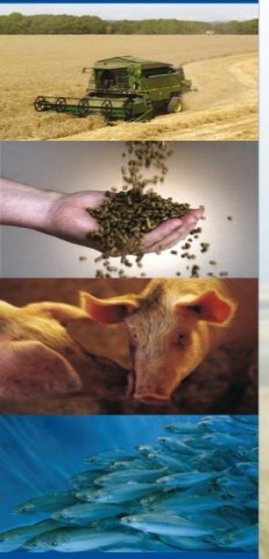
FEFAC

The European fish feed producers constant push for innovation and sustainability in aquaculture: what lies ahead?

Niels Alsted
Fefac

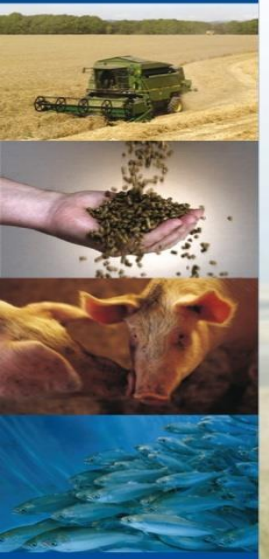
Agenda

- FEFAC what is it.
- Major changes for fish feed in the past
- Current trends in fish feed.
- The future



FEFAC in a nutshell

- Created in 1959
- Represents industrial compound feed and premixtures manufacturers
- 32 Members:
  - 23 Member Associations from 23 EU Member States
  - 2 Observer Members (Serbia, Russia)
  - 7 Associate Members (Turkey, Switzerland, Norway (3), EMFEMA, EFFPA)
- 153 mio. t of industrial compound feed in EU-28 in 2013
- 7 Technical Committees to assist the FEFAC Council
  - Animal Nutrition
  - Industrial Compound Feed Production
  - Premix & Mineral Feed
  - Feed Safety Management
  - **Fish Feed**
  - Milk Replacers
  - Sustainability



FEFAC Structure – Committees

Animal Nutrition
Chairperson: P. Peršak (CFIA)
Vice-Chair: P. Radewahn (DVT)

Industrial Compound Feed Production
Chairperson: P. Musil (SKK)
Vice-Chair: J. Piçarra (IACA)

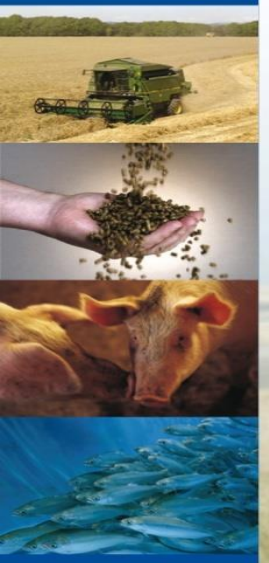
Milk Replacers
Chairperson: E. Fernhout (EUROFAC)
Vice-Chair: H. Swinkels (NEVEDI)

Premix and Mineral Feed
Chairperson: R. Sijtsma (NEVEDI)
Vice-Chair: J.F Labarre (EUROFAC)

Fish Feed
Chairperson: N. Alsted (DAKOFO)
Vice-Chair: T.A. Molland (NSF)

Feed Safety Management Committee
Chairperson: Y. Dejaegher (BEMEFA)
Vice-Chair: A. Booth (AIC)

Sustainability
Chairperson: A. Booth (AIC)
Vice-Chair: C. Callu-Mérite



FEFAC

Active Members

VFÖ	Austria	1995 (1964)
APFACA/BEMEFA	Belgium	1959
BFMA	Bulgaria	2013
CFIA	Croatia	2013 (2008)
CAFM	Cyprus	2004 (2003)
SKK	Czech Republic	2004 (2000)
DAKOFO	Denmark	1973
FFDIF	Finland	1995 (1993)
EUROFAC*	France	1959
DVT	Germany	1959
HGFA	Hungary	2012
IGFA	Ireland	1973
ASSALZOO	Italy	1959
LGPA	Lithuania	2005
NEVEDI	The Netherlands	1959
IZP	Poland	2004 (2001)
IACA	Portugal	1986 (1976)
ANFNC	Romania	2014
AFPWTC	Slovakia	2004 (2003)
GZS	Slovenia	2004
CESFAC	Spain	1986
FS	Sweden	1995
AIC	United Kingdom	1973

(observer as from ...)

