

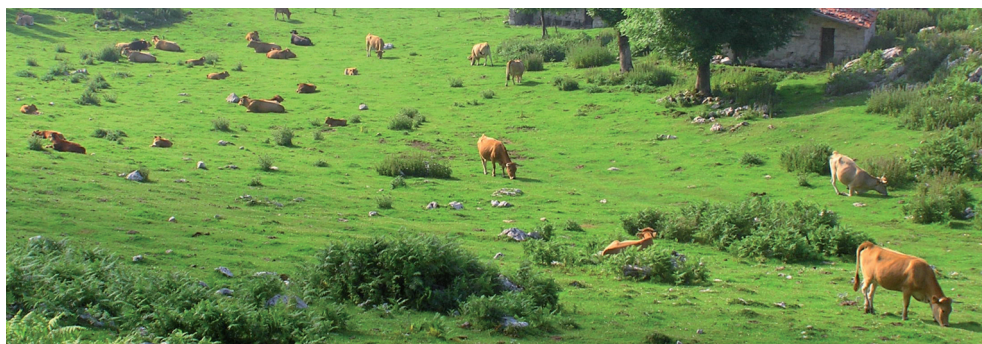
AGRICULTURE 2.8



Agriculture is a strategic sector due to its contribution to maintaining the population and economic activity in rural areas. Furthermore, the sector currently faces the challenge of responding to the need for food worldwide in a sustainable and environmentally friendly manner.

In Europe this concern about achieving sustainable agriculture is present in the new strategy "Europe 2020. A strategy for intelligent, sustainable and inclusive growth." The Agriculture Council held a debate at its meeting on 29 March, 2010 regarding the role that should be played by agriculture and Common Agricultural Policy (CAP). This strategy states that sustainable, productive and competitive agriculture is essential, bearing in mind the potential for growth and employment in rural areas.

Similarly, the European Commission Communication "The CAP towards 2020: Meeting the food, natural resources and territorial challenges of the future" assigned the following three main objectives to the CAP: viable food production, which will help to increase and stabilise farmers' incomes; management of natural resources to ensure viable and sustainable production practices and ensure the provision of environmental public goods; and balanced territorial development to support rural employment and maintain the social framework of these areas.



The challenge of a green economy, more environmentally friendly, must take agriculture into account as it occupies the largest proportion of community territory

KEY MESSAGES

Annual fertiliser consumption rose by 35.6% in 2010 following the decrease recorded in the two previous years.

In 2010, the use of phytosanitary products, in kg per hectare of active ingredient, was up by 12% on 2009, breaking the downward trend of previous years.

The area devoted to organic farming in Spain increased in 2010 by 3%. This increase puts Spain at the top of the European Union for the third consecutive year in terms of the number of hectares set aside for organic farming.

The number of organic livestock farms increased by 12% in 2010. Andalusia holds first place with 56.7% of farms, followed by Catalonia with 9.6%.

Irrigated area recorded an increase of 1.9% in 2011 to 3,473,474 hectares, 13.8% of total agricultural area.

In 2010, a link is observed between economic growth in the sector and the use of phytosanitary products and fertilisers

INDICATORS

- Fertiliser consumption
- Phytosanitary product consumption
- Organic farming
- Organic livestock farming
- Irrigated area
- Eco-efficiency in agriculture

