

USDA Foreign Agricultural Service

GAIN Report

Global Agricultural Information Network

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Voluntary Public

Date: 6/29/2016

GAIN Report Number: SP1613

Spain

Post: Madrid

Spanish Dried Fodder Exports Continue to Soar

Report Categories:

Grain and Feed

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Report Highlights:

Spain's dried fodder production is expected to grow in MY 2016/17. Despite the concerns about quality of the first cut, due to the excessive precipitation, Spanish fodder producers will likely continue to succeed in export markets, as ample supplies are anticipated. Export figures for MY2015/16 show how exports achieved historically high levels, surpassing for the first time the 1.2 MMT ceiling, driven by increased exports to traditional markets such as UAE and by a larger presence of Spanish dried fodder in markets such as China, Saudi Arabia and Jordan and Japan.

General Information:

Disclaimer: This report presents the situation for forage production and exports in Spain. 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 are not official USDA data.

Executive Summary

Spain’s dried fodder area is expected to grow in MY 2016/17 at the expenses of corn plantings. Production levels are anticipated to be good. Industry has expressed some concerns about quality of the first cut, due to the excessive spring precipitation.

Domestic demand for dried fodder continues to be weak as the consequence of the ongoing crisis of the dairy sector. In the absence of a strong domestic demand, fodder processors have managed to find alternative markets for their production.

Export figures for MY2015/16 show how exports achieved historically high levels, surpassing for the first time the 1.2 MMT ceiling, driven by increased exports to traditional markets such as UAE and by a larger presence of Spanish dried fodder in markets such as China, Saudi Arabia and Jordan and Japan. This tendency is expected to continue throughout MY2016/17.

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Abbreviations used in this report:

EC	European Commission
EU	European Union
FAS	Foreign Agricultural Service
GTA	Global Trade Atlas
CAP	Common Agricultural Policy
SPS	Single Payment Scheme
BP	Basic Payment
EFA	Ecological Focus Area
MAGRAMA	Ministry of Agriculture, Food and Environment
ESYRCE	Crop surface area and yields survey
AEFA	National Dried Alfalfa Producers Association
AQSIQ	China's General Administration of Quality Supervision, Inspection and Quarantine

HS Codes: Harmonized System codes for commodity classification used to calculate trade data.

Harmonized Codes 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.
121410	Alfalfa (Lucerne) meal and pellets; dehydrated, sun-cured and other.
121490	Hay (including alfalfa, whether or not double compressed, and Timothy); clover; and other.
MS	EU Member State(s)
MT	Metric ton (1,000 kg)
MY	Marketing year (May/April)
PS&D	Production, Supply and Demand
Ha	Hectares
°C	Celsius degrees
N/A	Not Available

Area and Production

In MY 2015/16, the total area planted to fodder crops declined compared to previous season. For MY2016/17 a rebound is anticipated at the expenses of lower corn plantings as a consequence of larger Fall plantings.

Alfalfa is a five-year cycle crop. Hence, normally, every year a 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 Fall and the remaining half is spring planted. For MY2016/17 while favorable crop margins led farmers to increase their alfalfa Fall plantings, wet Spring conditions prevented from further growth in the area devoted to alfalfa.

Table 1. Area Planted to Dried Fodder under Contracts with Processing Plants (Ha)^{1}**