*EUROFAC took over from SNIA in 2016

Observer Members

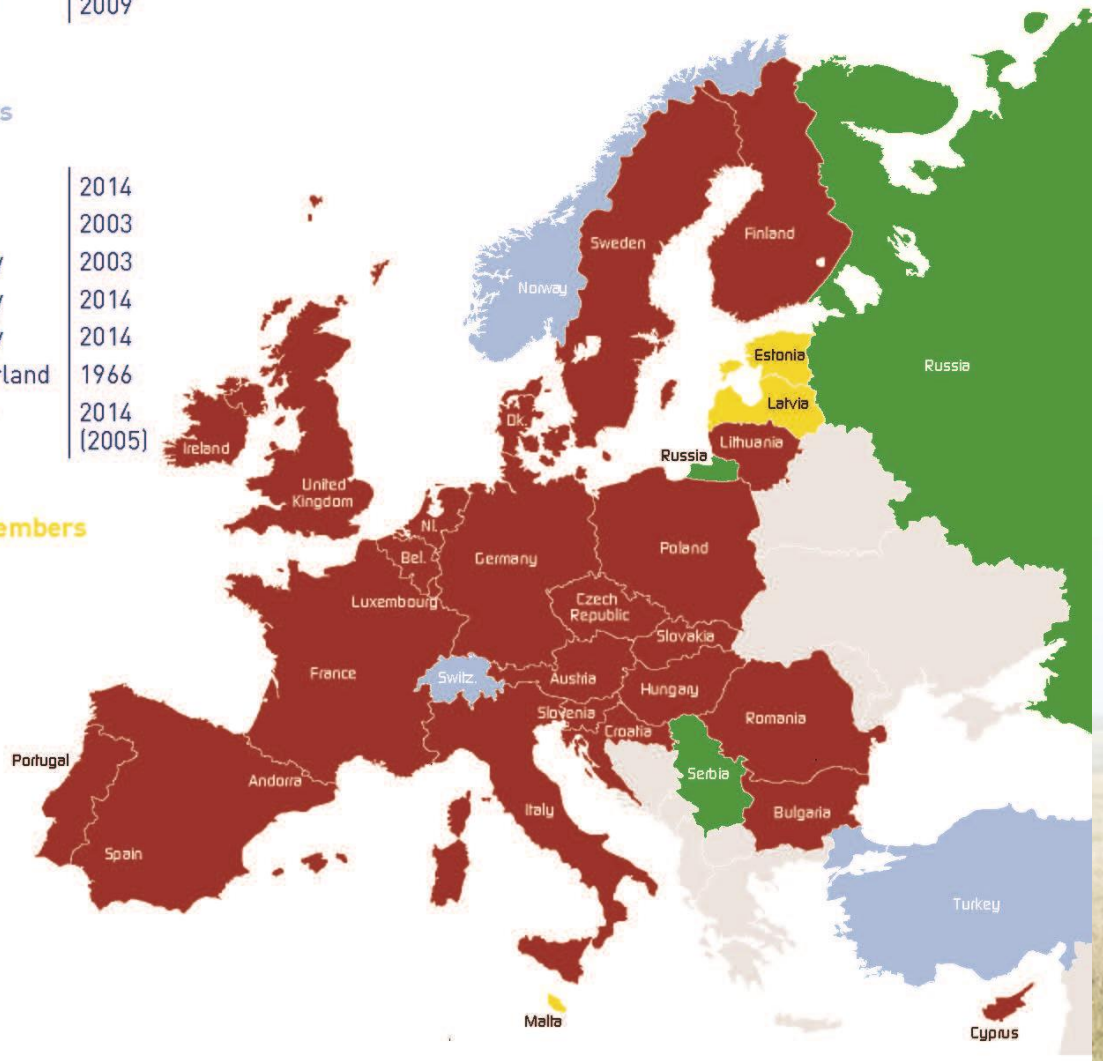
RUFM	Russia	2010
SFMA	Serbia	2009

Associate Members

EFFPA		2014
EMFEMA		2003
NSF	Norway	2003
FKF AS	Norway	2014
Norkorn	Norway	2014
VSF	Switzerland	1966
TURKIYEM	Turkey	2014 (2005)

Potential Active Members

- Estonia
- Latvia
- Malta



Situation on 1 January 2018

THE FEFAC 2030 Animal Feed Industry Vision

Feed Safety Management	Animal Nutrition	Sustainability

FEED INDUSTRY ANIMAL FOOD CHAIN SOLUTIONS

Feed safety management capacity building

Preservation of animal health to reduce need for antibiotics

Accommodate animal welfare demands

Facilitate responsible sourcing

Increasing nutrient efficiency

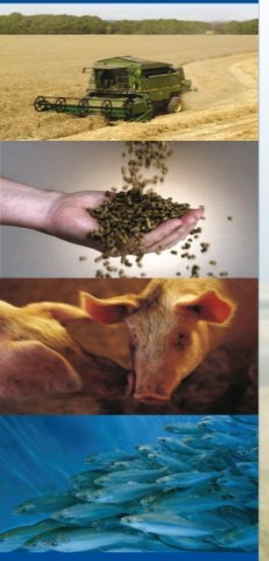
Risk management optimisation along the feed chain