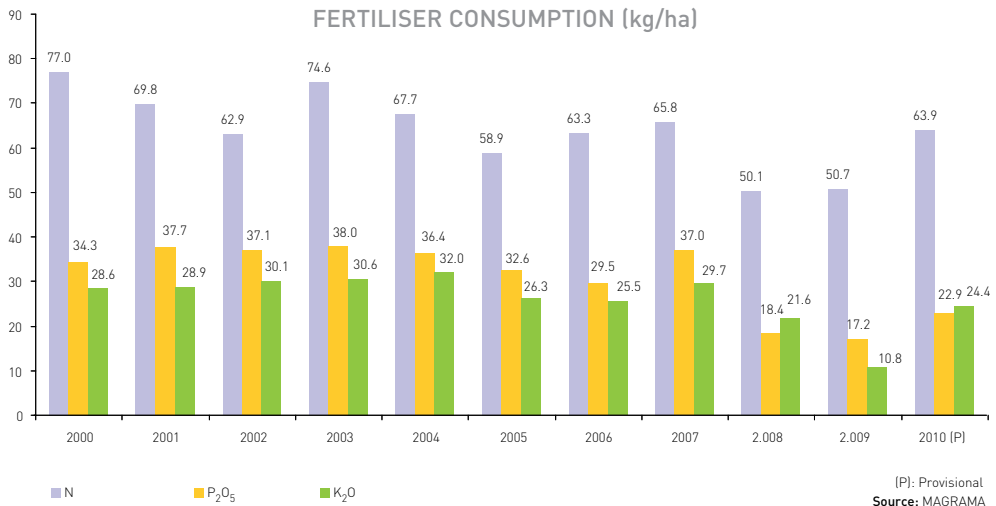
2.8 AGRICULTURE

and plays a vital role in the sustainable use of resources, the conservation of natural habitats and biodiversity as well as combating climate change.

Food and agriculture are undoubtedly at the heart of the challenges for the future of Europe and its objective of overcoming the crisis with intelligent, sustainable and inclusive growth.

Fertiliser consumption

Fertiliser consumption increased by 35.6% in 2010 in regard to 2009, returning to average consumption values for the last decade



According to provisional data, fertiliser consumption per hectare in 2010 (expressed as a nutrients) amounted to 111.2 kg/ha, up by slightly more than 35.6% on 2009. This significant increase has seen the consumption of nutrients return to the average values for the last decade following two consecutive years of decline. However, this overall increase was not uniform across each of the types of nutrients. N increased by 26% and P₂O₅ by 33%, while consumption of K₂O more than doubled (126%).

Analysis of provisional data by agricultural year (running from July to June of the following year) rather than by calendar year, reveals that mineral fertiliser consumption during in 2010/2011 increased by 24.6% in regard to the previous agricultural year.

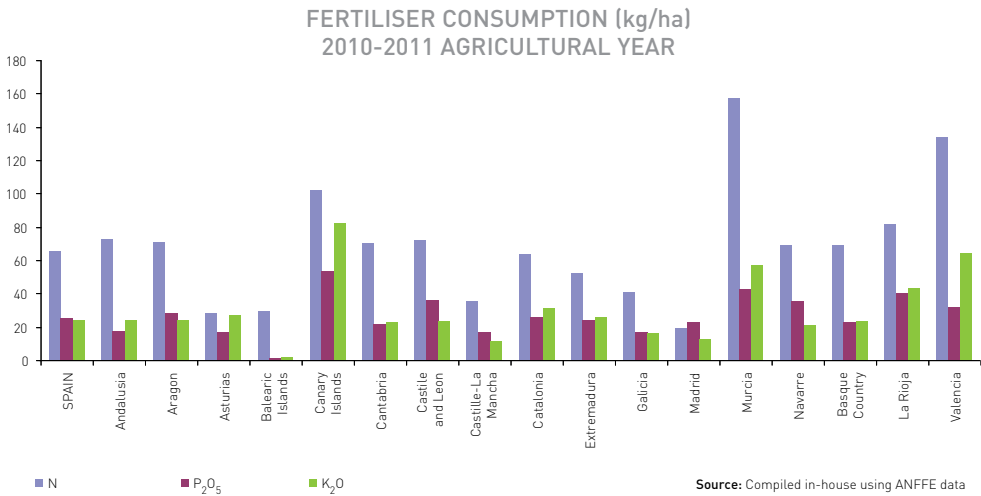
FERTILISER CONSUMPTION

By commercial product (1,000 t)	2006/07	2007/08	2008/09	2009/10	2010/11
Simple nitrogen fertilisers	2,387	2,360	2,027	2,062	2,455
Simple phosphate fertilisers	183	251	69	101	164
Simple potash fertilisers	267	245	90	149	212
Complex fertilisers	1,973	2,281	911	1,458	1,866
Total fertilisers	4,810	5,137	3,097	3,770	4,697
By fertiliser element (1,000 t)	2006/07	2007/08	2008/09	2009/10	2010/11
Total N	938	973	720	813	967
Total P ₂ O ₅	461	527	153	324	368
Total K ₂ O	411	432	181	274	363

By fertiliser element, nitrogen consumption increased by 19%, while phosphate and potash fertilisers increased by 14% and 33.3% respectively.

