AGRICULTURE

2.9

Environmental profile of Spain 2012

The agricultural sector has to be able to meet global food demand, as well as ensuring the economic, social and environmental sustainability of rural areas.

The maintenance of a solid Common Agricultural Policy (CAP), with an adequate budget that adapts to the diversity and particularities of Spanish agriculture, and supports the food sector in the modernisation and revitalisation process, is a priority of current policy management.

The CAP, which had a stable framework up to 2013, will have a new horizon as of 2015, once health check on it has been completed and the final revisions have been agreed and put in place. A new debate, known as 'CAP Horizon 2020' has already started regarding the CAP after 2015.

'The CAP towards 2020: meeting the food, natural resources and territorial challenges of the future', COM(2010) 672, advocates for a strong common policy based on two pillars: a greener and more equitably distributed first pillar and a second pillar focussing more on competitiveness and innovation, climate change and the environment.

The CAP reform process pursues three specific objectives: viable food production, sustainable management and balanced territorial development.

Food production that contributes to agricultural income and limits that income's variability while improving the competitiveness of the agricultural sector; sustainable management of natural resources and climate action through the application of sustainable production practices stimulating green growth through innovation, and pursuing climate change mitigation and adaptation actions; and balanced territorial development to support rural employment and maintain the social fabric of rural areas, that improves the rural economy and promotes the diversification of farming systems.

KEY MESSAGES

- In 2011 the consumption of fertiliser per hectare (expressed as nutrients) decreased by 8.1%, to 102 kg/hectare.
- Phytosanitary product consumption, expressed in kg of active ingredient per hectare, has declined by 5.4% in 2011.
- Spain, for the fourth consecutive year, is the EU's leading country in terms of the area dedicated to ecological agriculture, with 1,845,039 hectares.
- There were a total of 6,074 ecological farms, almost one thousand more compared to 2010. In terms of farm type, 49.1% were cattle farms.
- The total irrigated area in Spain was 3,522,616 hectares, approximately 16% of the total cultivated area.
- In 2011 there was a decrease in the GAV and in the consumption of fertilisers and phytosanitary products, while the irrigated area increased slightly.

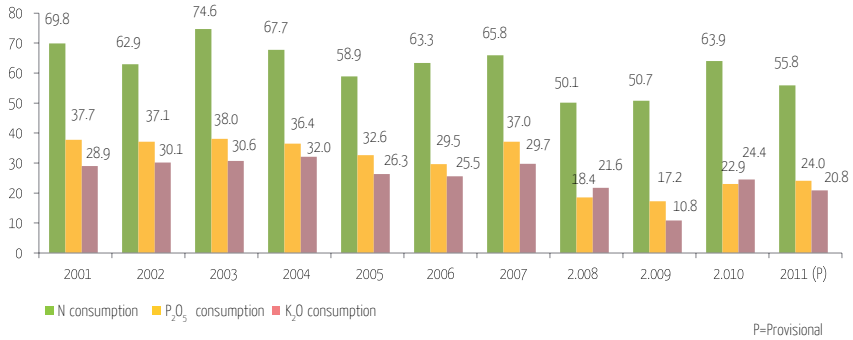
INDICATORS

- Fertiliser consumption
- Phytosanitary products consumption
- Organic farming
- Organic livestock farming
- Irrigationed area
- Environmental efficiency in the agriculture

Fertiliser consumption

In 2011, fertiliser consumption fell by 8.1%, compared to the previous year

Fertilisers consumption (kg nutrient/hectare)



P=Provisional
Source: MAGRAMA

Currently, agriculture is focussed on the production of quality food and the preservation of the environment and natural resources. Among these resources is the soil fertility. Fertility improvement must meet two fundamental requirements, agronomic effectiveness and the absence of harmful effects for health and the environment. In 2011, according to the most updated provisional data provided by the Directorate-General of Agricultural Production and Markets, mineral fertiliser consumption per hectare (expressed as a total of nutrients)

Fertiliser consumption

In commercial product (thousands of tonnes)	2007/08	2008/09	2009/10	2010/11	2011/12
Simple nitrogen	2,368	2,027	2,060	2,455	1,994
Simple phosphate	251	70	101	206	196
Simple potash	246	90	149	212	190
Complex fertilisers	2,281	978	1,458	1,851	1,648
Total fertilisers	5,146	3,165	3,768	4,724	4,028
In fertilisers (thousands of tonnes)	**2007/08**	**2008/09**	**2009/10**	**2010/11**	**2011/12**
Total N	973	720	811	965	805
Total P_2O_5	527	153	342	390	355
Total K_2O	432	181	267	356	291