Develop new resource efficiency indicators

Improve the quality & nutritional value of food products

Co-operation between control authorities & industry operators

Measure the environmental performance of feed production



AAC Aquaculture Advisory Council

- Multi stakeholder council 60/40% industry/other (NGO)
- Support the development of sustainable aquaculture in EU
- Advice and give recommendation to EU on requested topic
- 3 working groups
  - WG 1 Fish
  - WG 2 Shellfish
  - WG 3 General / Horizontal

Main raw materials used in fish feed production

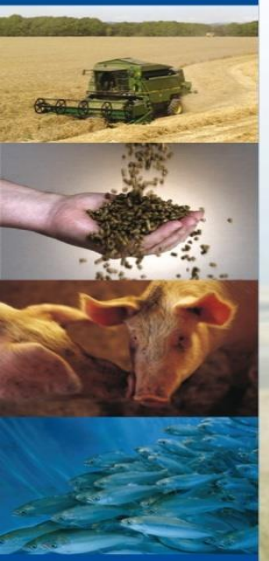
Vegetable raw materials

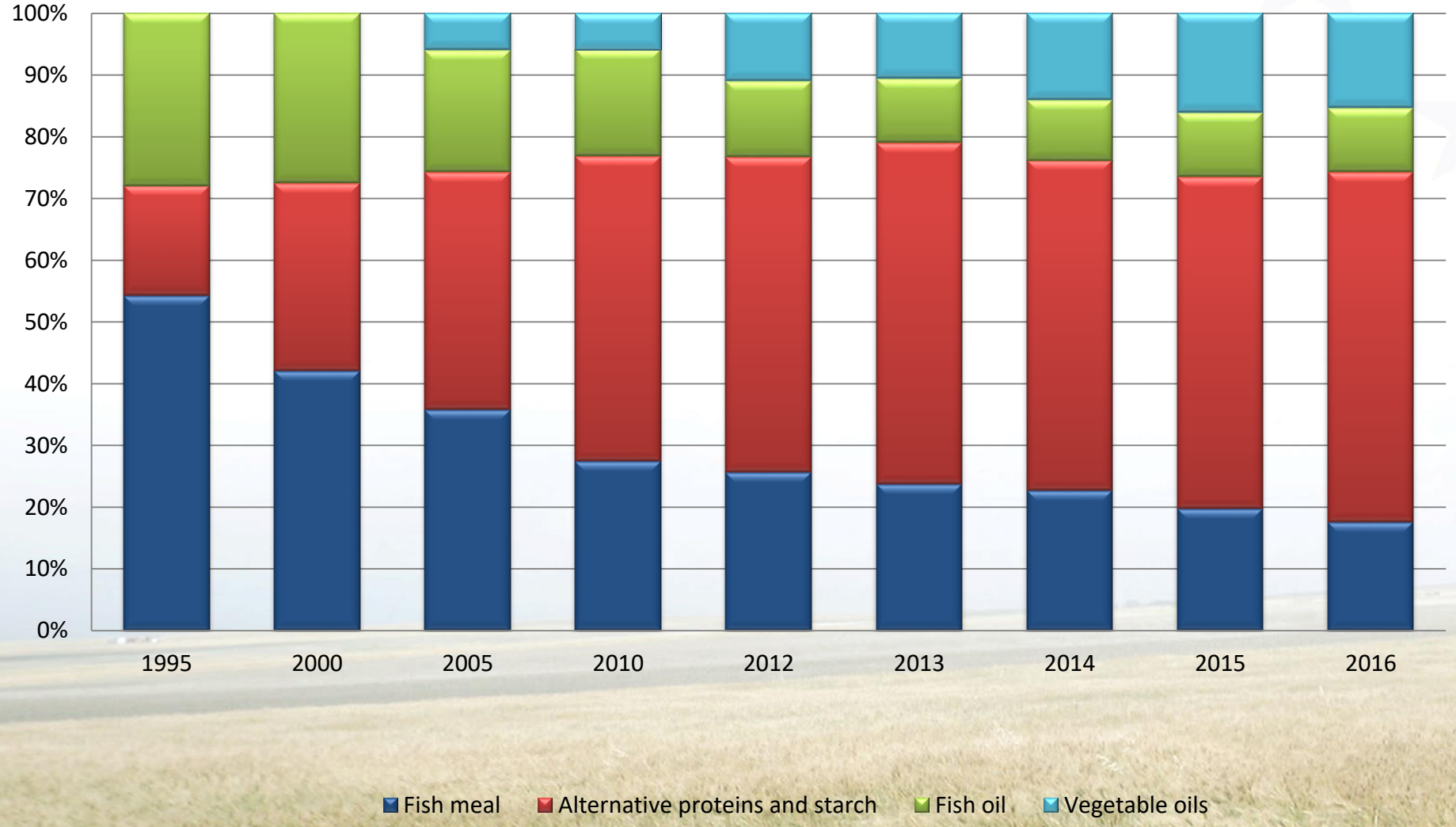
Marine raw materials

Land animal bi-products

Additives

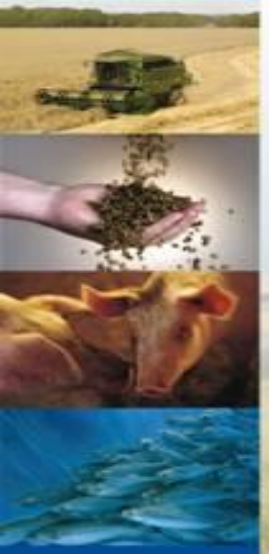
Major changes in raw material usage



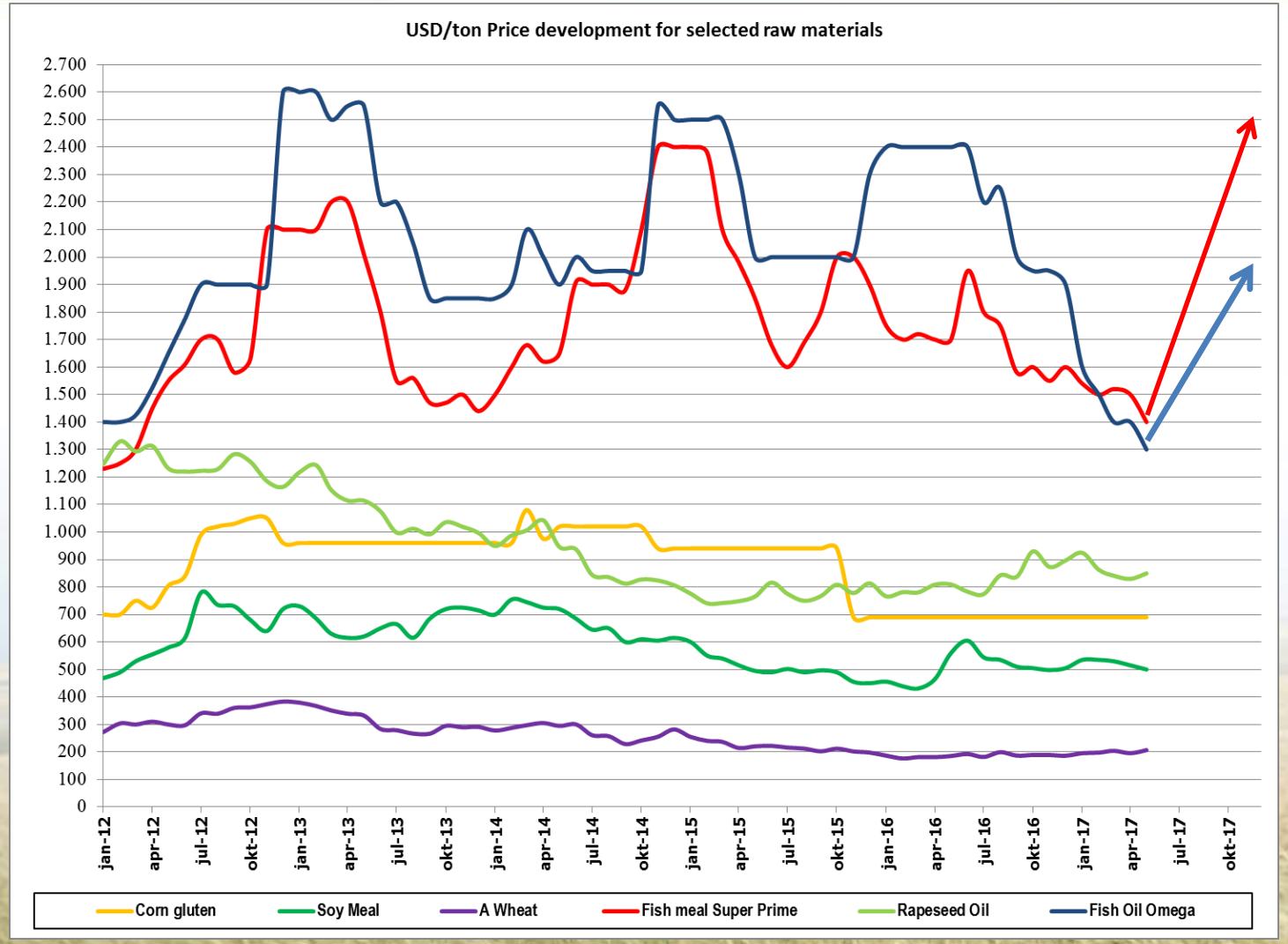


Why did we change composition

- Price, competition, volatility
- Availability
- Sustainability
- Certification (ASC)
- Knowledge created via R&D.
  - That’s the real competition
- Cannot be dependent on a limited resource with huge variability in price and availability.



