

LegValue 2nd Annual News Letter

October 2019

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INTRODUCTION:

News and views of Frederic Muel



Not a day goes by without talking about vegetable proteins for human consumption and grain legumes are a big part of it. In the last three weeks, we have collected a series of news articles published on the internet, you will find them at the end of this editorial.

The question arising in Europe today is whether our ability to produce peas, faba beans or soya in a significant way to help meet this high demand exists. Especially whether it can attract investment in the manufacture of protein isolate that has recently become an ingredient widely used by the agri-food industry.

There is a risk that the fruit of the work carried out in LegValue may come too late to drive strong development of legume crops. Within the European Union, country by country we are still at the stage of building protein plans whereas in reality a true European market should be created as soon as possible.

LegValue is working to produce tools that will facilitate the establishment of value chains based on grain legumes, by bringing together all the benefits and amenities that these crops provide at agricultural, environmental and societal levels. In addition, we are now working on organizing an event to be held in Brussels in the late spring of 2021. There we are aiming for the strongest impact among value chain actors, decision makers and those defining public policies. It is an event that we want duplicated in the different EU countries to directly reach all the actors contributing to the development of grain legumes both now and in the future.

Enjoy reading this newsletter, always rich in information. I hope it is not too much. I look forward to seeing you soon for our next appointments.

The legume world is moving fast!

Frederic

Legume food news - during the last three weeks

How do new plant based burgers stack up? We tasted them.

October 22 2019

<https://www.nytimes.com/2019/10/22/dining/veggie-burger-taste-test.html?fallback=false&recl=983978260&locked=0&geoContinent=EU&geoRe..>

(source: Julia Moskin- The New York Times)

Pea power: Can the humble crop save the planet?

September 24 2019

<https://www.bbc.co.uk/news/business-49605180>

(Source: Ben Morris Technology of Business editor in BBC)

Pea protein: The multi-million pound ingredient that's driving the vegan boom

September 13 2019

<https://www.thegrocer.co.uk/trend-reports/pea-protein-the-multi-million-pound-ingredient-thats-driving-the-vegan-boom/597452.article>

(Source: Emma Weinbren The GROCER)

The agribusiness giants want to advance on biodiversity in agriculture-

September 24, 2019

On September 23, 19 agri-food giants announced the launch of an "initiative" on the ecological transition of agriculture, with the aim of "protecting and restoring biodiversity within their supply chains". Gathered around Danone, these groups (including Kellogg's, Unilever, Nestle, Mars ...) pledge to "bring about a systemic change" to "improve the health of human and the planet," according to a joint statement . The signatories of the initiative, called "One Planet Business for Biodiversity", want to "scale up" the "alternative agricultural practices" to "improve soil health", "develop product portfolios to stimulate cultivated biodiversity" and "improve the management, restoration and protection of natural ecosystems". This project is part of an international agenda on biodiversity: companies want to present "ambitious commitments" and "measurable" on the occasion of the Cop 15 Biodiversity, which will be held in Kunming in China in October 2020. By elsewhere, the project was announced the same day as an international climate summit at the UN. (Source Mathieu ROBERT from AGRA Press)

LegValue Comment: No doubt that legumes will get benefit of this initiative, otherwise they just want to clean their image without any business changes

Soon legumes in the Laughing Cow

September 27, 2019



The Fromagerie Bel group, which produces the Laughing Cow, has announced its intention to launch a "hybrid" offer from legumes next year. "We will invent a new offer that will be made in part of dairy materials and plant material," said CEO Antoine Fiévet. "It will be a combination with legumes"

"This offer is intended to support our sustainable growth strategy and it corresponds both to nutritional needs and also to a greener ambition, environmental responsibility, since we know that vegetable protein is less carbon intensive than protein. animal," he added. Some of these products already exist but are not yet in the supermarket shelves: "We are pushing hard and we have plans to launch our first products next year," Fiévet said. First target market, the United States, then "very quickly Europe", with UK, Germany, Spain and France. "We will start in the United States, but they are destined to be marketed everywhere. Why not tomorrow a cow laughing with peas for France? ", Says Mr. Fiévet, for whom this approach potentially concerns the entire portfolio of brands of the group. It does not exclude adding to its range, ultimately, "only vegetable portions".

(Source: AGRA Press)

French Protein plan: starch makers put their weight in the balance- October 04, 2019

While the development of the French protein plan arouses the impatience of the professionals, the starch makers encouraged, at their general assembly on October 1st, the authorities to get involved more boldly for this cause of general interest. The starch makers confirmed this strong expectation of professionals. This plan "will mobilize all professions for an abundant protein production in France," said Marie-Laure Empinet, president of Usipa (Union of starch products industries), recently elected. "We recall the importance of shifting national and European public funds to research and promote the consumption of vegetable protein in human nutrition for its nutritional and environmental benefits," she said. Starch production extracts proteins. Proteins, especially those of wheat - where the interest of high-protein wheats for industry - represent a significant fraction of its production, alongside starch and fiber. In starch production, wheat comes first as raw material (for an equivalent of 400,000 hectares) and its share increases, as well as that of peas.

(Source: AGRA Press)

Invest with us in the Protein Revolution!

October 22, 2019



AgFunder have just opened our \$20m New Carnivore Fund to investors. The fund will invest in alternative protein startups including plant-based alternatives, cellular agriculture, and the picks-and-shovels that will enable the industry. We'll invest between pre-Seed and pre-IPO stages.

Why invest in alt protein?

Meat is a \$1.5 trillion dollar market, with alternative protein expected to capture 10% by 2030. This creates the potential for multiple, multi-billion dollar startups. Just as the car replaced the horse and petroleum replaced the whale, new plant-based solutions and cellular agriculture may replace vast portions of the animal agriculture industry. We created the New Carnivore Fund to invest in startups that are looking to capture this opportunity.

