

Market data on Industrial Hemp – fibres, shives and seeds

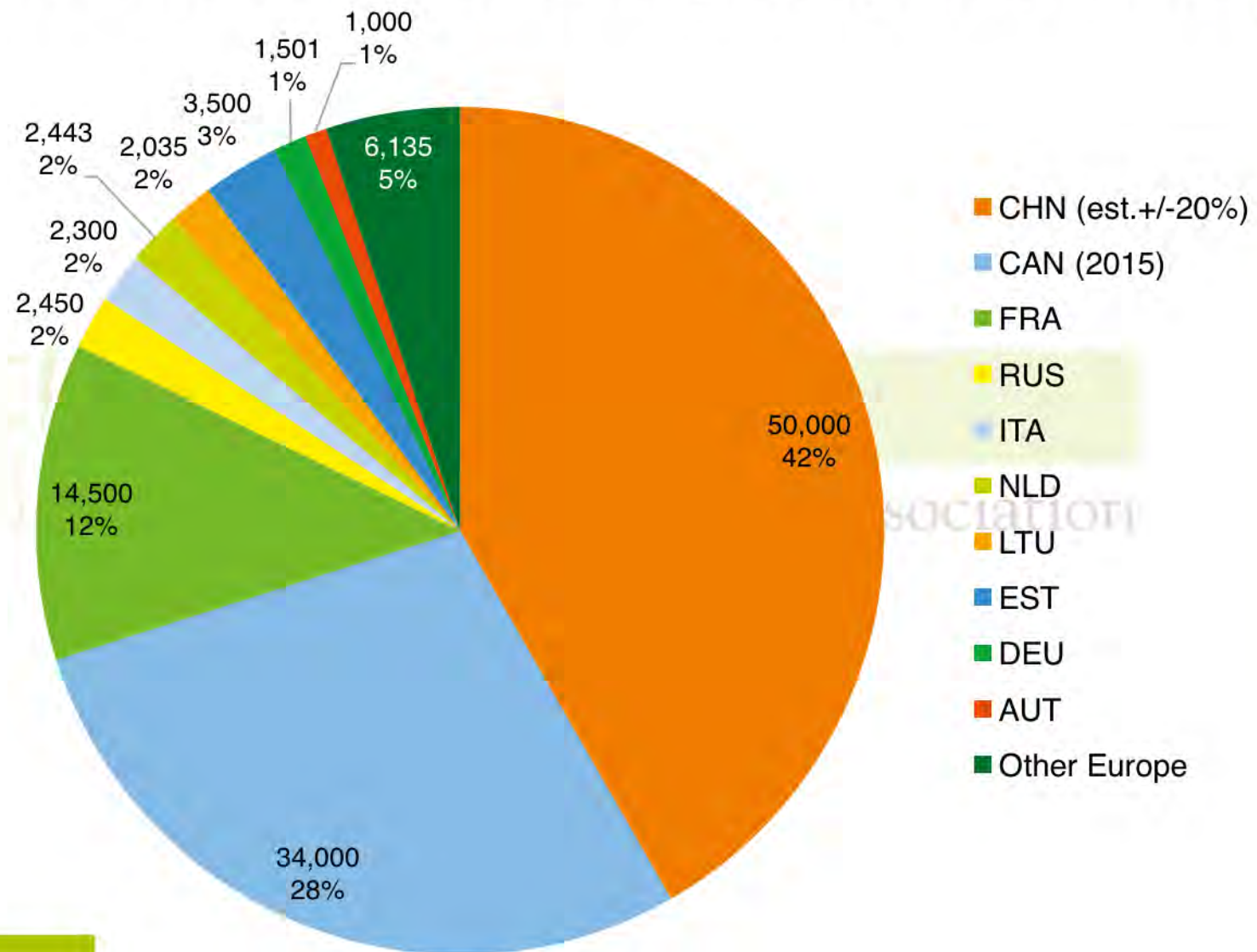
14th EIHA conference

Mark Reinders
President

European Industrial Hemp Association (EIHA)



Global harvested area industrial hemp 2016 (Total 120,000 ha)



Present hemp industry

Total Hemp cultivation area
in the EU more than **33.000 ha**
in **2016**.

The European Industrial
Hemp Association (EIHA)
has **23** regular members
(hemp processors) and
119 associate members
from **36** countries (2017).

