

**5th International Conference of the
European Industrial Hemp Association (EIHA)**

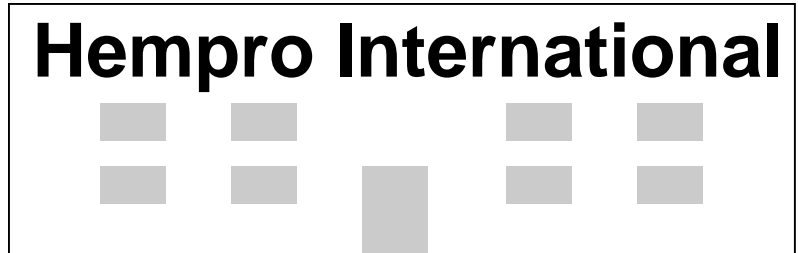
Update on the European hemp food market

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Main statement

The turnover with hemp foodstuff and corresponding raw material is rising. Hempseed, hulled hempnut, hempoil and hemp presscake are becoming more presentable – both in retail as well as the food industry.





Hanfhaus
Onlineshop



B2B
Wholesale



Raw material

- Textiles
- Accessoires
- Cosmetics
- Food

- Hempseed
- Hulled hempseed
- Hempoil
- Hemp presscake

Hemp as foodstuff



Hemp as foodstuff

Basic Products: Nuts, Oil



From a botanical perspective, the hemp seed is classified as a **nut** and is one of the **most valuable foodstuff of the world.**

- Hempnuts
 - whole nuts (left)
 - hulled nuts (right)



- Hempoil
(pressed from hempnuts)



Hempseed advantages



+ Rich in polyunsaturated fatty acids:

- Supplier of omega-3 fatty acids in form of alpha linolenic acid
- Supplier of omega-6 fatty acids in form of gamma linolenic acid
- ➔ Helpful with illnesses metabolic and cardiovascular ailments

+ Rich in protein:

- Includes eight essential amino acids
- Gluten-free
- ➔ Contributes to a healthy immune system and is easily digestible, even for consumers with digestion insufficiencies (Celiac disease)

+ Without allergens:

- Hempnuts contain no nut allergens
- ➔ also suitable for humans with nut allergy

+ GMO-free:

- Free of Genetically Modified Organisms
- ➔ Eco-friendly food source

Hemipoil – Comparison with other oils

Optimal Omega-6 to Omega-3 ratio

Oils with bad Omega-6 zu Omega-3 ratio

Oils with good Omega-6 zu Omega-3 ratio

All data in 100 g:	Omega 6	Omega 3	Omega 6 : Omega 3
Thistle oil	73,9	0,5	148:1
Grape seed oil	69,2	0,5	138:1
Sunflower oil	61,0	0,5	122:1
Margarine	41,1	0,5	82:1
Olive oil	8,6	0,8	11:1

Wheat germ oil	54,2	7,1	8:1
Soy oil	49,5	7,0	7:1
Walnut oil	57,3	10,1	6:1
Rape oil	20,4	9,3	2:1

Hemipoil	60,3	20,2	3:1
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Linseed oil	15,1	61,5	1:4
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Hemipoil has coeval a good Omega-6 to Omega-3 ratio and a high Omega-3-content

Hemipoil versus linseed oil

- Omega-6 to Omega-3 ratio (3:1) from hemipoil is equivalent to the natural ratio in humans body.
- Hemipoil contains alpha linolenic acid (like linseed oil) but also the rare gamma linolenic acid.

Hemp as foodstuff

Variety of products

- **Hempseeds**
- **Hulled hempseeds → hempnuts**
 - Hempseed bars → bakery products
 - cereals, etc.