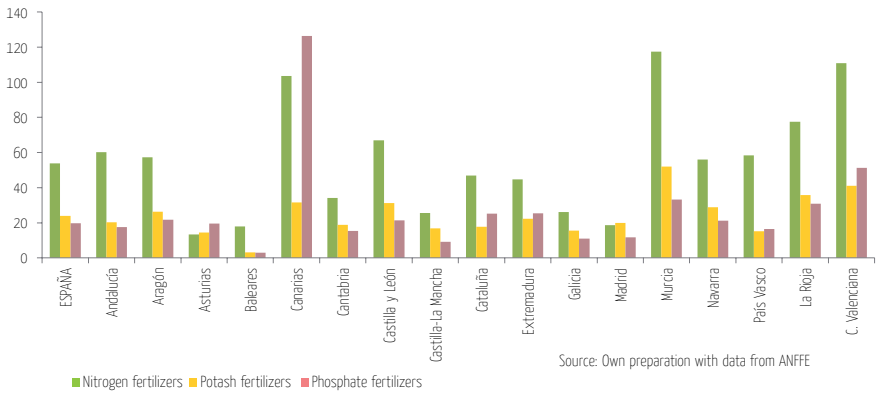
Source: MAGRAMA

declined by 8.1% with respect to 2010, standing at around 100.6 kg/hectare. Although there was a decrease in consumption, this was not uniform across the three main types. Therefore, while N and K20 use diminished by 11.3% and 13.5%, respectively, the consumption of P205 increased by 6.1%.

By agricultural year, the provisional data for mineral fertilisers consumed during the 2011/2012 campaign, the period that runs from July 2011 to June 2012, show a decrease in consumption of 14.7% with respect to the previous agricultural year. The consumption of the different fertilisers fell, although at different rates: while N and K20 decreased by 16.6% and 18.3%, respectively, P205 consumption decreased by 9.8%.

Similarly, in terms of fertiliser type used (as a commercial product) a general but differing decrease in consumption can be observed: the consumption of simple nitrogen fertilisers declined by 18.8%; simple potash fertilisers by 10.4%; simple phosphate fertilisers by 4.8%; and complex fertiliser consumption fell by 11% during the most recent agricultural year.

Fertilizers consumption (kg/ha). 2011/2012



Source: Own preparation with data from ANFFE

The autonomous communities with the greatest consumption of fertilisers are the Canary Islands (261.6 kg/hectare), Valencia (203.1 kg/hectare), Murcia (202.8 kg/hectare) and La Rioja (144.3 kg/hectare), being regions with a greater concentration of intensive agriculture with crops with high nutrient demand.

NOTES

- The fertilisable area is defined as arable land (excluding fallow and other unoccupied land) and natural grasslands, according to the Annual Statistical Agri-food Report 2012. Ministry of Agriculture, Food and Environment.
- Fertiliser: product mainly intended to provide nutrients to plants.
- 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.
- 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 determine fertilisers consumption runs from July to June of the following year.

SOURCES

- National Association of Fertiliser Manufacturers
- Annual Statistical Agri-food Report, 2012. MAGRAMA
- Survey on Areas and Crop Yields, 2012. MAGRAMA

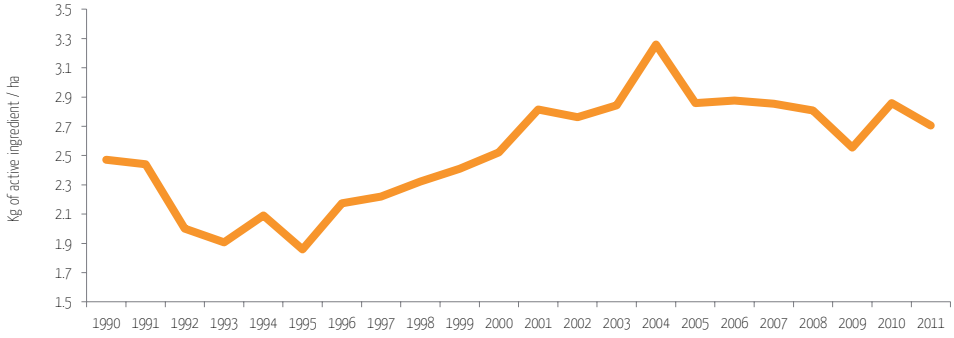
FURTHER INFORMATION

- www.magrama.es
- www.anffe.com

Phytosanitary products consumption

In 2011 the consumption of plant protection products, expressed in kg of active ingredient per hectare, has declined by 5.4%

