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Global Agricultural Information Network

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Spanish Fodder Continues to Seek New Export Markets

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Report Highlights:

Abundant spring precipitation delayed Spanish fodder harvesting operations and negatively affected the quality of the first cut. However, improved quality is reported for the summer cuts. Yield recovery, particularly in non-irrigated areas compensated for the reduction in planted area. As result, in MY2018/19, overall Spanish dried fodder production is projected to grow only marginally compared to MY2017/18. Yield recovery, particularly in non-irrigated areas compensated for the reduction in planted area. Given the absence of a strong domestic demand, the Spanish fodder industry continues to seek new export markets to diversify the destination of its products.

Disclaimer: This report presents the situation for dried fodder production in Spain and its exports. This report contains the views of the authors and does not reflect the official views of the U.S. Department of Agriculture (USDA). The data is not official USDA data.

Executive Summary

Spain’s is the EU-28 largest dry fodder producer and exporter. Dry conditions prevailing in MY2017/18 limited production, and consequently, export possibilities during that season. Despite the lower overall plantings reported by the industry, a marginal recovery in dried fodder production levels is anticipated for MY2018/19, due to better yields, particularly in non-irrigated land.

The first cut of MY2018/19 was delayed by about three weeks as rains and mild spring temperatures postponed the development of the crop. This extended the MY2017/18 season, which ultimately finished with very limited stock levels. In terms of quality, the excess of water was detrimental for MY2018/19 first cut. Drier conditions since the beginning of the summer have allowed for a qualitative recovery of the summer cuts. In the absence of a strong domestic demand, the Spanish fodder industry, continues to seek new markets to diversify the destination of their products.

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References

- Abbreviations:

AEFA	National Dried Alfalfa Producers Association
BP	Basic Payment
°C	Celsius degrees
CAP	Common Agricultural Policy
EFA	Ecological Focus Area
ESYRCE	Crop surface area and yields survey
EC	European Commission
EFA	Ecologic Focus Area
EU	European Union
FAS	Foreign Agricultural Service
GTA	Global Trade Atlas
Ha	Hectares
MAPA	Ministry of Agriculture, Fisheries and Food
MOU	Memorandum of Understanding
MS	EU Member State(s)
MT	Metric ton (1,000 kg)
MY	Marketing year (May/April)
N/A	Not Available
PS&D	Production, Supply and Demand
SPS	Single Payment Scheme

- HS Codes (Harmonized System codes for commodity classification used to calculate trade data) for Dehydrated Fodder:

1214	Rutabagas (Swedes), mangolds, fodder roots, hay alfalfa (Lucerne), clover, sainfoin, forage kale, lupines, vetches and similar forage products, whether or not in the form of pellets.
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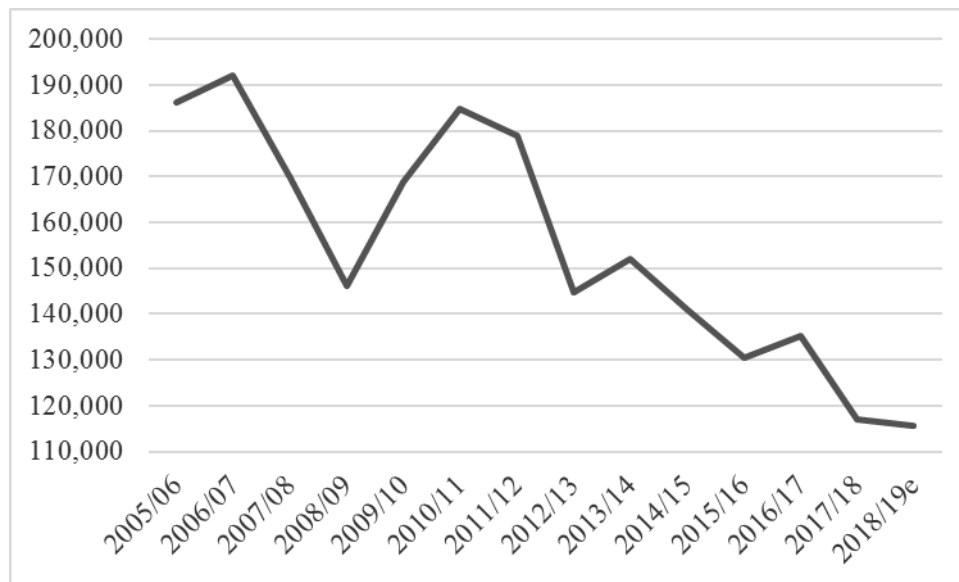
Area and Production

As alfalfa is a five-year cycle crop, every year 20 percent of the alfalfa is pulled out and replanted as a part of the crop's normal cycle. In Spain, approximately half of the alfalfa is planted during the fall with the remaining half being planted in spring.