- **Hempoil → capsules**
- **Hemp presscake → protein powder**
- **Hemp tea**



Examples hemp foodstuff



The hemp market

Production of hemp



Comparison of market volume for hemp (1):



Status Germany:

- Problem: no actual statistics for hempseed used as raw material
Estimated around 5% of hempseed production for food production,
95 % for animal feedstuff
- No specific information available about hempseed production
Presumably many hundred tons of hempseed annually
= many thousand tons of various end products
- 2005: the surface area of hemp cultivation in
Germany accounted to approx. 2000 hectares (incl. fibres)
- 2006: it comes to a decrease to 1200 ha
- 2007: small upward trend again

Comparison of market volume for hemp (2):

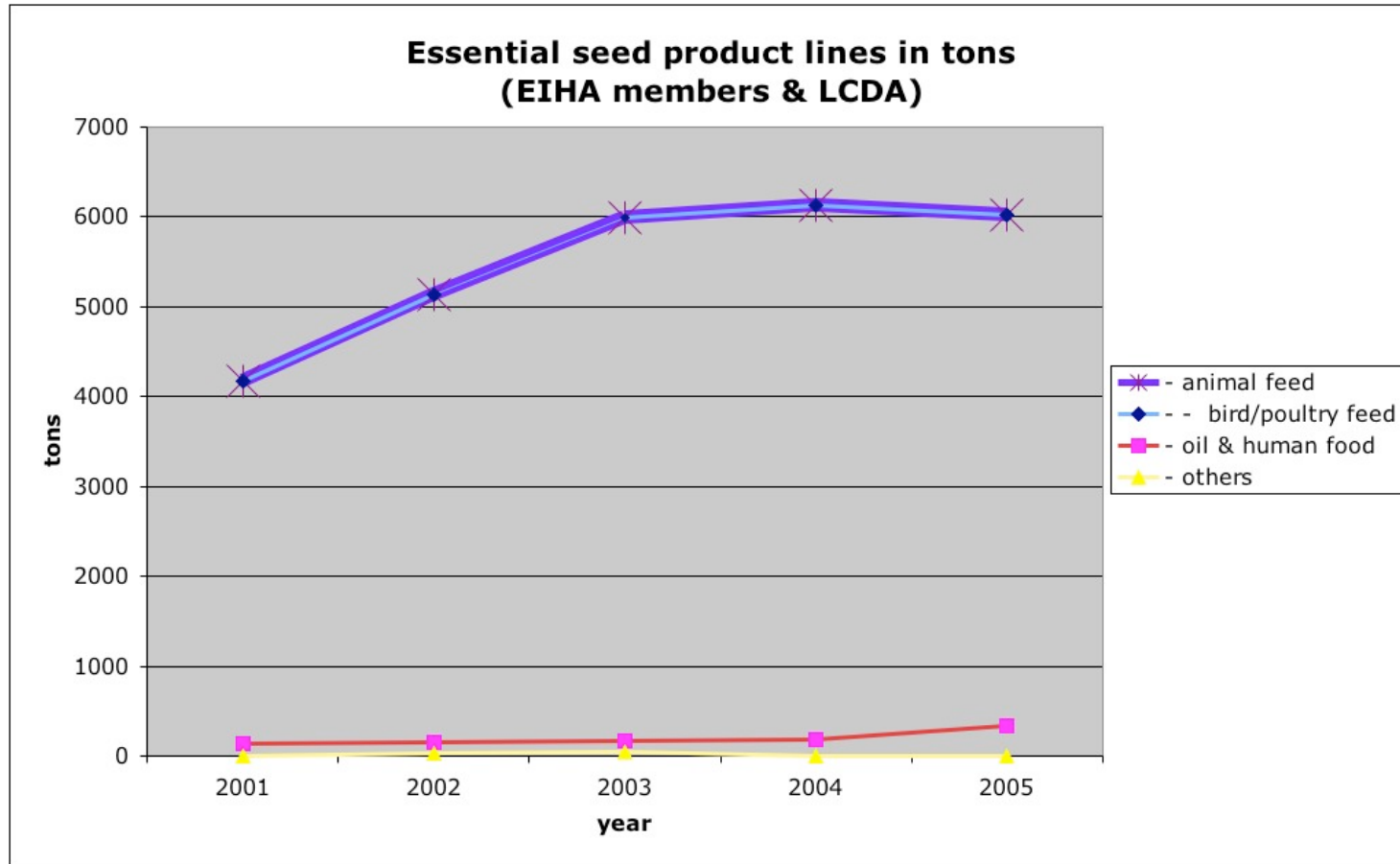


Status EU:

- 2000 - 2006 hemp cultivation area around 14000 - 20000 ha (due to stable fibre production)
- 2004 seed production approx. 6500 t; since then no significant increase
- Derived from the 6500 t = 6000 t for animal feed (bird-, fish-) and up to 500 t for foodstuff (oil) and in small amounts for cosmetics
- In spite of new studies of the hemp fibre in the EU (e.g. from nova-Institut) reliable data for seed production and hemp food consumption is still rare.

Source: Estimates nova-Institut (2006), BMELV (2004-2006), FNR e.V. (2006)

Acreage for hemp in EU:



Annotation: others = e.g. cosmetics

Source: EIHA (2006)

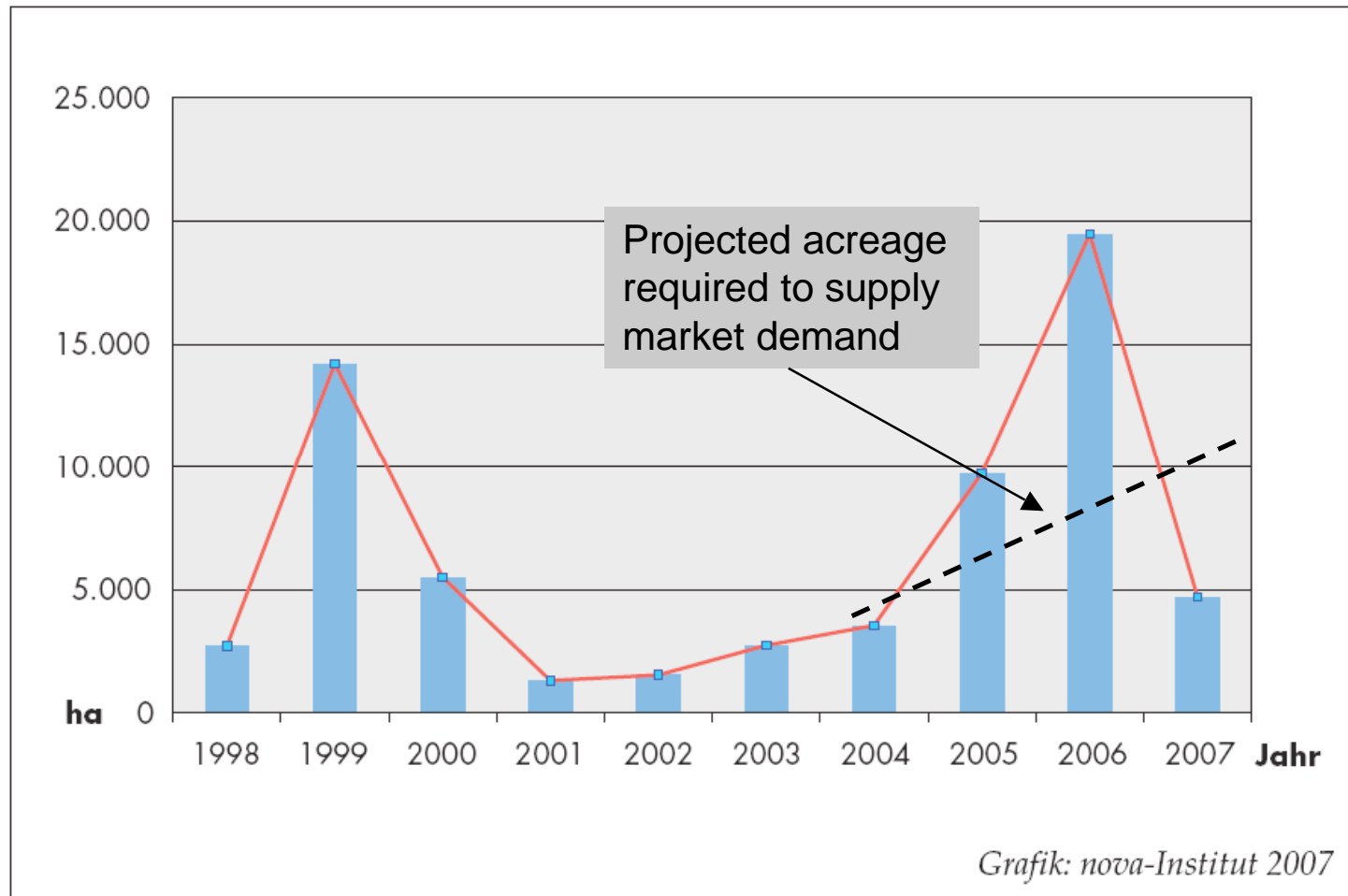
Comparison of market volume for hemp (3):