Phytosanitary products consumption (kg of active ingredient/hectare)



Source: Own preparation with data from AEPLA and MAGRAMA

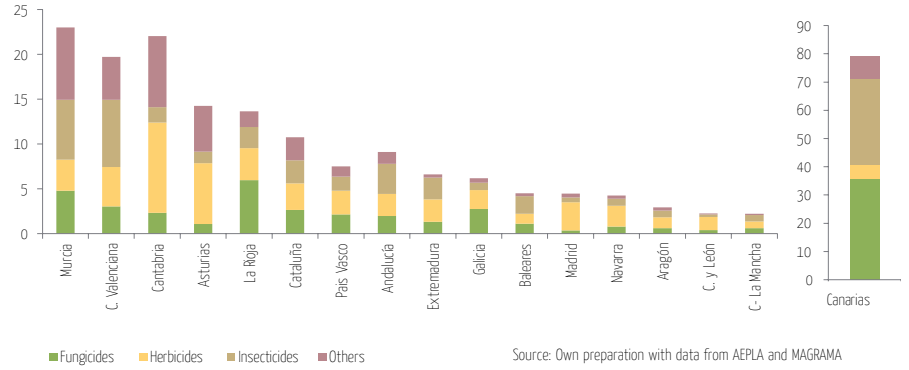
In Spain, the consumption of phytosanitary products for crop protection has increased gradually from the mid-nineties. Nevertheless, in 2011, the economic situation and the meteorological conditions during the spring gave rise to uncertainty among farmers that led to a 5.4% reduction in phytosanitary product consumption, expressed in kg of active ingredients per hectare. This annual variation bucks the trend seen in the previous year, when consumption rose by 12%, and takes consumption back to similar levels to the ones experienced in 2005, 2006 and 2007, the years prior to the current economic instability.

The use of phytosanitary products can have undesired effects and it is essential that these are not at any time dangerous to human health, or present high levels of risk for the environment. In this respect, the recently approved Royal Decree 1311/2012, has the objective of establishing the framework for action to achieve sustainable phytosanitary product use by means of a reduction of the risks and the effects of their use on human health and the environment. Furthermore, the RD also aims to promote integrated pest management along with alternative approaches and techniques, such as non-chemical methods.

In terms of the most highly used types of phytosanitary products in 2011, according to the data provided by the Trade Association for Plant Protection, the most used are insecticides, acaricides and nematicides (31.2%), followed by herbicides (30.2%) and fungicides (22.4%). With respect to 2010, there was a decrease in the consumption of fungicides and insecticides of 7.6% and 4.6% respectively, while herbicide consumption experienced a slight increase of 0.5%.

In 2011, the autonomous communities with the highest use of phytosanitary products per hectare are the Canary Islands, with 79.2 kg/hectare, followed by Murcia (23.0 kg/ha), Cantabria (22.1 kg/ha), (22.1 kg/ha), Valencia (19.7 kg/ha) and Asturias (14.2 kg/ha), while the communities with the lowest consumption were Castile-La Mancha (2.2 kg/ha), Castile-Leon (2.3 kg/ha) and Aragon (2.9 kg/ha).

