



CONTRIBUTION OF THE COTTON SECTOR TO THE FARM TO FORK STRATEGY, EXAMPLE OF THE SPANISH SECTOR

COPA COGECA

CDG ARABLE CROPS
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cooperativas
agro-alimentarias
España



Main Features

- Cotton in Spain is almost entirely produced in the **Autonomous Community of Andalusia**. There is a small area dedicated to this crop in the region of Murcia (0.2%).
- **Seville** is the region with the largest production (around 60-65% of the total in Andalusia).
- It is mainly grown on **irrigated land** in the Guadalquivir basin.
- About **2,000 farms** are dedicated to cotton cultivation. The average size of these farms is less than **10 hectares**. Smaller farms have a higher percentage of irrigated land (over 89%).
- The **average age of the holders of these farms** is lower than the average age of the agricultural sector, which is 60.5 years.





Main Features

- The cotton sector is eligible for the '**crop specific payment**'. The average amount of this payment in recent years (2016/17 -2018/19) is 994 €/ha.
- The cotton sector is among the sectors receiving **the lowest total amount of rural development support**.
- Compared to the world average, **costs per hectare** in Spain are about twice as high (1,650 €/ha compared to about 900 €/ha).





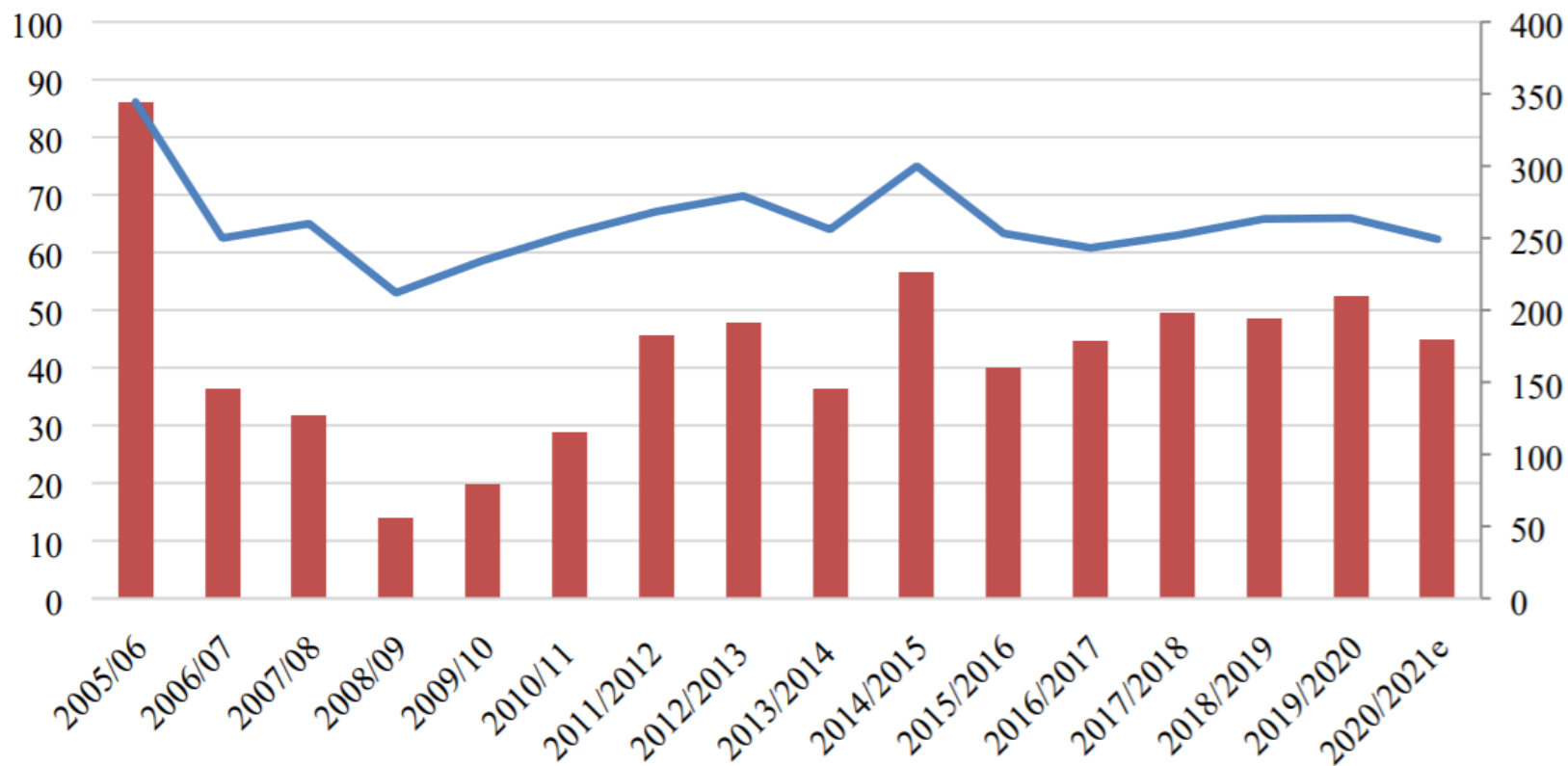
Main Features