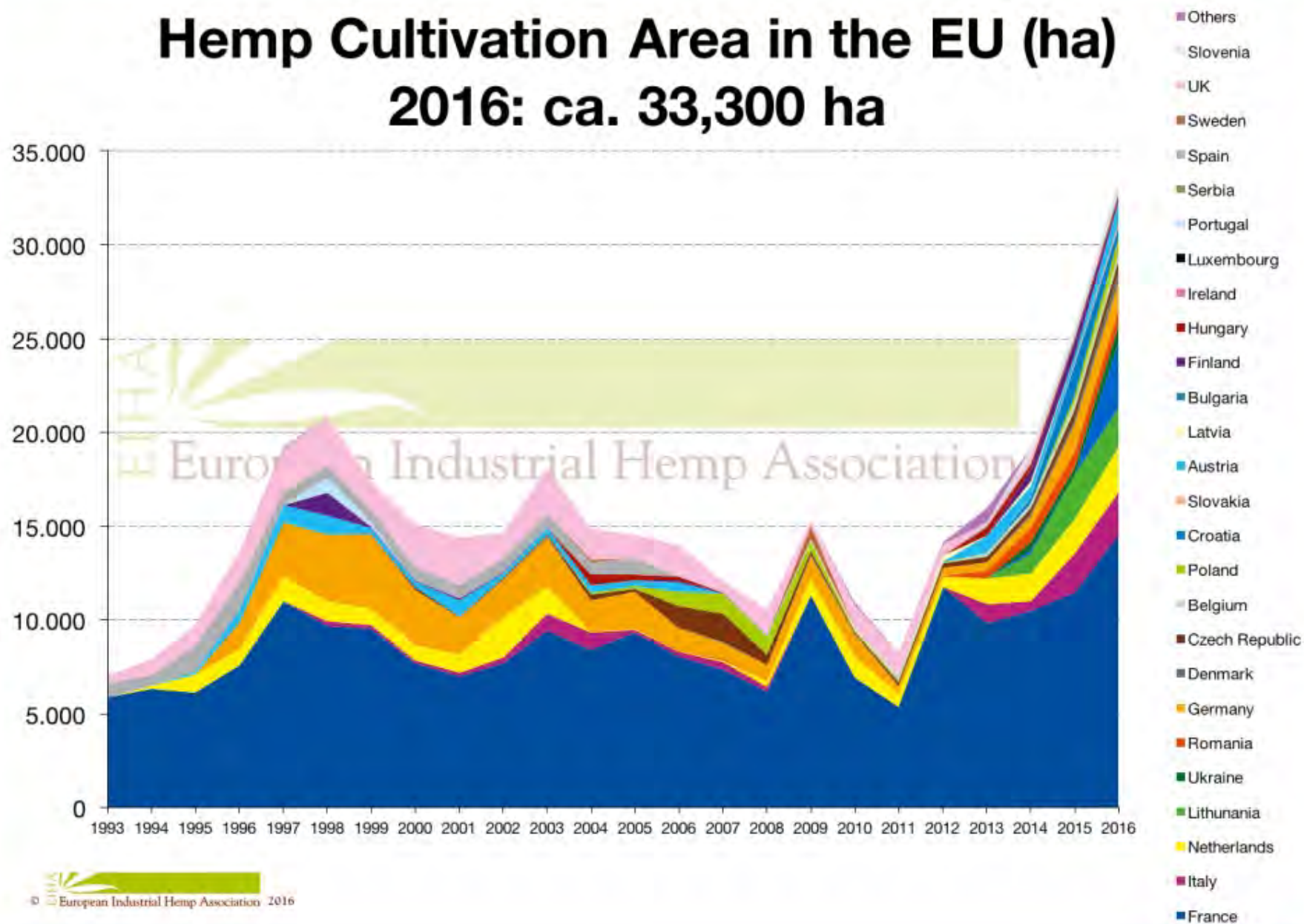


EIHA regular members



Hemp Cultivation Area in the EU (ha)

2016: ca. 33,300 ha





Decortication and fibre separation: From straw to dust, fibre and shives – a zero waste process

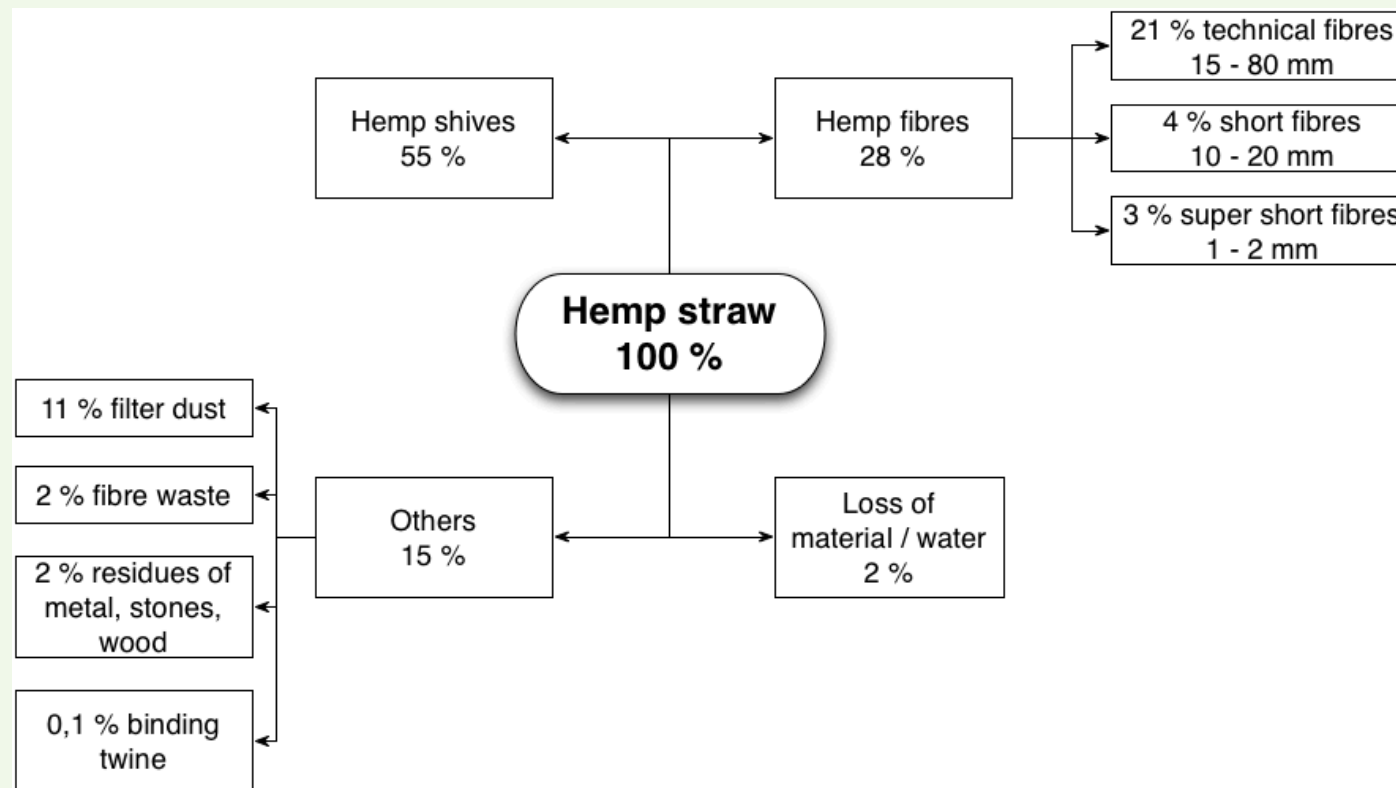


Hemp Processing HempFlax (Alba, Romania 2016)



Hemp processing plant, HempFlax 2016

Decortication and fibre separation: From straw to dust, fibre and shives – a zero waste process



Production, applications and markets for hemp fibres





**The European Hemp Industry:
Cultivation, processing and applications for
fibres, shivs, seeds and flowers**

Authors:
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May 2016

Download full report at www.eiha.org

ISCC PLUS Certification for Hemp

**ISCC PLUS: “Sustainability certification
for Hemp Fibres and other raw materials”.**

Certification of

- **Hanf Farm (DE) and**
- **HempFlax (NL/RO)**
- **Status PlanetChanvre (FR): Ongoing**



