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**Date:** 7/26/2019

**GAIN Report Number:** SP1940

## **Spain**

**Post:** Madrid

### **Spanish Dried Fodder Exports to China hit Record Levels**

**Report Categories:**

Grain and Feed

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**Report Highlights:**

Dry conditions prevailing since last fall and throughout the entire crop cycle reduced Spanish fodder production for MY2019/20, despite a larger registered area. Traditionally, Spain has been the largest fodder supplier to the Middle East and the United States has dominated exports to Asian Markets. However, in MY2018/19 the Spanish fodder industry quickly reacted to China's levies on U.S. alfalfa and consolidated its presence in the Chinese market, hitting record exports. Given Spain's lower fodder output MY2019/20, additional export growth to Asian markets (primarily to China) will likely reduce Spanish fodder shipments to the Middle East.

**Disclaimer:** This report presents the production and export situation of Spanish dried fodder. 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 the second world largest exporter after the United States. In Spain, the combined planted area for alfalfa and vetches covers an average of over 350,000 Ha. Over half of this area planted to fodder crops has contracts with the dried fodder industry.

In 2019, the planted area under industry contracts declined due to a slight increase in the planted area for corn. In addition, dry conditions prevailing since the fall, and throughout the entire crop cycle, discouraged alfalfa plantings and negatively affected yields. A recovery in planted area is anticipated for 2020 in response to China's steady demand.

In the absence of a strong domestic demand, the exports/production ratio has grown steadily over the past five years, and nearly 80 percent of domestic production is exported. Nevertheless, in MY2019/20 the drought impact on domestic pasture supplies may lead to a slight increase in domestic demand.

Traditionally, Spain has been the first fodder supplier to the Middle East while the United States dominated exports to Asian Markets. However, the Spanish fodder industry quickly reacted to China's levies on U.S. alfalfa and consolidated its presence in the Chinese market during MY2018/19. As Spain's dried fodder production levels are anticipated to decline for the third year in a row, the export supply is limited. Consequently, in MY2019/20 additional export growth to Asian markets (primarily to China) will reduce the presence of Spanish fodder in the Middle East market.

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## References

AEFA	National Dried Alfalfa Producers Association
BP	Basic Payment
°C	Celsius degrees
CAP	Common Agricultural Policy
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:

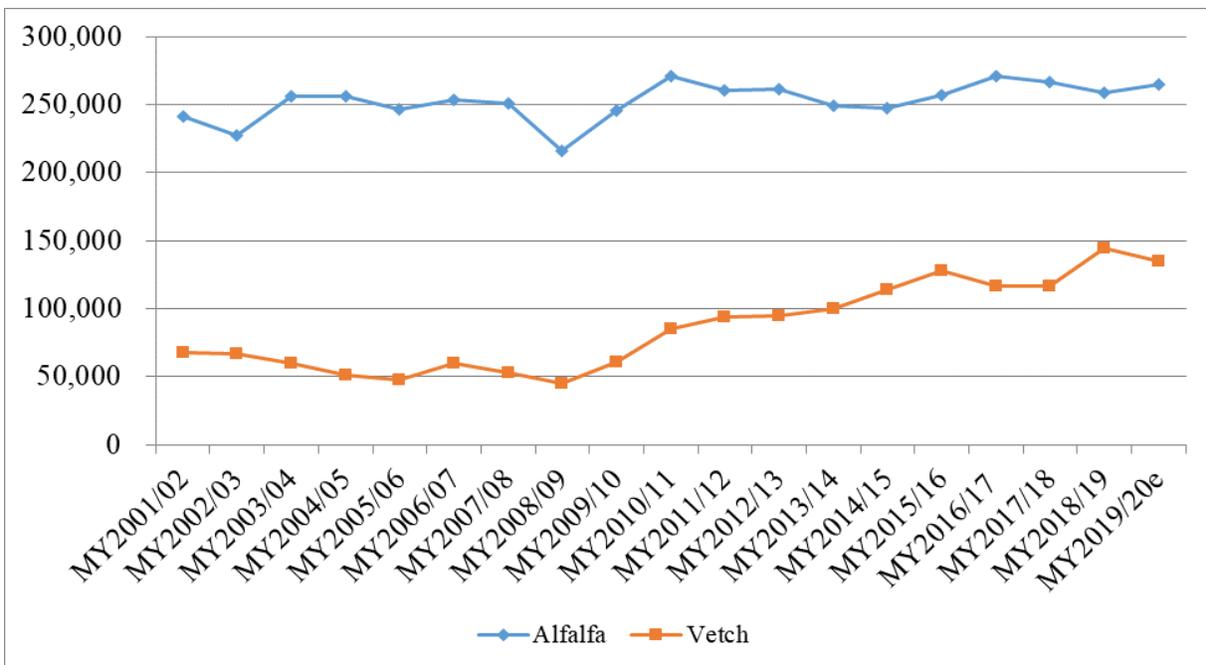
1214	Rutabagas (Swedes), mangolds, fodder roots, hay alfalfa (Lucerne), clover, sainfoin, forage kale, lupines, vetches and similar forage products, whether or not in the form of pellets.
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## Area and Production