- In recent years, cotton production in Spain has been between 170,000 and 210,000 tonnes, which represents around **20% of EU production**.
- Cotton cultivation is **very important at cooperative level**. In fact, all the ginning cooperatives are grouped together in **Coalsa S.L.**, formed in 2009 by the union of 10 cooperatives, which together represent **25% of the regional and national cotton production**.
- The **social and economic importance** of this crop in producing areas is exceptional, generating work and livelihoods for thousands of families.
- Our cotton fibre is of **exceptional quality** and highly appreciated by international markets, mainly in Asia, where the textile industry is predominant.
- Since 2005, **short-cycle varieties** have been introduced, which are more resistant to periods of drought, require less water and are therefore more profitable for cotton growers and sustainable, both economically and environmentally.





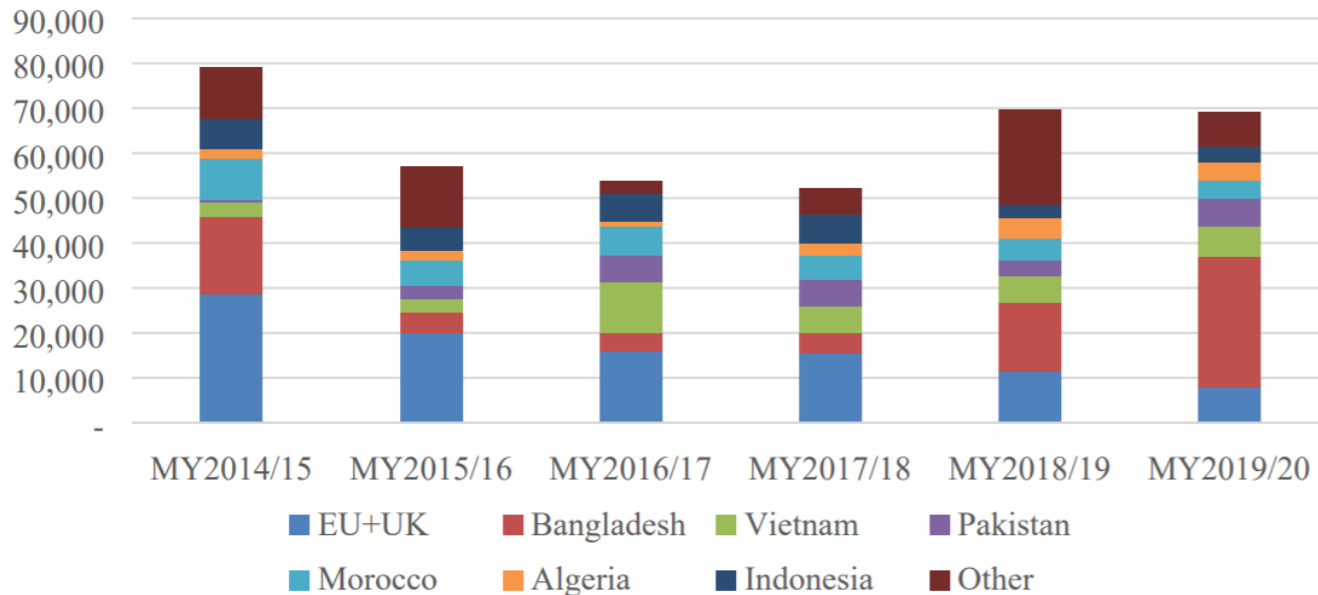
Production and Surface Evolution





Trade figures

- **Trade balance is positive.** Exports have averaged 78 million € over the last 10 years, compared to 4.7 million € for imports.
- Spain is a **net exporter of cotton fibre**. Average exports over the decade reached 52,000 tonnes.
- The Asian market continues to be the main destination for our exports. **Bangladesh**, the main destination.