ISCC PLUS Certificate

Certificate Number: ISCC-PLUS-Cert-DE110-75160108

DEKRA Certification GmbH
Handwerkstraße 15 *, D-70565 Stuttgart, Germany

certifies that

HempFlax Exploitatie
Hendrik Westerstraat 20, NL-9665 AL Oude Pekela, Netherlands

complies with the requirements of the certification system
ISCC PLUS
(International Sustainability and Carbon Certification)

This certificate is valid from 05.06.2016 to 04.06.2017

The certified site of the system user is a (type of operation):

First Gathering Point
Trade with (individual) warehouse
Individual Warehouse
Crushing Plant

The scope of the certificate includes the following chain of custody options:

Mass Balance

Stuttgart, 05.06.2016
Place and date of issue


Stamp, Signature of issuing party

The issuing Certification Body is responsible for the accuracy of this document.
Version 2 / Date: 09.06.2016



Annex to the certificate:

ISCC PLUS compliant materials handled by the certified site
(only applicable for material handled under the scope as: farm/plantation, point of origin, central office, first gathering point, conversion unit but **not** for material that is only traded and/or stored)

This annex is only valid in connection with the certificate:

ISCC-PLUS-Cert-DE110-75160108

Input material	Output material	Voluntary Add-ons
Hemp Straw	Hemp Fibre	

ISCC PLUS Add-ons:

- 202-01: Environmental Management and Biodiversity
- 202-02: Classified chemicals
- 205-01: GHG emissions
- 205-02: Consumables
- 205-03: Non GMO for food and feed
- 205-04: Non GMO for technical markets

Additional information on the add-ons is available on the ISCC website (www.iscc-system.org)

Natural fibre composites (1) – innovative technology for the automobile industry



BMW 5 Series



Fibre



Non-woven Fleece



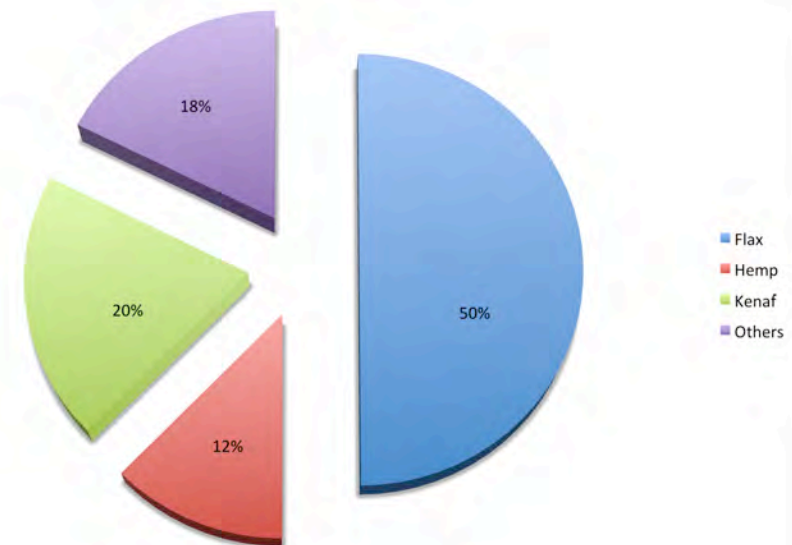
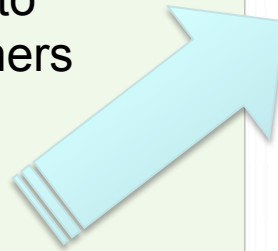
Naked Door



Finished Door

European Automotive Industry 2012: 30,000 t Natural Fibres in 60,000 t Biocomposites

From 2005 (Germany) to 2012 (Europe) the winners were: Kenaf & Hemp!

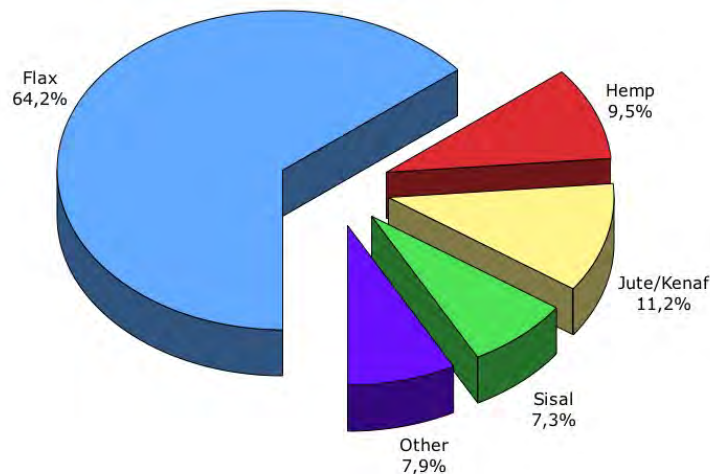


Europe 2012: 30,000 t Natural Fibres



Use of Natural Fibres for Composites in the German Automotive Industry 2005

Total: 19.000 t



Natural fibre composites (2) – wide range of application possibilities



Scale



Urn from Hemp Fibre and PLA



Toy Cars
made by Injection Moulding

Natural fibre composites (3) – wide range of application possibilities



Cases

natural fibre and polypropylene, compress
moulding (Hempro International, Winter &
Linotech)



Urn

hemp fibre and bioplastics, compress
moulding or injection moulding

Problem: Feeding natural fibres

In a project with BaFa, nova and others “soft pellets” were developed - easy to feed in compounder and now commercially available.