Phytosanitary products consumption (kg/hectare).2011



Source: Own preparation with data from AEPLA and MAGRAMA

NOTES

- In 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

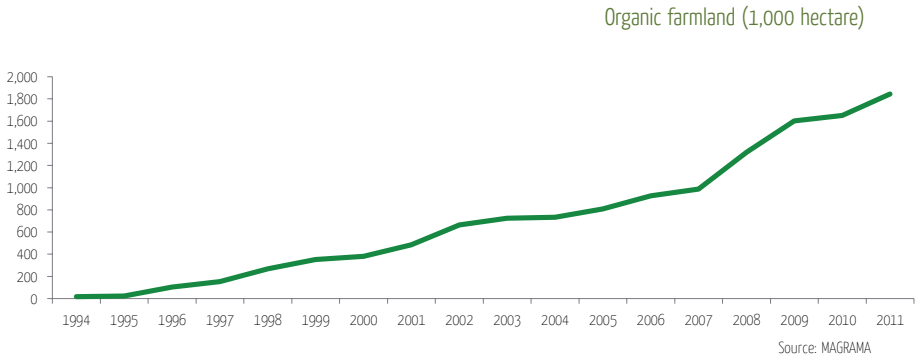
- Phytosanitary products: Trade Association for the Plant Protection.
- Treated area:
  - Survey on Areas and Crop Yields, 2012. MAGRAMA
  - Annual Statistical Agri-food Report, 2012. MAGRAMA

FURTHER INFORMATION

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

Organic farming

The area devoted to organic farming in Spain during 2011 has increased by 11.8%

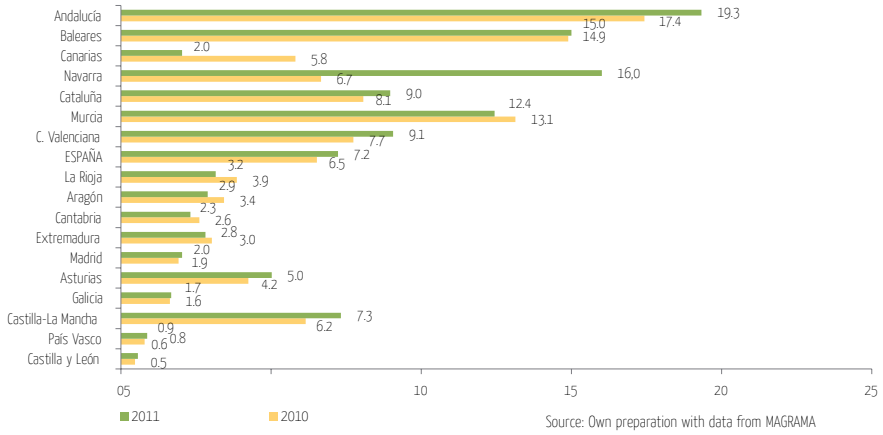


Organic farming can be defined as a compendium of agricultural techniques that excludes the use of synthetic chemical products such as fertilisers, pesticides, antibiotics, etc., with the aim of preserving the environment, maintaining or increasing the fertility of the soil and providing food with all its natural properties.

The growth of organic farming is creating new employment opportunities and wealth for rural economies, contributing, additionally, to the maintenance and improvement of the rural landscape. At the same time, organic farming takes into consideration local and regional harmony and promotes the use of the resources in situ. Spain's conditions allow for the development of this kind of agriculture, due to its favourable climate and the extensive production systems applied to a great number of crops. According to the data compiled in the report 'Organic Farming in Spain. Statistics 2011', the area devoted to organic farming in our country during 2011 increased by 11.8%, totalling 1,845,039 ha, compared to 1,650,899 ha in 2010. Based on this data, and other provisional figures provided by several European countries, Spain, for the fourth consecutive year, sits atop the EU ranking in terms of the number of hectares devoted to organic farming.

Likewise, the number of operators in the sector has increased by 18.3% having reached 32,837 in 2011, compared to 27,767 in 2010. Of the total number of operators, 32,206 were producers (primary activity) and 2,729 were manufacturers and/or processors (secondary activity).

Organic farmland as proportion of utilised agricultural area (%)



Source: Own preparation with data from MAGRAMA

If we analyse the annual evolution of the area devoted to organic farming by autonomous community, it can be seen that, although there was a notable increase in overall terms, there are communities in which the area fell. The increase in area registered in Navarre, from 30,771 ha to a total of 73,432 ha is worth highlighting.

Regarding types of farming, the area devoted to pasture, grassland and foraging covered 913,786 ha in 2011, 49.5% of the total. In terms of organic crops, the areas devoted to cereals (224,059 hectares), 12.1% of the total, and olive groves, occupying 168,619 hectares, 9.1% of the area, should be noted.

NOTAS

- Utilised Agricultural Area (UAA): Sum of farmland and permanent grassland and pastures. Data from the 'Survey on Areas and Crop Yields' 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 (ECC) 2092/91 (Official Journal of the EU 20/07/2007).