Analysis by fertiliser type (as a commercial product) shows a general but heterogeneous increase. In this sense, consumption of simple nitrogen fertilisers rose by 19.2% over the last year, while simple phosphate fertilisers were up by 62.2% and simple potash fertilisers by 41.8%.

Fertiliser consumption is directly related to agricultural intensity. As in previous years, Murcia, Valencia, the Canary Islands and, albeit to a lesser extent, La Rioja were the autonomous communities that recorded the highest consumption of products per hectare.



NOTES

- Fertilisable area is farmland (excluding fallow and other unoccupied land) and natural grasslands.
- Fertiliser: product mainly intended to provide nutrients to plants.
- Nutrient: chemical element essential for plant life and growth. In addition to carbon (C), oxygen (O) and (H) hydrogen, which come from air and water in particular, nutrients are classified as: primary nutrients, secondary nutrients and micronutrients. Primary nutrients are exclusively nitrogen (N), phosphorus (P) and potassium (K).
- Inorganic or mineral fertiliser: fertiliser obtained by extraction or by physical or chemical industrial processes whose declared nutrients are present in mineral form.
- Simple fertiliser: nitrogen, phosphate or potash fertiliser with a declared content of a single main nutrient.
- Compound fertiliser: fertiliser obtained chemically or by mixing, or by a combination of both, with a declared content of at least two main nutrients.
- Complex fertiliser: compound fertiliser obtained by chemical reaction, in solution or solid form as granules, with a declared content of at least two main nutrients. In solid form, each granule contains all the nutrients in its declared composition (as per the definitions established by Royal Decree 824/2005 of 8 July, on fertiliser products).
- The period used to measure fertiliser consumption runs from July to June of the following year.
- The chart includes the nitrogen, phosphorus and potassium provided by complex fertilisers.

SOURCES

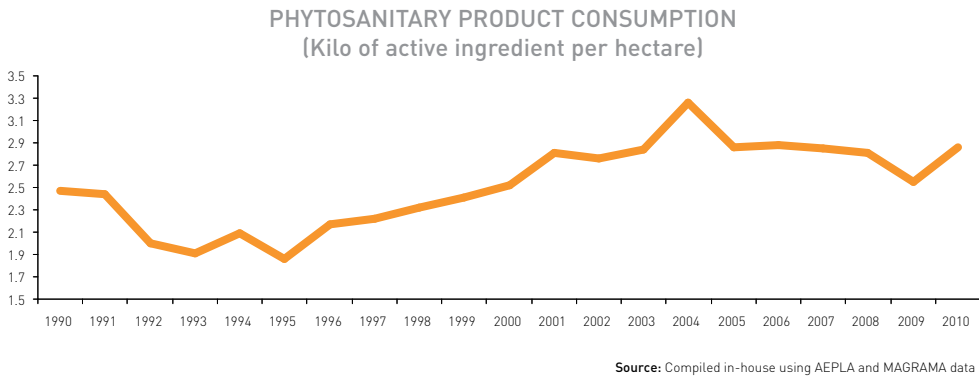
- National Association of Fertiliser Manufacturers (ANFFE).
- Agri-food Statistical Yearbook, 2011. Ministry of Agriculture, Food and Environment.
- Survey on Areas and Crop Yields (ESYRCE), 2011. Ministry of Agriculture, Food and Environment.

FURTHER INFORMATION

- <http://www.magrama.es>
- <http://www.anffe.com>

Phytosanitary product consumption

In 2010, phytosanitary product consumption increased by 12% in terms of kilograms of active ingredient per hectare



Crop protection against pests is a key aspect of the competitiveness of agriculture, a strategic sector for Spain due to its export potential, as the basis of the agro-food industry and the backbone of the rural environment.

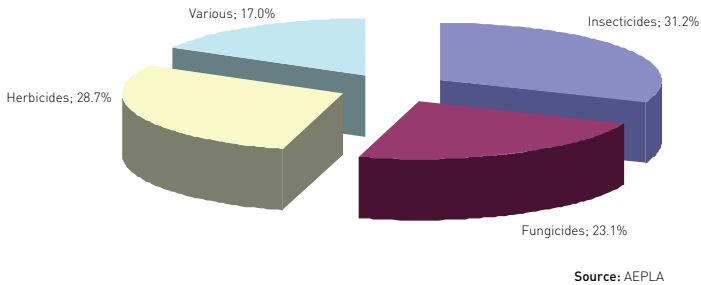
The use of chemicals to protect crops against pests and diseases and thus increase production yields, improve the quality of crops and increase their conservation period, has gradually increased since the mid-1990s.