Natural fibre composites (4) – Ironing board (Domena, France)



BioCharger
 (GreenGran, NL & China)
 JuteFibre Injection Moulding



Ironing board
 (Domena, France)
 Hemp Fibre Injection
 Moulding



Biocomposite of the year 2015 - ONORA bio-based polymers with hemp



Insulation – CO₂ emission and cost reducing application for construction



Application



Pulp and paper – special utilization of hemp



Pulp



www.citudi.com

Agrotextiles: weed suppression easy to handle base for garden and agricultural use



Tree planting

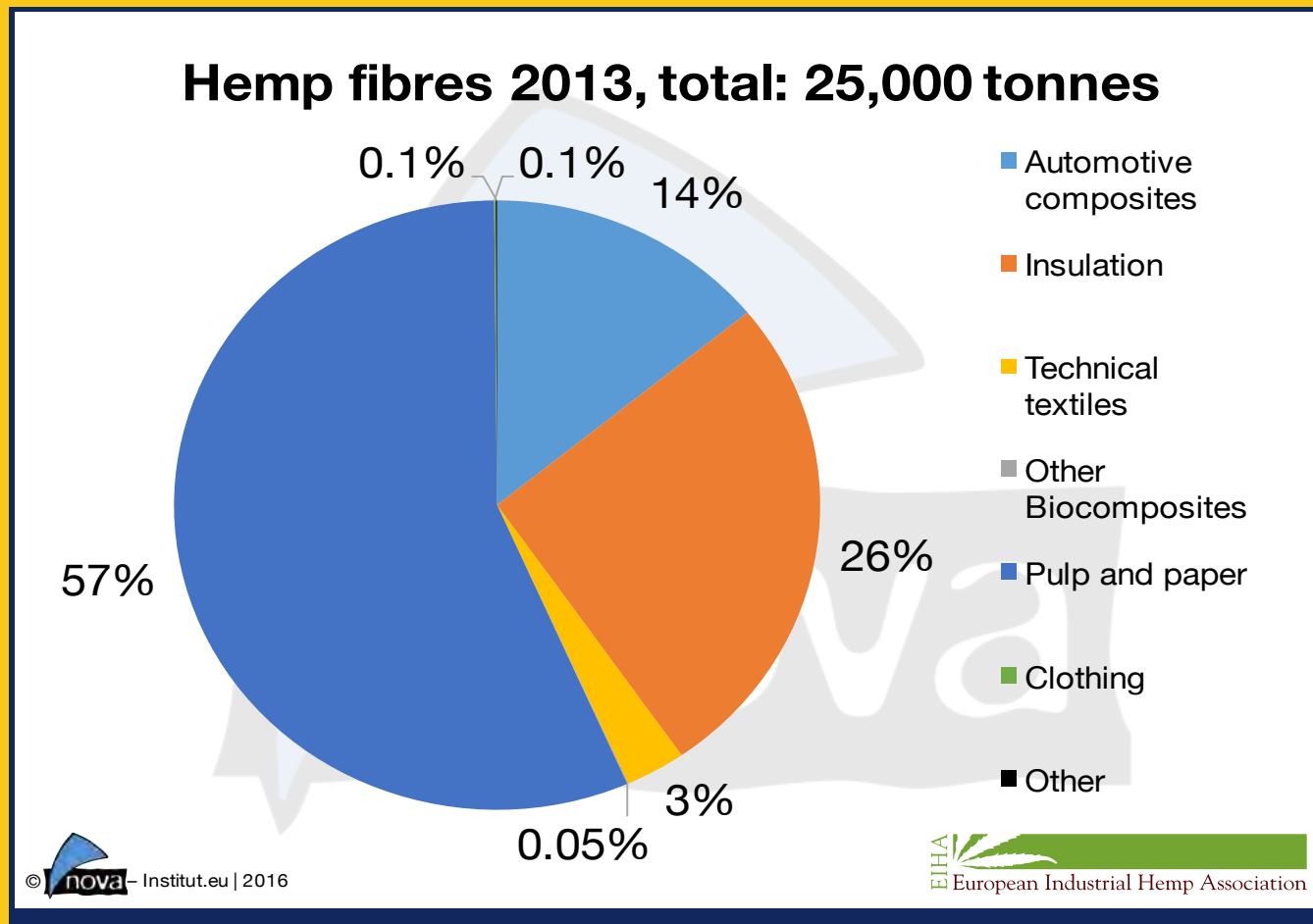
Agrotextiles: Organic growth medium

Cress – an environment friendly, annual renewable base layer for the plant industry replacing peat