SOURCES

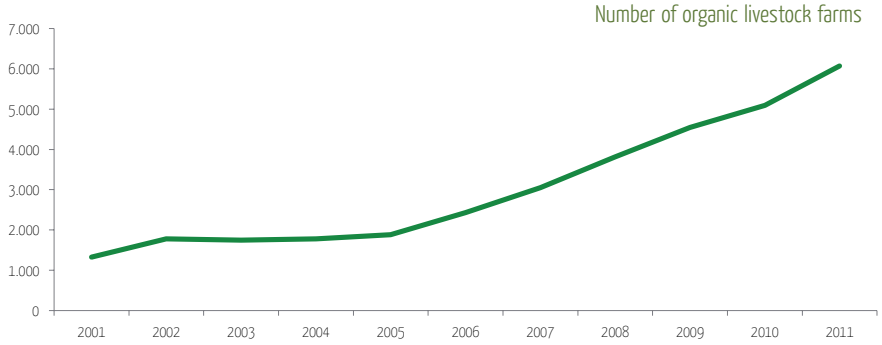
- Survey on Areas and Crop Yields, 2010 and 2011. MAGRAMA
- Statistics 2011. Organic agriculture, Spain. MAGRAMA

FURTHER INFORMATION

- http://www.magrama.gob.es/es/alimentacion/temas/la-agricultura-ecologica/

Organic livestock farming

In 2011 the number of organic livestock farms increased by 19.3%



Source: MAGRAMA

Organic livestock farming is an alternative livestock production system, that is more respectful of the animals, and that promotes their health and well-being, and that contributes to biological diversity and the preservation of species and natural habitats. Organic livestock farming systems produce high quality food from animals that is free of substances such as hormones, antibiotics and other synthetic medicinal products.

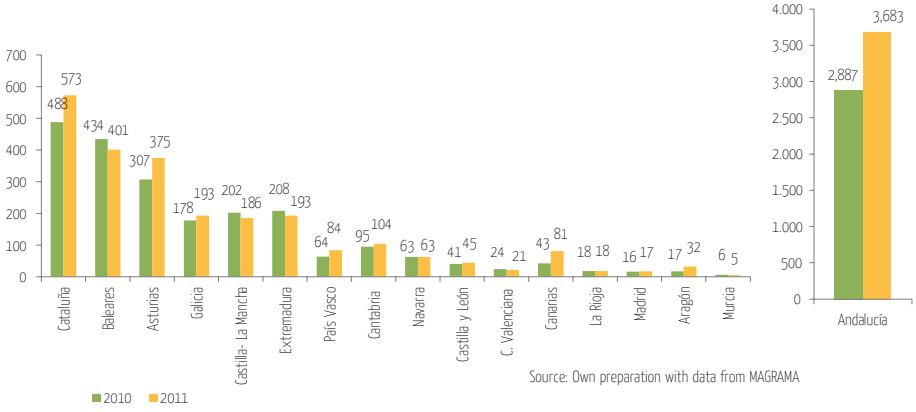
As is the case for organic farming, the demand from consumers for organic products is growing, and consequently there are new business opportunities for all sectors in the food supply chain, creating new opportunities of employment and wealth in rural economies. In light of this, according to the report 'Organic Farming in Spain. Statistics 2011', in Spain there were 6,074 organic livestock farms that year, almost a thousand new farms compared to 2010, when there were 5,091 farms.

In terms of farm type, 49.1% were cattle, 28.5% sheep, 10% goats, 3.5% poultry, 3.2% horses, 3% bee-keeping, 2.5% pig farming and 2% other types of farms. There are 2,983 cattle farms (2,898 meat and 85 milk), 1,730 sheep farms (1,679 meat and 51 milk), 604 goat farms (556 milk and 48 meat) and 154 pig farms.

If we analyse the annual trends, it can be observed that there was growth in all types of farms. Goat farms with a growth of 27.7%, followed by pig farms with an increase of 26.2% and sheep farms with 23.7%, registered the largest increases in 2011.

Regarding the distribution by autonomous communities of organic livestock farms, Andalusia occupies first place with 3,686 farms (60.6% of the total), followed by Catalonia with 573 farms (9.4%), the Balearic Islands with 401 farms (6.6 %) and Asturias with 375 (6.2%). The communities with the lowest number of farms in 2011 were Murcia (5 farms), Madrid (17 farms), La Rioja (18 farms) and Valencia (21 farms).