Raw materials used in fish feed are commodities with high price volatility

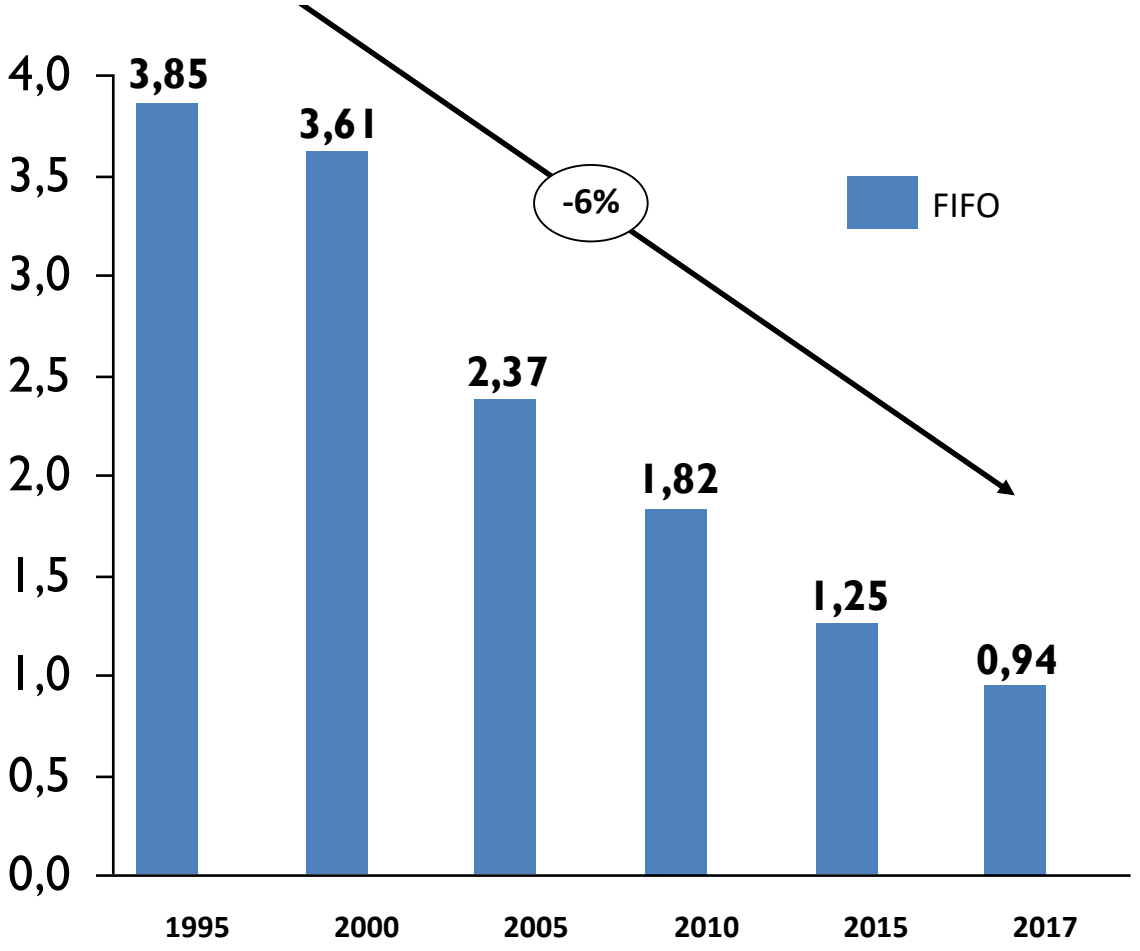


Source: Holtermann index

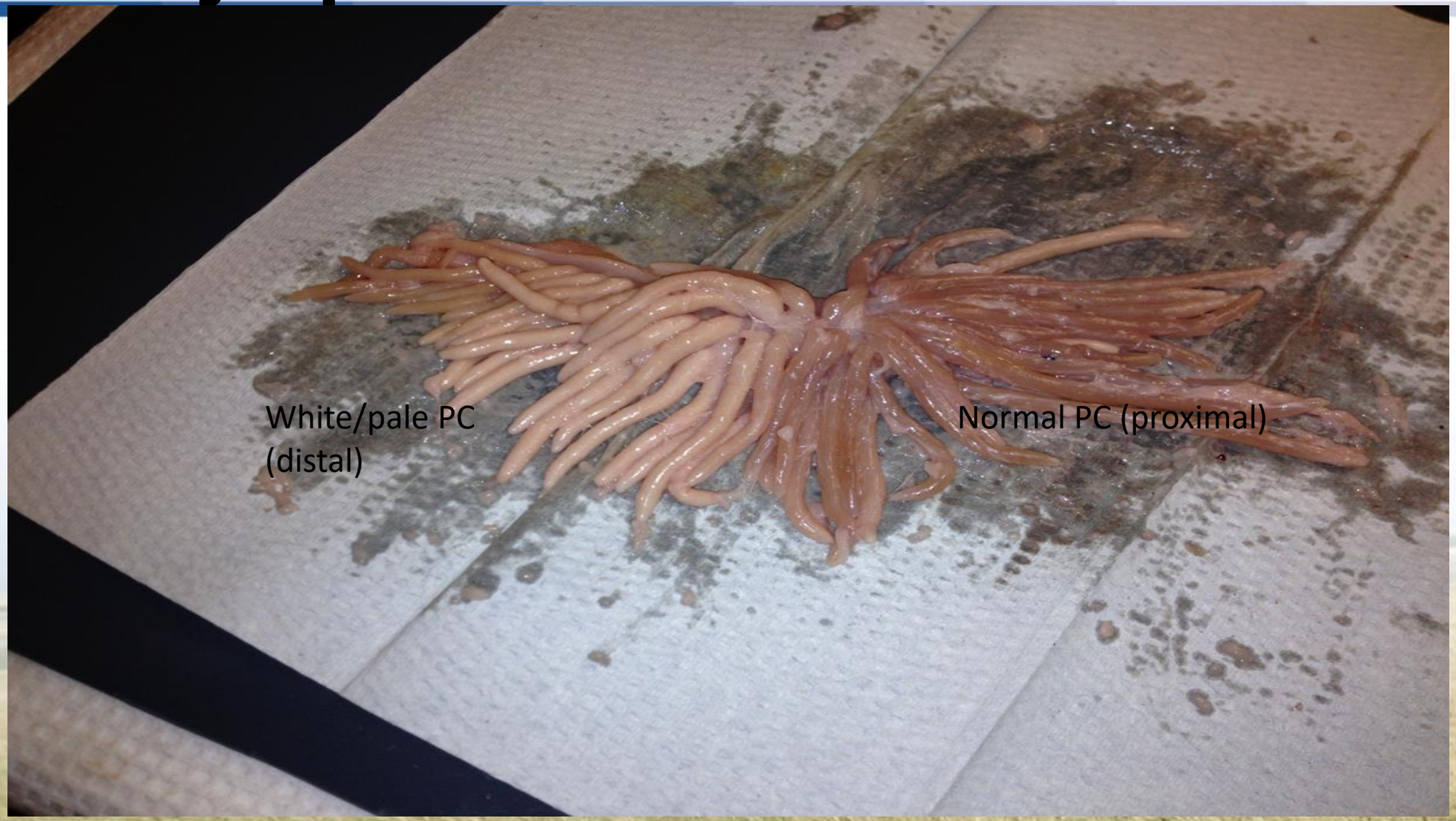
Fish In – Fish Out Ratio (FIFO) – Net producer of fish in 2017

IFFO view on calculation

FIFO ratio = (Level of fishmeal in diet + Level of fish oil in the diet) x FCR
Yield of fishmeal from wild fish + Yield of fish oil from wild fish



Effect of Vegetable protein is not always positive



Effect fishmeal on enterocyte histology

Normal (high fishmeal)

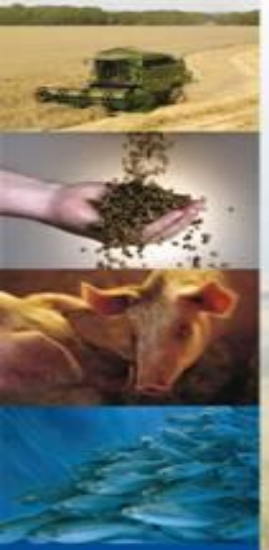
Enterocyte without vacuoles
(100X)