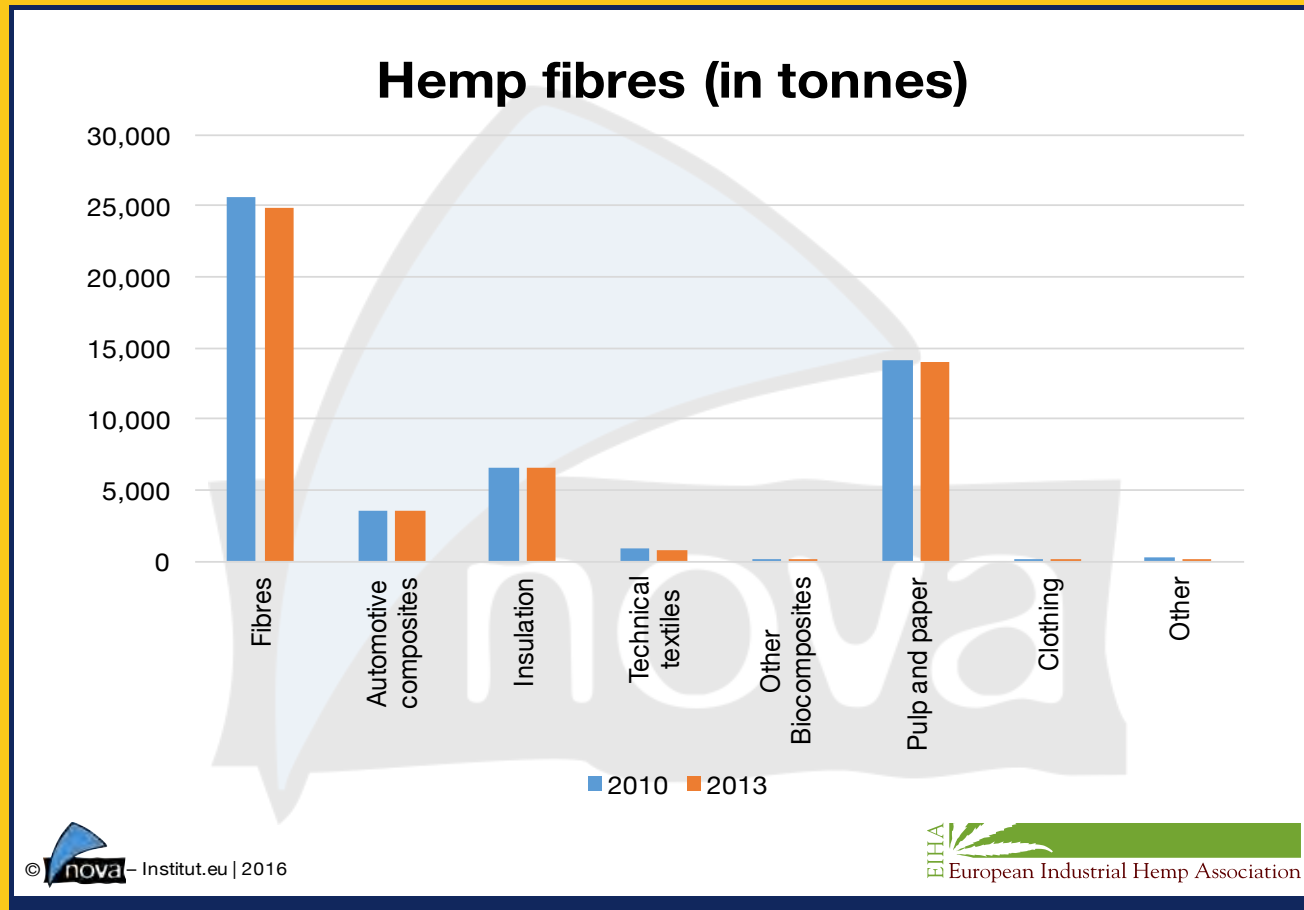


Cress production

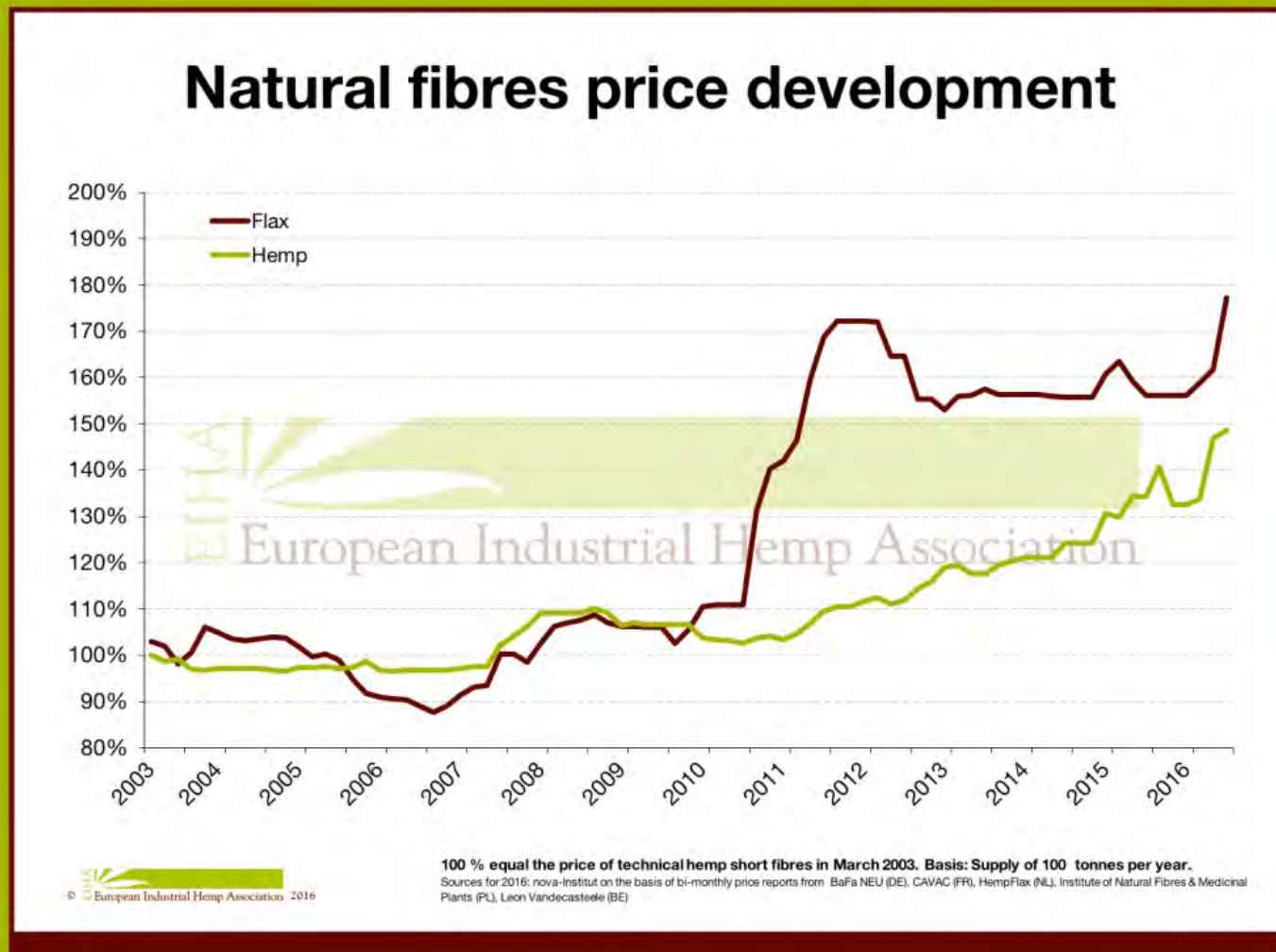
Results of the 2015 EIHA survey: Hemp Fibres



Results of the 2015 EIHA survey: Hemp Fibres



Price index: Hemp and flax technical short fibres



Production, applications and markets for hemp shives



Animal bedding – implementation for the comfort of your animal



Horse stable ground



Chicken farming

Garden – decorative alternative to barkmulch

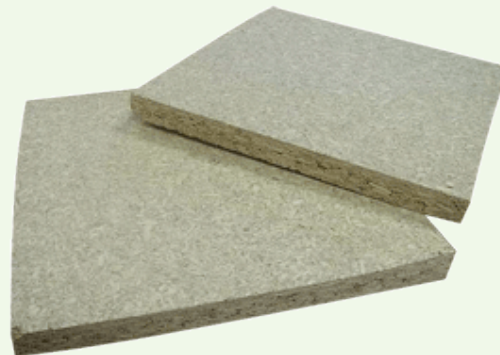


Particle boards – alternative to wood-based particle boards with half the weight



KOSCHE (Germany)
stopped (all particle board)
production in 2009;

AGROSYS (Germany) is still
producing and also
Chinese Hemp particle
boards are available.



