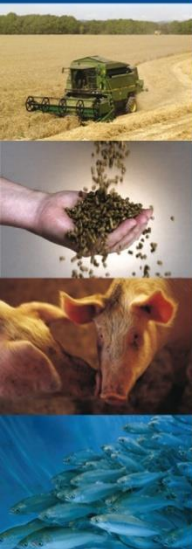


The importance of bio-industry co-products for the sustainability of the compound feed industry



Nicolas MARTIN
FEFAC Policy Advisor
Budapest, 9th May 2017



FEFAC in a nutshell

- Created in 1959
- Represents industrial compound feed and premixtures manufacturers
- 33 members
 - 24 Member Associations from 23 EU Member States
 - 2 Observer Members (Russia, Serbia)
 - 7 Associate Members (Turkey, Switzerland, Norway (3) EMFEMA, EFFPA)
- 154 mio. t of industrial compound feed production in 2016



FEFAC 2030 vision

FEFAC vision on animal feed industry:

A knowledge driven, reliable partner of a competitive livestock sector



FEFAC vision
on feed safety
management:

*Sharing
responsibility for
feed safety along
the chain*

FEFAC vision
on animal
nutrition:

*A multifunctional
science delivering
solutions to a
sustainable
livestock sector*

FEFAC vision
on
sustainability:

*A responsible and
resource-efficient
feed industry*

FEFAC vision

FEFAC vision on sustainability:

A responsible and resource-efficient feed industry

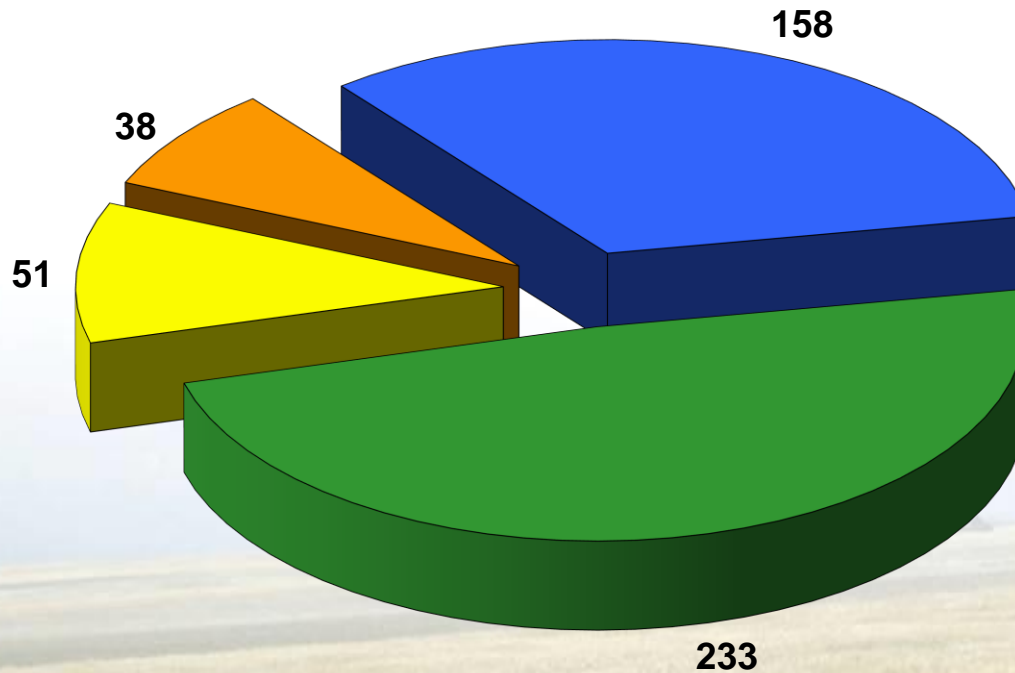
- *Resource efficiency*
- *Responsible supply*
- *Environmental footprinting*