The importance of Integrated Production in our sector

The specific technical regulation for Integrated Production (IP) of Andalusian cotton was published in 2002.

A large part of the production is under the **Integrated Production system**, which implies the supervision and certification of the crop by independent technicians, who guarantee that the agronomic practices used have been **environmentally sustainable and in accordance with the appropriate parameters**.

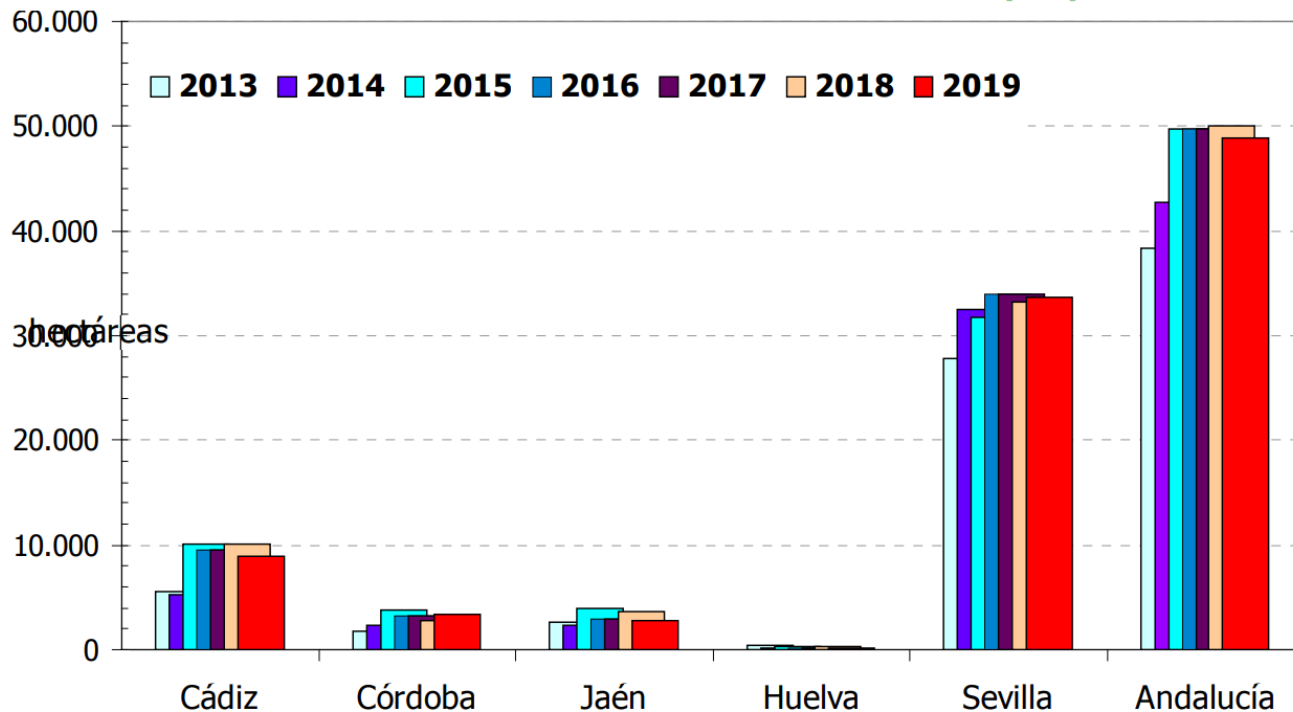
The **Rural Development Plan of Andalusia** (2014-2020), includes an agri-environmental aid for sustainable systems of agro-industrial crops such as cotton. The requirements for this aid demand that farms are part of an **Integrated Production Group** (API), in addition to carrying out practices to improve the structure and quality of soils (incorporation of plant remains, amendments with living covers).