Analysis of phytosanitary product consumption in kilograms of active ingredient per hectare (represented on the chart for the period 2001-2010) shows a relatively stable market compared to other sectors, bearing in mind that seasonal demand always depends on weather conditions.

Fungicides, insecticides and herbicides are the products most in demand. Many of the active substances these phytosanitary products contain constitute a risk to humans, animals and the environment. As a result, the authorisation, marketing and use of such products is regulated by the Official Register of Phytosanitary Products.

In 2010, phytosanitary product consumption, expressed in kg of active ingredient per hectare, grew by 12% in regard to 2009, despite the fact that the year began with bad weather conditions that delayed the treatments, particularly where grain was concerned. This consumption breaks the trend that had begun in 2007 and consolidated in 2008 and 2009, years in which consumption dipped by 1.6% and 9%, respectively.

ANNUAL CONSUMPTION OF PHYTOSANITARY PRODUCTS (2010) (tonnes)



According to information provided by AEPLA, insecticides, such as acaricides and nematicides, were the most used plant protection product in 2010 with 31%, followed by herbicides (29%) and fungicides (23%). Herbicides, following a rise of 14.6% linked mainly to cereals, recorded the most significant increase in regard to 2009, followed by the group of insecticides (acaricidas and nematicidas) with an increase of 13.5% and fungicides, which owing to weather conditions recorded growth of 6.6%, particularly in the case of anti-mildew fungicides.

NOTES

- For the purpose of calculating the indicator, “area treated with phytosanitary products” is taken as the total area of arable land, excluding fallow and other unoccupied land (i.e. the area devoted solely to herbaceous and ligneous crops).

SOURCES

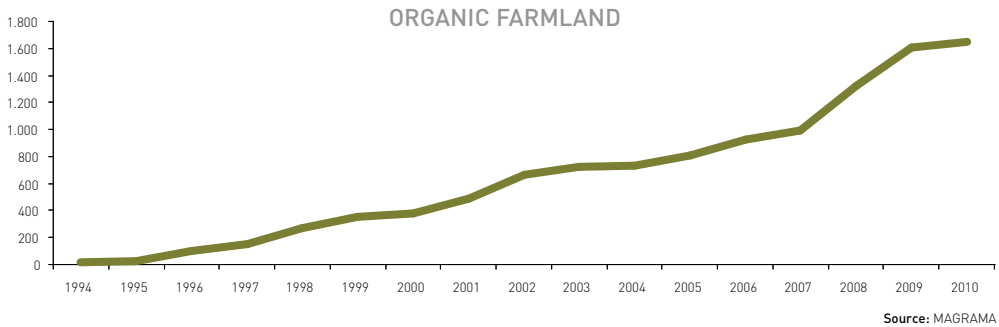
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FURTHER INFORMATION

- <http://www.magrama.es>
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Organic farming

The area devoted to organic farming in Spain increased by 3% to 1,650,866 hectares in 2010



Respect for the environment, biodiversity and the production of quality products have become a concern of society and public administrations in recent years. The interest on behalf of the government, as defined in the Comprehensive Plan of Action to Promote Organic Farming 2007-2010 has served to structure the sector by establishing areas of development that have improved product knowledge, consumption and marketing, thereby optimising resources.