EU-28 Livestock sourcing in feedingstuffs – 480 mio. t in 2015



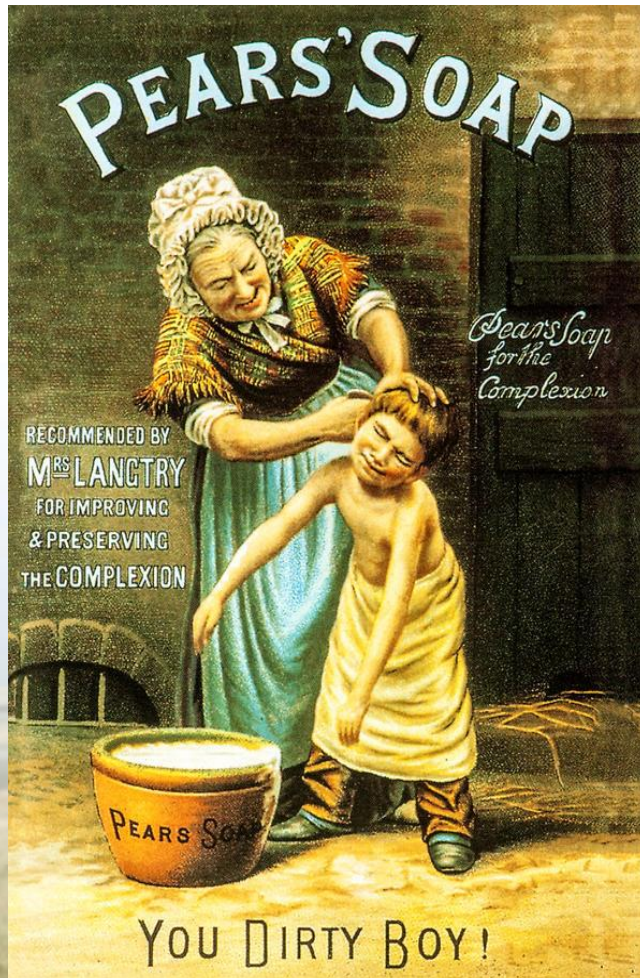
Source: FEFAC / EU Commission



- Forages
- Home-grown cereals
- Purchased straight feedingstuffs
- Industrial compound feed



Co-products – The Foundation of the Animal feed Industry

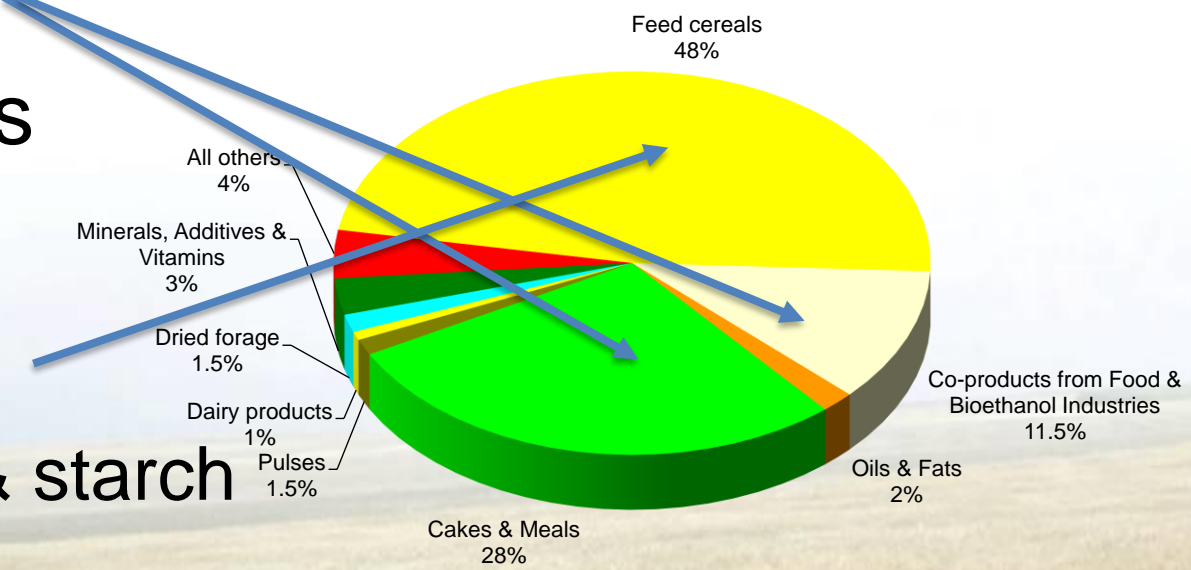


- Animal feed industry founded at the end of the 19 Century
- Based on the extraction of oil from oilseeds for the soap industry
- The residue - still referred to as “cake” was found to be a useful animal feed
- Also wheat bran from dry milling

What do you need in feed?