Graph 1 shows a significant decline (15 percent) in the area under contract during MY2017/18. This is the result of un-harvested alfalfa plots, in non-irrigated areas, where extremely low yield discouraged harvesting operations. This land was instead used for direct grazing purposes. Despite the lower available supply in MY2017/18, industry sources report they received low prices for their dried fodder. The limited internal demand, as a result of a shrinking dairy herd, along with the concentration of exports to a few destinations (**Graph 6**) placed downward pressure on prices and discouraged industry contracts for alfalfa plantings (**Graph 1**).

Additionally, the stabilization in area planted for corn, also prevented the growth of the fodder area under industry contract in 2018 (**Graph 1**). Dry conditions in the fall discouraged alfalfa plantings in non-irrigated land. On a positive note, sun-dried fodder prices rose in MY2017/18 (**Table 1**), which may have slowed down the anticipated decline in total land planted for fodder crops (**Graph 2**).

Graph 1. Area Planted to Dried Fodder under Contracts with Processing Plants (Ha) **



Source: FEAGA (Spanish Agricultural Guarantee Fund), AEFA and FAS Madrid estimates.

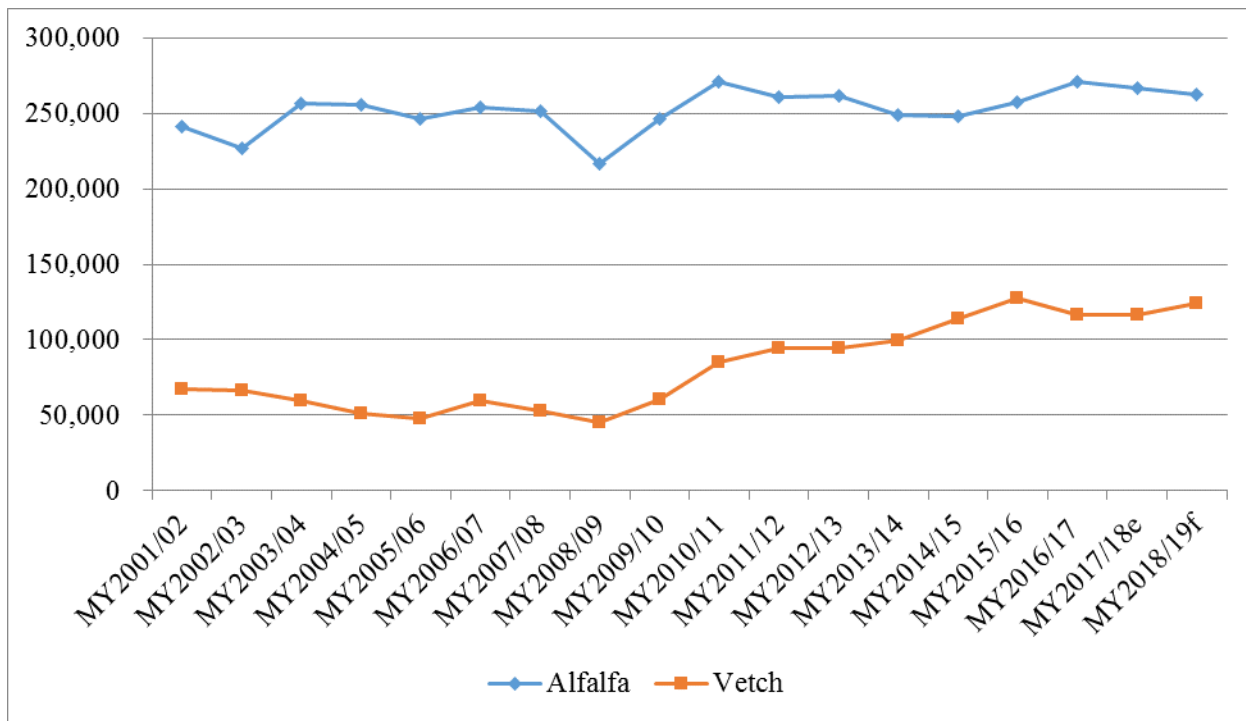
Table 1. Average Sun-Dried Fodder Farm-Gate Prices

