

Annex A

Request

Your request is relation to the history of consumption of CBD is:

- *1. Request for the working group 24 hour reports on CBD which details the history of consumption information provided by other member states of the EU and,*
- *2. Request information on the history of consumption from the Cannabis Trade Association (CTA) and the European Industrial Hemp Association (EIHA) including presentations made to the EU Novel Foods Working Group from the date of the organisations founding up to today's date.*

Response

Question 1

The information requested has been provided in Annex C.

Please note that some of the information has been withheld under 27 (international relations) of the Act. The information has been redacted and marked with the number of the relevant section of the Act in square brackets. Please see Annex B for further details.

Question 2

Please note that some of the information has been withheld under 40 (personal information) of the Act. The information has been redacted and marked with the number of the relevant section of the Act in square brackets. Please see Annex B for further details.

The FSA has requested information on the history of consumption of CBD extracts from industry since 2015 via meetings and correspondence with Cannabis and Hemp trade associations and also from food businesses when they request advice about novel food status of the products they wish to market. The evidence required by the UK and other Member States must relate to the CBD extracts on the market in Member States of the European Union before they can be considered as valid evidence which demonstrates a history of consumption of that extract. To date we have only received the attached information in Annex C from 2 of the trade associations these are Cannabis Trade Association and the European Industrial Hemp Association. Individual food businesses have not provided any information.

The European Industrial Hemp Association have recently added slides to the presentation they gave to the European Working Group on 12 March as they have received additional information on the history of consumption of hemp products consumed in Germany and Lithuania and I have attached this latest edition of the slides which was received on 20 May 2019.

Annex C – FOI 2413 Information for disclosure

EU Working Group discussions on Cannabis

Meeting of 12 March 2018

6. SUMMARY OF MEETING

Finally work to develop revised text on CBD and its novel food status continued. With consensus reached that the focus of the definition should be on concentrating intrinsically present CBD. This may need some further refinement before this is published for use by enforcement authorities.

Agenda item 4: CBD

Prior to the meeting **Cion** had circulated the background document by email highlighting the suggestions for updating the novel food catalogue provided by member states in light of the previous discussions. **Cion** introduced the document that summarised the challenges and provided a revised suggestion that sought to address the different positions that had been outlined. They explained that for technical reasons the entry cannot be updated to the proposed new format for the catalogue.

Cion explained that it was clear that hemp oil is not novel but there is some confusion over the use of terminology such as hemp oil and CBD oil. While generally **Member States (MS)** agreed that with the previous **[MS [S27(1)]** proposal there were some concerns that this did not fully represent the situation and that products with a history of consumption could be unintentionally captured. This is complicated by the different parts of the plants with different natural levels of CBD being used in some products.

The discussion proceeded to explore drafting suggestions for the text which covered the questions raised by **Cion** in their document. The first point was around the use of term selective extraction as included in the **UK** suggestion provided. A **MS [S27(1)]** suggested that what is meant by selective extraction should be included in the text. This was supported by **MS [S27(1)] and the UK** with the addition of retaining the term selective extraction. A **MS [S27(1)]** felt once the explanation was included the term could be removed and this was done.

A **MS [S27(1)]** suggested that in explaining what is meant by selective extraction it should not refer to the intention as this was difficult to enforce. This resulted in a lot of discussion around terms such as an increase of CBD relative to another parameter. At the suggestion of a **MS [S27(1)]** supported by A **MS [S27(1)]** the reference became around an increased concentration of CBD relative to the starting material. This was generally accepted. It was also clarified that the text refers to foods including food supplements following a point from three **MS[S27(1)]** .

There was discussion on the text in the draft on the parts of the plant covered. A **MS [S27(1)]** had previously suggested that flowers could not be used in food. The text on hemp seed oils not being novel was removed following an intervention by a **MS [S27(1)]**. **MS[S27(1)]** highlighting that to be more precise a threshold level would be

needed. A **MS [S27(1)]** suggested that EFSA be approached for a risk assessment but **Cion** countered that this would not provide assistance in the short term.