Status Canada:

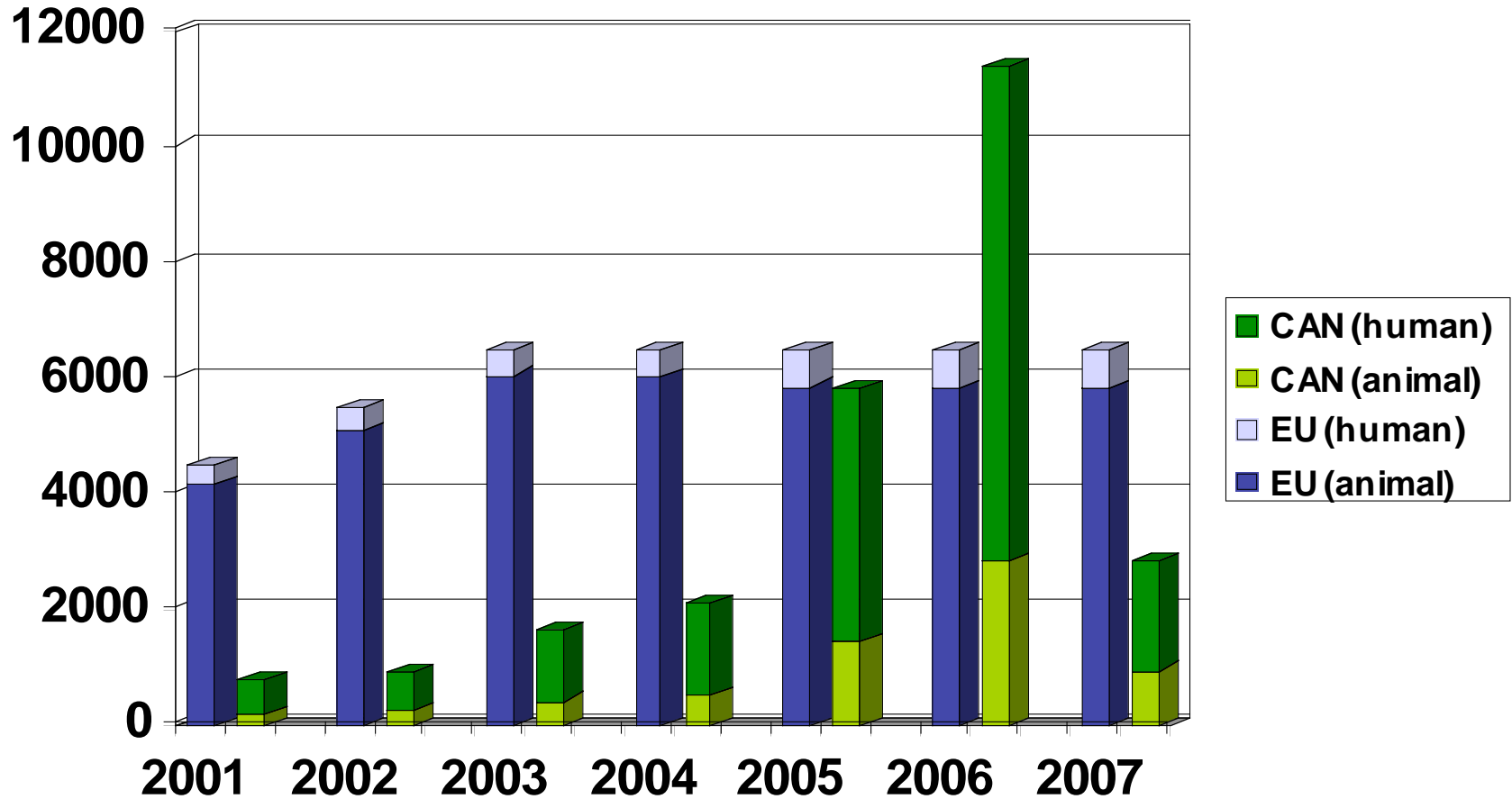
- From 2004 seed production: approx. 2000 t hemp seed; since then high increase
- Derived from the 2000 t approx. 750 t for hemp oil production and 900 t for hulled hempseed and hemp protein flour
- Virtually all production for seed – no utilization of fibre!
- More than 60% of acreage is certified organic and targets food market.
- Canadian acreage expands gradually - with hick-ups
- Sharp fall in 2007 to 4000 ha because acreage increased faster than the market
- Hempseed storages were still filled in 2007 with seeds from last year. Therefore acreages were reduced in 2007. But the demand is still increasing, so for 2008 there will be upward trend again.