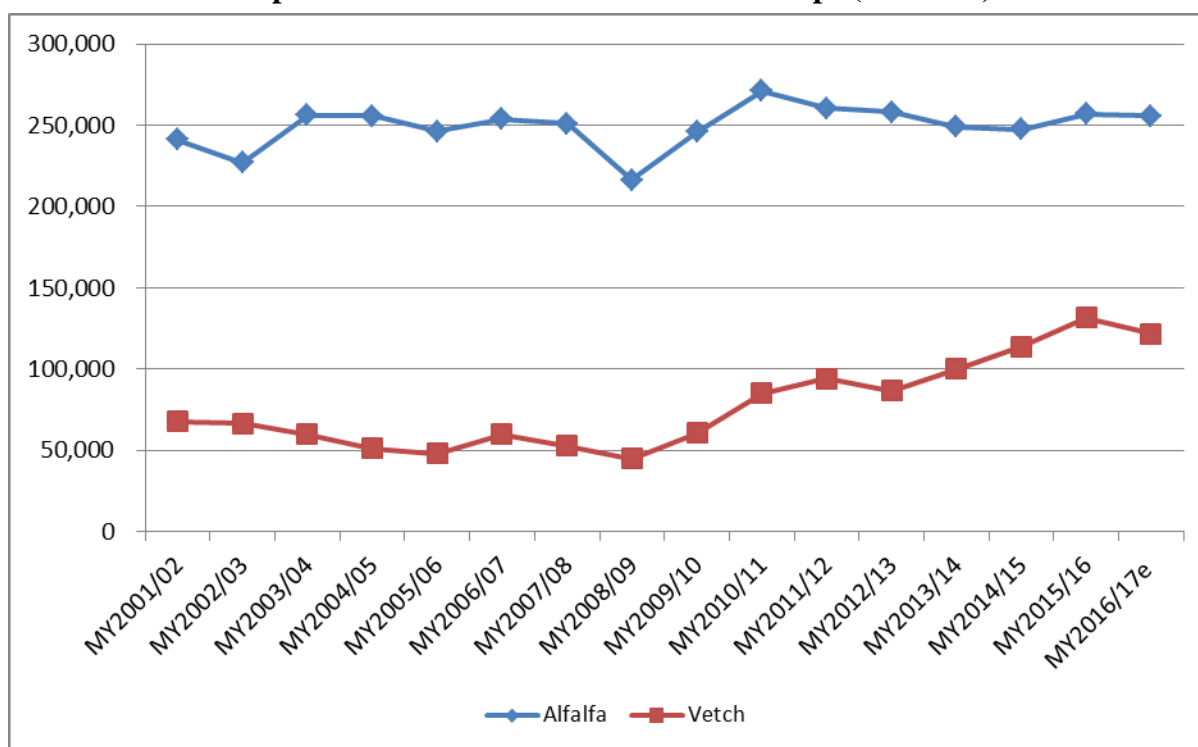
Market	Alfalfa	Vetch	Sainfoin	Fescue	Corn	Rye	Other	Total
2006/07	164,020	4,716	956	5,596	1,190	8,274	7,176	191,928
2007/08	143,554	4,583	506	6,043	1,197	7,744	5,994	169,623
2008/09	122,411	4,039	679	5,696	1,248	5,972	5,993	146,038
2009/10	135,747	9,106	641	9,748	1,076	8,301	4,074	168,693
2010/11	147,065	12,375	469	7,724	1,174	8,063	7,946	184,815
2011/12	140,887	14,166	760	4,051	1,230	6,946	10,431	178,920
2012/13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	144,674
2013/14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	151,956
2014/15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	141,011
2015/16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	130,556
2016/17e	N/A	N/A	N/A	N/A	N/A	N/A	N/A	135,000

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

***Note: Since MY2012/13 official information (FEAGA) 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.*

¹ Since April 1, 2012, (MY2012/13) the aid for dehydrated fodder scheme is incorporated into the farmer's Single Payment Scheme (SPS) and processors no longer receive a specific the aid. Hence, as of MY2012/13, no official information on the area planted to dried fodder is available. From MY2012/13 on, data in **Table 1** are based on the National Dried Alfalfa Producers Association survey.

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



Source: MAGRAMA and FAS Madrid estimates.

