



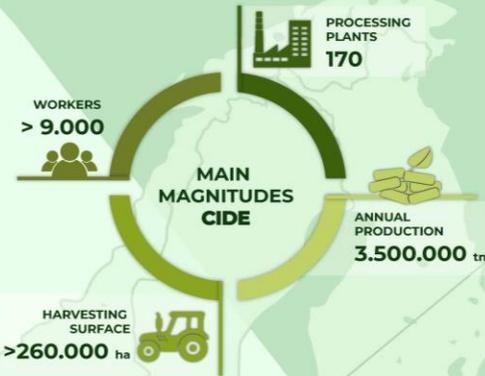
June 2023



CIDE

A · S · B · L

European Alfalfa Protein and fiber of the future



DENMARK: In Denmark, traditional production stopped by end of 2021. Instead, a new production of Green Protein started.

The production is based on raw material from 3.000 Ha of Alfalfa and clover grass. The capacity of the plant is 4.000 tons of Green protein with 50 % of protein. The product is used in compounds for egg layers and piglets. The fibers - 25.000 of fibers are used to produce biogas.



GERMANY: In Germany, there are 37 productions locations in the dehydrated fodder sector, that technically dry grass and alfalfa and press them into bales or cobs. The largest quantities are produced in southern Germany, which has a higher precipitation. Most drying plants are organized as cooperatives.

Thus, around 17.000 farms (10% of all German farms) take advantage of the drying plants. In 2021, a total of 240.000 t of cobs were produced. Due to climate change and the resulting lower precipitation also in Germany, alfalfa with good drought resistance is becoming an increasingly important forage crop.



ITALY: AIFE (Associazione Italiana Foraggi Essiccati - Italian Dried Fodder Association) is the Italian association representing the largest national producers of dried and dehydrated fodder. Every year, in the 30 processing plants associated with AIFE and located in 8 regions of the country, an average of 1 million tonnes of dried fodder is produced on a total area of around 90.000 hectares. Innovation and technological implementation of the plants allow AIFE to offer a top quality product, the result of the work of a supply chain that places respect for the environment at the top of its priorities.



ROMANIA: Romania's alfalfa area currently stands at roughly 410.000 hectares, the second highest in EU. However, yields remain among the lowest of the EU's largest alfalfa producers (often below 4 t/ha) and are largely weather dependent, but also affected by the prevalence of small and fragmented production structures and rudimentary drying and baling practices.

Romanian exports of alfalfa pellets are small, but increasing in tandem with alfalfa production and investments in pelleting technology, resulting in a positive trade balance in alfalfa pellets since 2017.



BULGARIA: Growing of alfalfa in Bulgaria goes back more than 100 years. There are several local varieties. Alfalfa acreage in Bulgaria is about 100000 hectares, a third of what it was in the past, and of that about 30% is for seed production. The soil and climatic conditions of the country allow further expansion of these areas.



NETHERLANDS: 8.000 ha. of alfalfa. We harvest ca. 12-14 Mt/ha.DM/year. There are 5 Dehy Plants. The fresh alfalfa is harvested, dehydrated and produced in 6mm pellets and 400 kg bales. Ca. 20% of our production is organic. The protein content is ca. 17%. Alfalfa is feed for ruminants, goats, horses and rabbits.



FRANCE: With 70.000 ha of alfalfa dedicated to dehydration, France is on the podium of European producers. Mainly concentrated in the Champagne-Ardenne region, these areas also extend to the west of the country, from Brittany to Périgord.

