2017 and 2017-2019. 16 departments account for more than half of the total amount of active substances classified as CMR purchased in the period 2018 to 2020 (map 1). With a 2018-2020 three-year average of 644 t, Somme department accounts for the largest amount of products purchased (+1.5% compared to 2015-2017), followed by Pas-de-Calais (547 t, +11%), Nord (521 t, +23%), Marne (404 t, -30%) and Eure-et-Loir (389 t, -22%). Some crops, such as potatoes grown widely across the north of France, are more often treated with fungicides. However, 13% of the fungicides and herbicides sold in 2020 are among the most toxic substances. In the case of insecticides, this share sits at 8%. Sulphur- and copper-based crop

Map 1: 2018-2020 three-year average purchases of active substances classified as the most toxic by department



Notes: quantities of active substances recorded in the form of sales figures are not taken into account (35 t of CMR substances not taken into account in the 8,029 t of CMR substances sold overall in 2020); the data quality is not sufficient to enable an analysis of the trend in purchases within overseas departments. Sources: BNV-D, data from 2015 to 2020 by purchaser postal code. Processing: OFB, 2020 and 2021 and SDES, 2022

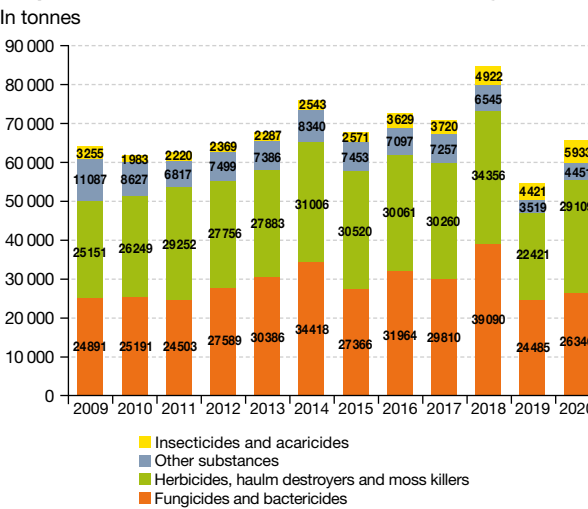
protection products used in viticulture are not classified among the most toxic products, which explains why Gironde sits in 15th position.

44% OF SUBSTANCES SOLD ARE HERBICIDES

In 2020, herbicides represent 44% of substances sold, fungicides and bactericides 40%, insecticides and acaricides 9%, with the remaining 7% distributed among other products, such as growth regulators.

Between 2009-2011 and 2018-2020, the quantities of fungicides sold increased by 21%, herbicides by 6% and insecticides by 105%, while sales of other products fell by 45%. Climate conditions have an impact here: the increased use of fungicides is seen in years with high rainfall, while years marked by high temperatures, such as 2018 and 2020, provide favourable conditions for insects (graph 2).

Graph 2: evolution of sales of active substances by function



Notes: other practices = nematocides, rodenticides, chemical mediators, molluscicides, regulators, repellents, talpicides, etc., including unknown functions; seed treatments are only included in the BNV-D from 2012 onwards and represent less than 1% of active substances sold in 2020. Coverage: France as a whole. Sources: BNV-D, sales data by INSEE distributor municipality code, extracted on 25 November 2021. Processing: OFB, 2021 and SDES, 2022

The distribution of sales by function, type of use and toxicity for the 10 most sold substances in France is available at different scales via the BNV-D's data visualisation tool.

HIGH CONSUMPTION OF HERBICIDES IN NORTHERN FRANCE

As in 2019, the Grand Est, Nouvelle-Aquitaine, Hauts-de-France and Centre-Val de Loire regions had the highest sales of herbicides in 2020.

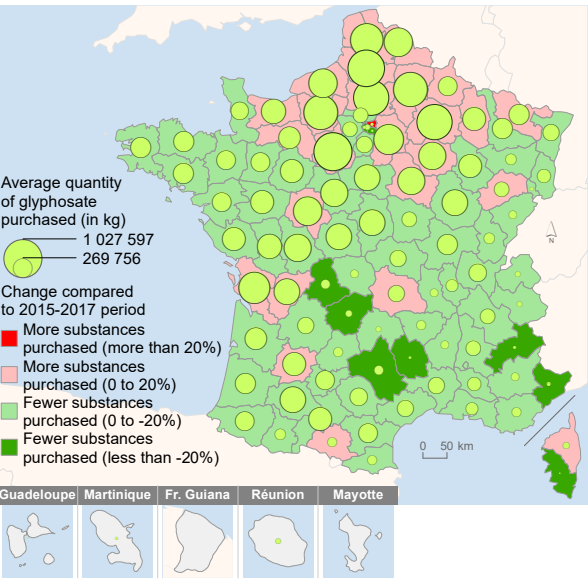
At departmental level, 21 departments account for over half of all herbicides purchased over the 2018-2020 period (map 2). With a 2018-2020 three-year average of over