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 planted in spring.

In Spain, the combined planted area for alfalfa and vetches covers an average of over 350,000 Ha (**Graph 1**). Over half of this area planted for fodder crops has contracts with the dried fodder industry (**Graph 2**), the remaining area is either sun-cured or livestock grazed (see **Processing** Section for additional details).

**Graph 1. Spanish Planted Area for Main Fodder Crops (Hectares)<sup>1</sup>**

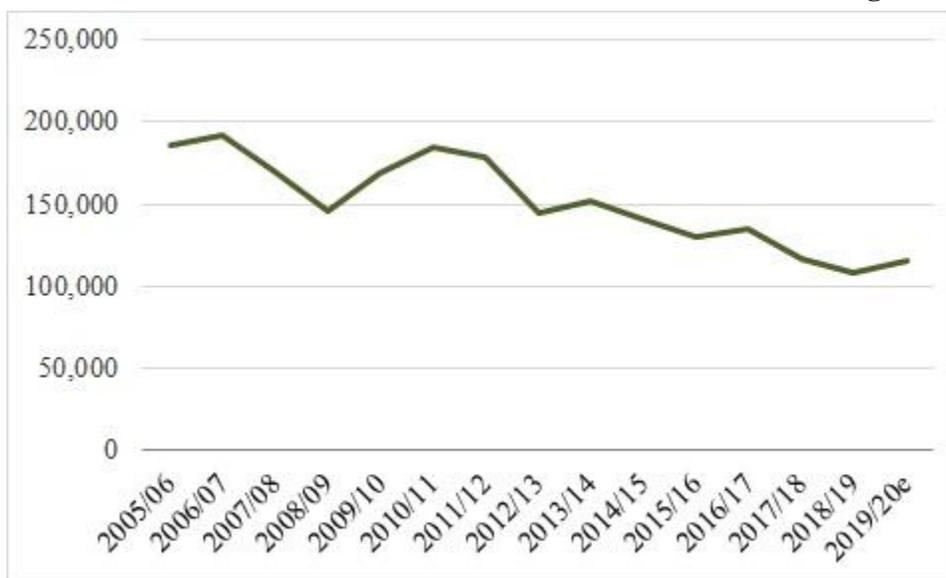


Source: MAPA and FAS Madrid estimates.

After peaking in MY2010/11, the Spanish alfalfa planted area has continuously declined (**Graph 2**). In the absence of a strong domestic demand, export demand and competition from other crops drive planting decisions. In MY2019/20, the area under industry contracts increased marginally (**Graph 2**), despite the prevailing dry conditions during the planting season. Industry sources anticipate a recovery in planted area for MY2020/21 in response to China’s steady demand.

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

**Graph 2. Planted Area for Dried Fodder under Contract with Processing Plants (Ha) \*\***



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

*\*\*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 percent of the dried fodder planted area under contracts with dehydrating plants.*

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 area oriented to export markets 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.