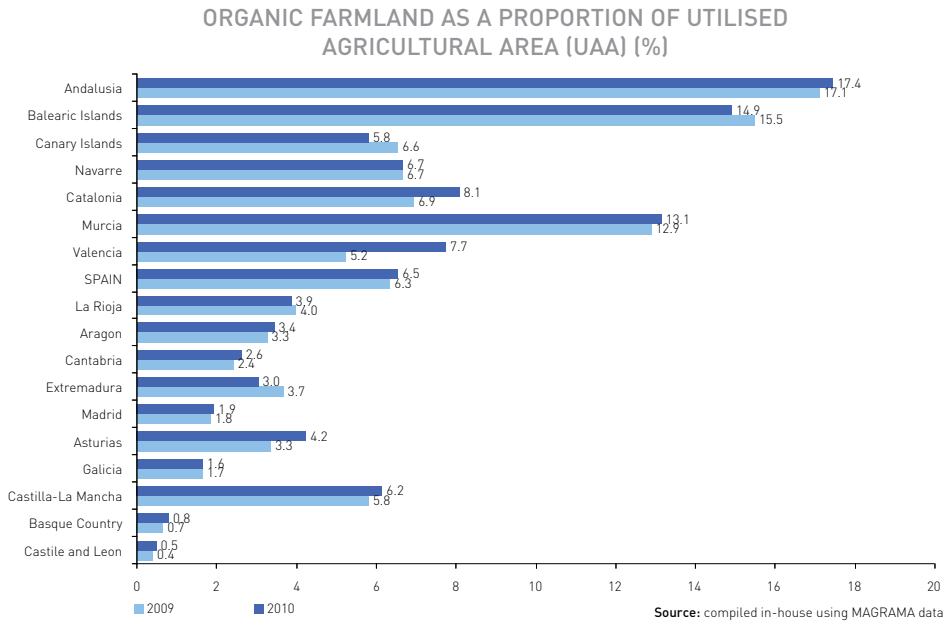
As a result of this performance, according to the data included in the report entitled “Organic Farming in Spain. Statistics 2010”, the area devoted to organic farming increased by 3% to 1,650,866 hectares in 2010, compared to 1,602,868 hectares in 2009. These figures put Spain at the top of the European Union for the third consecutive year, in terms of the number of hectares set aside for organic farming.

There was also striking growth in the number of workers per activity, with as many as 27,877 producers and 2,747 processors in 2010, up by 10.2% and 11.4% respectively on the previous year.

In 2010, twelve Autonomous Communities recorded increases in organic farmland. It is worth highlighting Valencia in particular, where organic farmland increased from 38,754 hectares in 2009 to 56,628 hectares in 2010 (46.1%), followed by Asturias (30.4%), the Basque Country (19.2%) and Castile-Leon (19%). At the other end of the scale, only Extremadura and the Canary Islands experienced significant decreases of 17% and 12.7% respectively.

In absolute terms, Andalusia has the largest expanse of land devoted to organic farming (879,859 hectares, 53.3% of the country's total). It is followed by Castilla-La

Mancha with 259,419 hectares (15.7% of the total), Extremadura with 95,417 hectares (5.8%) and Catalonia with 83,506 hectares (5.1%).



The total area devoted to organic crops in Spain, not including pasture, grassland, forage and forests, rose by 5.6% in regard to 2009 to 604,147 ha. The most popular organic crop was once again cereals, with 27.5% of the total (166,081 ha), followed by olive groves with 20.9% (126,328 ha), nuts with 14.9% (89,901 ha) and grapevines with 9.5% (57,231.7 ha).

NOTES

- Utilised Agricultural Area (UAA): Sum of farmland and permanent grassland and pastures. Data from the "Survey on Areas and Crop Yields (ESYRCE)". Ministry of Agriculture, Food and Environment.
- The legislative framework governing organic farming in Spain since 1989 comprises the Regulation on Generic Organic Labelling and, at European level, Regulation (EC) 834/2007 of 28 June 2007, on organic production and labelling of organic products, which repealed Regulation (EEC) 2092/91 [Official Journal of the EU 20/07/2007].

SOURCES

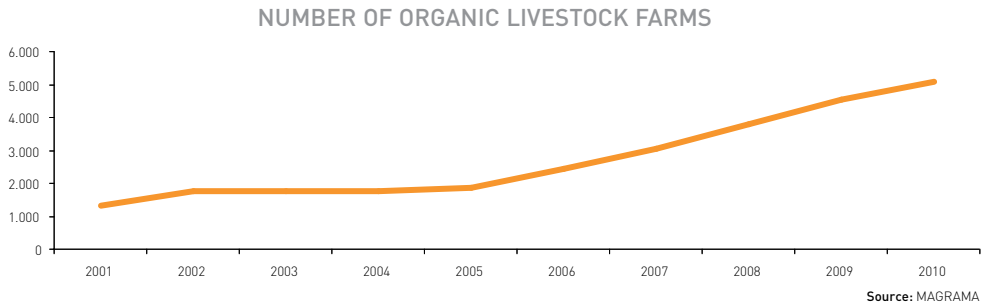
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FURTHER INFORMATION