There was a short discussion on how to manage the potential for strains of industrial hemp with higher natural levels of CBD. A **MS[S27(1)]** indicated that they wanted to be clear on the strains that could be used. **UK** suggested that of course strains produced by traditional breeding practices would not be novel but that the wider factor of which strains were permitted in food would apply. **Cion** noted the potential for non-traditional breeding techniques to be used. **Cion** supported by a **MS [S27(1)]** and **UK** agreed to copy the text from the *Cannabis sativa* entry on industrial hemp strains to also be included in the CBD entry.

MS [S27(1)] favoured referencing examples of the methods of extraction in the text so long as this was not an exhaustive list.

On the draft that was reached there remained a concern highlighted by a **MS [S27(1)]** supported by a **MS [S27(1)]** and **UK** that even in traditional hemp seed extractions the level of CBD could be concentrated. **Cion** did not fully accept this point but would consider this again. **Cion** concluded that the entry was developing but did not outline the next steps.

Meeting on 15 May 2018

6. SUMMARY OF MEETING

A presentation from a member state on the way forward for CBD and the products from hemp resulted in a lively discussion. While the focus was mainly consideration of the novel food status of parts of the plant, hemp seed extracts and selective extracts, wider issues were also explored. In particular whether there are wider safety issues and the ongoing work in the area of contaminants was considered. Calls were made for an Article 8 request under 178/2002 to consider the safety of this type of product. It was noted that CBD is leading this market but other cannabinoids are beginning to come through. This is of course a complex issue with links to medicines and national drugs policy and these will need to be considered as the food issues develop.

Agenda Item 10: Status of *Cannabis sativa*, CBD and Cannabinoids

[**S27(1)**

A lively discussion followed in which a **MS [S27(1)]** requested clarity on which parts of the plant are novel as the catalogue currently says “most parts of the plant are not novel”. A **MS [S27(1)]** particularly wanted agreement on leaves to feedback to industry. **Cion** commented that the key issue is improving the catalogue.

A **MS[S27(1)]** make the point that leaves and flowers have a history of consumption primarily in beer and lemonade for their flavouring properties. They raised concerns that when flowers are used in food (not just as a flavouring) the product is not safe as they contain high levels of THC. **Cion** commented that one of these issues might be a novel food issue in terms of whether there is a history of consumption but any safety issue where foods are not novel is for General Food Law. A **MS [S27(1)]** suggested that this may be an issue to discuss with the contaminants group. The work of this group in collecting data on the presence of THC in products was noted.

A **MS[S27(1)]** supported by A **MS[S27(1)]** raised the issue of using oil to dilute extract so the final product has levels of CBD consistent with those naturally. Operators were considering only the end product and it needed to be clear that the extract is a novel ingredient and can't be used without authorisation. Suggested wording included use of “selective extraction” or “enriched” in the definition.

A **MS[S27(1)]** suggested a maximum amount of CBD or THC but **Cion** rejected this and noted that this is for individual MS to decide. They suggested that there is insufficient data to explore a maximum levels approach and this is more linked to safety than novel food status. **Cion** emphasised that the key things to have a basic approach of deciding what is novel or not.

A **MS [S27(1)]** welcomed this and noted that there needs to be consensus of which products were on the market prior to 1997. They preferred a simple definition. A **MS [S27(1)]** flagged that a simple solution might not be possible but greater clarity was needed and perhaps previous versions of the catalogue would provide a good basis for considering this. welcomed this approach. A **MS[S27(1)]** suggest that this could be wider than CBD and other cannabinoids are coming through, so the approach once developed, should apply more widely to other selective extracts.

A **MS [S27(1)]** raised the issue of medicinal uses and **Cion** noted that the issue of whether products are medicines is at the discretion of MS. A **MS[S27(1)]** questioned what had been agreed at SCOPAFF in the past as this should be the starting point. The UK provided clarity that it was plant parts that were considered not novel and therefore maybe separate entries for plant parts and hemp seed oils were needed from the other types of extracts that appeared to be novel. **MS [S27(1)]** suggested combining entries in the catalogue as was done for Stevia to make clear which uses have a history of consumption although a member state emphasised that hemp seed oil was not novel and subject to a codex standard.