We deliver nutrition to animals, not raw materials:

- Protein
- Minerals
- Fibre
- Energy
 - Fats & starch



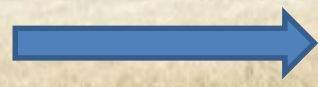
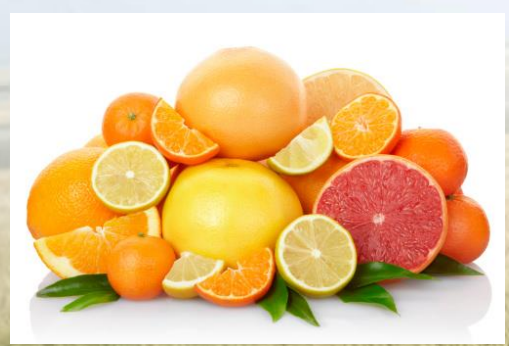
Animal Nutrition Science – Extracting the nutritional value from different streams of co-products



Brewer's grains



Dried Distillers Grains

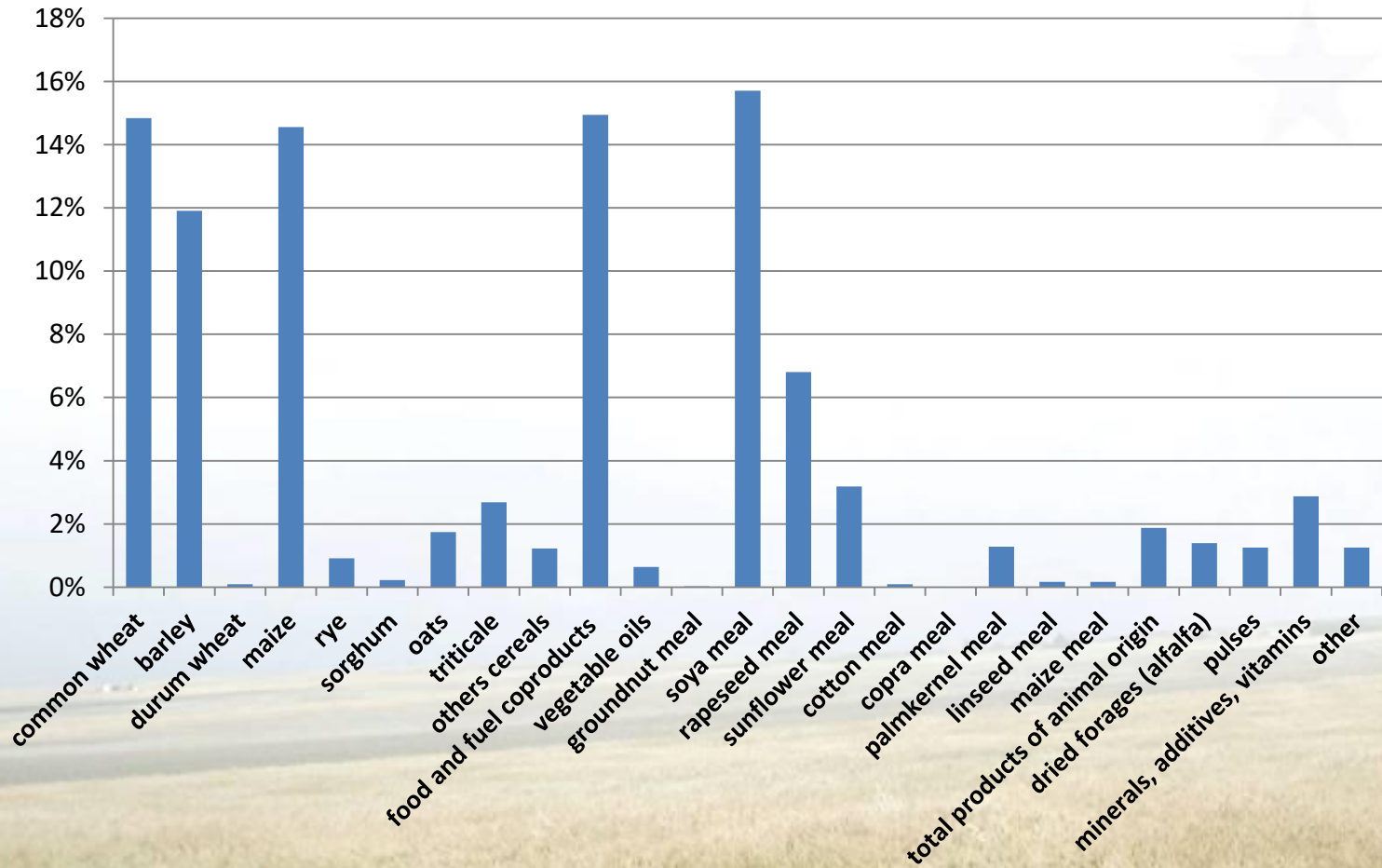


Citrus Pulp