Number of organic livestock farms



Source: Own preparation with data from MAGRAMA

NOTES

- The legislative framework governing organic agriculture 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 (ECC) 2092/91 (Official Journal of the EU 20/07/2007).

SOURCES

- Annual Statistical Agri-food Report, 2012. MAGRAMA
- Statistics 2012. Organic agriculture, Spain. MAGRAMA

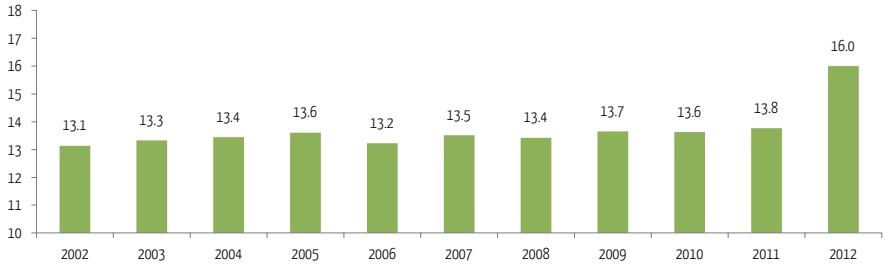
FURTHER INFORMATION

- http://www.magrama.es
- http://www.magrama.gob.es/es/alimentacion/temas/la-agricultura-ecologica/

Irrigated area

In 2012 the area of irrigated land in terms of total agricultural land reached 16%

Irrigation area with respect to the total agricultural area (%)



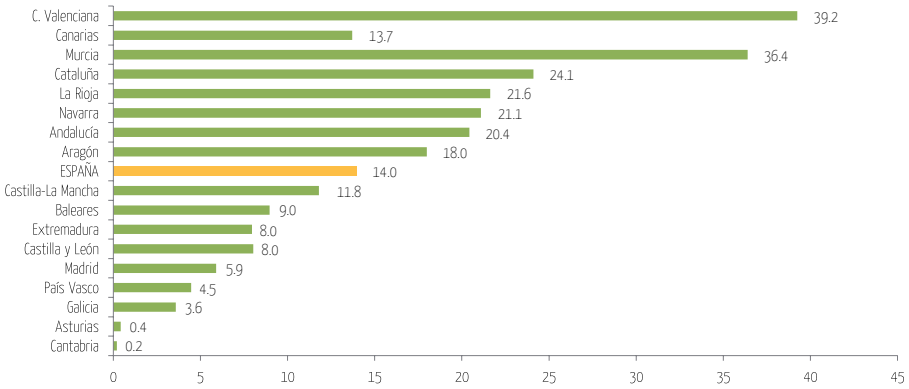
Source: MAGRAMA

The evolution and development of irrigation has a vital role in Spain's agricultural economy. In order to understand the contribution of irrigation to farms, it can be observed that, on average, one hectare of irrigated land produces six times more than a non-irrigated hectare and generates four times the income. Irrigation not only allows for higher incomes but these incomes are also more certain, due to greater crop diversity (avoiding non-irrigated monocultures), and a reduction in climatic risk caused by the variability of annual and seasonal precipitations.

In 2012 the irrigated area in Spain, according to the 'Survey on Areas and Crop Yields 2012, was 3,522,616 hectares, 1.4% more than in 2011. This area, approximately 16% of the total cultivated land, produces 65% of final agricultural production (2010 data from the Agricultural Statistical Annual Report 2011, MAGRAMA).

Another element to take into account in valuing the importance of irrigation is its role in rural land-use planning. Where there is irrigation this allows for the build up of important agribusiness complexes that have had a key role in the generation of income and employment in the rural environment. By autonomous communities, Valencia and Murcia have the highest irrigation area with relation to the total agriculture surface, with the 39.2% and 36.4% of the area respectively. On the other hand, the communities with the lowest percentage of irrigated land in relation to the total agricultural area are Cantabria and Asturias, with 0.2% and 0.4% respectively.

