

18 July 2018

**Survey on the use of water in the agricultural sector (SUWAS)
Year 2016**

**The volume of irrigation water used in the agricultural sector in
2016 was similar to that of the previous year**

The volume of irrigation water used by agricultural holdings amounted to 14,949 cubic hectometres in 2016, a similar figure to that of 2015.

By irrigation technique, the volume of water applied to crops by drip irrigation (localised irrigation) increased by 2.6% and the use of sprinkler irrigation increased by 2.2%. In turn, gravity irrigation decreased by 4.5%.

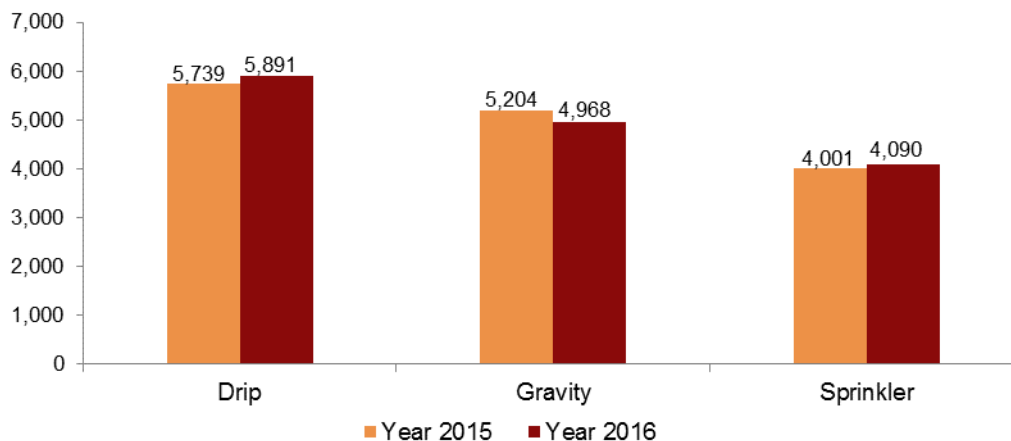
Water volumes by irrigation technique. Year 2016

Unit: thousands of m³

	Year 2016	% of the total	% annual variation
Drip	5,890,738	39.4	2.6
Gravity	4,967,791	33.2	-4.5
Sprinkler	4,089,971	27.4	2.2
National total	14,948,500	100	0.0

Water volumes by irrigation technique. Year 2016

Unit: cubic hectometres



By type of crop, herbaceous crops (cereals, legumes, rice, maize and forage crops), which accounted for 55.7% of the total volume of irrigation water, used 0.9% more water than the previous year.

Potato and vegetable crops recorded the largest increase, with 11.4% more water used than in 2015.

In turn, the water used fell by 11.0% in olive groves and vineyards, by 3.6% in fruit crops and by 0.3% in other types of crops.

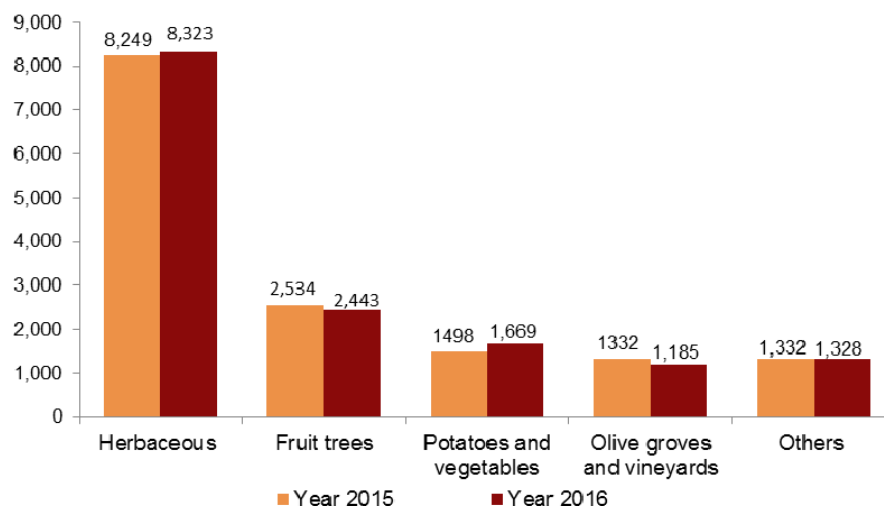
Water volumes by type of crop. Year 2016

Unit: thousands of m³

	Year 2016	% of the total	% annual variation
Herbaceous	8,323,014	55.7	0.9
Fruit trees	2,443,412	16.3	-3.6
Potatoes and vegetables	1,668,854	11.2	11.4
Olive groves and vineyards	1,185,466	7.9	-11.0
Others	1,327,754	8.9	-0.3
National total	14,948,500	100	0.0

Water volumes by type of crop. Year 2016

Unit: cubic hectometres



Water availability

75.0% of the volume of water available for irrigation in 2016 was of surface source.

On the other hand, 23.1% came from underground sources and 1.9% from other water resources, such as desalinated water (marine or brackish) or reclaimed water (from wastewater treatment plants).

Volumes of water available by source. Year 2016

Unit: thousands of m³

	Year 2016	% of the total
Surface water	13,812,391	75.0
Groundwater	4,249,215	23.1
Other water resources	347,928	1.9
National total	18,409,534	100

Results by Autonomous Communities

Among the Autonomous Communities that exceeded 1% of the total irrigated areas, the ones that used the most irrigation water in 2016 were Andalucía (27.3% of the total), Aragón (13.6%) and Castilla y León (13.4%). And those with the least were La Rioja (1.1%), Comunidad Foral de Navarra (2.6%) and Región de Murcia (3.6%).