With over 75k subscribers, AgFunder has become a globally recognized and respected brand amongst entrepreneurs, investors, and corporate executives which puts us in a unique position to source opportunities and support our portfolio companies. **(Source: Rob Leclerc, Founding Partner, AgFunder)**

And other relevant information:

Global Pea Protein Market 2019 Future Outlook by Manufacturers, Application, Product Types (Textured, Isolated, Concentrated), Growth Opportunities, Regional Analysis & Forecast 2025

Feb 4, 2019

<https://www.reuters.com/brandfeatures/venture-capital/article?id=80397>

(source: REUTERS PLUS)

Investing in plant protein accelerates

August 7, 2019

<https://www.foodbusinessnews.net/articles/14073-investing-in-plant-protein-accelerates>

(Source: Jeff Gelski Food Business News)

PUBLICATIONS

The following links to publications released in the last 12 months.

Abstracts.

The EU requires that the project prepare a number of "Abstracts" for the web site of the EIP- AGRI. These are short summaries brief for practitioners. 33 have been submitted for publication:
<https://ec.europa.eu/eip/agriculture/en/find-connect/projects/legvalue-fostering-sustainable-legume-based>

Reports.

Correlation between prices of grain legumes and prices of feed, fertilisers and meat.
<http://www.legvalue.eu/publications/correlation-between-prices-of-grain-legumes-and-prices-of-feed-fertilisers-and-meat/>

Possibilities for creating recovery-oriented price indicators for field pea and field beans compared to published market price reporting. Published in German. <http://www.legvalue.eu/publications/possible-price-indicators-for-legumes/>

Market analysis reports of grain legumes in the UK and Italy. These can be downloaded from <http://www.legvalue.eu/publications/market-analysis-of-grain-legumes-in-the-uk/>
<http://www.legvalue.eu/publications/market-analysis-of-legumes-in-italy/>

A report for Spain is in production, complementing those for Germany and France produce last year.

Detailed flow of goods for legumes from seed production to end use in three European Countries. Germany France and UK. <http://www.legvalue.eu/publications/detailed-flow-of-goods-seed-production-to-end-use/>

Worldwide Scientific Knowledge on Grain-legumes: to what extent does science contribute to agricultural diversity? <http://www.legvalue.eu/publications/worldwide-scientific-knowledge-on-grain-legumes/>

A contribution to diversification from a traditional, nearly forgotten crop - a poster presented at the EU conference on crop diversification in Budapest. <http://www.legvalue.eu/publications/a-contribution-to-diversification-from-a-traditional-nearly-forgotten-crop/>

A summary of the 1st reporting period for the Research Executive Agency of the EU Commission. <http://www.legvalue.eu/publications/1st-period-report-summary-rp1/>

Report from the commission to the council and the european parliament. The development of plant proteins in the European Union. <http://www.legvalue.eu/publications/eu-report-development-of-plant-proteins-in-the-european-union/>

Why doesn't Portugal produce more Chickpeas? <http://www.legvalue.eu/industry-studies/chickpea-value-chain-with-aicf-agro-inova%C3%A7%C3%A3o-sa-alentejo-portugal/why-doesnt-portugal-grow-more-chickpeas/>

Yield Stability and selection strategies for Chick pea production in Portugal. <http://www.legvalue.eu/industry-studies/chickpea-value-chain-with-aicf-agro-inova%C3%A7%C3%A3o-sa-alentejo-portugal/yield-stability-and-selection-strategies-for-chickpea-in-portugal/>

A short video demonstrating mechanical weed control in organic soya in Italy. <http://www.legvalue.eu/publications/new-movie-about-mechanical-control-of-weeds-organic-soya/>

A short video demonstrating relay cropping of wheat and lentils in Italy. <http://www.legvalue.eu/publications/relay-cropping-lentils-into-winter-wheat/>

A case study report examining the value of cover crops in the vining pea rotation. <http://www.legvalue.eu/industry-studies/vining-pea-for-frozen-processed-market-eastern-england-united-kingdom/cover-crops-report-2018/>

An evaluation study of the CAP measures applicable to the EU market for plant proteins <http://www.legvalue.eu/publications/market-developments-and-policy-evaluation-aspects-of-the-plant-protein-sector-in-the-eu/>

- Website of the LEGITIMES project : <https://www6.inra.fr/legitimes/>

a short presentation of scenario design with stakeholders in « Plateau Langrois » : <https://www6.inra.fr/legitimes/content/download/3554/34416/version/1/file/LegumineuseDansTerritoire.pdf>

- the extended report of this specific task is here : <https://www6.inra.fr/legitimes/content/download/3556/34428/version/3/file/L3.9-ConceptionScenariosTerritoriaux.pdf>

Coming soon.

Task 3.2: Elaboration of price setting schemes for legume markets

The output of this task will be to provide insights into current price indication systems and how prices are set for legumes in the European Union. This goal will be achieved by providing useful information to the different stakeholders, and thus by improving market transparency. Toward this end, an analysis based on a survey of stakeholders belonging to 29 European value chains, is being done. This analysis focuses specifically on five legume species, namely, soybean, pea, faba bean, lentil and chickpea. Firstly, it will investigate the determinants of the different prices that the stakeholders use along the value chains. Secondly, it will proceed to the price decomposition. This will give an indication about the margins gained by the different stakeholders along the value chains. Thirdly, it will provide price indicators for the five legume species in question.

The expected results of the overall analysis will help improving market transparency. Specifically, these results will, among other things, enable farmers to know the reference price at which they should sell their products. Consequently, the overall analysis will contribute to improve the market participation of farmers and other stakeholders.

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CROP DIVERSIFICATION CLUSTER

The six coordinators of the Horizon2020 projects listed below first met in March 2018 and discussed possible areas where the six projects could collaborate and develop a common approach for areas of common interest. Following a second meeting of the project coordinators and other project partners at the European Society of Agronomy conference in Geneva (August 2018), several 'working groups' were established with representatives from each project to progress specific areas of joint interest.

