

Spain dossier summary

Irrigation water, climate, fertilisers and crops. The essentials from the 30-page dossier.

Key figures

Figure	What it means
17.4 bn m³	Water abstracted for irrigation in 2020, 18.5% less than in 2010 (Eurostat).
59%	Share of freshwater abstracted in Spain in 2020 that is used for irrigation. Within agriculture, forestry and fishing, irrigation accounts for 92% (Eurostat).
2.74 Mha	Irrigated area in 2023, 11.7% of utilised agricultural area (Eurostat).
1,885 Mm³	Water saved per year in the central scenario, 11% of irrigation abstractions. Range from 0.9 to 3.8 bn m³ per year.
551 M€	Approximate annual value in the central scenario, at €0.22/m³, including the yield gain.
75.1 bn€	Agri-food exports in 2024, compared with 55.9 bn€ of imports (MAPA-Mercasa).
871,886 t	Mineral nitrogen used in 2024 (Eurostat). Indicative expenditure reached 1.2 bn€ that year.

bn = billions · M = millions · Mm³ = million cubic metres · t = tonnes. The savings are scenarios constructed from trials cited in the dossier; they are not measurements carried out in Spain.

Our products

Green Solutions develops products for water, fertilisation and crop protection. This document covers four product families.

Product	Stated use	Published evidence (level)
EVERGREEN® (hydrogel)	Retains rainwater or irrigation water as a gel, close to the roots.	Trials on maize, potato, watermelon, date palm and soya (sections 8 and 9). Level B to C.
ECOSORB® (corn starch-based hydrogel)	Same use; duration of 2 to 3 years according to the website.	Soya trial (China); laboratory acrylamide analysis. Level B to C.
ECOFERT® (fertiliser)	Fertiliser certified by SOHISCERT and EU Bio.	Published certificate; potato trial combined with EVERGREEN®. Level A (certificate), C (results).
Paulownia ALTIFOLIA®	Fast-growing tree for agroforestry.	Figures from the website; no trial in Spain. Level C.
Water Vital®, NAPEMA®	Outside the scope of this document.	No independent source in the documents consulted.

Key points

- **Irrigation is the main use of water.** It accounts for 59% of freshwater abstractions. This volume has fallen by 18.5% since 2010.
- **Irrigated land is concentrated.** Andalucía, Castilla-La Mancha, Castilla y León and Aragón account for around 70% of irrigated area.

- **The climate varies greatly.** Solar radiation ranges from 1,267 kWh/m² per year in Oviedo to 2,091 kWh/m² in Santa Cruz de Tenerife.
- **Fertilisers are expensive.** Nitrogen used fell from 1,059,299 t in 2020 to 871,886 t in 2024. Indicative expenditure reached 1.4 bn€ in 2022, at the price peak, and 1.2 bn€ in 2024.
- **Water savings are potential.** In the central scenario, they would amount to 1,885 Mm³ per year. The gains depend on the crop. Maize and vegetables benefit more in the trials; cereals, which are widespread, benefit less; potato is based on a single trial.
- **Trade depends on water.** Spain imports 9.4 Mt of maize, compared with 3.5 Mt produced on its territory, 88% of which is grown on irrigated land.

How to read the figures

Each figure refers to a source with a confidence level. A: Official statistics or an international database (Eurostat, World Bank, European Commission). B: Research institute, university, laboratory or non-statistical public body. C: Manufacturer statement, non-independent demonstration, press report or estimate. The sources are listed in appendix A of the dossier.

Water saved by crop (central scenario)

Eight crops total 1,362 Mm³ per year, 72% of the savings in the central scenario.

Crop	Irrigated area (ha)	Water saved (Mm³/year)
Grain maize	229,550	283.7
Olive	430,760	273.0
Nuts (almond, walnut…)	241,837	153.3
Fresh vegetables, melons and strawberries	79,630	152.7
Barley	236,832	150.1
Vineyard (grapes)	191,120	121.1
Green fodder	183,740	116.4
Citrus fruit	176,000	111.5

The calculations cover 2.58 of the 2.74 million hectares of irrigated land that Eurostat breaks down by crop. Full table in section 8.5 of the dossier.

Where irrigated land is located

Five communities total 1,476 Mm³ per year in the central scenario, 78% of the total.

Community	Irrigated area (ha)	Share of irrigated land	Water saved (Mm³/year)
Andalucía	653,570	13.9%	421.5
Castilla y León	415,290	7.9%	344.8
Castilla-La Mancha	418,390	10.2%	294.8
Aragón	383,190	17.8%	252.5
Extremadura	213,840	7.7%	162.3

Share of irrigated land: Portion of agricultural land that is irrigated (Eurostat, 2023). The 19 statistical regions are listed in section 6 of the dossier.

Foreign trade

- Fruit (6.95 Mt) and vegetables (6.56 Mt) were exported in 2024, mainly from the south and east.
- Barley imports fell from 3.4 to 1.6 Mt between 2023 and 2024; wheat imports, from 9.7 to 7.9 Mt.

Full dossier: 30 pages, with sources (appendix A) and calculation method (appendix B). Green Solutions · contact@green-solutions-group.com · green-solutions-group.com