Year	2012	2013	2014	2015	2016	2017
Price (Euros/100 Kg)	17.04	17.37	15.36	15.44	13.97	14.05

Source: MAPA.

***Note: Since MY2012/13 official information (FEGA) is no longer available. Data as of MY2013/14 is based on industry estimates. While crop specific areas are no longer published, according to contacts, alfalfa represents over 80% of the area planted to dried fodder under contracts with dehydrating plants.*

Graph 2. Area Planted to Main Fodder Crops (Hectares)¹



Source: MAPA and FAS Madrid estimates.

There are two major alfalfa growing areas in Spain: Castilla y Leon and the Ebro Valley (Aragon and Catalonia). Agricultural practices differ among the above-mentioned alfalfa producing regions. In the Ebro Valley area of influence, (Aragon and Catalonia) the most commonly cultivated alfalfa variety is “Aragón,” with about 75 percent of it cultivated land under irrigation. This is an export market oriented area with the Port of Barcelona as its main exit port. In Castilla y Leon, where nearly 70 percent of the alfalfa is non-irrigated, production is devoted to feed the domestic dairy herd. The most popular variety of alfalfa cultivated is known as “Tierra de Campos,” which perform well in heavy clay soils.

¹ Data for area planted to alfalfa and vetch in **Graph 21** differ from those showed in **Graph 1**, as **Graph 2** includes total area (with uses different than dehydrating process) and **Graph 1** includes only area under contracts whose production is subject of industrial transformation.

In MY2017/18, extremely dry conditions during the entire crop cycle reduced yield in non-irrigated land, which represents nearly 30 percent of the country’s total alfalfa planted area, and increased irrigation needs in irrigated land. Overall production levels were nearly 10 percent below the previous season.

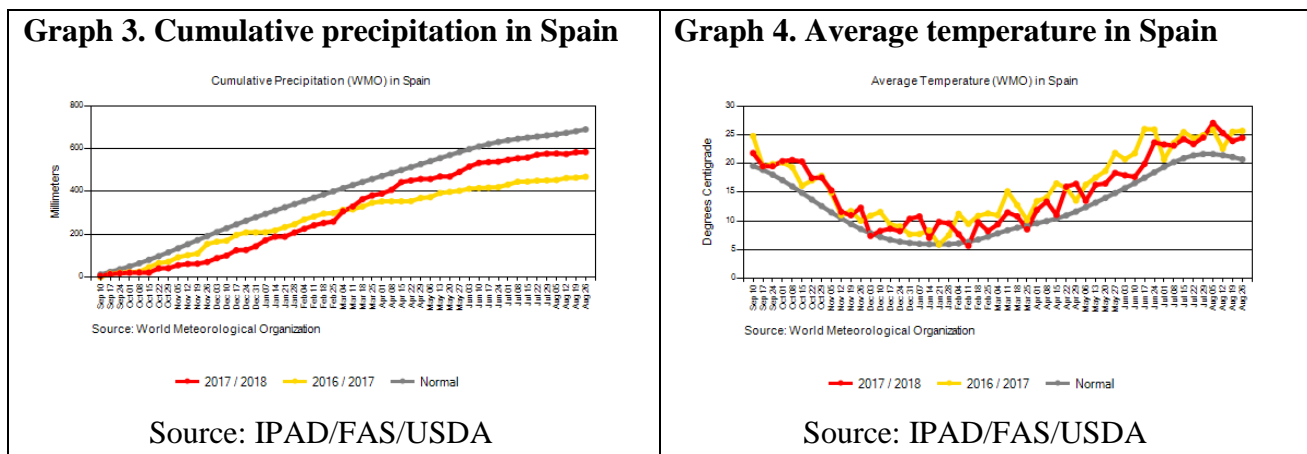
In MY2018/19, fall and winter dry conditions have been beneficial for the phytosanitary health of non-irrigated alfalfa but negatively affected fall replanting. Since March, spring rains (**Graph 3**) caused the overflowing of the Ebro river affecting one of Spain’s main fodder growing areas. However, they have contributed to the restoration of the soil and sub-soil humidity improving output projections in non-irrigated land. This will expand Spain’s total dried fodder production (**Table 2**). Similarly, abundant spring precipitations have replenished storage water granting water irrigation supply in irrigated areas.