- <http://www.magrama.es/>

Organic livestock farming

The number of organic livestock farms increased by 12% in 2010



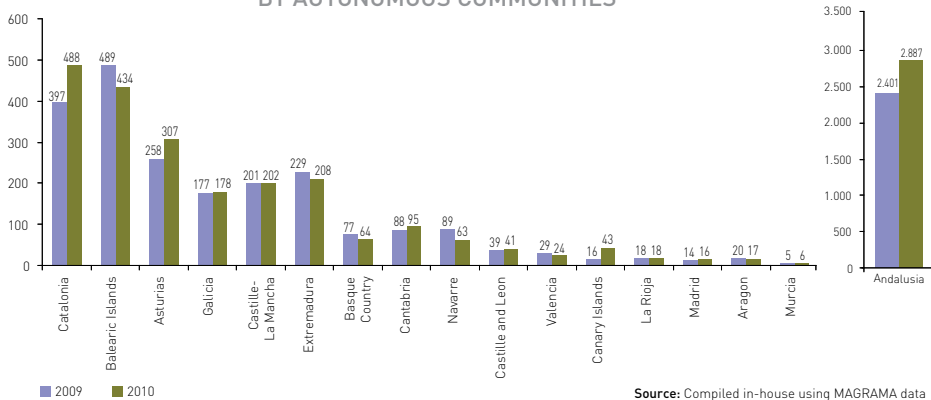
In general, organic farming, is the result of social concern, of consumers who given by the environmental degradation, increasingly, demand for food high-quality products, without health risk to humans, animals and the environment. In this respect, organic livestock constitutes an alternative livestock farming system, more animal friendly and with sustainability objectives, whereby the quality of the product and its safety, respect for public health, animal welfare and the promotion of indigenous races, the environment and rural development are the most important aspects.

According to the report entitled “Organic Farming in Spain. Statistics 2010”, there were a total of 5,091 new livestock farms in Spain in 2010, a 12% increase in regard to 2009 when a total of 4.547 farms was recorded.

By Autonomous Communities, Andalusia holds first place with 56.7% (2.887 farms), followed by Catalonia with 9.6% (488 farms), the Balearic Islands with 8.5% (434 farms) and Asturias with 6.0% (307 farms). Although overall developments in the sector have been positive, growth has been uneven across communities. The Canary Islands recorded the largest annual increase with 168.8% (16 farms in 2009 compared to 43 in 2010), while Navarra registered the strongest decrease, numbers falling by 29.2% (89 farms in 2009 compared to 63 in 2010).

By type of farm, 48.9% were cattle, 27.5% sheep, 9.3% goats, 4.6% horses, 3.6% poultry, 3.6% bee farming, 2.4% pig farming; and 0.2% other types of farms.

NUMBER OF ORGANIC LIVESTOCK FARMS BY AUTONOMOUS COMMUNITIES



By sub-sector, there were 2,489 cattle farms (2,415 beef meat and 74 milk), 1,399 sheep farms (1,355 meat and 44 milk), 473 goat farms (409 meat and 64 milk), which recorded increases of 18.2% in the case of cattle, 15.8% for sheep and 18.9% for goat. Annual growth in these types of farms as a whole has been positive, horse farms (31.5%) and pig farms (15.9%) being the only ones to experience a significant decrease in numbers.

NOTES

- The legislative framework governing organic farming in Spain since 1989 comprises the Regulation on Generic Organic Labelling and, at European level, Regulation (EC) 834/2007 of 28 June 2007, on organic production and labelling of organic products, which repealed Regulation (EEC) 2092/91 [Official Journal of the EU 20.07.2007].

SOURCES

- Agri-food Statistical Yearbook, 2011. Ministry of Agriculture, Food and Environment.
- Statistics 2011. Organic farming.. Ministry of Agriculture, Food and Environment.