Abormal (low fishmeal)
No low fishmeal additive

Highly vacuolated enterocytes
(100X)

If we did not do anything THE ALTERNATIVE

- Historical 40% fishmeal og 30 % oil in the diets
- Today's recipes would be 700 €/ton higher in price or 50 % higher
- Assumptions 5 mill ton salmonid / seabass/bream feed.
- FISH MEAL
- 15 % incl => 750.000 ton
- 40 % incl => 2.000.000 ton 1,250.000 ton dif
-
- FISH OIL
- 10 % oil => 400.000 ton
- 30 % oil=> 1.500.000 ton World volume MAX. 800.000 ton .
- Salmon could max get 500.000 ton => 1,6 mill to feed with 30 % fish oil.
- Fish meal
- 15 % incl 255.000 ton
- 40 % incl 680.000 ton
- If we should use only fish oil i our diets we would only be buying 255.000 ton fishmeal



Trends in fish feed

- No Growth in volume in several years.
- Norway is not growing as much a usual
- **The rest of the world is NOT increasing either**.

  Disease, Environment, access to sites, Legislation

- **Focus on marine resources**
- **Fishery management IFFO RS /MSC**
-
- **Access to fish oil EPA/DHA new sources coming**

- **New Raw materials**
  - Insect meal ??
  - Single cell protein Calysta
  - Special raw materials designed for the Aqua industry
    - **Fermentation**

- **Higher degree of differentiation**
- w3 – EPA/DHA
- Origen of sources
- Verlasso AquaChile,

  DSM /Evonik

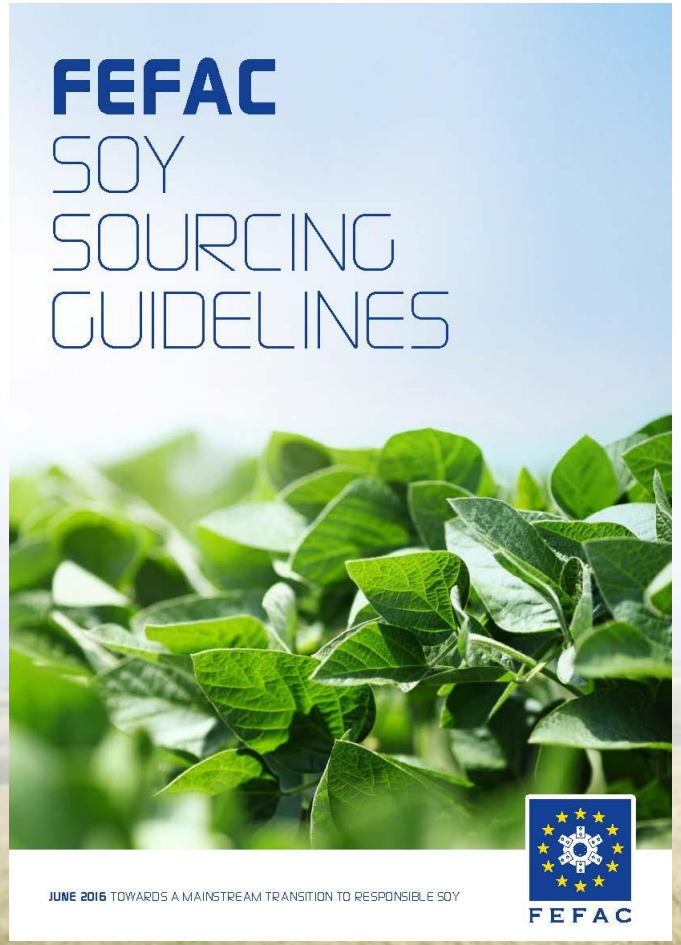
-

  No etoxyquin.
- Level of Dioxins etc based on legal limits
- Bespoke products with higher margins which substitute growth

  Certification BAP, ASC, FOS Label R, private standards

Raw materiel Sustainability

Sustainability – Facilitating responsible sourcing



- Creating transparency in a market with a plethora of certification schemes through independent benchmarking
- Facilitating the creation of a mainstream market of responsible soy
- Proactively stimulating good farming practices in exporting countries