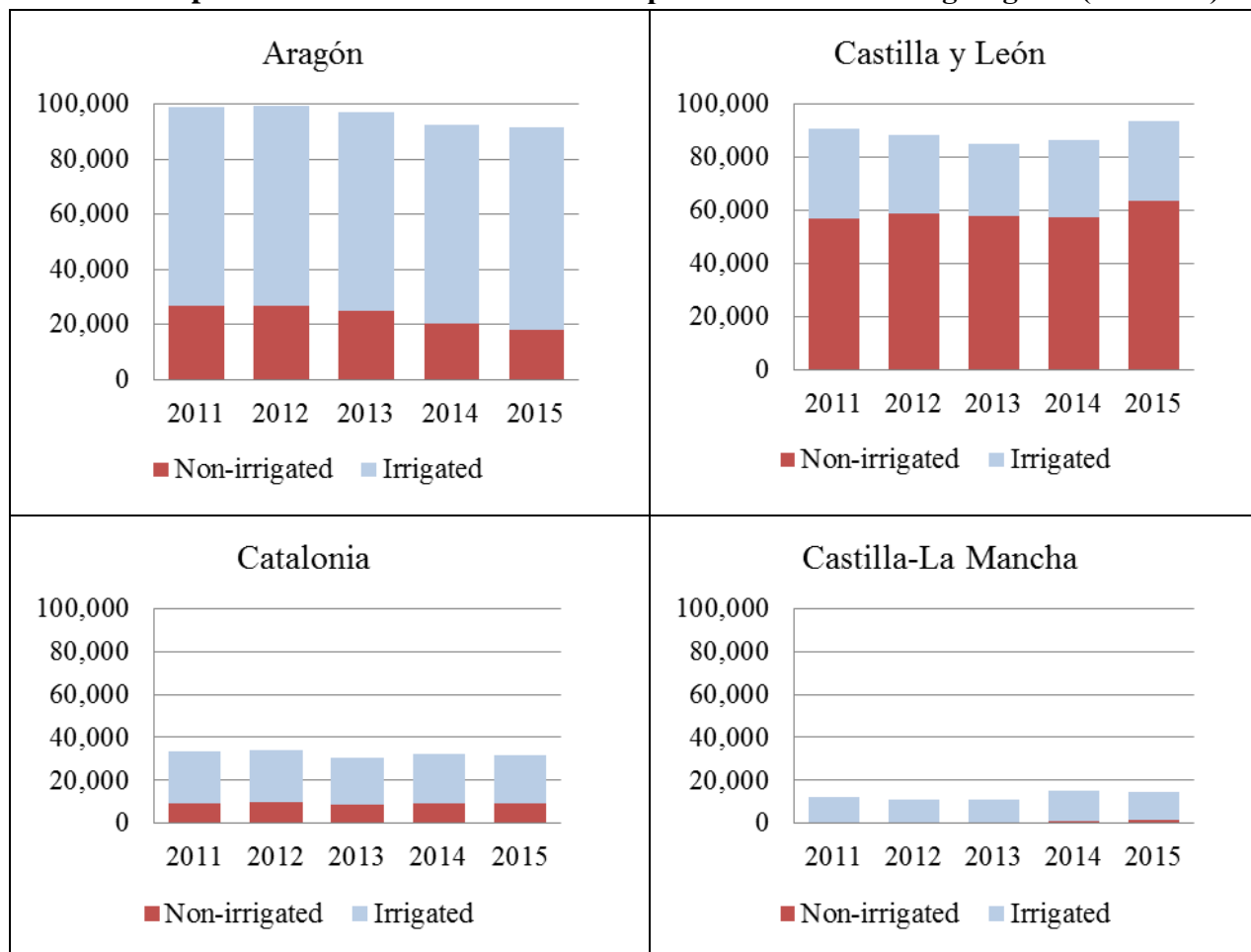
There are two major alfalfa growing areas in Spain: Castile y Leon and the Ebro Valley (Aragon and Catalonia), although significant volumes are also produced in Castile-La Mancha (**Graph 2**). Agricultural practices differ among these two main alfalfa producing regions.