A **MS** questioned whether from an EU legislative perspective cultivators of *Cannabis sativa* need to comply with 0.2% THC in hemp for cultivation if not seeking state aid and therefore whether this was best descriptor for the permitted chemovars. A **MS** explained in accordance with their national legislation this acted as a requirement but that this may be different in other MS. A **MS** noted that they are facing issues with

plant breeding and hemp. **Cion** proposed that by 31st May all MS to send proposals of how the catalogue could be improved. **Cion** will put together a draft proposal once suggestions are received and circulate this back to MS. **Cion** suggested one way to do this could be to have 3 entries:

1. Hemp products / parts of the plant that aren't novel
2. Novel extracts
3. Other parts of the plant

Meeting on 5 July 2018

SUMMARY OF MEETING

There was a lively discussion on the status of *Cannabis sativa*, CBD and cannabinoids. While the development of the novel foods catalogue entry is ongoing, consensus is beginning to emerge on the novel food status of parts of *C. sativa* plants. Further discussion is need on the status of extracts. This is of course a complex issue with links to medicines and national drugs policy and the development of the entry is being considered in this context.

Agenda Item 15: Status of *Cannabis sativa*, CBD and Cannabinoids.

Cion commented that the route to achieving legal clarity on the novel food status of the different forms of *Cannabis sativa* and related products would be the use of Article 5. However, given the nature of discussions to date it seemed preferred to improve the wording for the entries in the novel food catalogue. It was noted that this isn't legally binding and can be challenged. **Cion** have drawn up 2 proposal options for discussion on which comments received in May. There is a need to further refine these entries.

Cion summarised the background to this issue:

- Standing Committee in 1997 agreed that hemp flowers used in beer have a history of consumption
- Standing Committee in 2012 had a change of views on foods containing cannabis extracts. Member States can use foods when cannabidiols can't be detected. [**S27(1)**

]

Consensus was reached that anything from *Cannabis sativa* L. seeds are not novel. There continues to be confusion over the status of leaves, extracts other than those from the seed due to the potential cross contamination with THC. It was noted that tea and beverages produced by infusion or brewing methods which appear to have a history of consumption are a type of extract. The question posed was the approach that should be taken.

Cion highlighted that they had met with the UK Cannabis Trade Association (CTA) who had flagged that CO₂ and ethanol extraction techniques were in use in the industry. Their view was that using simple extraction 40% CBD could be extracted from the plant material using two passes of extraction the first to extract from the plant and the second to remove waxes and some terpenes. Cion asked Member states for insight into their positions.

[**S27(1)**

]

A **MS[S27(1)]** have asked industry for evidence of HoC but they haven't received any evidence. A member state was only aware of HoC of seeds. A Member state only legally allow seeds, seed oil and protein from hemp seeds - anything else is considered illegal or unclear with regard to novel foods. Supplements need to be registered and any that contain Cannabis are assessed to determine if they are a medicine. So far, the 2 assessed were regarded as medicines.

The UK were invited by **Cion** to explain the work of the CTA. **UK** commented that the CTA are new and growing in the UK and the EU and they are actively working with producers and through the food chain. The association recognises that highly refined extracts are novel but they view whole plant extracts that retain the balance of cannabinoids as not novel. They claim these have been used for a long time but have not provided evidence to support this. The FSA have been flagging the legal requirements and refer to the novel food catalogue as a basis for the position in the UK that refined extracts are novel, some products have a history of consumption but for others the status is not yet clear. It was highlighted that there was ongoing work with the medicines and drugs authorities in the UK. However, the lack of clarity meant enforcement of the novel food regulations could be challenged.

A **MS [S27(1)]** sought clarification of the basis of the current text and Cion flagged it reflected the response from the member states. sought clarification on whether hemp products containing oil from the stalks are novel and asked for these to be considered not novel. A member state was of the view that it was parts of the plant used as ingredients that were not novel rather than extracts.

UK noted that the General Food Law has come in since the standing committee position in 1997 and called for consideration of the interaction of the UN Convention on Narcotics which defines cannabis as the fruiting bodies and upper leaves. Clarification was sought on whether these would be considered as food. **Cion** suggested that if using registered varieties these are likely to be food. A **MS [S27(1)]** commented that as the convention is implemented in each Member State individually it is hard to comment on this across Member States. The implementation of the

convention in a member state had formed the basis for the saying that THC should be undetected in hemp products.

A **MS [S27(1)]** suggested that all Member States collect history of consumption of all products other than seeds in order to form a better basis for the discussion. **Cion** agreed with the principle but felt this could not be systematic as there is limited information available. The situation seemed to be complicated when products were on national markets and it would be for authorities to manage.

