Cereal Steps in Spain

Across Europe and North America

Careful crop planning and soil management are crucial for successful cereal production. Cereals, including barley, wheat, and oats, are a major part of the European food economy, with a significant impact on the continent's agricultural landscape.

In Spain, cereal production is a vital part of the agricultural sector, contributing significantly to the country's economy. The varied climate and soil conditions across the country allow for a diverse range of cereal types to be grown, including wheat, barley, and oats.

The government and agricultural organizations play a significant role in supporting cereal farmers through research, policy, and investment. This includes efforts to improve crop resistance to pests and diseases, as well as initiatives to reduce water use and increase sustainability in cereal production.

The Spanish cereal sector is also an important part of the country's export trade, with cereals being a major commodity in international trade, contributing to Spain's economic resilience and food security.

In recent years, the Spanish cereal sector has faced challenges, including variations in crop yields due to climate change and increased competition from other cereal-producing regions worldwide. However, ongoing efforts to adapt and innovate have helped to ensure the continued success and growth of the Spanish cereal sector.

Overall, cereal production in Spain is a testament to the country's agricultural traditions and commitment to sustainable and efficient farming practices.
Values and Benefits

- **Landscape.** Cereal steppes are characterised by a flat or slightly undulating topography, open spaces and scant tree vegetation.

- **Bird species.** Although not widespread, the main natural values of this agro-ecosystem are the populations of many birds species that are in decline throughout Europe, including the most threatened Hen Harrier, Montagu's Harrier, Lesser Kestrel, Great Bustard, Little Bustard, Stone Curlew, Black-bellied Sandgrouse, Pin-tailed Sandgrouse, Short-toed Lark, Calandra Lark, Crested Lark and Tawny Pipit.

- **Plant diversity.** Low-growing perennial shrubs and higher vegetation like oak and leguminous shrubs are found in abandoned fields, borders between fields and scattered plots.

- **Cultural traditions.** The Merino sheep is a unique race adapted to long-distance transhumance, with the associated environmental and cultural values.

Challenges and Threats

The system has experienced a four-way process of change over the last decades:

- **Species loss.** Since before the entry of Spain in the Common Market of the European Community (1986), the agricultural authorities have encouraged intensification of agriculture. Mechanization has intensified, leading to the destruction of bird nests and disturbance resulting in nest abandonment. The repeated ploughing-up of fallows during winter and spring disturb the steppe birds and reduce the weed cover attracting them. With an increased application of fertiliser, the proportion of fallow land is reduced, and legumes have almost disappeared, while cereal stubble continues to be burned in autumn. As a consequence of land consolidation schemes, many hedgerows and shrubs between fields have been removed. Further, irrigation systems are developed where water is available, changing the ecology of the system.

- **Population loss leading to land abandonment.** Lack of profitability and scarcity of young farmers willing to take over farms cause abandonment of agriculture in marginal areas. Rural depopulation is happening rapidly (with densities under 30 inhabitants per square kilometre in some regions), and social functions are not maintained or renewed, driving, in a feedback loop, young people to move out of rural areas. As a consequence, large surfaces of non-irrigated land have been colonised by natural vegetation or have been reforested with fast-growing species, leading to a loss of habitat for steppe birds.

- **Urban development.** In the form of transport infrastructures, power lines, dispersed housing and industrial areas, urban development is taking place in surrounding cities, attracting more people and impacting negatively on the natural values. These developments are usually not perceived as positive by the local people.

- **Minimal financial support.** Financial resources spent on the problems and demands of dryland areas are kept to a minimum, in comparison to those targeting more productive areas, reflecting a low recognition of the unique values of these systems. This lack of recognition frustrates farmers in cereal steppes.
Public Policies and Incentives

- Programme coordination. Agri-environmental measures have been developed that are aimed at the conservation of birds in extensive cereal systems, but the financial rewards for farmers have been too low for a substantial adoption by farmers. Furthermore, lack of sufficient coordination between agricultural and environmental departments results in limited impact due to design deficiencies. However, cross-compliance on direct payments is introduced in 2003, is expected to be an opportunity to enhance the environmental performance of agricultural policies. Additionally, specific compensatory allowances for Natura 2000 (European ecological network) sites, which are under future development programmes, can encourage the adoption of more nature-friendly agricultural practices in the most valuable areas.