Earlier this year (in March 2019), it was agreed to establish a working group for communication and dissemination of joint project activities with the aim of reaching a wider audience and increasing the overall impact on crop diversification uptake. A joint communications web site has been established via the communications group. <https://www.cropdiversification.eu>

A flier outlining the purpose, objectives

and approach of the cluster has been published and can be down loaded from here.

https://www.cropdiversification.eu/fileadmin/cropdiversificationcluster/documents/CDC_leaflet_draft4.pdf

Collaborating projects:

DIVERSify GA no. 727284. <https://www.diverimpacts.net/>.

“Designing InnoVativeplant teams for Ecosystem Resilience and agricultural Sustainability”,

ReMIX GA no. 727217 <https://www.remix-intercrops.eu/>

“Redesigning European cropping systems based on species MIXtures”

LegValue GA no. 727672 <http://www.legvalue.eu/>

“Fostering sustainable legume-based farming systems and agri-feed and food chains in the EU”

TRUE GA no.727973. <https://www.true-project.eu/>

“TRansitionpaths to sUstainablelegume based systems in Europe”

Diverfarming GA no. 728003. <http://www.diverfarming.eu/index.php/en/project-2>

“Crop diversification and low-input farming across Europe: from practitioners engagement and ecosystems services to increased revenues and chain organization”

DiverIMPACTS GA no. 727482. <https://www.diverimpacts.net/>

“Diversification through Rotation, Intercropping, Multiple cropping, Promoted with Actors and value-Chains Towards Sustainability”

Projects involved are funded under the Horizon 2020 tender codes:

SFS-02-2016: **Teaming up for good**:Exploiting the benefits of species diversity in cropping systems.

SFS-26-2016: **Legumes -transition paths**: to sustainable legume-based farming systems and agri-feed and food chains.

RUR-06-2016: **Crop diversification systems**: for the delivery of food, feed, industrial products and ecosystems services –from farm benefits to value-chain organisation.

‘Crop diversification’ cluster of Horizon2020 funded EU projects



Collaboration between projects to

- share information, methods and results
- increase the overall impact on crop diversification uptake
- sustain activities and infrastructures into the future.



CASE STUDY FOCUS

The LegValue project has a large number of case studies from which data is being gathered and with which there is considerable stakeholder involvement. Here we present a short summary of 4 of them.

Dry Peas in the UK:

Challenges for dry peas in the UK are similar to those experienced for faba beans: to maintain supply of good quality dry peas for seed, animal feed and human consumption and to develop innovative new markets for dry peas products. In addition to these challenges, there is a pressure of greater sensitivity to soil and weather conditions alongside more limited existing markets for peas. Thus area is restricted significantly when compared to faba bean. This case study is formed of a network of trade organisations (collectors) for dry peas in the UK for the animal feed markets and for the human consumption market, both national and international. A network of the merchants and processors is formed to examine the features of the value chain.

There are approximately 50 organisations that form Pulses UK and are also PGRO (Processors and Growers Research Organisation) members, including breeders and seed specialists, exporters, agrochemical manufacturers and suppliers, shipping and fumigation services, merchants and processors. A subsection of pulses UK is participating <https://www.pulsesuk.co.uk/> (Pulses UK is the new name for the former British Edible Pulse Association - BEPA)

<http://www.legvalue.eu/industry-studies/value-chain-for-combining-pea-with-the-bepa-british-edible-pulses-association-united-kingdom/>

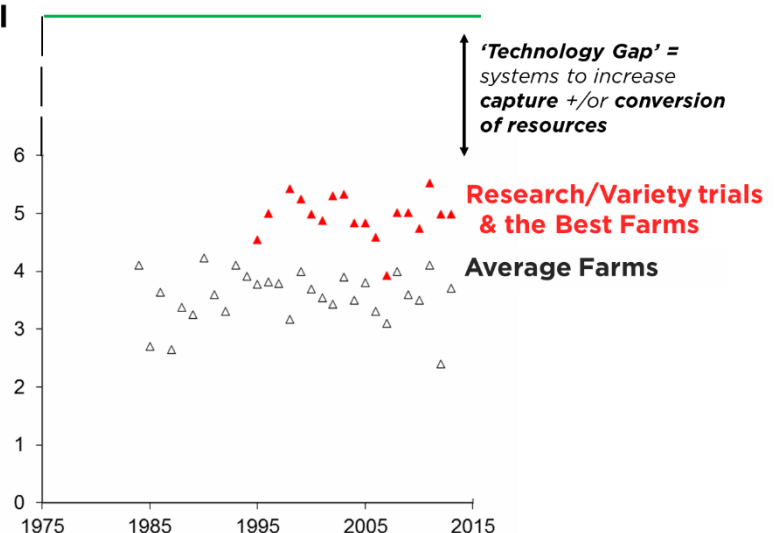
Pea Yield Enhancement Network : <https://www.yen.adas.co.uk/About/YENPeas.aspx>

Figure 1. Potential and actual UK pea yields and YEN approach for the yield gap

Pea YEN (Yield Enhancement Network) has been running since 2016, including a total of 26 growers supported by a variety of industry stakeholders over this time. The project was designed to identify solutions for the current challenges in the pea growing sector. Each year crop potential yield has been modelled, in-field observations were taken, final field yields were measured and pre- and post-harvest samples were analysed for nutrient content and quality. End of season meetings were held where all involved in the

Potential yield

Pea Yield in UK (t/ha)



project could discuss challenges to yield enhancement of peas. This report draws together conclusions from the three Pea YENs completed so far and makes recommendations for the future. The project continues with an expanding grower base in 2019. Growers and their supporting agronomists and sponsors are encouraged to share knowledge and discuss ideas on what factors limited their field yields and how field yields could be brought further in line with potentials (Figure 1).

The Pea YEN continues with the same ethos but a refined protocol, especially including a more accurate field yield measurement. Industry support continues, with a wide range of stakeholders represented e.g. breeders, analytical services, agronomy companies, fertiliser manufacturers, traders and researchers.