In **MY2019/20**, extremely dry conditions prevailed during the entire crop cycle and significantly reduced yield in non-irrigated land (30 percent of the country’s total alfalfa area), and increased irrigation needs in irrigated land. For additional information on climate conditions affecting crops in **MY2019/20**, see GAIN Report [SP1930](#).

In addition to dry weather conditions, the area increase with new alfalfas also limited overall yields this season. Newly planted alfalfas produce lower yield compared to mature crops. Industry sources also report lower production due to the incidence of alfalfa weevil (*Hypera postica*) during the first cut. Globally, Post anticipates a reduction in production levels of nearly 10 percent (**Table 2** and **Graph 3**).

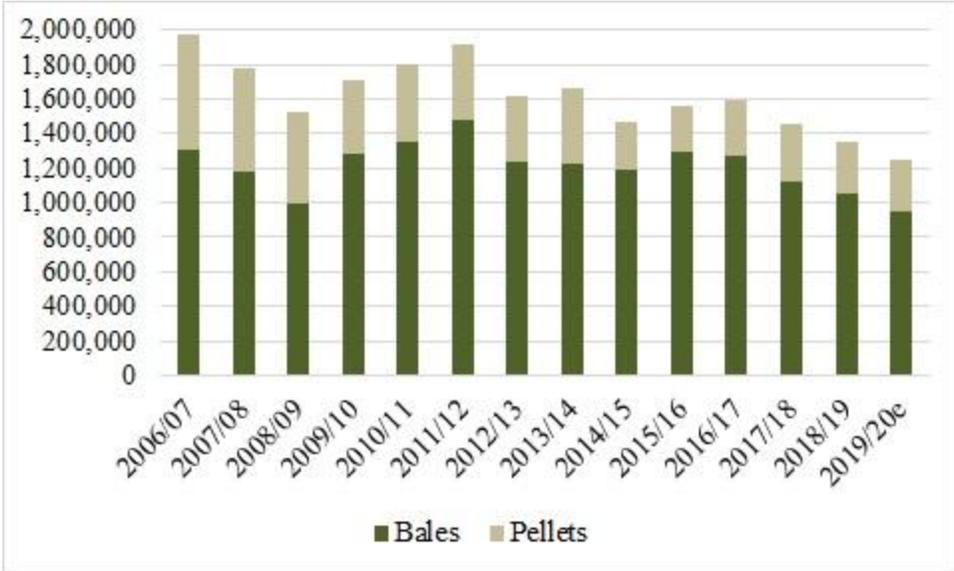
Nevertheless, warm (**Graph 5**) and dry (**Graph 4**) early summer conditions allowed for a recovery in the quality and the quantity of the summer cuts.

**Table 2. Dried Fodder Production under Contracts with Dehydrating Plants (MT)<sup>2</sup>**

MY	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20e
<b>Production (MT)</b>	1,469,716	1,559,498	1,609,907	1,453,076	1,352,505	1,250,000

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

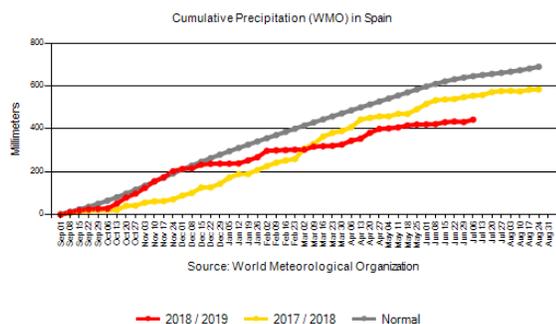
**Graph 3. Spain Dried Fodder Product by Production Type (MT)**



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

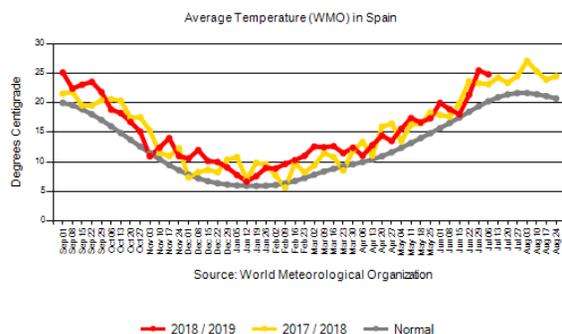
<sup>2</sup> It includes sun-dried fodder and dehydrated fodder. On average, dehydrated fodder represents over 90 percent, which given its homogeneity, is preferred by some importing countries.