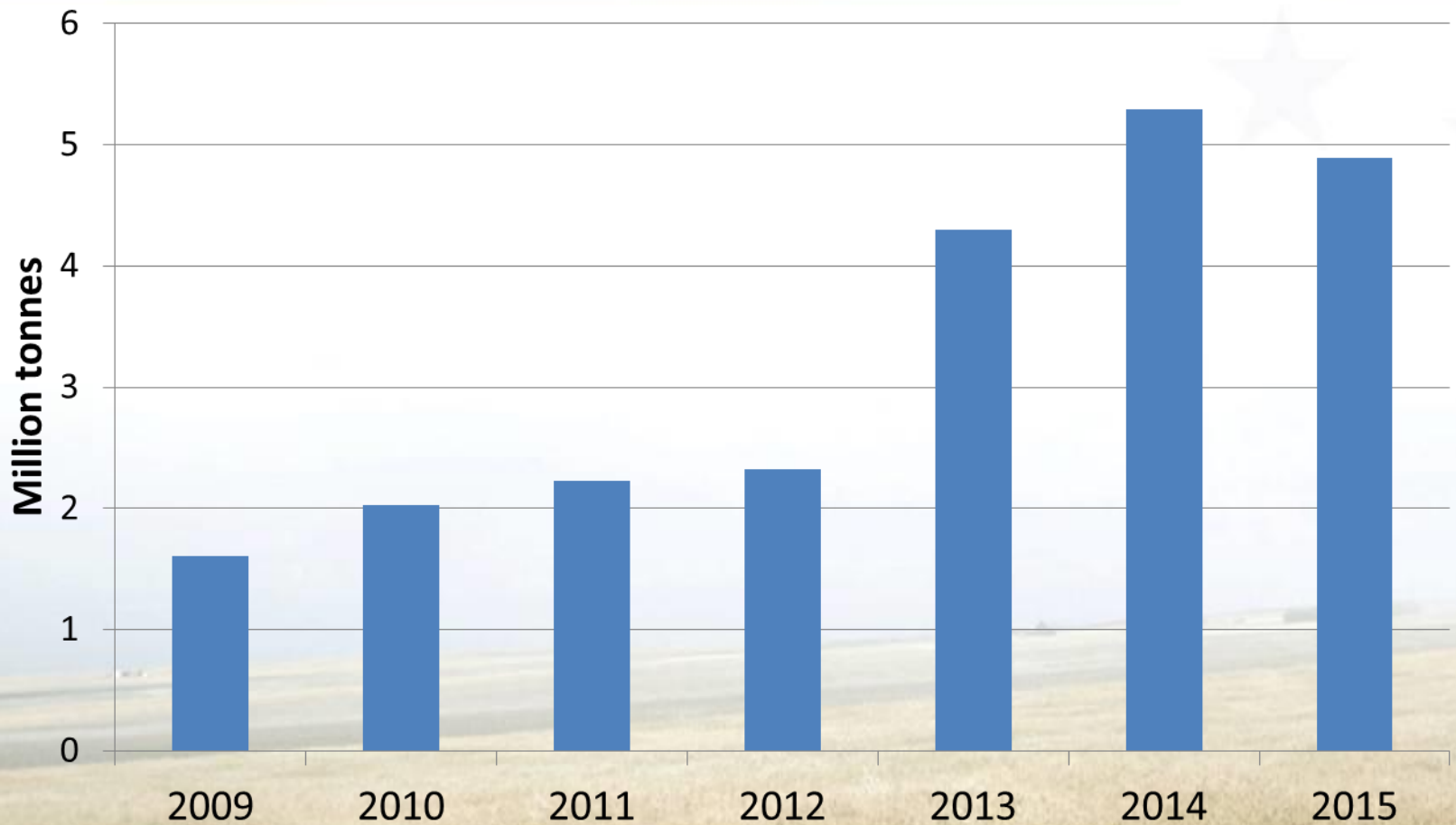
Consumption of feed ingredients by the EU compound feed industry



2009-2013 average (source: FEFAC)



Co-products from EU ethanol production



Sustainability

- co-products used in animal feed industry
- Environmental footprint of livestock products
 - Use of co-products strong impact on CO₂ emissions & land-use
 - Sustainable development as a business opportunity!