Construction – easy to handle construction material with great qualities



Spraying



Finished Wall

Construction – easy to handle construction material with great qualities



Examples show offices and private houses in UK – many hundreds of houses are built in UK and France in recent years.



Construction – applicable for large constructions as well



Beer Distribution Centre

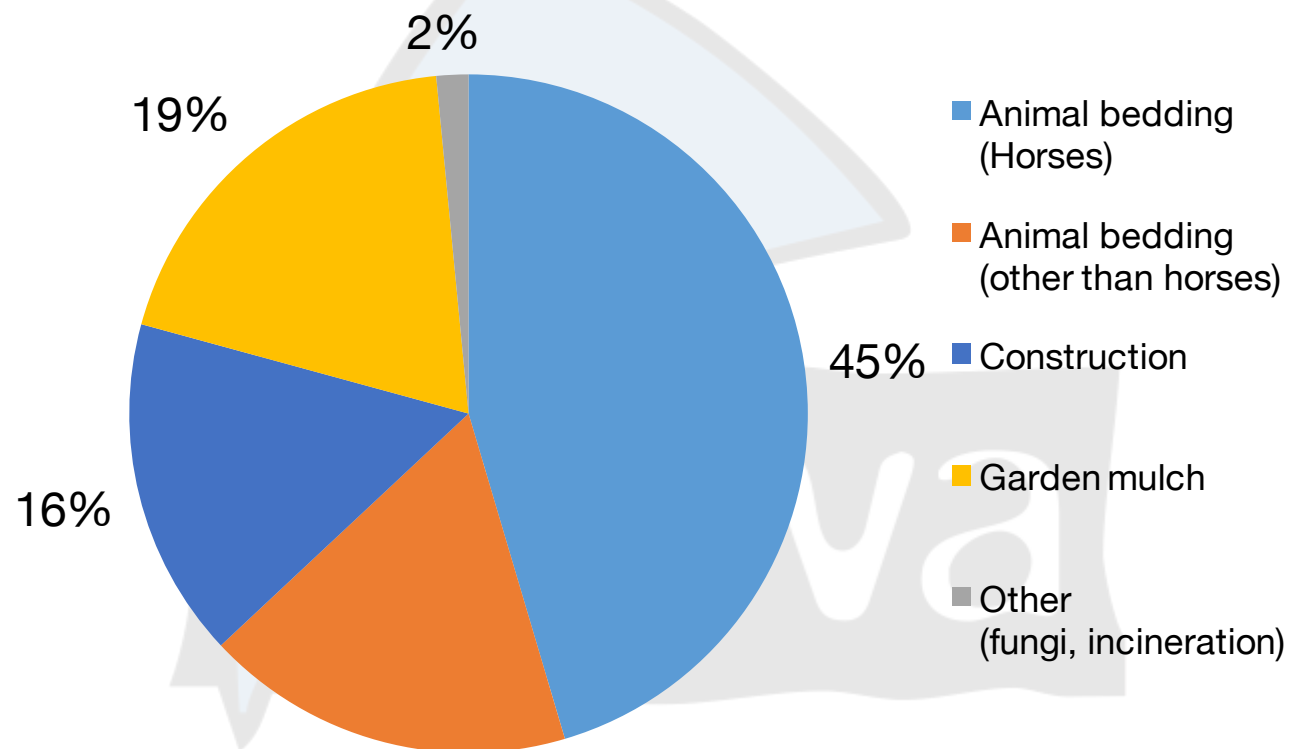


Hemclad® – Mark & Spencers Cheshire (2012)