In Castile y Leon, the most extended type of alfalfa cultivated is “Tierra de Campos”. These groups of varieties are grown in heavy clay soils, in most cases with no irrigation. Hence, yields are strongly linked to spring precipitations. This alfalfa is mostly consumed by the domestic dairy herd.

In the Ebro Valley, the most extended type of alfalfa cultivated is “Aragón”, the large majority of it under irrigation. A significant amount of the alfalfa produced in this area ends up in the export market.

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

Graph 2. Area Planted to Alfalfa in Spain's Main Producing Regions (Hectares)*



Source: ESYRCE. MAGRAMA

Despite the area reduction in MY2015/16, according to industry sources, dried fodder production grew. Climate conditions for fodder production in MY2015/16 were very favorable until the beginning of May, high temperatures and lack of precipitation throughout the summer significantly reduced alfalfa yield expectations in non-irrigated land. However, extraordinary good yields were recorded in irrigated land, which represents the vast majority of Spain alfalfa production. Total MY2015/16 production levels exceeded MY2014/15 production levels. The combination of lack of precipitation and high temperatures resulted as well in very high quality forage.

As per MY2016/17 climate conditions, average precipitation levels in Spain at the beginning of the hydrological year allowed planting operations to be carried out in a timely manner. Winter conditions were extremely dry. However, timely spring rains have contributed to replenish soil water and reservoirs. Warmer than usual temperatures prevailed until mid-February and spring temperatures were rather mild, allowing for good yields in non-irrigated alfalfa in particular. Overall MY2016/17 yields are anticipated to overcome last season levels.

Some industry sources point out that the excess of water may have been detrimental for quality standards and the first alfalfa cut may not qualify as premium quality.

For additional information on climate conditions affecting crops in MY2016/17, see GAIN [Report SP1610](#).

Table 2. Production of Dried Fodder under Contracts with Dehydrating Plants (MT)³

MY	2009/1	2010/1	2011/1	2012/1	2013/1	2014/1	2015/1	2016/1
Producti	1,710,6	1,804,4	1,920,5	1,619,8	1,659,6	1,469,7	1,559,4	1,595,0

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

Processing

There are different techniques in preserving fodder through reducing moisture content, mainly through sun-drying or dehydration. In Spain, both preserving methods coexists, however, sun-cured fodder is consumed in the domestic market, while dehydrated fodder, which represent the large majority of the fodder production, is domestically consumed and also exported.

Alfalfa destined for dehydration is cut in the field. After a pre-drying phase field it 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 with trucks to the plant.

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. Final product moisture ranks between 12-14%.

The above mentioned reportedly quality issues of the first cut of MY2016/17 harvest may lead to an increased share of pellet versus bales production (**Table 3**).

³ It includes sun-dried fodder and dehydrated fodder. On average, dehydrated fodder represents over 90 percent, which given its higher homogeneity, is preferred by some importing countries.

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

Market Year	Pellets	Bales	Total
2006/07	671,381	1,303,269	1,974,651
2007/08	605,995	1,176,343	1,782,339
2008/09	534,625	992,875	1,527,500
2009/10	427,652	1,282,956	1,710,609
2010/11	451,106	1,353,350	1,804,426
2011/12	441,723	1,478,810	1,920,533
2012/13	386,495	1,233,328	1,619,823
2013/14	438,158	1,221,530	1,659,688
2014/15	283,361	1,186,208	1,469,716
2015/16	265,115	1,294,383	1,559,498
2016/17e	382,800	1,212,200	1,595,000

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

Table 4. Spain Location of Processing Plants

Region	Number of Plants	Of which approved to export to China ⁴
Aragon	34	19
Catalonia	11	8
Castile y Leon	11	5
Castile-La Mancha	7	0
Navarra	4	0
Andalusia	3	1
Extremadura	1	0
Balearic Islands	1	0
Total	72	33

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

Consumption and Marketing

Domestic consumption of dried fodder only represents a small amount of the demand due to the ongoing crisis of the dairy sector. The export market continues to be Spain's fodder main client, despite ongoing tepid rebound and later stabilization in the dairy cows' inventories since 2012.