Table 2. Dried Fodder Production under Contracts with Dehydrating Plants (MT)²

MY	2014/15	2015/16	2016/17	2017/18	2018/19e
Production (MT)	1,469,716	1,559,498	1,609,907	1,453,076	1,500,000

Source: AEFA (National Dried Alfalfa Producers Association) and FAS Madrid estimates.

Persistent rains until the beginning of the summer combined with the mild temperatures prevailing delayed the development of the crop by about three weeks. As a result, first cut harvest operations started with a delay, extending the length of the 2017/18 season, and quality issues were reported. Warmer (**Graph 4**) and drier (**Graph 3**) early summer conditions have allowed for a recovery in quality and quantity of the summer cuts.



² It includes sun-dried fodder and dehydrated fodder. On average, dehydrated fodder represents over 90 percent, which given its homogeneity, is preferred by some importing countries.

For additional information on climate conditions affecting crops in MY2018/19, see GAIN Report [SP1818](#).

Processing

Spanish fodder producers use both sun-drying and mechanical dehydration to create dried fodder:

- Sun-cured fodder: Sun-cured fodder is normally less homogeneous and is for the domestic market. Sun-cured fodder operations include mowing, which may be combined with conditioning; turning and tedding to allow an even drying, windrowing, collection, and baling.
- Dehydrated fodder: Alfalfa destined for dehydration is cut in the field. After a pre-drying phase in the field, the alfalfa is windrowed and transported to the fodder processing plant. The large majority (85 percent) of the alfalfa is collected and transported by fodder wagons, while the remaining 15 percent is chopped and collected by forage harvesters and transported via trucks to the plant. Dehydrated fodder represents about 85 percent of the country’s fodder production. It is domestically consumed and largely exported. In the fodder processing plant, the alfalfa is classified by quality and moisture. Then it goes through the processing plant drier (one step trommel), which dries the fodder out with a 300°C air flow. Moisture levels of the final product fall between 12-14%.

Details about dehydrated fodder processing plants location as well as whether they are approved to export to China or Iran can be found in **Table 3**. Additional information about trade agreements for Spanish dried fodder is available in the **Trade Section**.

Table 3. Spain Location of Processing Plants

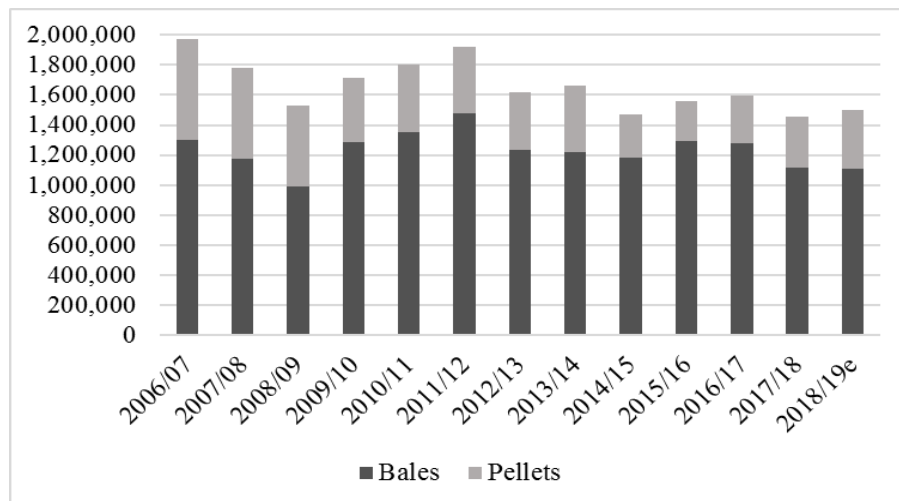
Region	Number of Plants	Approved to export to China ³	Approved to export to Iran
Aragon	34	31	34
Catalonia	11	8	8
Castile y Leon	10	7	6
Castile-La Mancha	8	2	2
Navarra	4	3	4
Andalusia	3	2	3
Extremadura	1	0	1
Balearic Islands	1	0	0
Total	69	53	58

Source: AEFA (National Dried Alfalfa Producers Association) and MAPA.