Overview of sales and purchases of crop protection products in France in 2020

1,000 t, Eure-et-Loir has the highest purchases of herbicide products, followed by Somme (976 t), Marne (924 t), Oise (905 t) and Aisne (823 t). While the purchase data do not directly reflect the usage data, the agricultural surface area and type of crops that characterise these departments are nevertheless explanatory factors. Indeed, these departments have a large utilised agricultural area (UAA) and in particular large areas of arable land: between 335,000 and 512,000 hectares, according to the 2020 agricultural census, well above the national average of 179,000 ha. Oise, along with Aisne, Marne and Somme are the first four departments in terms of beet crop area. Yet, according to the 2017 field crop cultivation practice survey of the Ministry of Agriculture, beet crops receive a very high average number of herbicide treatments compared to other crops (13.7 compared to 2.9 on soft wheat, for example).

In 25% of departments, purchases of herbicide active substances were higher over the 2018-2020 period than the 2015-2017 period (map 2). This mainly concerns the departments situated in the northern half of France.

Map 2: 2018-2020 three-year average herbicide purchases by department



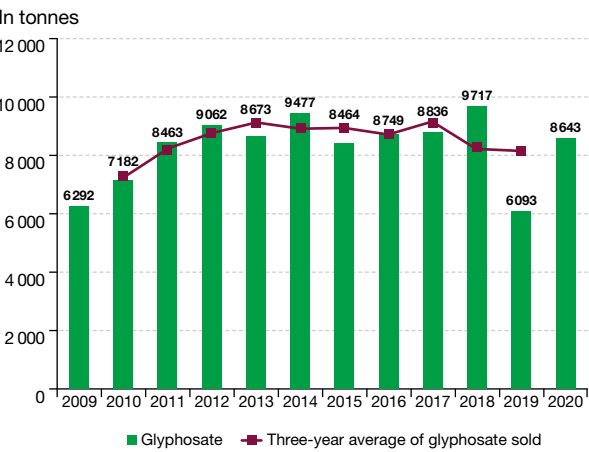
Notes: of a total of 28,354 t of herbicide active substances sold in 2020, 113 t (0.4%) were recorded with a postal code of 00 or 00000; it is not therefore possible to determine a location for the purchasers of these sales; the data quality is not sufficient to enable an analysis of the change in purchases within overseas departments. Sources: BNV-D, data from 2015 to 2020 by purchaser postal code. Processing: OFB, 2020 and 2021 and SDES, 2022

BOX 1

Glyphosate – the most used herbicide

Glyphosate belongs to the family of aminophosphonates or organophosphorus pesticides. It is a total systemic foliar weedkiller, i.e. a non-selective herbicide absorbed by the leaves and having a generalised action. The expiration of the patent, which fell into the public domain in 2000, led to the production of numerous generic products and to a reduction in the price of this herbicide and to its generalisation. The molecule and/or products that contain it are classified as toxic to aquatic organisms with long-lasting effects. Given the uncertainties relating to the hazardness of this substance, and in particular its carcinogenic nature, France is committed to phasing out glyphosate use. After sulphur, of which 13,000 t are used in traditional and organic agriculture, it is the second most used active substance in France: 8,600 t sold in 2020, 6,100 t in 2019 and 9,700 t in 2018, representing 12% of total sales over the 2018-2020 period (graph 3).

Graph 3: evolution in quantities of glyphosate sold



Coverage: France as a whole. Sources: BNV-D, sales data by INSEE distributor municipality code, extracted on 25 November 2021. Processing: OFB, 2021 and SDES, 2022

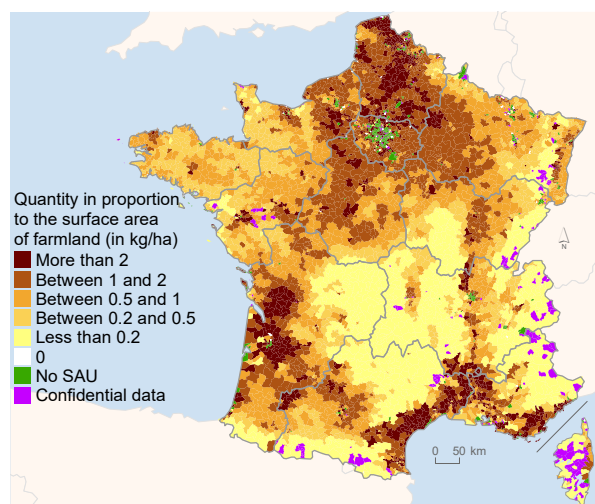
Over the 2009-2020 period, it was also the most sold herbicide at national level among the 120 active substances used as herbicides, with a relatively stable share of around 28%. Sales of products authorised for use in gardens reach a peak of 24% of total glyphosate sales in 2013. After 2013, sales of products authorised for use in gardens fell significantly following a ban on use, initially for public corporations and local authorities on 1 January 2017, and then for private users of crop protection products, excluding biocontrol products, on 1 January 2019 (2014 Labbé Law and 2017 Pothier Law). In 2020, sales of these products had fallen to very low levels, representing less than 1% of total glyphosate sales (compared with 5% in 2019 and 10% in 2018). The latter uses of products authorised for use in gardens are uses by professionals (farmers, local authorities, etc.), looking for smaller packaging.