**Graph 4. Cumulative precipitation in Spain**



Source: IPAD/FAS/USDA

**Graph 5. Average temperature in Spain**



Source: IPAD/FAS/USDA

## 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 plants. 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. The alfalfa then 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. Spanish Processing Plants by Location**

<b>Region</b>	<b>Number of Plants</b>	<a href="#">Approved to export to China<sup>3</sup></a>	<a href="#">Approved to export to Iran</a>
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
<b>Total</b>	<b>69</b>	<b>53</b>	<b>58</b>

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

### **Consumption and Marketing**

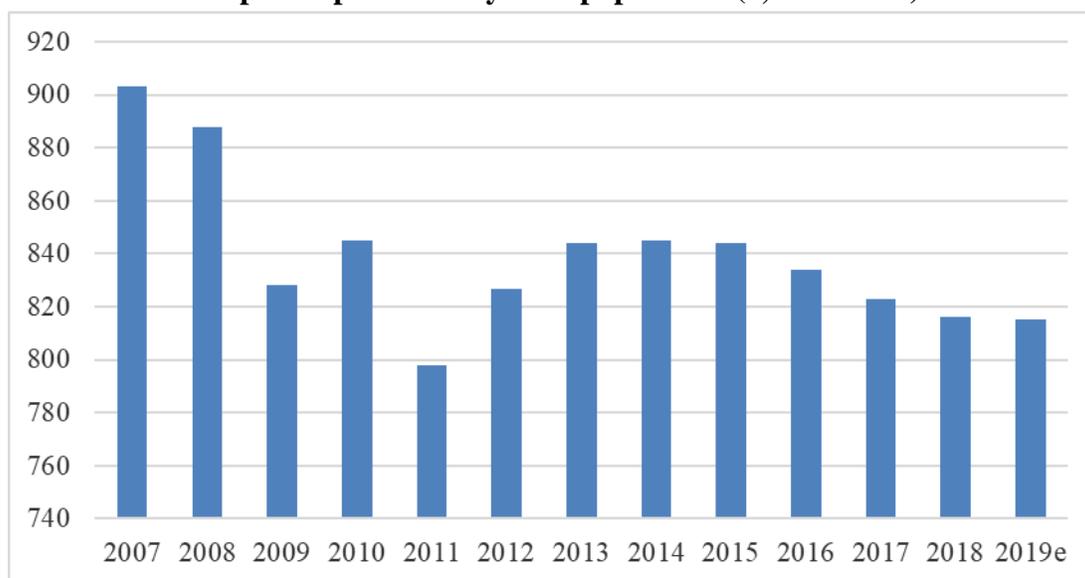
Domestic consumption of dried fodder is very limited, and only absorbs 20 percent of domestic dried alfalfa production. The domestic dairy herd, registering a long-term reduction in inventories (**Graph 6**), is the primary customer, along with other ruminants like sheep and goats. Consequently, the market is driven by export demand. Nevertheless, in MY2019/20, the drought impact on the availability of pasture could lead to a slight increase in domestic dried fodder demand.

For more information on the EU-28 dairy sector, see the latest information available on [Dairy and Products Semi Annual EU-28 GAIN Report](#).

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

**Graph 6. Spain's Dairy Cow population (1,000 Heads)**



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

## 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 (**Graph 7**) largely exceeding imports (**Table 5**), which are limited to a few strategic exchanges with neighboring countries.