Establish a mainstream market transition of responsible soy

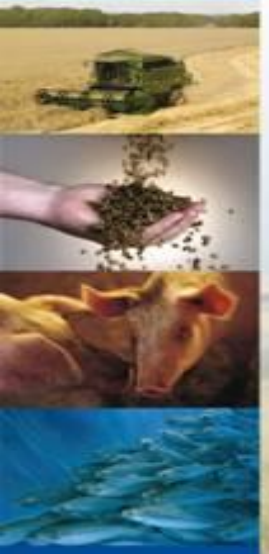
- Not a new standard!
- Benchmark for existing standards
- Need to show commitment to sustainability at soy farm level
- Need to build legitimacy for feed use of soy

FEFAC Soy Sourcing Guidelines

- **6 principles**
  - Legal compliance
  - Responsible working conditions
  - Environmental responsibility
  - Good agricultural practices
  - Respect for legal use of land / land rights
  - Protection of community relations

- **59 criteria**
  - 37 essential criteria: all should be met
  - 22 desired criteria: at least 5 should be met

- **Verification is essential**



Progress to date: 17 programmes meet FEFAC Soy Sourcing Guidelines

- 3 farmers programmes
- 5 company / trader
- 2 FEFAC member schemes
- 7 « other » programmes

FEFAC

"Without data, you're just another person with an opinion"
W. Edward Deming

Sustainability – Measuring environmental performance

- Environmental footprinting science still undergoing maturation process
- Time to establish reliable, globally harmonized methodologies and databanks
- FEFAC on the forefront with its involvement in the Feed PEFCR (Product Environm. Footprint Food category rules) and the GFLI Global Feed LCA Institute)

EUROPE 2020 Strategy
Delivering more sustainable consumption and production

- By 2020, produce the right incentives for citizens to choose the most resource efficient products and services, through appropriate price signals and clear environmental information
  - Product Environmental Footprint (PEF) published in April 2013 (Single Market for green products)
- Ensure more environmental friendly products on the EU market
- Promote sustainable consumption

Building the Single Market for Green Products

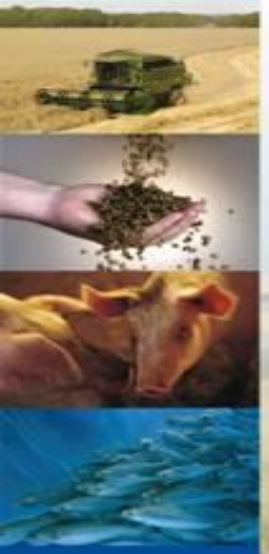
- General objective
  - improve the availability of reliable information on the environmental performance of products and organisations
- Specific objective
  - promote the use of a common methodology to assess and communicate the environmental performance of products and organisations
- Operational objectives
  - Launch 2 methodologies, simple but also robust, one for products (PEF), one for organisations (OEF)
  - Encourage the take-up of the methodologies in Member States and by private sector
  - Develop Product Category Rules through an open, transparent, multi-stakeholder process

FEFAC's response to policy drivers

- Harmonization of environmental footprinting methodology to strengthen credibility and establish a level playing filed.
- Development of LCA database to enable transparent monitoring and demonstrate continuous improvement.
- Service provider to livestock industry

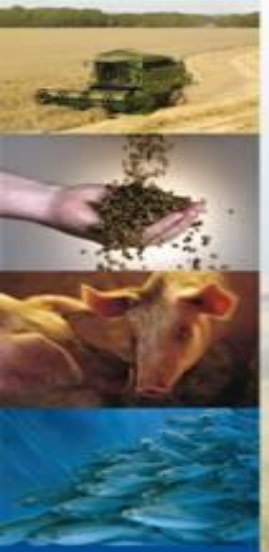
Harmonization of environmental footprinting: FEFAC activities

- International level (FAO) :
  - first feed-specific LCA guidelines which reflect a consensus among partners in the multi-stakeholder process, including the FAO, national governments, private sector organisations as well as NGOs
- At EU level:
  - Food SCP Round Table (ENVIFOOD Protocol): Scientifically reliable and uniform methodology for food and drinks
  - Feed PEF pilot: feed-specific rules aligned with EC methodology



The Feed PEF pilot

- Set the ground for harmonized communication of environmental performance of feed and feed products, in line with the technical requirements of the European Commission
- Avoid distortion of competition, by setting pre-competitive and harmonized methodological rules
- Build on the value already created with the current projects
- Breaking down internationally accepted methodologies to the European level
- Coordinated input for livestock projects



Conclusion

- FEFAC is a way to influence EU policy

  AAC participation
- Reduced dependency of marine raw materials
- Documented Sustainability of feed (raw material) and farming is part of our future.
- Tools are available for documented sustainable fish feed and more will come

FEFAC

Thanks for you attention

Niels Alsted

Fefac