There was discussion around the use of parts of *Cannabis sativa* particularly leaves and flowers for flavouring purposes. There was agreement on wording that flowers have a history of use in beer in the same way as hops. A **MS [S27(1)]** to check history of use and see if this is specifically for lemonade or is more general than that. This was felt to be important by **MS [S27(1)]** as reflecting the information Member States hold and to maintain the previous Standing Committee decisions. The potential for some to be flavouring preparations was raised by A Member state. **Cion** agreed to check with flavourings colleagues. A **MS [S27(1)]** preferred to reflect the wording from previous decisions.

A **MS [S27(1)]** sought clarification on whether this type of use also reflected hemp juices. They considered that this was too broad as it could cover several parts of the plant. It was also explored if the reference for the use should be restricted to lemonade or if other non-alcoholic beverages should be included. A **MS [S27(1)]** preferred that this reflected the documented use.

There was discussion around the terms used. A **MS [S27(1)]** suggested that *C. sativa* is either always followed by (fibre hemp) or never. A **MS [S27(1)]** suggested industry don't like the terms fibre hemp.

In response to **Cion** question on whether the wording on the need to check with Member States on any specific requirements in the respective countries should be retained, **UK** asked to keep wording due to the medicines and drug legislation interactions that could be different between Member States. A **MS [S27(1)]** commented that the use of seeds should be 'as such' in the first bullet point of the current draft. This was noted.

The issue of developing the extracts entry was raised and it was felt that further development was needed. **Cion** commented that this was the aspect that was likely to have a larger impact on industry. The discussion ended with the progress that had been achieved noted but with recognition that further discussion was needed.

Meeting on 10 September - Detail

Agenda Item 11 on Status of *Cannabis sativa*, CBD and Cannabinoids – This item was not discussed

Meeting on 16 October 2018

SUMMARY OF MEETING

The European Industrial Hemp Association (EIHA) and the British Association of Cannabis gave a joint presentation on CBD and cannabinoids which resulted in a lively discussion. No concrete evidence of a history of consumption in the EU before 1997 was provided. MS were in agreement that evidence would be needed to confirm CBD extracts are not novel. This is of course a complex issue with links to medicines and national drugs policy.

Agenda Item 10: Status of Cannabis sativa, CBD and cannabinoids

The EIHA and the British Association of Cannabis gave a joint presentation. This covered health claims safety and the limited information they have on history of consumption before 1997.

A lively discussion followed in which **Cion** clarified that we are focusing on whether products are novel rather than the safety to begin with.

A **MS [S27(1)]** questioned some of the information provided on history of consumption. The organisations noted that they do not have concrete information on history of consumption besides old cookbooks and some historical suggestions. **Cion** reiterated that clear evidence would be needed to back up HoC.

The presentation included a suggestion to cap the maximum amount of CBD/cannabidiol extracts at 5% as CBD content in raw biomass for EU registered varieties is between 1-5%. A **MS [S27(1)]** explained that as there hasn't been evidence of use of enriched CBD extract, it doesn't matter if this is then diluted to 5% or lower, it would be novel. If the extraction method has been used before, but the end product hasn't been consumed before, it would also be novel.

A **MS** suggested that if the organisations have safety data, they should submit a novel food authorisation. The BIHA responded that it is a long process and they already have 20 million users. A **MS [S27(1)]** also suggested an Article 4 application to determine the novel status.

[S27(1)

Meeting of 14 and 15 January 2019

SUMMARY OF MEETING

A lively discussion on amendments proposed to the entries for *Cannabis sativa* and CBD and Cannabinoids took place with the aim of achieving a consensus on the novel status of products already on the market and also those proposed to be marketed. A second aim was to amend the Novel Food Catalogue wording to produce greater clarity which would enable FBOs to make decisions on marketing their products. MS agreed FBOs and relevant trade associations had not provided evidence of a history of consumption in the EU before 1997 for either food supplements containing CBD, or extracts of CBD, and as a consequence they were novel foods.

Agenda Item 14: Cannabidiol

Cion introduced this item. It noted that the information in the catalogue was not clear and the aim of the meeting was to get a consensus and to find the right wording for both *Cannabis sativa* and Cannabidiol in the Novel Food Catalogue.