The importance of Integrated Production in our sector

Around **50,000 hectares** are cultivated in integrated production, which represents more than 75% of the total area. It is important to bear in mind that area under integrated production in 2004 was only 11%.





The importance of Integrated Production in our sector

A network of **61 APIs**, made up of more than 200 technicians, provides technical advice on an area of around 50,000 hectares.

Technicians must transmit the phenology and phytosanitary situation of a certain group of plots to the Plant Health Service on a weekly basis.

	APIs	Técnicos/as	Superficie
Cádiz	12	40	8.961
Córdoba	4	13	3.316
Huelva	-	-	159
Jaén	6	12	2.797
Sevilla	39	140	34.659
Andalucía	61	205	49.893





Environmental aspects of the Integrated Production Programme

1. Use of plastic

In 2003/04, 52,100 ha were cultivated with plastic mulch. After the introduction of the agri-environmental programme in 2006/07, its use was banned. At present **its use is practically non-existent**.

2. Crop fertilisation

The regulations require plant and soil analyses to determine the plant nutritional status and soil fertility.

Integrated Production Regulation establishes the following limits for fertilisation:

OBLIGATORIAS	PROHIBIDAS
Las extracciones (kg/Tm de producción), a los efectos anteriores, se establecen en: N.....40 P.....15 K.....15	Superar, por ha y campaña, los siguientes aportes: 200 UF de Nitrógeno 96 UF de Fósforo 96 UF de Potasio





Environmental aspects of the Integrated Production Programme

The **reduction in its use and the lower water input**, allow an effective control of the vegetative growth of the plant.

3. Phytosanitary products treatments

Integrated production programme prioritizes the most specific methods for pest and disease control. It uses the **active substances that are most respectful** of the auxiliary insects and the environment.

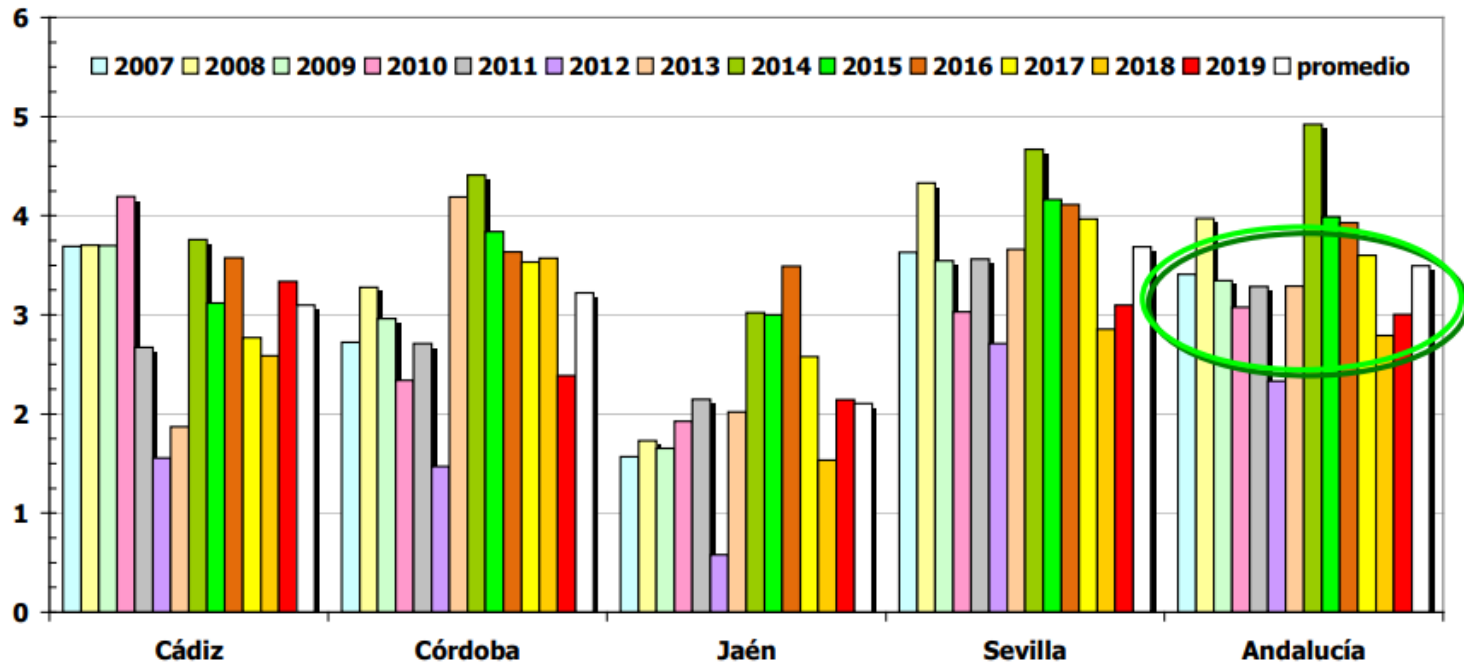
Applications during last season have been **substantially lower** than the average of the last 10 years, with the number of treatments per plot being around 3.