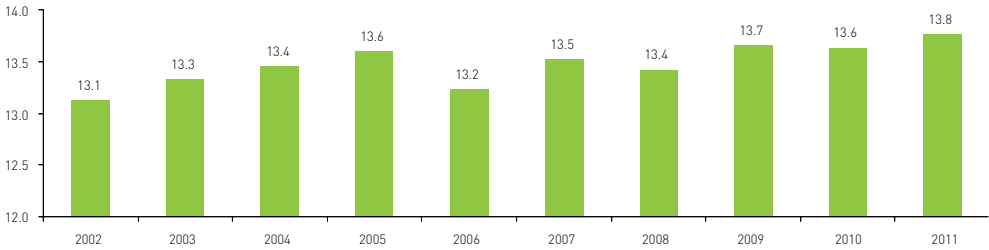
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Irrigated area

In 2011, there has been an increase of 1.9% in irrigated area in relation to the previous year

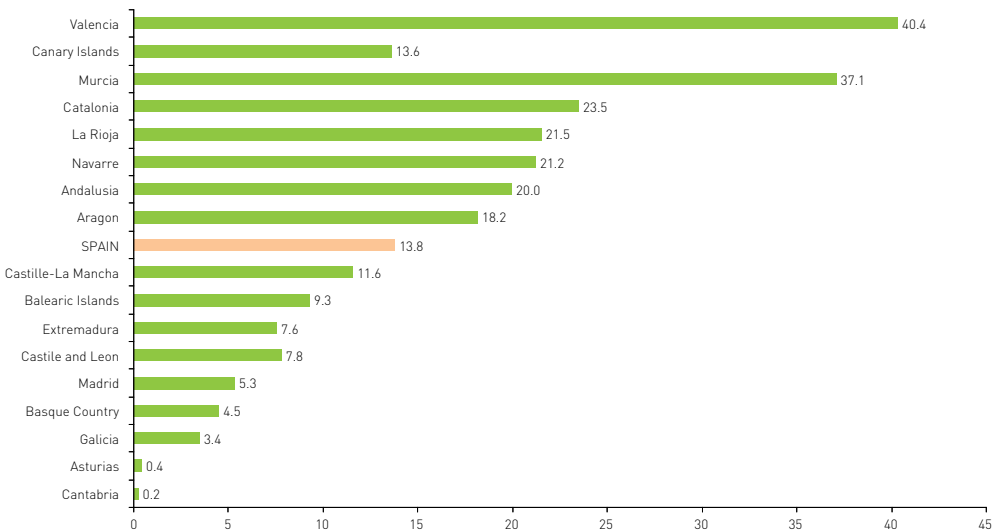
IRRIGATED AREA AS A PROPORTION OF TOTAL AGRICULTURAL AREA (%)



Source: MAGRAMA

Irrigation is a basic part of the Spanish agri-food system. Irrigated area in Spain recorded an increase of 1.9% in 2011 and now amounts to 3,473,474 hectares, which represents 13.8% of total agricultural area. This percentage is the highest recorded in the last decade, the average for which stands at 13.5%.

IRRIGATED AREA AS A PROPORTION OF TOTAL AGRICULTURAL AREA (%) 2011



Source: MAGRAMA

The Autonomous Communities with the most irrigated area in relation to total agricultural area are generally the regions on the Mediterranean coast, which base the economies on the production of citrus fruit and vegetables. Valencia (40.4%), Murcia (37.1%) and Catalonia (23.5%) recorded the highest percentages of irrigated area in relation to total agricultural area, as opposed to the Communities of Cantabria (0.2%) and Asturias (0.45), which register the lowest percentages due to devoting large areas to grassland and pastures.

The irrigation sector is constantly being modernised, resulting in more rational water consumption through the use of more appropriate technologies. In this sense, there has been an increase in more efficient irrigation systems over the last decade, in comparison to traditional systems based on gravity-fed irrigation systems. This development is the key to rural development in Spain, as it acts as a manager of natural resources, water and soil, contributes to the development of the agri-food sector and influences environmental and cultural aspects, particularly as a territorial and population balancing factor.

In 2011 the number of hectares irrigated by localised irrigation systems rose by an annual 1.8% to 1,658,317, which accounts for 47.8% of total irrigated area. The number of hectares irrigated by sprinkler systems rose by 6.8% in 2011 to 782,508 ha (22.5% of the total).

Furthermore, the area irrigated by gravity-fed systems witnessed a slight decrease of 1.2% and now covers 1,031,669 ha, 29.7% of total irrigated area.