Faba Beans in the UK:

Value chain for field beans with Frontier Agriculture Ltd (United Kingdom)

Key challenges for the UK are to maintain supply of good quality faba beans for seed, animal feed and human consumption and to develop innovative new markets for faba bean products. inability to consistently realise full yield potential and grower decisions not to include faba beans in rotations can lead to gaps in production for all faba bean markets in some years. The widening gap in annual margins between cereal and faba bean production, as well as policy decisions at national and european levels, adds further to lack of uptake of faba beans.



The case study focuses on the value chain for field beans, working with Frontier Agriculture Ltd., one of the leading UK grain traders and exporters of faba beans, and other members of the trade. Frontier agriculture has a close relationship with farmers and grain consumers. Operating across all aspects of arable crop production and grain marketing, frontier supplies seed, crop protection products and fertiliser to farmers, as well as providing specialist agronomy advice through a team of 140 agronomists. The project gives the opportunity to evaluate and review the features of this value chain using surveys and interviews of different stakeholders along it in order to establish their legume know-how and benefits and constraints experienced in developing the market.

<http://www.legvalue.eu/industry-studies/value-chain-for-field-beans-with-frontier-agriculture-ltd-united-kingdom/>

In January 2019 Frontier announced new premium opportunities for UK faba bean growers. Investing in a new processing facility, Frontier are the first in the UK growers to offer a premium contract price for faba beans reaching a minimum level of protein content.

<https://www.frontierag.co.uk/news-events/news/news-archive/1394-new-contract-from-frontier-offers-premium-opportunities-for-uk-bean-growers>

In July 2019 Frontier's new multi million pound investment was opened deploying custom designed de-hulling technology to remove the skins from up to 50,000 tonnes of beans every year to create a protein source which will primarily be used to make food for the aquaculture market (fish feed market).



Nick Heald, commercial director photographed at Frontier's Nottingham site says: "Beans could deliver on all fronts for farmers, economically, agronomically and environmentally."

<https://www.frontierag.co.uk/news-events/news/news-archive/1405-frontier-bean-plant-officially-opens>

Swiss Organic Soybean Value Chain:

For over 30 years, Switzerland has cultivated conventional soybean varieties, specially adapted to the cool Swiss cultivation conditions. These varieties must now be tested under organic conditions in different regions of Switzerland (Eastern Switzerland, the Central Plateau, Western Switzerland), and their processing properties must be tested.

The yield stability has so far not been guaranteed. Soya cultivation is very demanding, farmers have limited experience, and there are still various open questions regarding cultivation. To be prioritised and solved, on-farm experiments are tackling pressing problems and obstacles in organic soya cultivation. This is a collaboration between project partners and farmers, taking into consideration the results and issues of the soya project "Bio Suisse soya from Europe" and already established solutions of other foreign organisations. As there is so far no organised soya advisory service, an independent, dynamic and FiBL-coordinated advisory system, as well as a farmers' advisory network for independent advisory and training for farmers is being established. Practical advisory materials in different media are being created for cultivators. Additionally, different public advisory events are being carried out (field visits, workshops, conferences, courses). Furthermore, an infrastructure for crop-intake and a quality assurance concept are planned.

The project serves the purpose of networking and coordination of actors in the Swiss organic soya supply chain. They engage in exchange, give feedback from the sector and discuss questions regarding the market, so as to create stable framework conditions in production for all parties involved with Swiss organic soya.

<http://www.legvalue.eu/industry-studies/developing-organic-soya-value-chain-central-plateau-switzerland/>



Knowledge transfer activities during 1st period of 2019.

1) Cost and Margin calculation: <https://www.bioactualites.ch/cultures/grandes-cultures-bio/legumineuses-a-graines/soja-coutprod-fr.html#c22240>

A margin calculator has been developed and multiple scenarios tested - free for farmer's use.

2) An article published: Need of 2500ha Soybean for feed:

<https://www.bioactualites.ch/actualites/nouvelle/2500-ha-de-soja-fourrager-bio-recherches-dici-2021.html>

The benefit of introducing soybean into the rotation acknowledging the price paid for the season 2019, the contribution of Bio Suisse and the political decision about animal nutrition was promoted to farmers.

3) New movie about mechanical control of weeds: <https://www.bioactualites.ch/cultures/grandes-cultures-bio/legumineuses-a-graines/soja-sarcler-fr.html#c25106>

Most of the equipment was developed for vegetables production and later adapted for Soybean and other crops.

4) Description of how to choose the right variety: <https://www.bioactualites.ch/cultures/grandes-cultures-bio/legumineuses-a-graines/sojabio-lechoixdesvarietes.html#c25086>

Varieties on the Swiss Organic market have been evaluated in relation to climate, altitude, soil and rain distribution and sensitivity to cracking before maturing.

Events

An field day for organic cropping was held 13th of June 2019 in Schwand-BE Switzerland. This event represented all the work done by the farmers, the advisers and the research in terms of development in organic agriculture.

<https://bioackerbautag.ch/fr/>

<https://www.youtube.com/watch?v=mNzKCOQ6G7Y&feature=youtu.be>

A Study of the Faba Bean value chain in Germany and involvement of The association “Rheinische Ackerbohne e.V”.

The cultivation of faba beans has a long tradition in Germany. With the import of potatoes in the 17th century, faba bean production in Germany first disappeared from human nutrition and with the beginning of soya imports in the 1950s also from animal nutrition. Presently only less than 0.5% of the total acreage (2018: 54 000 ha) is cultivated with faba beans in Germany.

The positive effects of legumes in the crop rotation are well known. However, the low market prices for faba beans cause farmers to be more discouraged from cultivating the faba bean. The small amounts of cultivation lead to a reduced market power of the producing farmers (in relation to the selling price) and thus the cultivation is reduced further. In order to break this negative spiral, it is necessary to create a funding structure that makes the cultivation of faba beans economical. The support can be abolished if a functioning market structure has been established.