³ Since August 2017 other 20 plants are approved to export to China in addition to the 33 approved between 2014 and 2015.

Quality issues in the MY2017/18 harvest led to an increased share of pellet versus bales production (**Graph 5**). In MY2018/19, the excess of water may have negatively affected the quality of the first cut, which might contribute to a somewhat increased pellet production at the expenses of bales.

Graph 5. Spain Dried Fodder Product by Production Type (MT)



Source: FAS Madrid based on AEFA data and FAS Madrid estimates.

Consumption and Marketing

Domestic consumption of dried fodder only represents a small amount of the sector’s demand, with the domestic dairy herd as the primary customer, along with other ruminants like sheep and goats. From 2013, the fodder needs of the dairy sector remained stable but registered a decline since 2015 as a result of the dairy quota’s phase out (**Table 4**). For more information on the EU-28 dairy sector, see the latest information available on [Dairy and Products Semi Annual EU-28 GAIN Report](#).

Table 4. Dairy Cow population (1,000 Heads)

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Dairy cow population	903	888	828	845	798	827	844	845	844	834	823

Source: Eurostat. FAS Madrid estimates.

Nevertheless, it is the export demand, in particular the demand in the Middle East and Asia what primarily drives the changes in the global fodder market (See **Trade** Section). The Spanish fodder industry continues to seek new markets and work to diversify the destination of its products.

Trade

Spain is the world’s third largest fodder exporter after the United States and Australia. Spain is a net exporter of fodder, with exports (**Table 6**) largely exceeding imports (**Table 5**), which are limited to a few strategic exchanges with neighboring countries.

Table 5. Spain Total Imports of Fodder by Origin in MT*

Country of Origin	MY 2013/14	MY 2014/15	MY2015/16	MY2016/17	MY2017/18
EU-28	6,136	18,137	31,726	24,485	17,850
Others	504	738	1,839	678	1,310
TOTAL IMPORTS	6,640	18,875	33,565	25,163	19,160

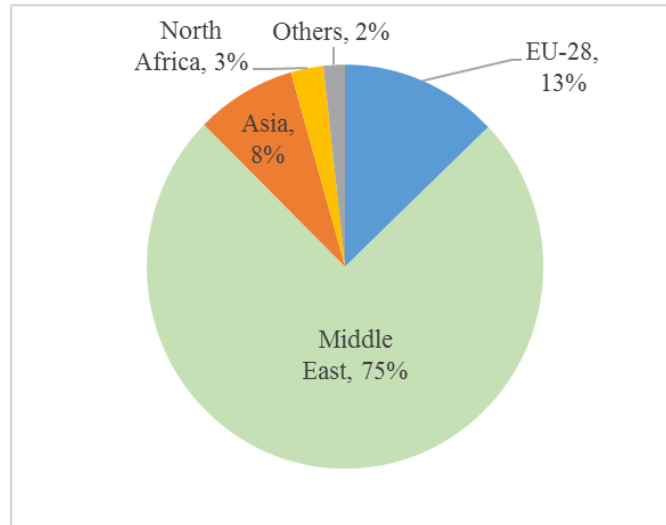
Source: GTA and FAS Madrid estimates.* Includes both bales and pellets.

The large majority of Spanish dried alfalfa exports are concentrated in a limited number of countries. United Arab Emirates is the main destination of Spain’s dried fodder exports. Other important destination for Spanish dried fodder include Saudi Arabia, China, Jordan, Morocco, Lebanon, Kuwait, Japan and Tunisia.

A shorter Spanish crop in MY2017/18 combined with stiff competition with U.S. alfalfa in Saudi Arabia, prevented Spanish fodder exports to this market to grow, despite the country’s decision to phase out its domestic forage production.