NOTES

- Irrigated area refers to the area devoted to crop production or pasture improvement that is supplied with water, irrespective of the number of times irrigation is performed per year.
- Total agricultural area refers to arable and fallow land, greenhouses and family smallholdings.
- One irrigated hectare produces on average six times more than an unirrigated hectare, and generates four times more income.

SOURCES

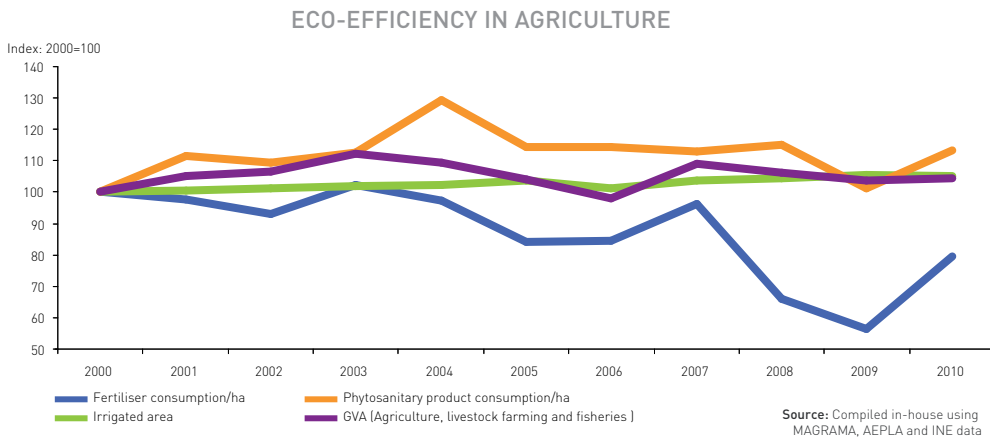
- Survey on Areas and Crop Yields [ESYRCE], several years. Ministry of Agriculture, Food and Environment.

FURTHER INFORMATION

- <http://www.magrama.es>

Eco-efficiency in agriculture

In 2010, a link is observed between economic growth in the sector and the use of phytosanitary products and fertilisers



The eco-efficiency of the sector, analysed by comparing its economic growth and the most important pressures it generates, presents us with a mixed result. Gross Value Added (GVA) for agriculture, livestock farming and fishing was up by slightly more in 2010 than in 2009 (+ 0.4%), although GVA as a whole recorded an increase of 4.3% over the period of reference 2000-2010.

The ideal scenario for eco-efficiency occurs when (upward) economic growth in the sector is clearly unrelated to the use of resources, which should display a downward trend.

On the basis of this principle, fertiliser consumption per hectare recorded a significant rise of 41.3% in 2010 as a result of the low level of consumption recorded in previous years, the lowest values being recorded in 2009 (78.7 kg/ha of fertiliser) as a result of the economic instability and uncertainty linked to the upturn in fertiliser prices and the weather conditions during that agricultural year.

The environmental performance of phytosanitary product consumption was similar, albeit on a smaller scale, to that of fertiliser consumption. After recording the lowest figure of the 2000-2010 series in 2009, an increase of 12.2% was observed in 2010.

Meanwhile, irrigated area continued to record slight annual increases throughout the entire 2000-2010 period. Only in 2006 and 2010 were slight decreases registered in irrigated area. Irrigated area increased by 5.1% over the period 2000-2010, outpacing growth in GVA over the same period, which reveals that economic growth in the sector and the increase in irrigated area are clearly related.

NOTES

- Gross Value Added in the sector refers to agriculture, fishing, hunting and forestry.
- For the purpose of calculating the indicator, eco-efficiency is considered positive when the trend in the sector's economic growth is decoupled (contrary and divergent) from that of the pressures it exerts on the environment.

SOURCES

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- Fertiliser consumption: Agri-food Statistical Yearbook, 2011. MAGRAMA. 2010 (provisional).
- Phytosanitary product consumption:
 - Business Association for the Protection of Plants (AEPLA).
 - Agri-food Statistical Yearbook, 2011. Ministry of Agriculture, Food and Environment.
 - Survey on Areas and Crop Yields (ESYRCE), several years. MAGRAMA.
- Irrigated area: Survey on Areas and Crop Yields (ESYRCE), several years. MAGRAMA.

FURTHER INFORMATION

- <http://www.magrama.es>
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- <http://www.aepla.es>
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