For this reason, there are support programs to promote legume research and the cultivation organized by the German Government. By using these programs the cultivation of e.g. faba beans in Germany could be increased from 17 300 ha in 2011 to 54 000 ha in 2018.

The association “Rheinische Ackerbohne e.V” .:

In the Rhineland various actors allied to promote the cultivation of faba beans. They use the subsidy programs to develop a market for legumes in the region by sales and quantity bundling. Using the subsidy program makes the cultivation of faba beans more economical for them. This time of economical cultivation should be used to re-establish faba beans and build a value chain.

The association is not a producer group and does not distribute the faba beans themselves, but each member manages individually although marketing measures are carried out centrally by the association. 2000 tons of faba beans are currently bundled by the association members each year, and the jointly produced quantity is sold to the agricultural trader. In this way, a reasonable price for the protein product is achieved.

Members of the association include farmers, the local cooperative, traders and other associations.

Fig. Products, offered by association members

In order to achieve the above-mentioned goals, the association advertises the faba beans for the consumer.

This is intended to satisfy the consumers demand for regional and GMO-free products and provide consumers an alternative to imported soy from overseas.

In order to catch attention and come in contact with the consumer, the association participates at public events and attends numerous agriculture-, or consumer-fairs, farm festivals and specialist conferences. In addition, the usability of the bean is described on the own website. Finally, field signs were developed that include information on the cultivation of faba beans, the utilisation possibilities and the ecosystem services provided by the faba bean. The association also organizes the utilisation of faba beans in animal feed.



Faba beans are used as animal feed. So faba beans are mixed with the feed of laying hens. The eggs are sold as GMO-free, regional products. Likewise, a dairy farmer feeds his cows with the beans and offers the milk. A regional butcher offers meat of pork, which was fed primarily with local faba beans. Furthermore, a beekeeper produces honey by placing his bee colonies in the faba bean stocks. All these products bear the logo of the association "Rheinische Ackerbohne e.V." as recognition and unique feature. The marketing of the products takes place almost through direct marketing.

Summary:

The association "Rheinische Ackerbohne e.V." raise a value chain with a culture that has traditionally been cultivated in Europe and that provides a large number of ecosystem services. Such cooperation can help to establish legume cultivation permanently.

It could be examined whether the activities of the association are transferable to other regions in Europe.

PROJECT PARTNER FOCUS.

A focus on 3 of the project partners there role and experience.

Terres Inovia

Organisation

The mission of TERIN is to improve the economic competitiveness of oilseed, grain legumes and hemp crops through technical means, by adapting production to the economic context, the regulatory requirements and demands of society. Its program aims to optimize grain production, to value the products and diversify outlets. TERIN is the result of the merging of two entities in 2014: CETIOM (Centre Technique Interprofessionnel des Oléagineux Métropolitains) and the technical staff of UNIP (Union Interprofessionnelle des Plantes riches en Protéines).

Expertise in relation to the the topic

TERIN aims at increasing competitiveness of pulses via programmes of research, development and agricultural extension. It has a wide expertise in field trials, work with farmer's networks, and a tradition of close collaboration with basic research laboratories, especially with INRA. Communication, training and extension are major activities of TERIN through technical publications, field meetings, and a web site. TERIN leads a network of 10 field stations representatives of the diversity of the crop production in France and including different pedo-climatic conditions. TERIN is also developing cropping system evaluation sites and 10 innovative farmer networks allowing the assessment of the delivery of ecosystem services provided by the grain legume crops. TERIN dedicates each year a wide effort in crop modelling to develop decision making tool for the farmers and other supply chain actors

Role in the project

Participating in all work packages and leading WP7, TERIN will play a key role in ensuring strong and efficient interactions among all WPs, and in developing multi-actor approach to enlarge the outcomes of the project towards a largest audience as possible. TERIN will be in charge of gathering and maintaining a database for the project with a clear management of the access right within and without the consortium.

Selected relevant projects related to LegValue

- **PROGRAILIVE** (FEADER, 2015-2019). It will provide experiment data and farm networks on associated legumes with cereals.
<https://tporganics.eu/prograilive-to-secure-and-increase-the-production-of-protein-grains-in-brittany-and-pays-de-la-loire/>
- **LEGATO** (FP7, 2013-2017). It will provide data mainly on cropping system and food uses, and some know how concerning the impact of rhizobium application on yield and protein content of several grain legume species. <http://www.legato-fp7.eu/>
- **COSELAG** (CTPS, 2016-2017). It will provide a co-design of legume breeding quality criteria with all actors involved in the value chain, and the identification of targeted criteria depending of the different end uses that will be shared at the start of LegValue.
https://www6.inra.fr/coselag/content/download/3364/34030/version/1/file/COSELAG_Prereflexion_Equip_e_projet.pdf

https://www6.inra.fr/coselag/content/download/3487/35159/version/1/file/PPT_presentation_COPIL_28032017.pdf

- **LEGITIMES** (ANR, 2014-2017). It will provide data on innovative crop management and legume services, with an expertise on participatory research and development including farmers, extension services, stakeholders and scientists. <https://anr.fr/Project-ANR-13-AGRO-0004>
https://www6.dijon.inra.fr/umragroecologie_eng/Research-Programs/ANR/LEGITIMES
- **GL-PRO** (FP5, 2003-2006), concerted action of European Extension Network for the Development of Grain Legume in the EU. It will provide expertise on crop management, environmental benefits and potential areas for growing pea, fababean and lupins. 5 partners of GL-PRO are involved in LegValue. <https://cordis.europa.eu/project/rcn/69955/factsheet/de>
this project resulted in the production of guidelins for growing legumes in Europe.
[http://www.globalbioenergy.org/uploads/media/0503_AEP -
_Guidelines for growing grain legumes in Europe.pdf](http://www.globalbioenergy.org/uploads/media/0503_AEP_-_Guidelines_for_growing_grain_legumes_in_Europe.pdf)

PGRO Research Limited (PGRO)

Organisation

The PGRO is focussed on legume production. Its' mission is to pursue the provision of current advice for growers, the realisation of improved crop yield, quality and economic guidance. To facilitate open, accessible, reliable and relevant knowledge exchange. To develop progressive and innovative approaches towards crop research and development. To create and maintain extensive and close links with growers, processors, trade and fundamental researcher communities.