The three Autonomous Communities in which the use of irrigation water increased the most were Castilla-La Mancha (14.5%), Extremadura (7.7%) and Cataluña (5.4%).

In turn, those that reduced the use of irrigation water the most were La Rioja (-25.6%), Castilla y León (-7.7%) and Andalucía (-3.1%).

Volumes of irrigation water by Autonomous Community. Year 2016

Unit: thousands of m³

	Total	% of the total	% annual variation
National total	14,948,500	100.0	0.0
Andalucía	4,086,586	27.3	-3.1
Aragón	2,032,466	13.6	0.7
Castilla y León	2,008,631	13.4	-7.7
Castilla-La Mancha	1,655,033	11.1	14.5
Cataluña	993,388	6.6	5.4
Comunitat Valenciana	1,234,802	8.3	1.4
Extremadura	1,577,803	10.6	7.7
Murcia, Región de	531,117	3.6	-2.4
Navarra, Comunidad Foral de	392,940	2.6	-2.3
Rioja, La	167,446	1.1	-25.6
Remaining Autonomous Communities ¹	268,288	1.8	-7.9

¹ All the Autonomous Communities with an irrigated area of less than 1.0% of the national total are grouped under the heading "Rest of Autonomous Communities".

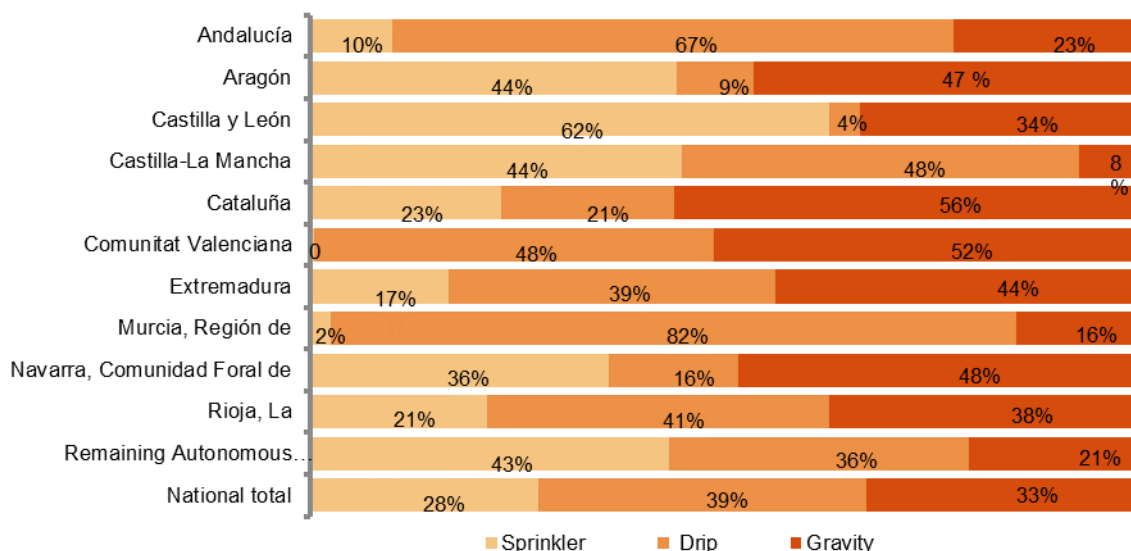
By irrigation techniques, the Autonomous Community that used the most drip irrigation water was Andalucía. In gravity irrigation, the largest volume used corresponded to Aragón, and in sprinkler irrigation, to Castilla y León.

Water volumes by Autonomous Community and irrigation technique. Year 2016

Unit: thousands of m³

	Sprinkler	Gravity	Drip	Total
National total	4,089,971	4,967,791	5,890,738	14,948,500
Andalucía	404,696	929,598	2,752,292	4,086,586
Aragón	894,285	949,162	189,019	2,032,466
Castilla y León	1,251,377	680,927	76,327	2,008,631
Castilla-La Mancha	739,800	125,782	789,451	1,655,033
Cataluña	228,479	559,278	205,631	993,388
Comunitat Valenciana	4,744	636,118	593,940	1,234,802
Extremadura	261,311	696,904	619,588	1,577,803
Murcia, Región de	13,277	80,200	437,640	531,117
Navarra, Comunidad Foral de	140,906	190,837	61,197	392,940
Rioja, La	35,498	62,960	68,988	167,446
Remaining Autonomous Communities	115,598	56,025	96,665	268,288

Water volumes by Autonomous Community and irrigation technique, in percentage. Year 2016



Methodological note

The INE conducts the *Survey on the Use of Water in the Agricultural Sector* every year in order to estimate the volume of irrigated water used by agricultural holdings. The sample of the 2016 survey was made up of 557 irrigation communities.

The Central Business Register (CBR) was used as a reference framework, as well as other complementary information from the administrative registers of the Ministry of Agriculture and Fisheries, Food and Environment.

The selection of the sample is comprehensive for those irrigation communities that group together agricultural holdings with a total surface area of more than 2,000 hectares. Communities with a surface area less than this magnitude are investigated by sampling, selecting a quota of entities previously stratified by size, using an allocation with a compromise between uniform and proportional.

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