Environmental aspects of the Integrated Production Programme

Evolution of phytosanitary treatments by region



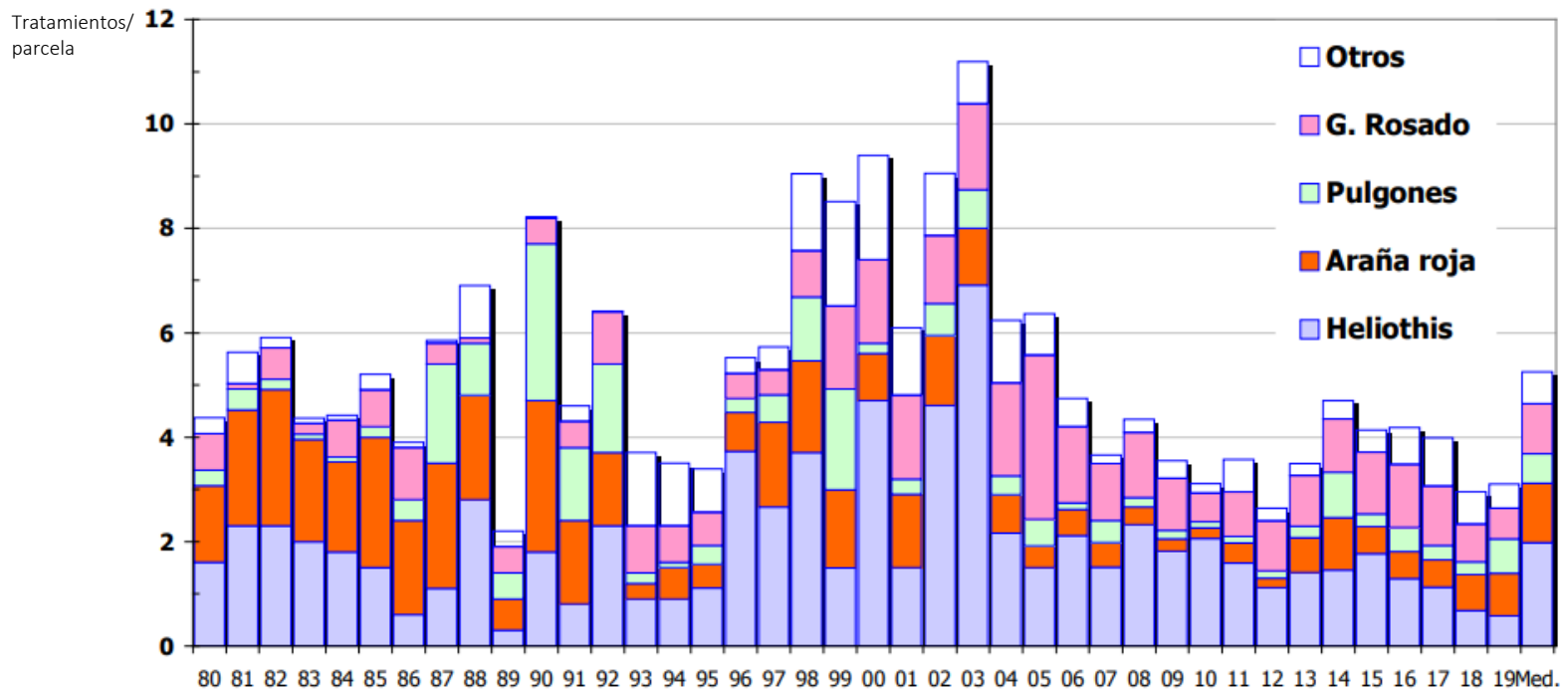
Fuente: Consejería Agricultura, Pesca y Desarrollo Rural