ACTIVE SUBSTANCE USE CLOSELY LINKED TO LOCAL AGRICULTURAL SPECIALISATIONS

Since 2015, the data on the quantities of active substances sold have been reliably available at purchaser postal code level. In the case of agricultural uses, the postal code relates to the place of the farm, which does not give the precise location or period of application of the product purchased. Indeed, the farmed parcels may be situated in municipalities with a different postal code and some products may be stored.

Over the 2018-2020 period, the municipalities with the highest number of purchases of active substances (excluding those used in organic farming and biocontrol products) in proportion to the farms' UAA are often situated in field crop and permanent crop areas (viticulture, fruit or other permanent crops) – (maps 3 and 4).

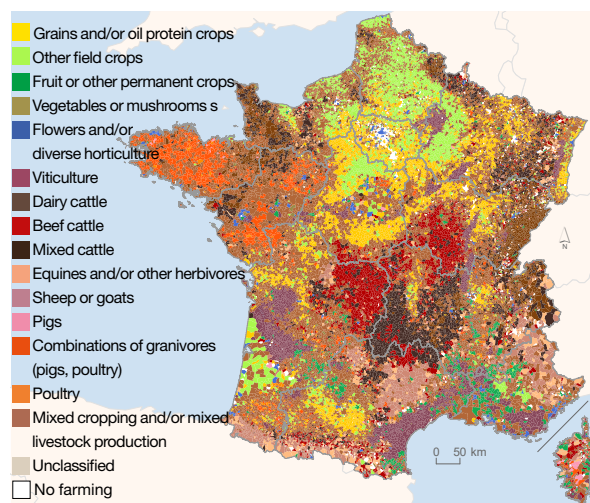
Map 3: the purchase quantities of active substances excluding organic farming or biocontrol products in proportion to the UAA, by postal code, over the 2018-2020 period



Notes: purchases of active substances (excluding organic farming and biocontrol products) by purchaser postal code, in proportion to the UAA of farms with seat of farmotex in the postal code area in question (excluding postal codes in which the number of farms is five or fewer).

Sources: BNV-D, data from 2018, 2019 and 2020 by purchase postal code. Department of Statistics and Foresight Analysis (SSP): agricultural census 2020 (provisional data). Processing: OFB, 2020 and 2021 and SDES, 2022

Map 4: distribution of economic and technical orientation (ETO) by municipality in France in 2020



Sources: Agreste, agricultural census 2020 (provisional data)

METHODOLOGY

The BNV-D has included sales data by INSEE distributor municipality code since 2009. Sales data by purchaser postal code (referred to here as 'purchases') have reliably been available since 2015. Provision of purchaser postal code is only mandatory where distributors sell to professional users. The crop protection products can be sold under two main usage categories depending on whether they have 'authorised for use in gardens' status or not. Only people who can prove their professional user status and who have a certificate of compliance (called Certiphyto) can purchase products that are 'not authorised for use in gardens'. Purchase data for 2013 to 2019 were extracted on 26 November 2020 and purchase data for 2020 on 25 November 2021.

(see detailed methodology linked to the publication).

FIND OUT MORE

- [Active substance sale and purchase data visualisation application](#)
- [2017 field crop cultivation practice survey](#)
- [Environment and agriculture – key figures – 2018 edition](#), CGDD/SDES, Datalab, June 2018, 122 p.

Sandrine PARISSE, SDES

Legal registration: March 2022
ISSN: 2557-8510 (online)

Publication director: Béatrice Sédillot
Editorial coordination: Laurianne Courtier
Maps: Antea
Modelling and implementation: Agence Efil, Tours

General Commission for Sustainable Development

Statistical Data and Studies Service (SDES)

Sub-Directorate for Environmental Information

Tour Séquoia - 92055 La Défense cedex

Email: diffusion.sdes.cgdd@developpement-durable.gouv.fr

www.statistiques.developpement-durable.gouv.fr