The organisation aims to ensure members are able to quickly and easily glean appropriate information and advice. Applied research is be carried out to a high standard and within appropriate quality criteria such as GEP as necessary and the organisation cultivates a widely held reputation for reliability and collaborative independence. Knowledge exchange and transfer activities form a core plank of the PGRO's purpose.

Expertise in relation to the topic

PGRO has developed a strong network of collaborating partners ranging from leading international fundamental research institutes to renowned consultancies, Grower representative groups and Trade bodies. Its' extensive network of members and contacts make PGRO ideally suited to a programme of research examining supply chains and commercial pathways. The organisation focuses on accumulating knowledge of a practical and applied nature, transferring that knowledge for immediate application and impact. It provides market updates, pest monitoring and agronomy services, variety and agronomy tools for decision support as well as rolling programmes of practical field trials. Services are provided free via various communications methods including web sites, social media, paper publications, training programmes, site promotional knowledge transfer events and direct face to face and telephone contact.

The PGRO releases reports and publications for growers and the trade/ supply chain for implementation of knowledge in best practice, rather than for academia. <https://www.pgro.org/agronomy-guides-publications/>

these include Official journals

- The Pulse Magazine - <http://www.graphicgeneweb.co.uk/flip/mobile/>
- The Vegetable magazine - <https://www.pgro.org/veg-ebook-2018/mobile/index.html>

In addition regular topical news releases and growing season crop updates are produced. Monthly Pulse Market Updates (in conjunction with Pulses UK, the UK pulses trade association) are released for growers. <https://www.pgro.org/pulse-market-updates/>

Role in the project

PGRO is participating in WPs 1 to 5 providing information, data, guidance, advice, practical resources and assistance. It will lead WP6 in which its primary role will be the promotion and provision of open access to the study findings and the delivery and population of an information repository of first point of reference for growers, the trade, supply chain and policy makers in the EU, the purpose being to enhance the impact of LEGVALUE outcomes. PGRO will provide and follow farm networks through surveys of their farmer' members with 2 value chains on fababean and pea.

Selected relevant projects related to LegValue

- **LEGATO** (FP7, 2013-2017) will provide data on cropping system and food uses, and know how concerning the impact of rhizobium application on yield and protein content of grain legume species. <http://www.legato-fp7.eu/>
- **OPTIBEAN** (UK 2011-2015) “Improving the availability of UK sourced protein feed through new fababean varieties, production and utilisation systems”. The delivery of an agronomy tool for fababean production (<https://www.pgro.org/optibean-project/>) and successful uptake of fababean as a feed ingredient and soya substitute in various commercial livestock units.
- **PC-GIN** (2005 - 2018) the Pulse Crop Genetic Improvement Network serves the process of legume crop improvement. It enables scientific resources, results and knowledge delivery to breeders, producers and end users. It provides resources, expertise and understanding to public and commercial sectors in breeding and in the definition and improvement of product quality, commercial and public goods. It promotes and executes the translation of genomic research to crop improvement, consistent with the needs of UK industry, and policy objectives relating to sustainable agriculture and has links and involvement in, European pulse crop research programmes. <https://www.jic.ac.uk/pulse-crop-genetic-improvement-network-pcgin/>
- **GREEN PIG** (2008-2012) the environmental consequences of using home-grown legumes as a protein source in pig diets (Green Pig) Demonstrated that home grown legumes can be used beneficially as a soya substitute in both feed and environmental terms. <https://www.pgro.org/the-environmental-consequences-of-using-home/>
- **BEANS 4 FEEDS** (2012-2016) the project aimed to develop air-classification technology for fababeans to improve the economic and environmental sustainability of UK food production and food security. <https://beans4feeds.hutton.ac.uk/>

Terres Univia

Organisation

TUN is the result of the merging of two entities in 2015: UNIP (Union Interprofessionnelle des Plantes riches en Protéines) and ONIDOL (Organisation Nationale Interprofessionnelle Des graines et fruits Oléagineux). The mission of TUN is to represent and defend the interest of oilseed and vegetable proteins branch, by adapting this value chains to the technical, economic and market context, the regulatory requirements and demands of society.

The composition of its members is representing each economic player in the oilseed, vegetable proteins and industrial hemp supply chains in feed, food and non-food. Quality, relationships organisation, promotion, research and knowledge of target feed and food markets are major activities of TUN through statistics publications, sectors meetings and a website.

TUN collects inter-branch subscriptions and support the research (public research, technical institutes) and the development to the operational actors in the oilseed and grain legumes supply chains. Being the technical center for oilseed and vegetable proteins branch, TERIN (Terres Inovia) is the major beneficiary for this program.

Expertise in relation to the topic

TUN aims increase competitiveness of grain legumes by conducting inter-professional actions and producing information, knowledge to increase sector transparency. To this end, statistical databases on production, marketing and prices are established and summarized in brochure and statistical booklets published each year. TUN has also an observatory of economic results about the production of oilseed and vegetable proteins. As the technological and sanitary quality of grains and meals are essential in the contractual commitments between actors in the sector, TUN has set up an interprofessional observatory on the technological quality of pea, faba bean, rape, sunflower and soya grains collected in France, the results of which are published annually, as well as a sanitary observatory for grains, meals and oils. And, to inform on the situation and environment of the oilseed and vegetable proteins sector, "La Lettre des Oléopros" is published every six months, while a quarterly information note (the "Note to operators") contains a series of brief news about production and markets. TUN also carries out some economic studies (prospective analysis, market studies, sector diagnosis, etc.).