Environmental aspects of the Integrated Production Programme

History of phytosanitary treatments in Seville region according to pests



Fuente: Consejería Agricultura, Pesca y Desarrollo Rural

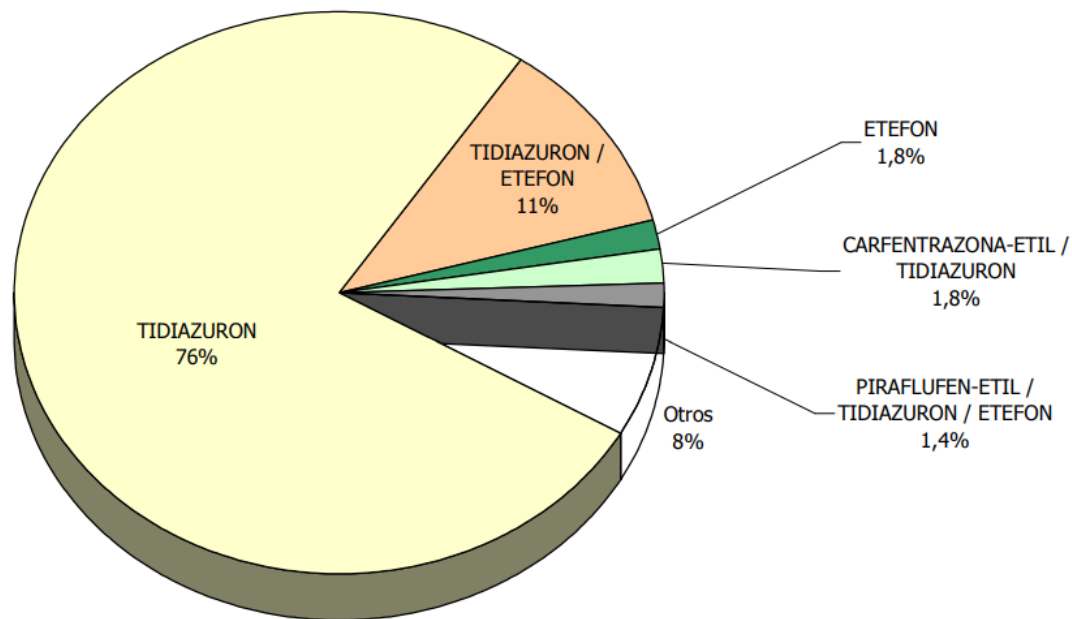




Environmental aspects of the Integrated Production Programme

Strategy for the use of defoliants

Sustancia Activa	Parcelas
Tidiazuron	94,8
Etefon	17,6
Carfentrazona-etil	5,4
Piraflufen-etil	3,8



Fuente: Consejería Agricultura, Pesca y Desarrollo Rural

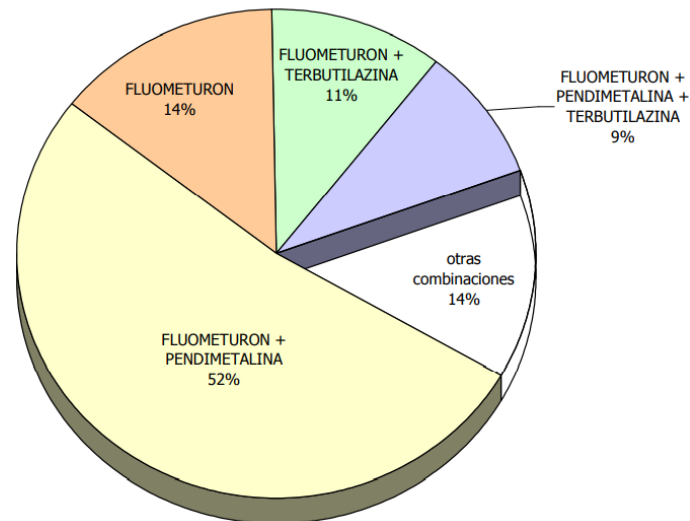




Environmental aspects of the Integrated Production Programme

As regards weed control, in Andalusia chemical methods (herbicides) are usually combined with mechanical methods (ploughing and weeding).