Acreage for hemp in Canada:



Source: Leson (2006/2007)

Development of EU / CAN hempseed production in tons



Source: Estimates nova-Institut (2006) / Hempro (2007)

Estimated acreage worldwide (2005):

Area	Hemp acreage in ha
EU 25	14.500
Other European countries	5.700
Asia (China and North Korea)	ca. 80.000
Australia	250
North America (Canada)	10.000
South America	4.300
Total	ca. 115.000

The hemp market



Established marketing channels in foreign countries:

- USA
 - Trader Joe´s Supermarkt
 - Publix
- Canada
 - Shoppers Drug Mart Drogeriemarkt („Canada's largest retail drugstore group“)
 - Metro Canada
 - Choices Markets
- UK
 - Sainsbury´s Supermarkt (“UK´s leading supermarket chain“)



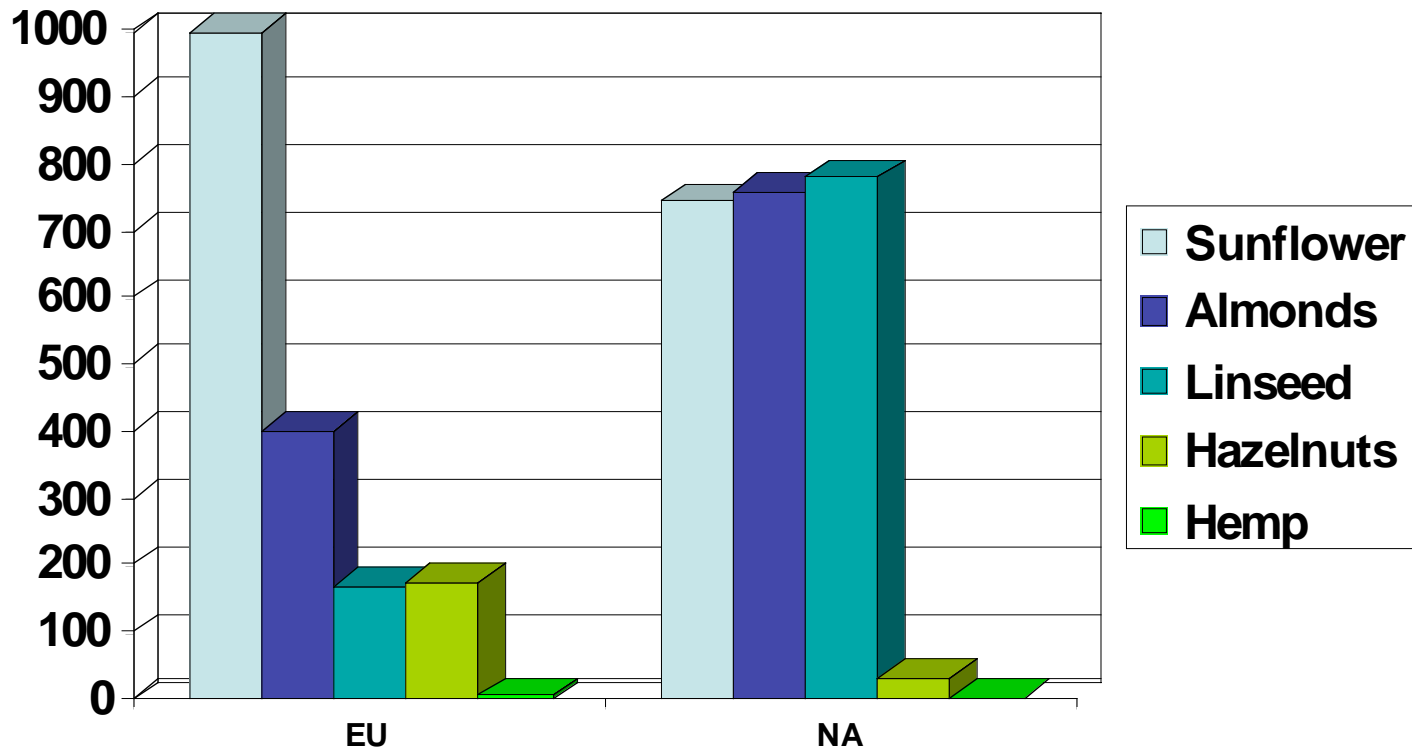
The hemp market

„Hottest Products in 2007“



- NBC Today Show Spotlights “Healthy Hemp Foods” (16. Januar 2007)
- NBC’s food editor and resident expert Phil Lempert:
“These are going to be the hottest products in 2007”

Comparison of total market volume in 1000 tons 2004



	Germany	EU	Canada	USA
Sunflowerseeds	69,65	4100,00	54,40	692,30
Almonds	0	404,45	0	761,29
Linseed	13,00	169,70	516,90	265,98
Hazelnuts	0	178,48	0	34,02
Hemp	> 1	7	4	0

Source: FAOSTAT, Eurostat, Statistics Canada, U.S. Sunflower Crop Quality Report

Reasons for problems/ challenges



- **Quality:** e.g. ffa (free fatty acids indication number), cleaning, drying etc.
- **Availability (Supply):**
 - Increase of desired amounts, only stepwise possible
- **Countries of origin:**
 - Germany, but only small amounts
 - France provides high quality seed, but expensive
 - East Europe and China gain importance as seed distributors, but yet with certain quality problems
- **Marketing:**
 - Achieve greater attention in trade and with customers
 - No standard customer information available
 - The hemp foods hardly reach German supermarket chains
 - Abroad, integration in supermarket assortments (product design)

- North American data shows that high sales turnover and substantial amounts can be achieved.
 - ➔ Good perspectives for the EU market
- In Great Britain, Canada and USA, hemp already belongs to the standard sortiment in supermarkets
 - ➔ This should also be possible in the EU and other countries e.g. Germany.
- Example: If only 10 % of the population in Germany would integrate 10 ml of hemp oil in their daily nutrition, a yearly requirement of approx. 30 million litres of hemp oil e.g. 100 000 tons of hemp seed would result.

Thank you for your attention!



For any further questions please do not
hesitate to contact us:

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