In short

- Global demand for feed proteins will increase but EU demand will remain stable
- EU dependency for its protein supply remains stable but dependency of third countries vis-à-vis the EU market is decreasing
- Traditional resources get scarce and challenged for their sustainability

→What to do?



Strategic raw materials supply: FEFAC's perspective

- Need to meet the global growing demand for animal products
- Broad access to feed ingredients is a key factor of competitiveness
- Need to reduce pressure on human edible resources
- Need to reduce pressure on the environment
- Further increase of feed efficiency (feed conversion rate)
- Meet consumers expectations



Comprehensive EU protein balance sheet available since April 2017

- Fair and accurate description of EU protein supply
- Synergies between livestock and arable crops production
- Valorisation of co-products from food and biofuel industries
- Strategic dimension of protein supply
- Environmental aspects
- Anticipate needs

https://ec.europa.eu/agriculture/sites/agriculture/files/cereals/balance-sheets/protein/2015-16_en.pdf

2015/16	Million tonnes						protein content (Feed use) (G)	Million tonnes (crude protein)		
	Total EU production (A)	EU imports (B)	EU exports (C)	EU Total Domestic Use (D)	EU total feed use (E)	Feed use EU origin (F)		EU total feed use (H) = (E) * (G)	Feed use EU origin (I) = (F) * (G)	% Feed Use of EU Origin (I) / (H)
CROPS					179,0	162,4		18,22	16,73	92%
<i>CEREALS (of which)</i>	311,6	20,5	50,8	281,4	174,4	157,7		17,07	15,59	91%
Common Wheat	151,3	4,1	32,7	119,0	55,8	51,7	11,0%	6,14	5,69	
Durum Wheat	8,3	2,5	1,2	8,8	0,3	0,3	12,0%	0,04	0,03	
Barley	61,4	0,3	14,2	48,1	36,3	36,3	10,0%	3,63	3,63	
Grain Maize	59,1	13,3	2,2	73,8	58,5	46,8	8,0%	4,68	3,75	
Rye	7,6	0,0	0,2	7,9	3,0	2,9	11,0%	0,33	0,32	
Sorghum	0,6	0,1	0,0	0,9	0,7	0,5	11,0%	0,08	0,05	
Oats	7,5	0,0	0,2	6,9	5,2	5,2	11,0%	0,57	0,57	
Triticale	12,6	0,0	0,0	12,3	11,0	11,0	11,0%	1,21	1,21	
Other cereals	3,2	0,2	0,0	3,8	3,6	3,0	11,0%	0,40	0,34	
<i>OILSEEDS (feed use without crushing)</i>	32,0	18,6	0,9	49,8	1,2	1,2		0,32	0,32	100%
(of which)										
Soyabeans	2,3	14,6	0,1	16,8	0,8	0,8	31,6%	0,25	0,25	
rapeseed	21,8	3,5	0,3	24,9	0,3	0,3	18,8%	0,06	0,06	
Sunflowerseed	7,9	0,5	0,4	8,0	0,1	0,1	15,4%	0,02	0,02	
<i>PULSES (of which)</i>	4,4	0,7	0,9	4,2	3,4	3,4		0,82	0,82	100%
Field Peas	2,1	0,3	0,4	2,0	1,6	1,6	22,5%	0,36	0,36	
Broad beans	2,0	0,3	0,4	1,9	1,5	1,5	26,0%	0,40	0,40	
Lupins	0,4	0,1	0,1	0,4	0,3	0,3	22,5%	0,07	0,07	