The pace of exports to the Middle East – North African countries (namely, Jordan, Morocco, Iran, Lebanon, Kuwait and Tunisia) is growing. Spanish exports dominate these markets, while the United States, trailing by Australia, are Japan’s and China’s largest fodder suppliers (**Graph 6**).

Graph 6. Spain's Dried Fodder Export Distribution (5-year average)



Source: FAS Madrid base on GTA data.

On September 2017, the Spanish Ministry of Agriculture, Fisheries and Food (MAPA) signed a Memorandum of Understanding (MOU) establishing phytosanitary requirements with the Plant Protection Authorities in Iran. This agreement has allowed Spanish dried fodder exports to double its presence in this market. The MOU covers dehydrated alfalfa exports from Spain in bales or pellets.

Similarly, the signing of an MOU with China, allowed Spanish fodder manufacturers to export to that country since MY2014/15. However, since MY2016/17, Spanish fodder exports to China have been stagnant, due to stiff competition from the United States and Australia.

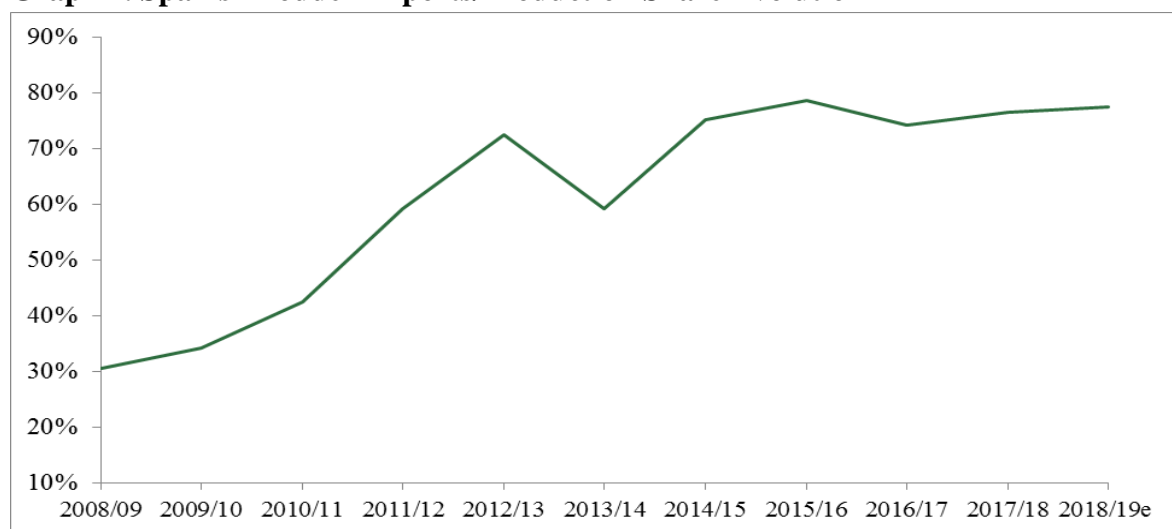
Table 6. Spain Total Exports of Fodder by Destination in MT*

Country of Destination	MY 2013/14	MY 2014/15	MY 2015/16	MY 2016/17	MY 2017/18
EU-28	144,583	131,286	134,296	142,346	169,656
United Arab Emirates	643,243	700,013	722,679	668,675	552,844
China	0	91,841	126,120	67,688	71,084
Jordan	24,514	29,791	44,261	67,145	67,266
Lebanon	14,081	21,066	14,873	21,563	41,063
Iran	0	0	14,952	14,924	30,004
Morocco	15,539	14,799	7,093	34,857	29,770
Saudi Arabia	73,167	45,092	109,333	103,891	26,674
Korea, South	2,474	7,445	8,355	10,524	23,900
Qatar	168	123	0	255	23,580
Japan	2,863	7,648	10,854	13,335	15,813
Kuwait	6,171	9,112	9,442	17,093	15,799
Tunisia	2,189	4,371	2,741	10,879	8,841
Algeria	1,379	5,940	3,368	3,429	4,036
Libya	34,231	19,908	20	917	115
Others	17,478	14,478	17,541	17,572	31,288
TOTAL	982,080	1,102,913	1,225,928	1,195,093	1,111,733

Source: GTA. * Includes both bales and pellets.