Role in project

TUN is participating in WP2 to WP6, mainly involved in WP2 and WP3. TUN leads T2.5 and T3.2, providing its expertise in price setting, institutional tools in the value chains and economic data. TUN also follows 6 case studies in France on faba bean, pea, lentil and organic mix species. And, it participates in WP4 by organizing the national workshops on public policies on legumes in France.

Selected relevant projects related to LegValue

- **GL-PRO** (FP5, 2003-2006), concerted action of European Extension Network for the Development of Grain Legume in the EU. It will provide past expertise on crop management, environmental benefits and potential areas for growing pea, faba bean and lupin. 5 partners of GL-PRO are involved in LEGVALUE.
<https://cordis.europa.eu/project/rcn/69955/factsheet/de>
- **PROTEASUPPLY** (2016). It analyses the French pea and faba bean supply-chains and identifies the blueprint accepted by all actors involved in the supply chains. Outcomes will be provided to LegValue.
<https://www.critt-tl.fr/portfolio-items/ameliorer-supply-chain-de-filiere-proteagineux-proteasupply/>
- **COSELAG** (CTPS, 2016-2017) provides a co-design of legume breeding quality criteria with all actors involved in the value chain, and the identification of targeted criteria depending of the different end uses shared in LegValue project.
https://www6.inra.fr/coselag/content/download/3364/34030/version/1/file/COSELAG_Prereflexion_Equip_e_projet.pdf
- **PEAMUST** (2010-2019) PeaMUST aims at **developing new varieties of peas** and optimizing their symbiotic interactions to **stabilize the yield and quality of pea seeds** in the context of climate change and reduction of pesticides use. To achieve this ambitious goal, PeaMUST benefits from an exceptional period of **8 years**, a significant contribution from the main **pea breeding companies** and **broad scientific and technical partnership**. <https://www.peamust-project.fr>
- **VOCALIM (2016-2019)** is a French project aimed to promote poultry farming systems which are autonomous in Protein-rich feedstocks at the national level. Terres Univia is one of the financial partners and Terres Inovia, one of the technical partners of this project. <https://www.itavi.asso.fr/content/vocalim>

- **FILEG** is a territorial project whose main mission is to promote the conditions necessary for partnership between upstream and downstream stakeholders in order to structure a legume sector that creates value for both human and animal food in Occitania. <https://www.fileg.org>
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EUROPEAN PLANT BASED PROTEIN AWARDS

The third edition of the European Plant based Protein Awards is launched to give a new impetus to the agricultural and food transition by offering the winning startups an acceleration programme and unique visibility in Europe. Made necessary by global population growth, balancing protein sources has become essential to feed the planet while preserving climate, natural resources, biodiversity and human health. Villages by CA and their partners come together around a common ambition: fostering the future of food or how to support and encourage this agricultural and food transition.

The call for applications for startups is largely supported by the French agricultural and agri-food ecosystem, which includes many world leaders in the sector. It is organized by the Villages by CA Nord de France and Champagne Bourgogne, in close collaboration with Terres Univia, and relayed by the Village by CA network, a unique Europe wide network of 29+ accelerators.

<http://plantbased-protein-awards.ca-norddefrance.fr/>

EUROPEAN POLICY NEWS

Since publication of the LegValue 1st Annual News Letter the EU Commission reported on development of plant proteins in the EU with the press release https://europa.eu/rapid/press-release_IP-18-6495_en.htm reproduced below.

The release also contains links to reports and documents coming out of the **November 2018 conference in Vienna - The Development of Plant Proteins in the European Union - Opportunities and challenges** https://ec.europa.eu/info/events/development-plant-proteins-europe-opportunities-and-challenges-2018-nov-22_en

Including presentations by Legvalue project partners.

- 1) **"Research and Innovation" - Chris de Visser (Wageningen University & Research)**
- 2) **"Supply Chains and Market Segments" - Marie-Benoit Magrini (French National Institute for Agricultural Research, INRA)**

The state of play of plant proteins in the EU

There is a high demand for plant proteins in Europe, amounting to around 27 million tonnes of crude protein in 2016/2017 and the EU's self-sufficiency rate varies substantially depending on the source (79% for rapeseed and 5% for soya, for example). As a consequence, the EU imports annually around 17 million tonnes of crude protein of which 13 million are soya based. However, there are positive trends: the soya area in the EU has doubled to almost one million hectares since the CAP reform in 2013. Similarly, in the

case of pulses (field peas, faba beans, lentils, chickpeas), production has almost tripled in the EU since 2013.

While animal feed remains the most important outlet (93%), the market for plant proteins has experienced considerable segmentation, with demand in **high-value feed** and **food** sectors growing. The **food** market for plant proteins is seeing double-digit growth, driven by demand for meat and dairy alternatives.

Background

This report is intended to meet the Commission's commitment to review the supply and demand situation for plant proteins in the EU and to explore possibilities to further develop their production in an economically and environmentally sound way.

In addition, the European Parliament adopted a report in April 2018 calling for a European strategy to promote European protein crops.

For More Information

[Report on the development of plant proteins in Europe](#)

[Programme of the 2018 conference on plant proteins in Europe](#)

IP/18/6495

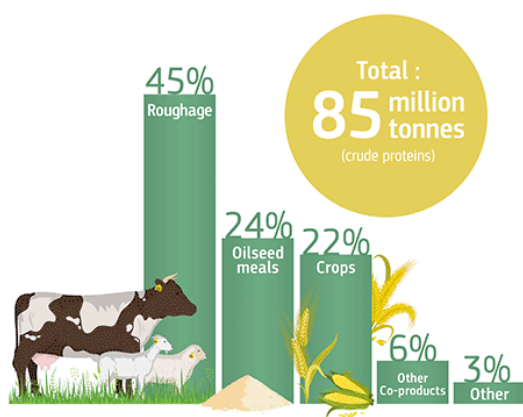
In May 2019 the EU Commission for the first time published the EU feed protein balance sheet.

https://ec.europa.eu/agriculture/sites/agriculture/files/cereals/balance-sheets/protein/eu-feed-protein-balance-sheet_2017-18.