Industry had not been able to provide a history of consumption data for CBD since putting it on the market. The key point was that the history of consumption had to be for the products on the market.

Cion asked MS if CBD in food supplements were novel. All MS present agreed that it was.

A **MS [S27(1)]** commented that aqueous extracts of CBD could be enriched. As CBD doesn't dissolve easily in water then terpenes could be added. Another **MS [S27(1)]** agreed with this principle. A **MS [S27(1)]** questioned which aqueous extracts were being referred to and which plant parts were to be used. A **MS[S27(1)]** commented that tea was usually sold as hemp tea not as CBD. The **MS [S27(1)]** agreed that hemp tea was not novel. If the extract was produced using benzene, CO2 or alcohol or extracts all these extracts are novel as the processes hadn't been used in the production of CBD prior to May1997. It was accepted that hemp and hemp derived products were not novel and cold pressed seed oil was also not novel.

A **MS [S27(1)]** considered that all CBD was novel and only seed derivatives were not novel. Another **MS [S27(1)]** commented flowers and leaves were not allowed in products because of narcotics legislation. It also considered only oils derived from seeds were not novel. Other MS had the same position. It was agreed the Novel Food Catalogue entry should be very clear. The Catalogue entry should confirm which extracts were novel and which weren't.

Cion informed the meeting a disclaimer should be put in the catalogue on the basis of the Member states information. An explanation was needed if a change was to be made. A **MS [S27(1)]** commented that cannabidiol could come from contamination.

A Member state informed the meeting that it had issued statements that CBD extracts were novel. It noted that there was a distinction between contaminants and intentional constituents. The member state viewed intentional constituents of foodstuffs as novel.

Member States reaffirmed industry had not provided documentation which confirmed a history of consumption of CBD extracts. **[S27(1)**

]

Producers making an application for authorisation of CBD as a novel food are not making applications under Article 4 of the Novel Food Regulations (EU)2015/2283.

A Common definition as to whether or not CBD is novel is required in the Novel Food Catalogue. It was not necessary to have a separate entry for cannabidiol.

A **MS [S27(1)]** noted that some Hemp products should be regulated under the Misuse of Drugs Act. It further noted there was nothing in food law about the 0.2% THC levels. This figure related to farm payments.

The meeting agreed the novel status of CBD extracts and supplements. The discussion was to be continued at the next meeting.

Meeting of 12 March 2019

SUMMARY OF MEETING

The morning was dominated by CBD considerations, with both the European Industrial Hemp Association (EIHA) and the Cannabis Trades Association (CTA) providing consecutive presentations. No additional history of consumption for CBD extracts was provided and despite industry contestations to the contrary, **MSs** were in agreement that CBD extracts are novel. **MSs** agreed that whilst the Novel Food Catalogue entry wasn't entirely satisfactory, a further change at this time wouldn't be appropriate. **[S27(1)**

]

Agenda Item 6: Status of *Cannabis sativa*, CBD and Cannabinoids

Overall: Industry representatives gave 2 consecutive presentations, following by questions from the **MSs**. After presentations (once industry had left), **MSs** discussed CBD further and agreed the EU Novel Food Catalogue remains unaltered, and that in general the enforcement approach should be consistent across **MSs** where practical; although it was acknowledged a firm and uniform timeframe for compliance was unlikely.

Points of note:

Whilst Industry Present

- Presentations by **EIHA** (European Industrial Hemp Association) and **CTA** (Cannabis Trades Association). Their contention remains that CBD extracts

are not novel as they derive from hemp and are similar to 'making a cup of tea'. They want hemp leaves/flowers added to the Catalogue as not novel, use of traditional extraction methods to make CBD not novel, naturally occurring Cannabinoids not novel, a max dose of 160mg per day for adults, and support to devise private standards. **EIHA** confirmed money was available for toxicology but not certain what to do. **MSs** advised they should request an Article 4 consideration, or could apply for authorisation under Article 10; noting that MSs could also raise an Article 5, and several Article 10 applications had already been received from others.

After Industry Left the Meeting

- Limited new history of consumption evidence provided, and it exclusively related to hemp derived products (not CBD extracts).
- CBD issue is complex with several legislation regimes: novel food, medical, drugs, animal feed, environmental.
- **[S27(1)]**

]. It's for individual **MSs** to determine if treated as a drug or medicine.