With the exception of MY2016/17, when fodder quality issues negatively influenced export volumes, the ratio exports/production has grown steadily well above 70 percent (**Graph 7**).

Graph 7. Spanish Fodder Exports/Production Share Evolution*



Source: FAS Madrid based on AEFA and GTA data. *MY on May April basis

Stocks

The combination of a short alfalfa crop in MY2017/18 in consumption areas, the dry winter conditions, and an extended period of snow covering boosted feed demand for this protein-fiber. These situations along with the delay of MY2018/19 first cut has resulted in an extended MY2017/18 season that ultimately finished with very limited stock levels.

Production, Supply and Demand

Table 7. Spain Production, Supply and Demand for Dehydrated Fodder (MT)

Market Year	MY2014/15	MY2015/16	MY2016/17	MY 2017/18	MY 2018/19e
Production	1,469,716	1,559,498	1,609,907	1,453,076	1,500,000
Imports	18,875	33,565	25,163	19,160	16,000
Total supply	1,488,591	1,593,063	1,635,070	1,472,236	1,516,000
Dom. Consumption	385,678	367,135	439,977	360,503	366,000
Exports	1,102,913	1,225,928	1,195,093	1,111,733	1,150,000
Total Demand	1,488,591	1,593,063	1,635,070	1,472,236	1,516,000

Source: FAS Madrid estimates.

Policy

Since 2015, the EU replaced the Single Payment Scheme with the so-called Basic Payment (BP) which is not crop specific. Farmers receive an area payment regardless of the crop.

The Basic Payment amount takes into consideration the different land uses at the county level. For example irrigated vs. non-irrigated land or permanent crops vs. pasture land. The basic payment amount is influenced by the previous amount of support farmers received for cultivating the land. As result, a total of fifty homogeneous regions have been defined in Spain. Broadly speaking, the amount of the Basic Payment allocated to each region represents the support granted to the type of land use. The amount of support under Basic Payment received was calculated based on the subsidies received in 2014. In the irrigated land in the Ebro basin, where most of the export oriented alfalfa is grown, industry sources estimate that Basic Payment would add up to nearly 250 Euros per hectare. In the case of Castilla y León, the other main alfalfa producing region, where alfalfa is grown in non-irrigated land and coexists with non-irrigated grain plots, the amount of support via Basic Payment may add up to 90 Euros per hectare.

A large part of farm support is linked to compliance with greening measures. An option for greening compliance is to maintain EFAs (Ecological Focus Area). Alfalfa is considered as a nitrogen fixing crop for greening compliance purposes. Farms over 15 Hectares need to devote over 5 percent of their cultivation land to this use.

Since 2018, the ban on the use of pesticides on fallow land or nitrogen-fixing crops, catch or cover crops grown as an EFA enters in to force. Consequently, when used for greening compliance, part of the alfalfa area has to be cultivated without Plant Protection Products. This ban affects to farms whose total land is above 15 hectares, out of which at least 5 percent is EFA. The estimated impact of the ban on overall alfalfa production is expected to be negligible in terms of produced volumes.

In Spain’s implementation of CAP reform, specific payments have been allocated to protein crops (peas, bean, and sweet lupin) or legumes (vetch, soybeans, *lathyrus cicera*, *lathyrus sativus* and non-irrigated alfalfa). Support levels are not sufficient to significantly influence planting decisions (See values in **Table 8**). Hence, farmers’ planting decisions will ultimately be based on crop margins expectations.

Table 8. Legume Specific Payment (Euros/Ha)

Year	Total Area (Ha)*	Percentage in Castile y León	Payment (Euros/Ha)
2015	450,372.01	55	48.06
2016	451,406.24	53	47.71
2017	484,549.12	56	44.48

Source: FEAGA

**includes all legume crops eligible for the subsidy*

Related Reports

Report Title	Date Released
Fodder Demand in the Middle East Drives Spanish Export Growth	06/16/2017
Saudi Arabia: Saudi Arabian Alfalfa Hay Market	02/27/2017
Spanish Dried Fodder Exports Continue to Soar	06/29/2016