Irrigation areas with respect to the total agricultural surface per autonomous communities (%). 2012



Source: MAGRAMA

Furthermore, this is a dynamic sector that is continuously modernising. In this regard, year after year there is progress made concerning the use of technologies that allows for more rational, efficient water use. In 2012, the number of hectares irrigated by localised irrigation systems was 1,662,847, 0.3% more than in 2011, and which represents 47.2% of the total irrigated area. Sprinkling and automated systems irrigated 541,150 and 297,149 hectares respectively, representing 15.4% and 8.4% of the irrigated area, an increase of 8.7% and 4.4% compared to the previous year.

At the same time, the use of less efficient irrigation systems once again experienced a decline: in 2012 the number of gravity-fed systems fell by 1.1% with respect to 2011, covering 1,020,406 hectares.

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.

FUENTES

- Survey on Areas and Crop Yields, several years. MAGRAMA

FURTHER INFORMATION

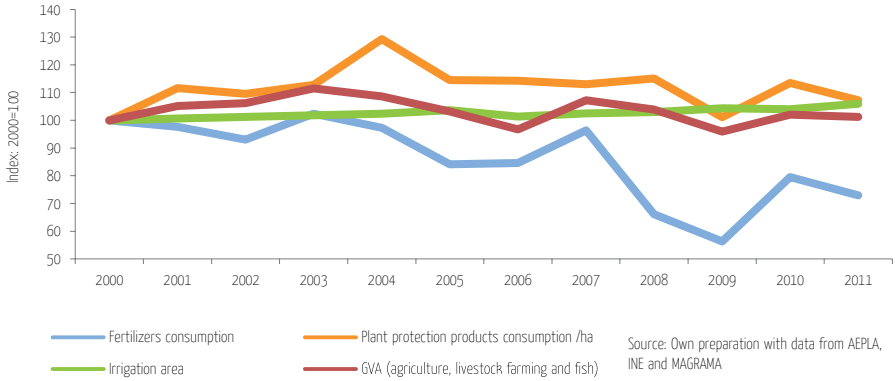
- http://www.magrama.es

Environmental efficiency in the agriculture

2011 saw a decline in the GVA and in the consumption of fertilisers and phytosanitary products, while the irrigated area slightly increased

En la gráfica se muestra la eficiencia ambiental del sector agrario, analizada mediante la comparación de la evolución de su crecimiento económico y el de las presiones más importantes que genera, para el periodo 2000–2011. Esta gráfica presenta un comportamiento desigual.

Environmental efficiency in the agriculture



Source: Own preparation with data from AEPLA, INE and MAGRAMA

Si se analiza la evolución del Valor Añadido Bruto (VAB) de la agricultura, la ganadería y la pesca para el periodo de referencia 2000-2011, el VAB ha experimentado un incremento del 1,3%. Sin embargo, en el último año analizado, ha registrado un valor ligeramente inferior al obtenido en 2010 (-0,7%).

El comportamiento del consumo de productos fitosanitarios presenta una evolución similar a la del VAB, aunque a diferente escala. Constata, en este sentido, que el consumo de productos fitosanitarios para el periodo de referencia 2000-2011 se ha incrementado un 7,3%, mientras que para el último año analizado el incremento ha sido al igual que el VAB negativo (-5,4%).

La evolución del consumo de elementos nutrientes por hectárea ha experimentado en 2011 una importante reducción (8,1%), debida principalmente a la climatología del año agrícola, al precio de los productos fertilizantes y a la situación de inestabilidad económica. En la evolución del consumo, se observa como el consumo de fertilizantes acumula un decrecimiento desde el inicio del periodo de referencia (2000-2011) del 27,1%.

Por otra parte, la superficie de regadío ha mantenido durante todo el periodo 2000-2011, ligeros incrementos anuales. En 2011, el incremento anual ha sido del 1,9%, mientras que el incremento acumulado desde el inicio del periodo es del 6%.

NOTES

- The GVA 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

- National Statistics Institute. Spanish National Accounts. Base year 2000. 1995-2010 Accounting series. GDP at market prices (GVA for agriculture).
- Fertiliser consumption: Statistical Annual Agri-food Report, 2012. MAGRAMA
- Plant protection products consumption:
  - Trade Association for the Plants Protection
  - Annual Statistical Agri-food Report, 2012. MAGRAMA
  - Survey on Areas and Crop Yields, several years. MAGRAMA
- Irrigated area: Survey on Areas and Crop Yields, several years. MAGRAMA

MÁS INFORMACIÓN

- http://www.magrama.es
- http://www.anffe.com
- http://www.aepla.es
- http://www.ine.es