In terms of protein content, the balance sheet also shows that the EU's self-sufficiency rate is high for products with less than 15% protein content and for products with over 50% protein content, respectively at 97 and 92% of self-sufficiency. In contrast, the EU produces only 29% of what it consumes in products with a protein content of 30 to 50%.

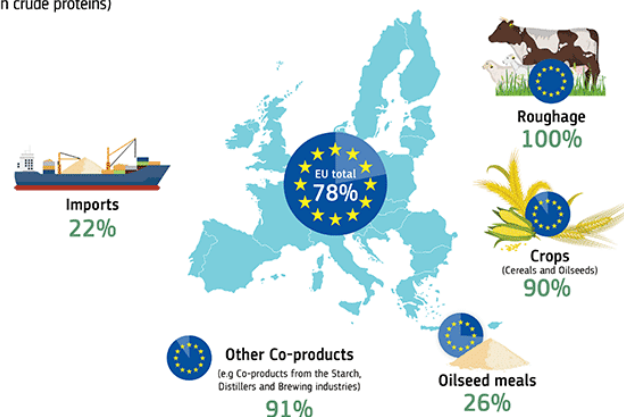
For the 2017/18 period on which the document reports pulses accounted for 0.98million tonnes ,93% of EU Origin. This compared with 13 million tonnes of Soya bean meals, 2% of EU origin.

EU plant protein supply: share of protein sources



Source: European Commission

EU self-sufficiency per protein source (in crude proteins)



Source: European Commission

More detail and background information can be found here https://ec.europa.eu/info/news/commission-publishes-overview-eu-feed-supply-2019-may-20_en

LEGUME NEWS FROM FRANCE

General information / events on legumes in France

French Protein Plan

As requested by the French President Emmanuel Macron, a French Protein Plan will be launched in the last quarter of 2019. "We must recreate Europe's protein sovereignty", he said, calling for Europe to be "able to reproduce its own proteins, for itself and for farmers". For this, Terres Univia was asked to set up a steering committee gathering other interbranchs (on crop and livestock sectors) to identify a 10-year horizon for market opportunities and to establish the development dynamic of the French Protein Strategy.

For more information: <https://www.terresunivia.fr>

SOS PROTEIN Conference (11 September 2019)

SOS Protein (Improve the protein self-sufficiency of livestock farms in Western France) is an ambitious research and experimentation program aimed at improving protein autonomy in Bretagne and Pays de la Loire French regions in the animal and plant sectors. A conference was held during the SPACE 2019 event to discuss the main results of the program.

For more information about SOS PROTEIN: <https://pole-agro-ouest.iimdo.com/uk/>

Symposium on legumes seeds (11 February 2020)

Following the last French-speaking meetings on legumes (Rencontres Francophones sur les légumineuses) on September 2018, GNIS and INRA are organising a symposium on 11 February 2020 on the future of the legume seed sectors.

How can we rethink the organization and orientations of the varietal creation of seed, forage or vegetable legumes, in response to the challenges of the agro-ecological transition, new expectations, uses and regulatory mechanisms?

This conference is open to all operators in the legume sector, the seed sector, research and public authorities. The day will be marked by presentations, round tables and workshop work.

It will take place at FIAP, Espace Jean Monet, 30 rue Cabanis, 75014 Paris.

<https://www.gnis.fr/agenda/avenir-des-filieres-semences-de-legumineuses/>

INFORMATION/EVENTS ON TERRES UNIVIA ACTIVITIES ON LEGUMES

1. Note to operators for French protein crops

Edited by Terres Univia, the note to operators (Note aux opérateurs) is a quarterly information note containing a series of brief news about production and markets of protein crops (pea, faba bean and lupin). The last edition was in June 2019.

<http://www.terresunivia.fr/decouvrir-terres-univia/actualites/note-aux-operateurs-419-325>

2. Charte Soja de France

Launched in 2018 by Terres Univia, the **CHARTE SOJA DE FRANCE** was elaborated by the main actors of French soya production and transformation value chain: seed companies, farmers, grains collectors/elevators, first processors/users. This is a common certification framework for Soybean grown in France.

<http://www.terresunivia.fr/sites/default/files/Charte%20Soja%20de%20France/charte-soja-de-france-v1.pdf>

To know more about the implication of Terres Univia:

<http://plantbased-protein-awards.ca-norddefrance.fr/article/why-did-terres-univia-choose-to-participate-in-these-innovation-awards>

3. Meeting on “Pea and Faba bean” (19 November 2019)

The meeting is dedicated to actors on pea and faba bean sectors who would like to discover the progress of research, to identify the technical levers to be mobilized and to exchange with the actors of the French sector. Do you want to meet the needs of French producers and market expectations? This meeting is for you!

Organized by Terres Inovia, it will take place at FIAP, Espace Jean Monet, 30 rue Cabanis, 75014 Paris.

<https://www.weezevent.com/carrefour-pois-et-feverole>

4. Les « Rencontres Oléopro » (5 December 2019)

The event is organised by Avril, FOP, Sofiproteol, Terres Inovia and Terres Univia. It will be an opportunity to discover the innovations of the vegetable oils and proteins sector and to exchange on the challenges and issues of the sector.

It will take place at La Maison de la Mutualité, Paris.

For more information: c.leguillou@terresunivia.fr

5. VOCALIM conference on “Which proteins to feed poultry?” (19 December 2019)

Vocalim is a French project aimed to promote poultry farming systems which are autonomous in Protein-rich feedstocks at the national level. Terres Univia is one of the financial partners and Terres Inovia, one of the technical partners of this project. The conference will present the main results of the project.

<https://www.itavi.asso.fr/content/vocalim>