**Table 5. Spanish Total Fodder Imports by Origin in MT\***

Country of Origin	MY 2014/15	MY2015/16	MY2016/17	MY2017/18	MY2018/19
EU-28	18,137	31,726	24,485	17,850	18,008
Others	738	1,839	678	1,310	765
<b>TOTAL IMPORTS</b>	<b>18,875</b>	<b>33,565</b>	<b>25,163</b>	<b>19,160</b>	<b>18,773</b>

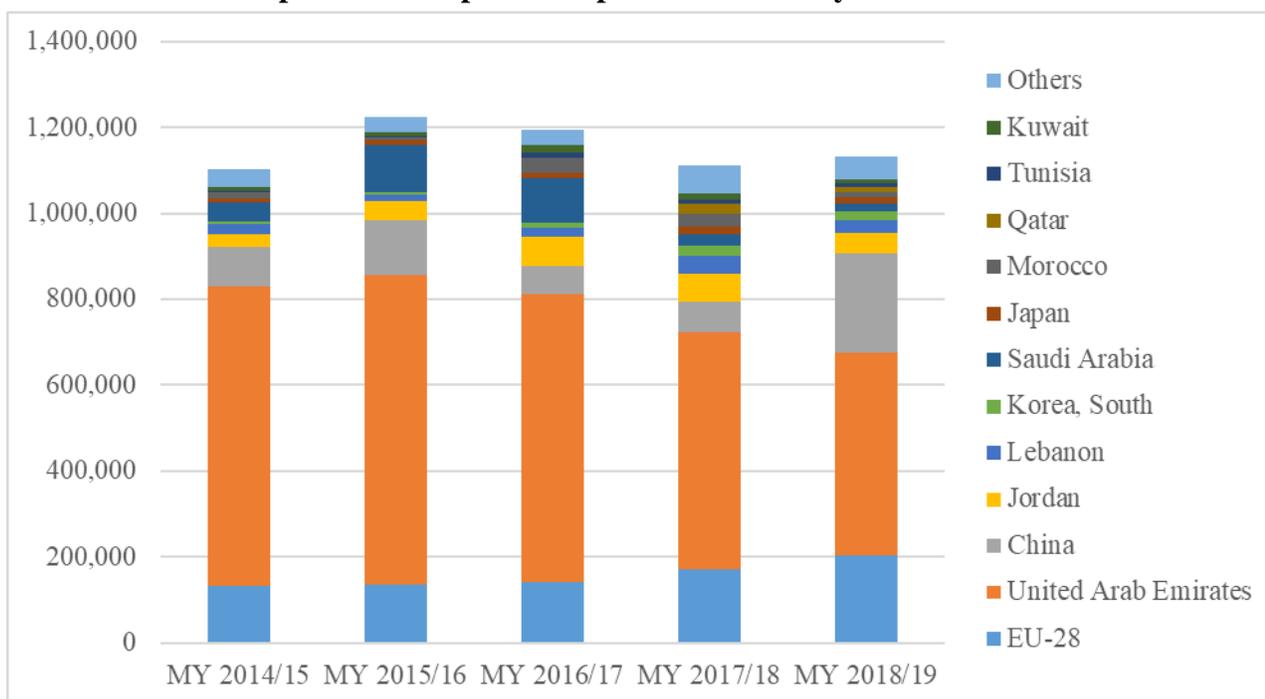
Source: GTA and FAS Madrid estimates.\* Includes both bales and pellets.

Spain exports nearly 80 percent of its dried alfalfa production. Spanish dried alfalfa exports are concentrated in a limited number of countries, led by United Arab Emirates, who absorbed over 40 percent of the exports in MY2018/19.

Driven by China’s levy on U.S. alfalfa, in **MY2018/19**, Spanish dried alfalfa exports to China tripled, consolidating China as the second largest market for Spanish dried fodder. Other important destination for Spanish dried fodder include other EU Member States<sup>4</sup>, Jordan, Lebanon, South Korea, Saudi Arabia, Japan, and Morocco (**Graph 7**). While the Middle East continued to be the largest regional market in MY2019/20, the importance of Asian markets is growing driven primarily by the three-fold increase in exports to China (**Graph 8**).