- Economic diversification. Other measures have been introduced in the regulatory development programmes aimed at income diversification through new activities, tourism, and the production of high-quality products. Efforts, in the processing and commercialisation of regional products, are also financially supported under that programme. Primarily oriented towards raising living standards and population fixation, the impact of these measures on the maintenance of cereal steppe landscapes is uncertain. Technical assistance to farmers and shepherds, provided by environmental authorities, could contribute to the conservation of steppe birds.

- Formal protection. Only a small percentage of the cereal steppes have any formal protection. The LIFE-Nature programme of the EU has been applied on a small scale in ECU/IDX areas, and some initiatives are ongoing. Land consolidation schemes are also present. Land consolidation schemes, however, can have ambiguous effects on the environment, and their implementation must be carefully monitored to ensure that they do not contribute to the decline of cereal steppes.

- Detrimental schemes. Unfortunately, policy measures with adverse effects are also present. Land consolidation schemes (ECU/IDX) sometimes contribute to the detrimental effects on the environment. In some cases, the introduction of more profitable, non-cereal crops in cereal steppes and the abandonment of traditional farming practices contribute to the decline of cereal steppes. Furthermore, agricultural land and have had similar negative impacts for the steppe habitats.

- Decoupling. Recent reform of the EU Common Agricultural Policy (CAP) introduces payments decoupled from production and market price support, aimed at reducing the impact of subsidies on agro-ecosystems. However, the introduction of more profitable, non-cereal crops in cereal steppes and the abandonment of traditional farming practices can still have adverse effects. Specific conservation measures should be designed, monitored, and adapted continuously to reach their conservation aim.
Interview with Juan de Mesa

Juan de Mesa is a 34-year old dryland farmer in Cobeña, a small village 30 kilometres north of Madrid. (Pictured at right with his daughter Jimena.) Juan inherited from his father both the pride of being a farmer and the natural curiosity and respect towards the Great Bustards inhabiting his fields. He owns 100 hectares and rents twice that, with an average field size of two hectares. He considers himself a lucky farmer, since this farm-size, together with good markets for his eggs, makes his farm economically viable.

What conservation actions do you implement on your farm?

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I went into the extensification measure of agri-environmental schemes when these began in 1996, although the payments hardly compensate for the loss of income derived from the compulsory one-hectare set aside. However, I learned as a child helping my father that the harvesting combine could destroy the nests of the Great Bustard and other birds lying in the ground, lost in the wheat. I always have the combine operator take precautionary measures: If I am aware of where the nest is, I have the operator leave a one-metre patch around the nest in order to disturb the nestlings as little as possible. Since I do not always know the precise location of nests, and want to give adult birds and chicks the opportunity to escape, I ask the operator to begin harvesting from the periphery of each field, moving forward concentrically to the centre, and to put a hanging-chains device in front of the combine. In this way birds have the opportunity to escape well in advance, avoiding bird-killings otherwise common. Other precautions include taking extra care when ploughing and chemical-spraying. I always try to leave a half-meter wide unploughed edge with my neighbours’ fields and avoid

spraying these strips. This is not only beneficial for beetles, butterflies and other insects, but also for rabbits, who find refuge in this vegetation.”

How do you see the future of your farming and your farm?

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Well, I have heard that CAP aids are evolving towards more environmental concerns, but the precise determinations for the next campaign are not yet known. However, seeing as this production begins to have a market, I am considering entering into organic farming schemes. I face this stage with uncertainty since things are changing rapidly. For example, the village is expanding, and a couple of my fields could soon become building land soon. Given the offered prices, I would have no options....”
We are blessed with a world of beautiful and varied landscapes — natural and wild, cultivated and agrarian. This is a book about one group of these, the working landscapes that include farming, grazing, horticulture, and related human activities. These landscapes not only produce food and fibre, they also provide renewable energy, ecological services, conservation of cultural heritage, social cohesion and biological diversity.

This book celebrates and explores these agrarian landscapes that are crucial to our physical and psychological well-being but rarely considered in depth. We have chosen to use examples in both Europe and North America to help provide a context for showing different kinds of agrarian landscapes. In each instance we explore the range of benefits and values to all of society and the challenges or threats that they face. At the same time, we look at the public policies and incentives being used to help foster more sustainable development in the regions where these landscapes exist, and we explore private initiatives by landowners, farmers, businesses, conservationists and communities to protect and preserve the benefits or to overcome the challenges.