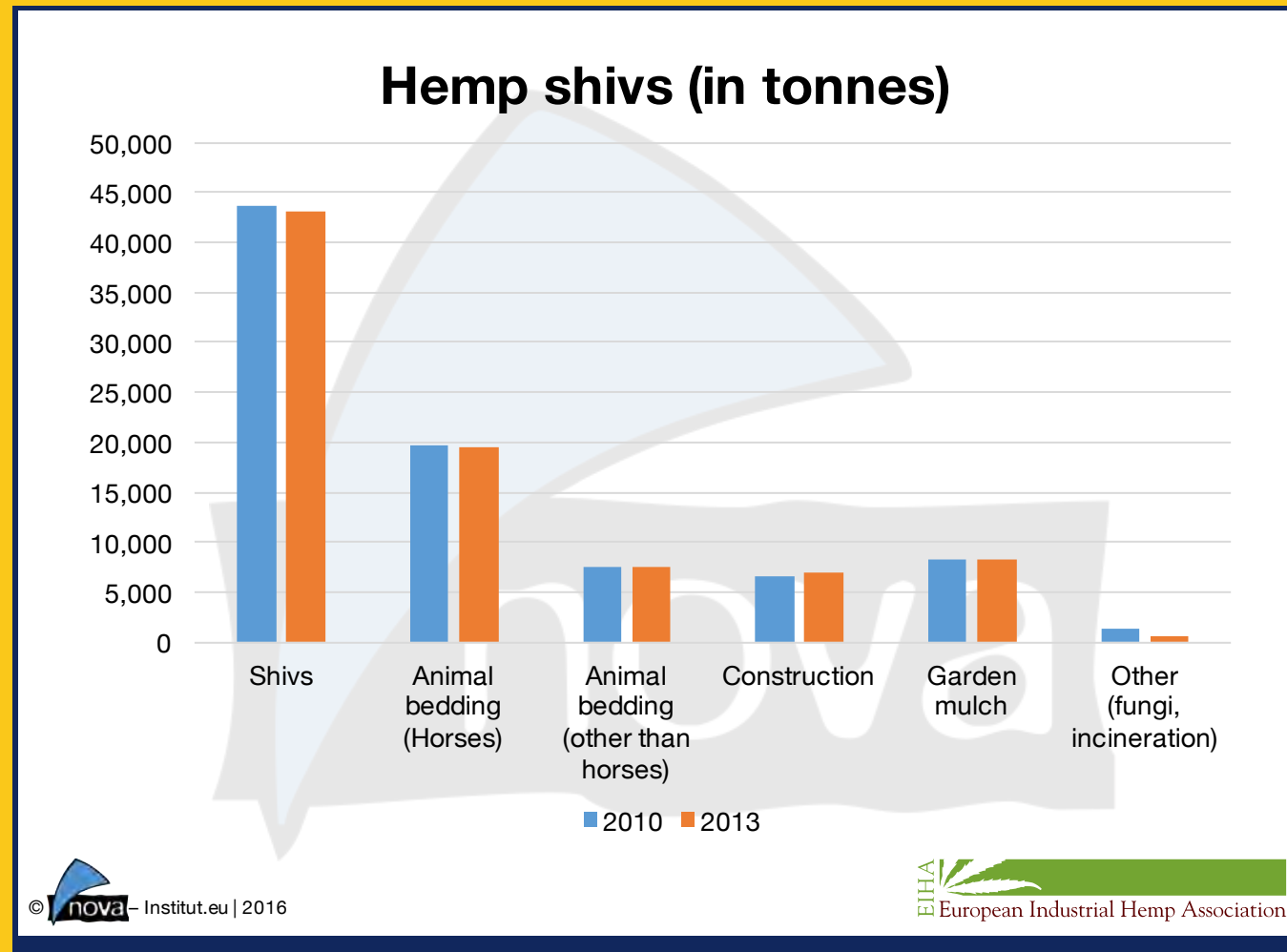


Results of the 2015 EIHA survey: Hemp Shivs

Hemp shivs 2013, total: 43,000 tonnes



Results of the 2015 EIHA survey: Hemp Shivs



Production, applications and markets for hemp seeds



EU 2011: Production of 11,500 t, consumption of 21,300 t hemp seeds – main applications



Hemp seeds – food applications



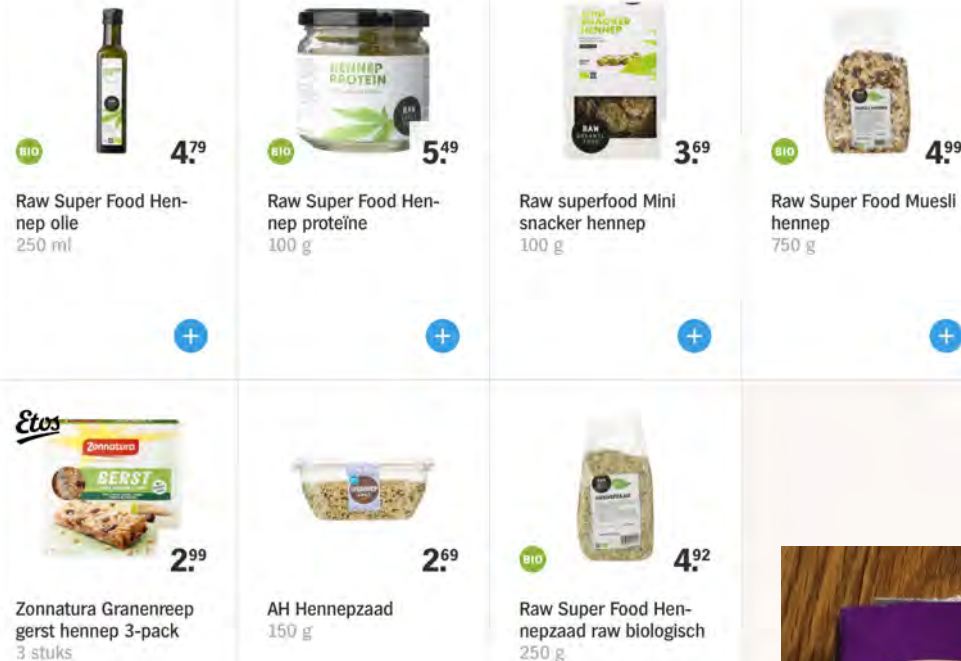
Hemp oil



Hemp nuts



Snacks



European Industrial Hemp Association



Big supermarkets and discounter selling hemp food products (2015):
Albert Heijn (The Netherlands), on top
and ALDI (Germany), right.



In Europe the demand for Hemp seed has been increasing over the years and is currently at about 18,000 metric tons in 2013. Estimates for 2015 see the market reach 21,000 metric tons (EIHA 2015). This is covered ca. 50% by domestic production and ca. 50% by imports from China. From all seed used for food production ca. 50% are organic certified and sold in the "bio-food" market (EIHA 2015).

mt hemp seeds p.a.	2008	2009	2010	2011	2012	2013	2014	est. 2015
EU production	6.000	7.000	6.000	5.500	7.000	9.000	9.000	11.500
- France	n/a	6.500	4.500	4.000	5.000	7.000	6.000	7.000
- others	n/a	500	1.500	1.500	2.000	2.000	3.000	4.500
EU imports*	10.000	9.700	10.800	11.500	10.000	9.000	9.500	10.000
EU exports**	500	900	800	500	300	100	100	200
EU consumption	15.500	15.800	16.000	16.500	16.700	17.900	18.400	21.300
- Food	600	700	1.800	2.500	2.700	3.200	6.400	8.300
- Feed	14.900	15.100	14.200	14.000	14.000	14.700	12.000	13.000