In 70% of the plots **a single application has been made**, either at pre-sowing or pre-emergence of the crop.



Fuente: Consejería Agricultura, Pesca y Desarrollo Rural





Environmental aspects of the Integrated Production Programme

4. Water consumption for irrigation

In Andalusia, approximately 92% of the cotton area is irrigated. The volumes of water used at our latitude range between 5,500 and 6,000 m³/ha.

Integrated production regulation **banns blanket irrigation** and requires maximum volumes to be set according to root depth, water status and physical characteristics of the soil. **The average water flow used by 73% of cotton farmers is between 3,000 and 4,000 m³/ha.**

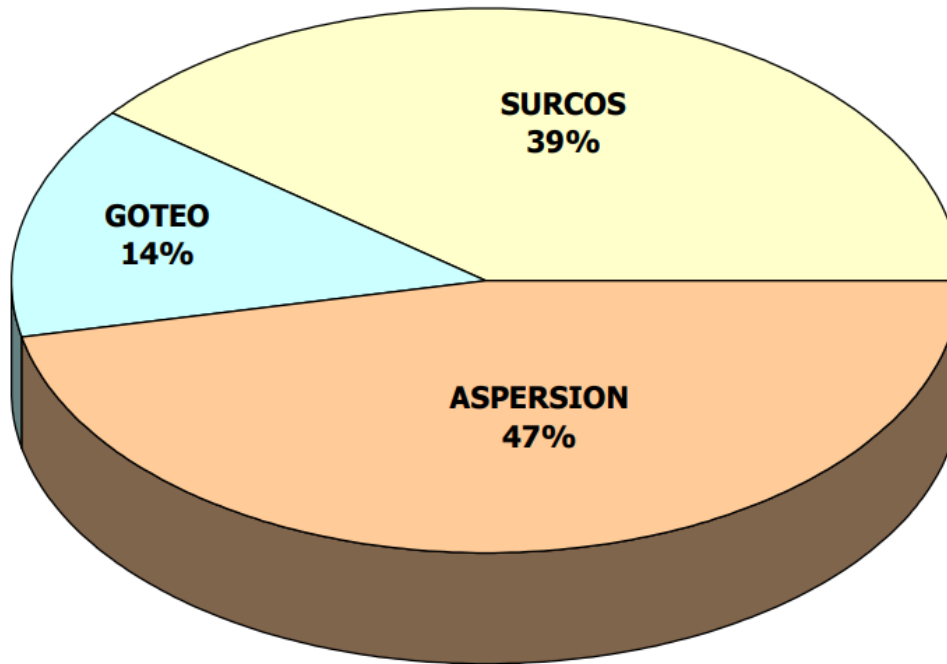
The irrigation methods used are: **drip irrigation, sprinkler irrigation and furrow irrigation.** The use of the first two methods is approaching 60% of the total sown area.





Environmental aspects of the Integrated Production Programme

Irrigation system according to the percentage of surface area



Fuente: Consejería Agricultura, Pesca y Desarrollo Rural





Final Conclusions

The Cotton sector contributes highly to the Farm to Fork Strategy. Farmers and cooperatives are strongly committed to implement friendly environmental practices and they have been working for it for ages. The sector does not start from 0.

The introduction of the agri-environmental programmes and the support programme for Integrated Production Groups **has brought about a major change in crop management.**

- All inputs applied are reduced.
- The use of plastic mulch has been abandoned.
- Water use is reduced.
- Less fertiliser is applied.
- The average number of phytosanitary treatments per season is also reduced.
- Soil structure and fertility is being improved by incorporating organic amendments.





Final Conclusions

- Incorporation of technicians through the Integrated Production Groups has improved crop management, reduced costs and the environmental impact of cotton.
- Spanish cotton sector is proactive in reducing inputs, signing agreements with the public administration to optimize fertilization and irrigation, to improve knowledge of the agro-climatic adaptation of the crop according to varieties, or the management of crop residues to pests control such as the pink bollworm.
- Cotton is a crop that maintains the activity of farms in producing areas, in the absence of viable agricultural alternatives.