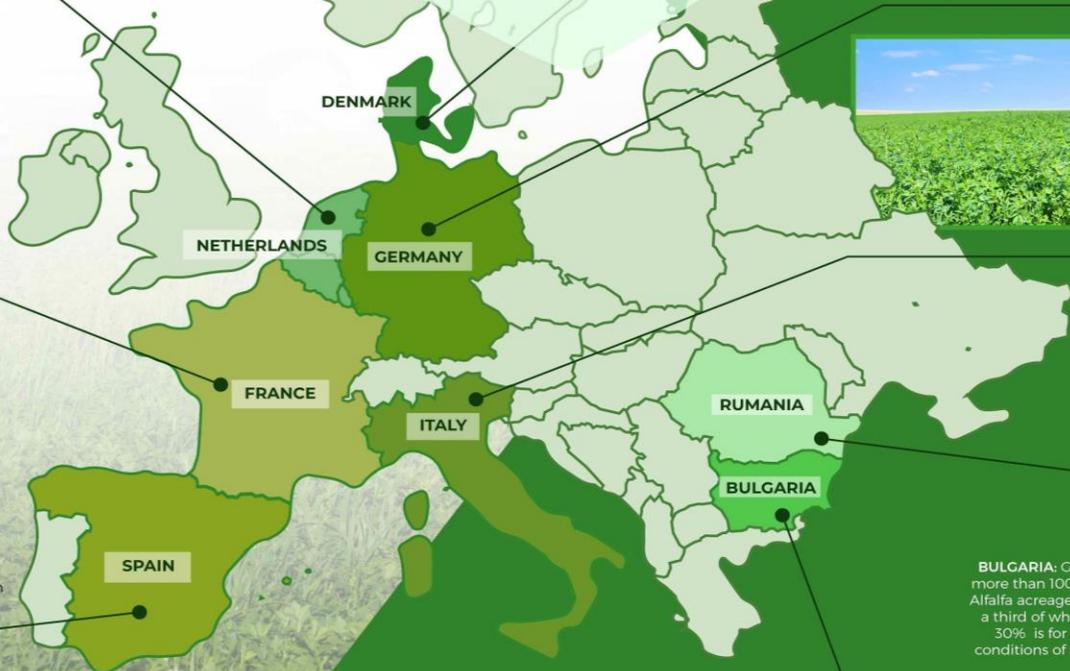
Alfalfa is transformed into pellets, bales and protein concentrate on 24 production sites, at the rate of 3 to 4 cuts per year. Most of the production is destined for the French and European domestic market



SPAIN: Due to its geographical conditions, it is the leading alfalfa producer in Europe, with an average annual area of some 260.000 hectares. Sixty percent of the crop is grown in irrigated areas, the main producing regions being Castilla y León, Aragón and Cataluña.

Fifty percent of Spanish production is destined for the dehydration industry, some 130.000 ha per year. The rest of the production is ensiled, hayed or grazed directly.

In irrigated lands, 5 or 6 cuts per year can be achieved, with exceptional yields of up to 15.000 kg/ha, which has made Spain the second largest alfalfa exporter in the world.





FINAL PRODUCTION DEHYDRATED FORAGES 2022

PRODUCTION DEHYDRATED FORAGES 2022

Country	INITIAL STOCK	PRODUCTION		
		ALFALFA	GRASSES	TOTAL PRODUCTION
Germany		33.434	133.735	167.169
Spain	61.000	944.000	319.000	1.263.000
France	10.000	770.000	5.000	775.000
Netherlands	5.000	60.000	15.000	75.000
Bulgaria	3.500	15.000	15.000	30.000
Italy	250.000	650.000	300.000	950.000
Denmark	-	2.000	12.000	14.000
TOTAL CIDE	329.500	2.474.434	799.735	3.274.169

EVOLUTION EUROPEAN PRODUCTION (Last 10 years) *1000

COUNTRY	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/2022
France	818	720	810	711	740	867	759	780	650	775
Germany	225	199	244	150	195	221	192	222	215	167
Italy	600	585	716	700	790	710	810	790	990	950
Denmark	40	20	20	20	20	20	20	20	20	14
Netherlands	113	90	108	100	116	130	120	123	98	75
Spain	1439	1650	1469	1450	1392	1450	1352	1411	1425	1263
UK	42	42	38	35	38	31	33			
Bulgaria										30
TOTAL	3.277	3.306	3.405	3.166	3.291	3.429	3.286	3.346	3.398	3.274



COMMENTS ABOUT THE MARKET & SALES

COMPSUPTION & SALES DEHYDRATED FORAGES 2022

Country	CONSUMPTION & SALES				
	TOTAL FOR COMSUMPTION	AUTOCOM PSUPTION	TO SALE	SOLD	FINAL STOCK (tons)
Germany	167.169	-	167.169	167.169	-
Spain	1.260.000	-	1.260.000	1.220.000	40.000
France	760.000	25.000	785.000	780.000	5.000
Netherlands	80.000	15.000	65.000	60.000	5.000
Bulgaria	5.000	-	30.000	26.500	-
Italy	1.200.000	-	1.200.000	960.000	240.000
Denmark	14.000	-	14.000	14.000	-
TOTAL CIDE	3.486.169	40.000	3.521.169	3.227.669	290.000