2015/16	Million tonnes						protein content (Feed use) (G)	Million tonnes (crude protein)		
	Total EU production (A)	EU imports (B)	EU exports (C)	EU Total Domestic Use (D)	EU total feed use (E)	Feed use EU origin (F)		EU total feed use (H) = (E) * (G)	Feed use EU origin (I) = (F) * (G)	% Feed Use of EU Origin (I) / (H)
CO-PRODUCTS					83,8	44,9		25,77	9,87	38%
<i>SOYBEAN MEALS (of which)</i>					31,1	1,8		14,3	0,8	6%
Soybean meal (from EU soybean production)	1,6				1,5	1,5	40,0%	0,61	0,61	
Soybean meal (imported soybeans crushing)	10,3				10,1	0,0	47,0%	4,76	0,00	
Soybean meal (traded as such)		19,8	0,3		19,1	0,0	45,5%	8,71	0,00	
Soybean Protein Concentrate					0,3	0,3	62,5%	0,19	0,19	
<i>RAPESEED MEALS (of which)</i>					13,8	11,8		4,5	3,9	86%
Rapeseed meal (from EU rapeseed production)	11,8				11,8	11,8	33,0%	3,90	3,90	
Rapeseed meal (imported rapeseed crushing)	1,9				1,9	0,0	33,0%	0,64	0,00	
Rapeseed meal (traded as such)		0,4	0,5		0,0	0,0	33,0%	0,00	0,00	
<i>SUNFLOWER MEALS (of which)</i>					6,8	3,6		2,1	1,0	47%
Sunflower meal (from EU sunflowerseed production)	3,6				3,6	3,6	28,0%	1,01	1,01	
Sunflower meal (imported sunflowerseed crushing)	0,2				0,2	0,0	35,0%	0,08	0,00	
Sunflower meal (traded as such)		3,2	0,2		3,0	0,0	35,0%	1,05	0,00	

2015/16	Million tonnes						protein content (Feed use) (G)	Million tonnes (crude protein)		
	Total EU production (A)	EU imports (B)	EU exports (C)	EU Total Domestic Use (D)	EU total feed use (E)	Feed use EU origin (F)		EU total feed use (H) = (E) * (G)	Feed use EU origin (I) = (F) * (G)	% Feed Use of EU Origin (I) / (H)
CO-PRODUCTS					83,8	44,9		25,77	9,87	38%
<i>OTHERS (excluding on-farm use)</i>					32,1	27,6		4,8	4,2	86%
of which										
Palmkern meal	0,0	2,3	0,0	2,3	2,3	0,0	16,0%	0,36	0,00	
Other oilseed meals	0,6	0,0	0,0	0,6	0,6	0,6	37,0%	0,23	0,22	
Corn Germ meal	0,4	0,0	0,0	0,4	0,4	0,4	26,0%	0,10	0,10	
Corn Gluten Meal					0,1	0,1	60,0%	0,06	0,06	
Corn Gluten Feed	2,8	0,3	0,1	2,9	2,9	2,8	19,0%	0,55	0,52	
Distiller's Dried Grains with Solubles	3,4	0,6	0,2	3,8	3,8	3,4	30% for wheat 27% for corn	1,1	1,0	
Wet Distillers Grain					n.a.	n.a.				
Wheat bran	8,3	0,0	0,0	8,3	8,3	8,3	15,5%	1,29	1,29	
Wheat gluten feed					0,4	0,4		0,00	0,00	
Citrus pulp	0,0	0,5	0,0	0,5	0,5	0,0	7,5%	0,04	0,00	
Beet pulp pellets	4,5	0,8	0,1	5,1	5,1	4,5	7,5%	0,39	0,33	
Molasses	5,0	1,1	0,1	6,0	2,4	2,0	10,5% beet 4% cane	0,23	0,21	
Processed Proteins (potatoes)					0,2	0,2	12,0%	0,02	0,02	
Dried Fodder	4,0				n.a.	n.a.	16,0%			
Former Foodstuff					5,0	5,0	8,8%	0,44	0,44	
OTHER SOURCES					2,2	2,1		0,84	0,75	90%
(excluding on-farm use)										
Processed Animal Proteins					0,6	0,6	58% for pork 63% for poultry	0,36	0,36	
Fish Meal	0,4	0,4	0,2	0,5	0,5	0,4	65,0%	0,34	0,25	
Whey Powder					0,9	0,9	12,5%	0,11	0,11	
Skimmed Milk Powder					0,2	0,2	12,5%	0,02	0,02	

Comprehensive EU protein balance sheet

- Dependency only for protein-rich feed materials
- Relative competitiveness EU / other regions; cereals / proteins
- No disconnection between livestock and arable crops
- For the time being: no credible alternative to imports from domestic production for highly digestible proteins