As Spain’s dried fodder production levels are anticipated to decline for the third year in a row, the export supply will be limited. Hence, any additional growth in Asian markets in **MY2019/20** will result in a reduced presence of Spanish fodder in the Middle East. While the Spanish dried fodder industry is gearing up for an area recovery in MY2020/21, the production increase and the subsequent exportable supply will be largely contingent upon precipitation patterns.

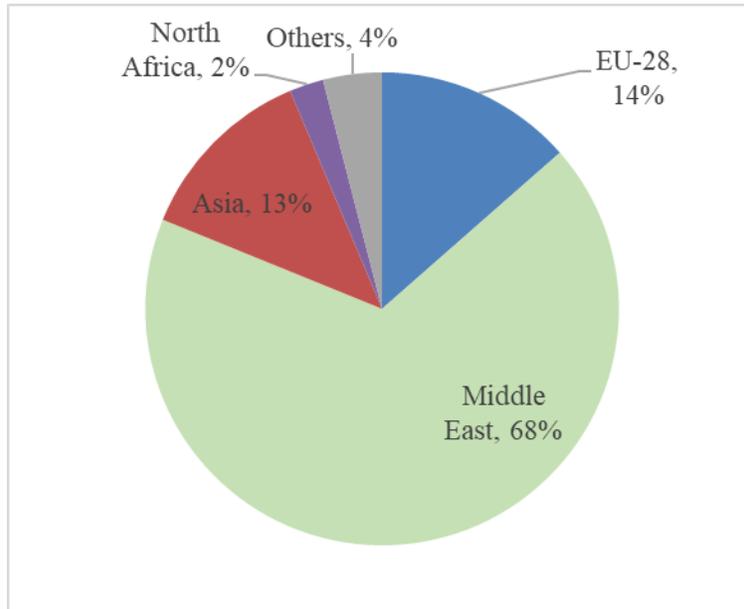
**Graph 7. Total Spanish Exports of Fodder by Destination in MT\***



Source: GTA. \* Includes both bales and pellets.

<sup>4</sup> Including traditional markets such as France, Italy, or other destinations such as Ireland, where extremely dry conditions prevailing boosted import needs.

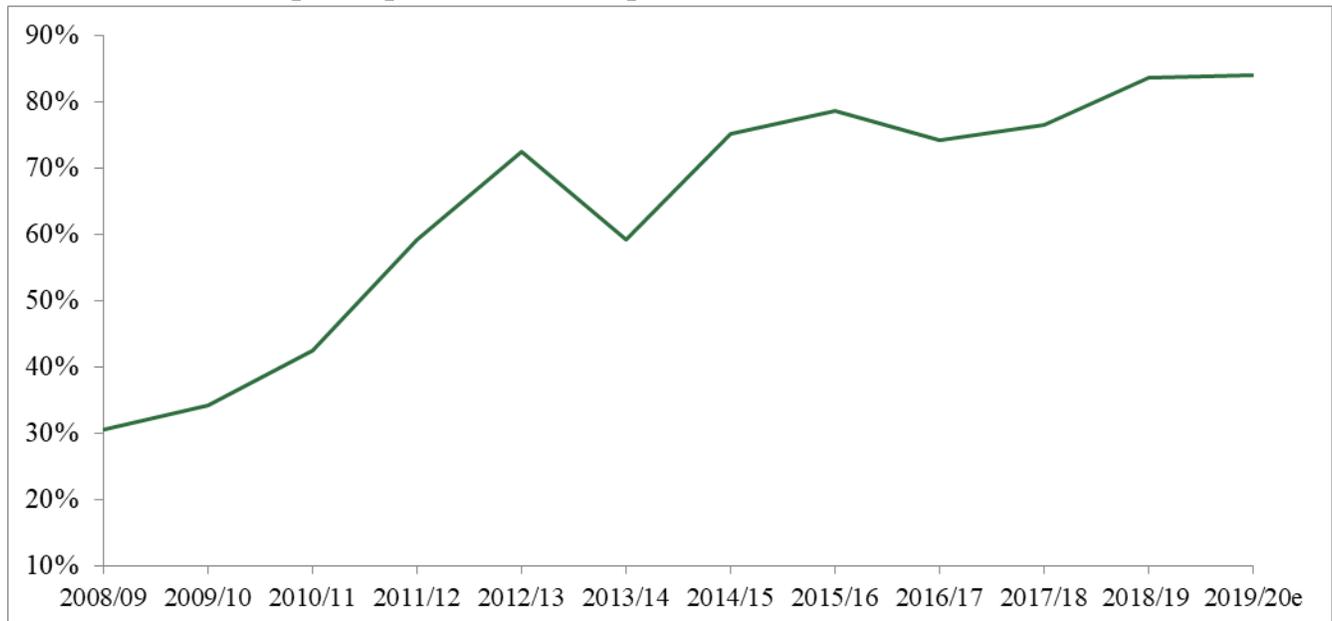
**Graph 8. Spain's Dried Fodder Export Distribution (5-year average)**