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

⁴ For more information on the Agreement with China, please see **Trade** Section.

Table 5. Dairy Cow population (1,000 Heads)

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016e
Dairy cow population	903	888	828	845	798	827	844	845	844	843

Source: Eurostat. FAS Madrid estimates.

Trade

Spain is a net exporter of fodder with exports (**Table 7**) largely exceeding imports (**Table 6**). Imports recorded from other EU countries such as France or Poland grew significantly on MY2015/16, (**Table 6**).

Table 6. Spain Total Imports of Fodder by Origin in MT*

Country of Origin	MY	MY	MY	MY	MY2015/16
EU-28	8,175	10,139	6,134	18,136	31,358
Others	350	841	506	739	1,840
TOTAL	8,525	10,980	6,640	18,875	33,198

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

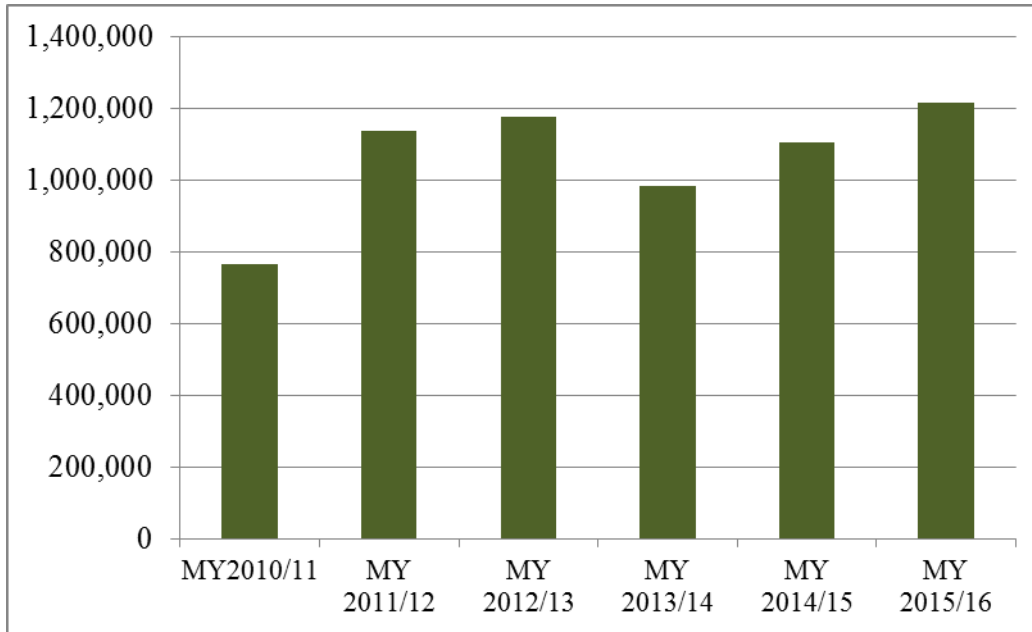
Dried fodder exports represent over 70 percent of total domestic production. In MY2015/16 record export levels have been achieved. In the absence of a strong domestic demand, fodder processors have managed to find alternative markets for their production and dried fodder exports continue to soar since MY2008/09, with the exception of MY2013/14, when exports decline.

The Middle East, led by UAE is the main destination for Spanish fodder. China became the second largest destination of Spain's dried fodder since an export protocol was signed between Spain's and China's competent authorities in 2014 (See [SP1419](#)).

This agreement came into force in MY2014/15, when China became a strategic client for Spain-based processors as number two destination for Spanish dried fodder. Trade data for MY2014/15 and MY2015/16 confirm China's position as second largest overseas destination for Spanish dried fodder.