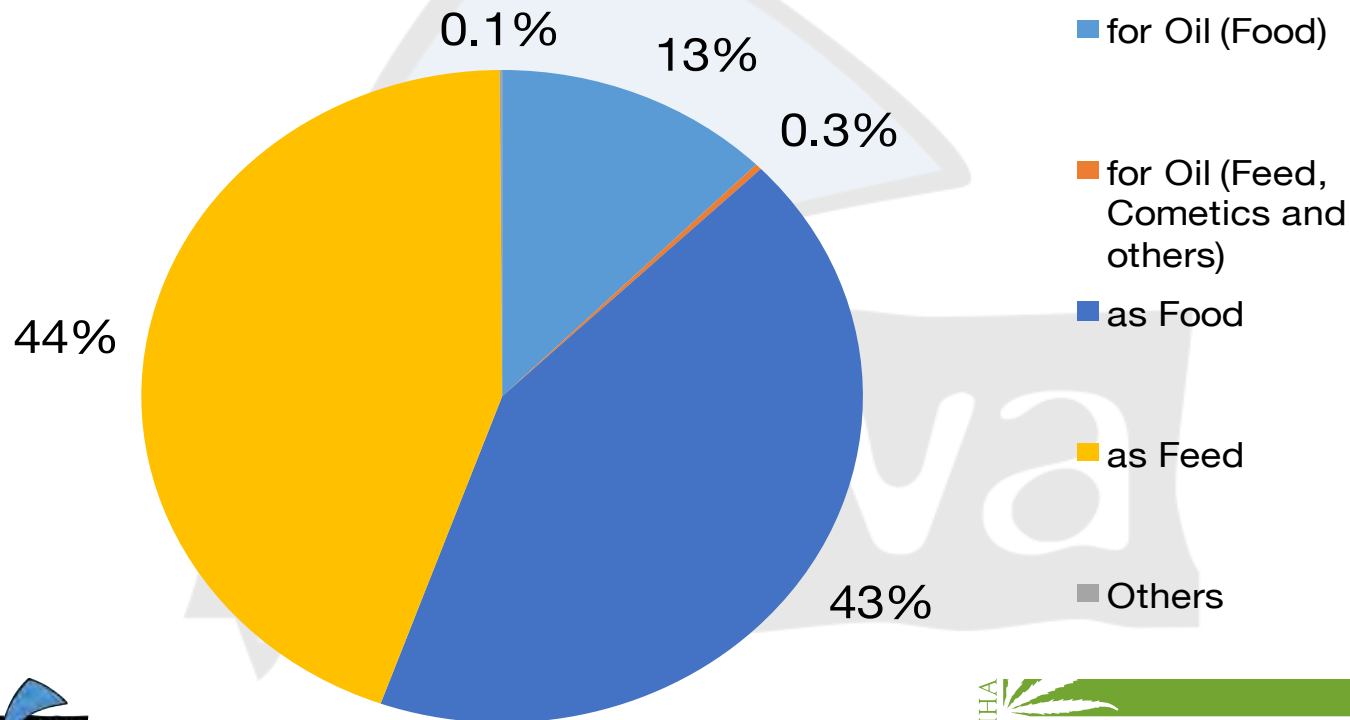
Development of European Hemp Seed Market 2008 – 2015

* Mainly from China, ** Exports of processed hemp seeds to North America

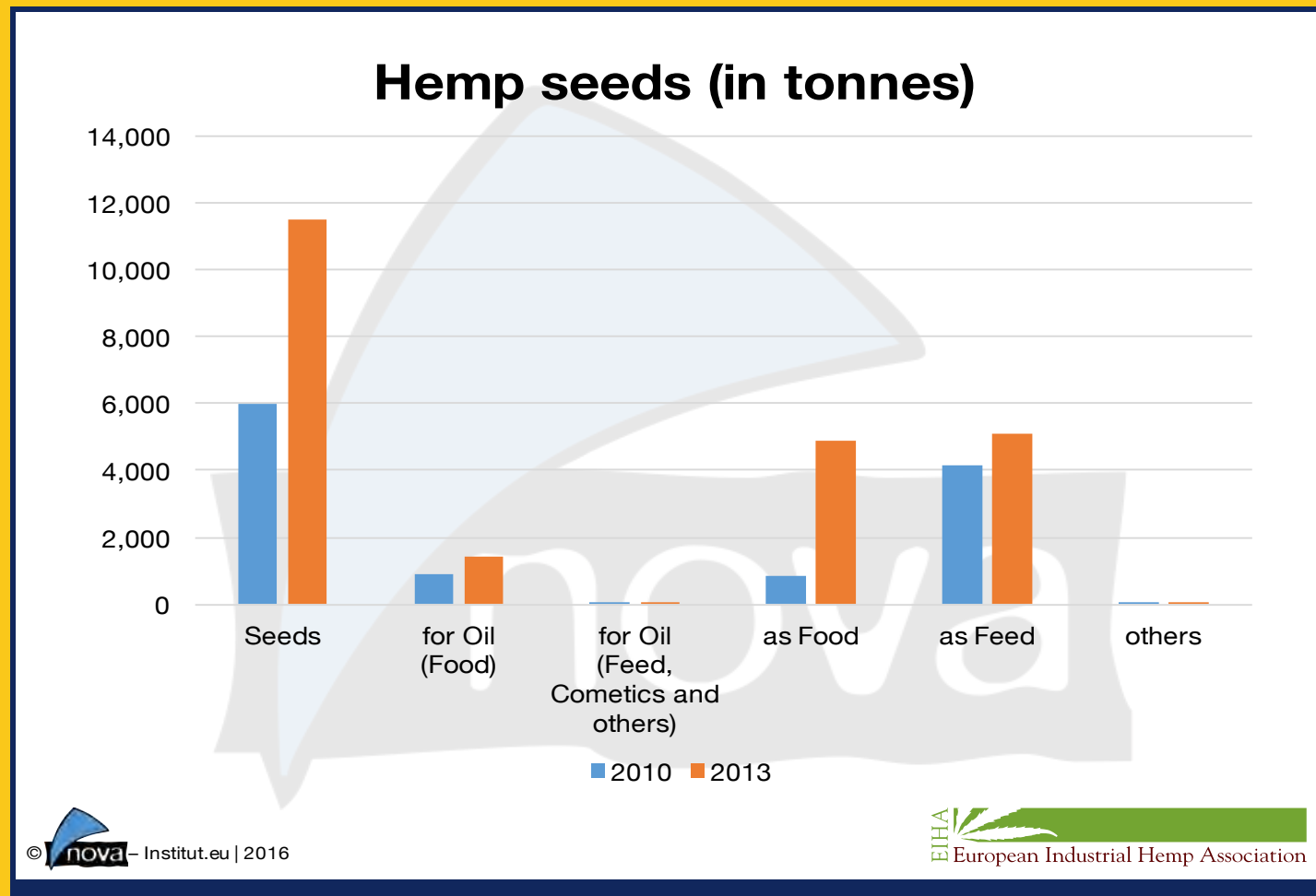
Sources: nova-Institut (2015) EIHA (2015), Eurostat (2015), Hempro Int. (2015)

Results of the 2015 EIHA survey: Hemp Seeds

Hemp seeds 2013, total: 11,500 tonnes



Results of the 2015 EIHA survey: Hemp Seeds



Production, applications and markets for hemp cannabinoids



Results of the 2015 EIHA survey: Cannabinoids

Very recently CBD has increasingly gained prominence in the **pharmaceutical** and **food supplement** industries.

- In 2013, 240 tonnes of flowers & leaves were used for:
 - medical applications (THC/CBD);
 - food supplements (CBD);
 - production of essential oil (for food and beverages).
- Compared to only 7.5 tonnes in 2010.

This means an increase of 3,000% from 2010. Further growth is expected in the next years.