Source: FAS Madrid base on GTA data.

The exports/production ratio has grown steadily over the past five years. On average, Spain exports nearly 80 percent of domestic production (**Graph 9**).

**Graph 9. Spanish Fodder Exports/Production Share Evolution\***



Source: FAS Madrid based on AEFA and GTA data.

\*MY on May April basis

## Stocks

The combination of the good pace of exports throughout MY2018/19 and the second shortest alfalfa crop in a row has resulted in low beginning stocks for MY2019/20. If export demand continues strong, the smaller area projected for MY2019/20 along with the anticipated poor yields, particularly in non-irrigated land, could result in very low ending stock levels in MY2019/20.

## Production, Supply and Demand

**Table 6. Spain Production, Supply and Demand for Dehydrated Fodder (MT)**

Market Year	MY2015/16	MY2016/17	MY 2017/18	MY 2018/19	MY 2019/20e
<b>Production</b>	1,559,498	1,609,907	1,453,076	1,352,505	1,250,000
<b>Imports</b>	33,565	25,163	19,160	18,773	25,000
<b>Total supply</b>	<b>1,593,063</b>	<b>1,635,070</b>	<b>1,472,236</b>	<b>1,371,278</b>	<b>1,275,000</b>
<b>Dom. Consumption</b>	367,135	439,977	360,588	239,715	225,000
<b>Exports</b>	1,225,928	1,195,093	1,111,648	1,131,563	1,050,000
<b>Total Demand</b>	<b>1,593,063</b>	<b>1,635,070</b>	<b>1,472,236</b>	<b>1,371,278</b>	<b>1,275,000</b>

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 the Basic Payment received was calculated based on the subsidies received in 2014.

In the irrigated land of the Ebro basin, where most of the export oriented alfalfa is grown, industry sources estimate that the 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). For the purpose of greening compliance, alfalfa is considered a nitrogen-fixing crop. Farms over 15 Hectares need to devote over 5 percent of their cultivation land to this use.

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

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). However, support levels are not sufficient to significantly influence planting decisions (See values in **Table 7**). Hence, farmers’ planting decisions are ultimately based on crop margins expectations.

**Table 7. 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	475,716.67	56	45.30
2018	484,549.12	56	44.48

Source: FEAGA

*\*includes all legume crops eligible for the subsidy*

## Related Reports

Report Title	Date Released
<a href="#">Spanish Fodder Continues to Seek New Export Markets</a>	9/12/2018
<a href="#">Fodder Demand in the Middle East Drives Spanish Export Growth</a>	06/16/2017
<a href="#">Saudi Arabia: Saudi Arabian Alfalfa Hay Market</a>	02/27/2017
<a href="#">Spanish Dried Fodder Exports Continue to Soar</a>	06/29/2016