Strategic raw materials supply: FEFAC's perspective

- Short term
 - Need for a predictable and workable regulatory framework (pesticides, fertilizers, GMOs)
 - Level playing field
- Long term
 - Strategic approach on protein supply
 - Circular economy: increase use of co-products and biomass; reduce waste



Responding to Changes in Availability

- Sustainability
- Research and Development
 - Need to understand value of raw materials, particular co-products, to get the most efficient production
 - Continue discussion and research on alternative protein sources (insects, algae,...)
 - Specifying diets and feeding to optimise production.
 - Reducing waste and potential pollution
 - Eg lower nitrogen diets with better amino acid balance
 - Enzyme technology to replace added phosphate
 - Former foodstuffs
 - Adding value for our customers



Need to develop resource efficiency indicators

- Feed conversion rate is obvious, but the nature of the resources should also be taken into account.

Parameters	1940	1965	1985	2005	
Body weight (kg)	1.4	1.6	1.9	2.4	+171%
Age at slaughter (days)	84	63	49	42	-50%
Feed conversion rate	4.0	2.4	2.0	1.7	
Protein deposition (g/day)	2.5	3.8	5.8	8.6	+344%

Evolution of animal performance for broiler
(IFIF)



Thank you for your attention

Stay informed on the feed industry via Twitter (@FEFAC_EU) & the FEFAC NewsFEED

FEFAC

Fédération Européenne des
Fabricants d'Aliments Composés

Europäischer Verband
der Mischfutterindustrie

European Feed
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FEFAC
NewsFEED
EU Feed Industry raises Profile Animal Nutrition in 2016
XIVth FEFAC Congress in Antalya "Societal acceptance of livestock and feed production in the EU"
FEFAC and its Turkish member association Türkiye-Bir will submit the annual [Circular Economy Package](#), taking place in Antalya, Turkey on 21-22 April 2016. The event will focus on the industry's policy approach to the European Commission presented in the Circular Economy Package to discuss the roadmap towards a more resource-efficient food and feed chain management. Key note speakers from the EU institutions and feed chain partners will discuss the societal benefits of introducing new animal nutrition solutions, while safeguarding the high EU feed safety standards. Other indicated sessions will discuss current developments in LCA methodology for environmental footprint calculations of feed production as well as soy value chain efforts and commitments in North- and South-America to produce and deliver responsible feed materials to the EU Feed industry.
FEFAC/FEFANA Conference "Innovation in Animal Nutrition" on 9 June 2016
FEFAC and FEFANA will hold a first invitational joint high-level stakeholder EU Conference on "Innovation in Animal Nutrition" in Brussels on 9 June 2016. The two European feed industry organisations will present their visions of a modern industry where central roles are played by innovation and public-private partnerships, which are key to shaping a smart, resource efficient Europe and meeting the EU Commission objectives on jobs, growth and investment.
The event aims at highlighting the need to foster the practical application of innovation in animal nutrition. FEFAC and FEFANA members are convinced that animal nutrition can further assist the EU livestock sector in addressing major global challenges such as climate change and antimicrobial resistance if more efforts are made to tackle EU regulatory bottlenecks.
A provisional draft programme of the "Innovation in Animal Nutrition" Conference on 9 June 2016 will follow shortly.
156.1 Million Tonnes Compound Feed Produced in 2015
Modest feed industry growth (0.2%) compared to 2014 - Market outlook 2016 pessimistic
Compound feed production in the EU-28 reached an estimated level of 166.1 million tonnes in 2015, according to data provided by FEFAC members. This is a 0.2% increase compared to 2014. Feed costs remained low and even decreased compared to 2014, due to a good 2015 cereals harvest in the EU both in terms of quantity and variety status. In addition, there was a largely sufficient supply of oilseed meals globally, especially soybean meal. This compensated the still decreasing pigmeat quotations to a certain extent, at a time when pigmeat production continued to increase by close to 1% in 2015. FEFAC market experts share a more bullish outlook concerning industrial compound feed production in 2016, foreseeing a significant reduction in pig feed demand. See FEFAC's [press release](#) for a detailed analysis of the compound feed estimates of 2015 and a more in-depth market outlook for 2016.
Circular Economy Package proposes Exclusion from Waste Legislation for Feed
Oliveeet meals and former foodstuffs clearly identified as non-waste
On 2 December 2015, the European Commission published the long-awaited Circular Economy Package, which included
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