Total dried fodder production grew in MY2015/16, and so did exports (**Graph 3**), which achieved historically high levels, overpassing for the first time the 1.2 MMT ceiling, driven by increased exports to traditional markets such as UAE and by a larger presence of Spanish dried fodder in markets such as China, Saudi Arabia and Jordan and Japan. Since MY2015/16 Spanish dried alfalfa is also present in Iran (**Table 7**).

Graph 3. Spain Total Exports of Fodder (MT)



Source: GTA. * Includes both bales and pellets.

Table 7. Spain Total Exports of Fodder by Destination in MT*

Country of	MY	MY2012/13	MY	MY	MY
EU-28	251,015	159,362	139,674	128,506	124,839
United Arab	707,728	782,034	643,243	700,013	722,679
China	0	0	0	91,842	126,119
Saudi Arabia	92,248	118,505	73,167	45,092	109,333
Jordan	21,035	20,164	24,514	29,791	44,261
Iran	0	0	0	0	14,952
Lebanon	3,462	7,910	14,081	21,066	14,873
Japan	8,104	6,943	2,863	7,649	10,854
Kuwait	9,572	10,612	6,171	9,112	9,442
Korea South	4,402	3,375	2,474	7,445	8,355
Morocco	22,786	20,535	15,540	14,799	7,093
Others	15,627	45,048	60,353	47,598	23,721
TOTAL EXPORTS	1,135,979	1,174,488	982,080	1,102,913	1,216,521

Source: GTA. * Includes both bales and pellets.

Production, Supply and Demand

Table 8. Spain Production, Supply and Demand for Dehydrated Fodder (MT)

Market Year	MY 2012/13	MY 2013/14	MY 2014/15	MY 2015/16	MY 2016/17f
Production	1,619,823	1,659,688	1,469,716	1,559,498	1,595,000
Imports	10,971	6,640	18,875	33,198	10,000
Total supply	1,630,794	1,666,328	1,488,591	1,592,696	1,605,000
Dom. Consumption	456,604	684,248	386,089	376,175	382,600
Exports	1,174,190	982,080	1,102,502	1,216,521	1,222,400
Total Demand	1,630,794	1,666,328	1,488,591	1,592,696	1,605,000

Source: FAS Madrid estimates.

Policy

Since 2015, the **Single Payment Scheme** has been replaced by the so-called **Basic Payment (BP)**. The current support is not crop specific. Hence, farmers receive an area payment regardless the crop they grow.

Mandatory crop diversification as an option for greening compliance may serve as an additional incentive to cultivate fodder crops in some areas where monoculture was extensively carried out. Another 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 ha need over 5% of their cultivation land devoted to this use.

Additionally, in Spain's implementation of CAP reform specific payments have been allocated to **protein crops** (peas, bean, and sweet lupin) or **legumes** (vetch, *lathyrus cicera*, *lathyrus sativus* and non-irrigated alfalfa). Support levels though are not sufficient to significantly influence planting decisions (**€40/Ha for** protein crops and legumes). Hence, farmers will ultimately decide based upon crop margins.

EU-wide farm groups have reiterated in different fora the importance of boosting EU's domestic supply of protein insisting in the environmental benefits in terms of reducing greenhouse gas emissions, benefiting biodiversity and improving soil quality.

Related Reports

Report Title	Date Released
Spanish Fodder Consolidates its Presence in Export Markets	08/10/2015
Spain is Ready to Export Dried Fodder to China	07/17/2014
Wondermilk Works Wonders In China	03/01/2014
Dutch Dairy Processors Gear Up for Chinese Demand	05/08/2013
Spanish Dried Fodder Processors Seek New Markets	06/03/2013
Record Forage Exports Despite Record Domestic Prices	March 2013
U.S. Hay Exports to the UAE on the rise	06/14/2012
Spain dehydrated fodder Sector Faces New Challenges	03/06/2012
Spain Dehydrated Fodder Sector 2011	02/02/2011
Spain Dehydrated Fodder Sector 2010	02/22/2010