- ✓ Energy cost last year was extremely high (Gas and electricity)
- ✓ High sales prices
- ✓ The cost of freight rates fell significantly during the season
- ✓ This campaign has been conditioned by the global situation the inflation and the Ukraine war.
- ✓ High forage demand during the first 9 months of the season
- ✓ Euro dollar exchange rate benefits European exports



ESTIMATION PRODUCTION 2023

ESTIMATION PRODUCTON DEHYDRATED FORAGES 2023

Country	INITIAL STOCK	PRODUCTION ESTIMATION		
		ALFALFA	GRASSES	TOTAL PRODUCTION
Germany	-	45000	200.000	245.000
Spain	40.000	400.000	200.000	600.000
France	5.000	770.000	5.000	775.000
Netherlands	5.000	60.000	15.000	75.000
Italy	240.000	550.000	250.000	800.000
Denmark	-	3.000	12.000	15.000
Bulgaria	2.000	25.000	20.000	45.000
TOTAL CIDE	292.000	1.853.000	702.000	2.555.000

PRODUCTION FORECAST 2023

- Our estimation it's the production could be 22 % less than the last campaign
- Devastating drought in Spain, estimated 50% less.
- In Italy the total flood damage has not yet been calculated, but it is sure to dramatically affect alfalfa production.
- The production could be less than 2.500.000 Tons, (-700.000 mt)
- Some dehydration plants will have problems to meet the fixed costs that increase significantly if the production is very low.



RELEVANCE SECTOR



RELEVANCE SECTOR

DEHYDRATED SECTOR FIGURES 2022					
COUNTRY	Number of Plants	Number of Hectares	Organic Production	Workers	Average Protein Range
Germany	34	35.000	33.433	500	18,0%
Spain	58	105.000	10.000	4.000	19,0%
France	26	70.000	100.000	1.000	18,0%
Netherlands	5	13.000	16.000	150	17,0%
Bulgaria	1	2.000	0	80	18,0%
Italy	30	80.000		2.500	18,0%
Denmark	1	2.000	2.000	30	20,0%
TOTAL	155	307.000	161.433	8.260	18,2%

Our Sector Relevance in EU



170 dehydration industries



Currently, the European sector of dehydrated fodder searches for 9,000 jobs in different countries



The total of hectares destined to the production of dehydrated forages in Europe exceeds 260,000



Alfalfa contributes to improving biodiversity with 117 species of birds using it for food, shelter or reproduction



It does not need nitrogen fertilizers, thus avoiding water being contaminated by nitrates



Bees conservation: More than 60 species of bees pollinate alfalfa



Alfalfa doesn't need fertilizers and chemical treatment at all, perfect crop for organic production

European Forage Environment

European Forage CO₂ sequestration

It fixes 9 t/ha/year of CO₂ (1.5 t in the parts that are underground, 0.75 t in its roots and 6.75 t in the parts that are above ground), thus helping to alleviate the greenhouse effect and acting as a green filter.

Accounting of carbon emissions and sequester in the forage production process. Helping to mitigate the Carbon footprint.

Forage crops does not require herbicides and phytosanitary products do not need to be extensively used.

The binomial of alfalfa cultivation and dehydration industry as a fundamental vector in mitigating climate change.

European Forage, food safety and animal welfare

The European Forages producers through a highly technological process sanitize, stabilize and extract the foreign bodies present in the raw materials.

Quality analysis of all production batches is carried out regularly as required by European HACCP regulations.

Dehydrated European Forages are characterized by high stability and very low humidity levels, which guarantee the health of the product and prevent the appearance of mycotoxins, molds, live insects, and any substance that can harm the animal welfare.

The seed used for sowing in all European countries is NO GMO.

FOR MORE INFORMATION

WEB SITE

- www.europeanforage.eu

SOCIAL MEDIA

- Linked In: <https://www.linkedin.com/company/cideasbl>
- Twitter: @cideforage