- EU Novel Foods Catalogue remains unchanged, with no current firm proposals to review this further; although acknowledgement that the Catalogue entry isn't optimal. **EC** will consider this issue further.
- No disagreement amongst **MSs** on novel food status of CBD extracts; they're novel.
- Consideration of future enforcement should be consistent amongst **MSs** where possible; noting that there is variation between legislative regimes due to drug and medicinal legislation variation. **[S27(1)]**

-]
- In relation to CBD safety **EFSA** confirmed that not aware of anything to suggest safety concerns but can't state with certainty as applications don't have adequate information at this time.

Contrasting MS positions:

Whilst Industry Present

- **[S27(1)]**
-]
- A **MS[S27(1)]** advised that medical and drug legislation not harmonised so a consistent approach across all **MSs** is not possible.
- A **MS [S27(1)]** confirmed that other novel products were made by concentrating certain aspects (comparable to the cup of tea analogy) e.g. lycopene from tomatoes; the focus being on if the product itself is novel.

After Industry Left the Meeting

- A **MS [S27(1)]** raised that they felt the Catalogue needed further clarification. **EC** confirmed that the Catalogue has an impact (even though not legally binding). **[S27(1)]**

- [S27(1)]

Annex C

Information received from Cannabis Trades Association (CTA) and European Industrial Hemp Association EIHA)

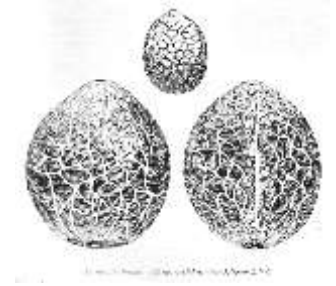
Information from CTA

It's Nigh Time to Grandfather Hemp

by Richard Rose

Humans and the animals humans eat have been ingesting phytocannabinoids such as THC and CBD for many thousands of years, in many different cultures, without any social, mental, or physical problems arising from consumption.

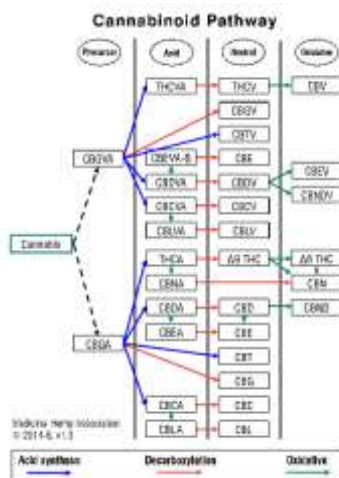
The sticky resin on the flowers of the female *Cannabis* or Hemp plant (same genus, different end-uses) contains cannabinoids, including THC and CBD. Physically near that resin are the seeds. Lower THC hemp thrived in the temperate latitudes and contained CBD, and *Cannabis* at the sub-tropical/tropical latitudes had higher THC, higher total cannabinoids, and more resin.



Therefore the regulations should not be as though CBD and the other cannabinoids were a new substance for humans and animals to consume, or that there's some question as to toxicity, or that they should be Scheduled, Novel, or Controlled. Rather, we should recognize that Hempseed and therefore consumption of cannabinoids, trace and not, is ancient and therefore worthy of Grandfathering into food and drug regulations as a food pre-existing regulation for millennia. After more than 12.000 years with no regulation, it is the world's longest, broadest, and largest toxicology study, with not one death.

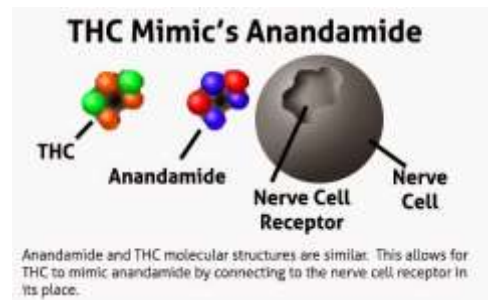
There are at least 144 cannabinoids found in *Cannabis*. The best known is

THC, but also CBD, THCa, CBDa, CBGa, CBG, CBLa, CBCa, CBC, CBEa, CBNa, CBN, CBL, CBT, CBE, CBND, THCVa, CBDVa, CBGVa, CBLVa, CBCVa, THCV, CBDV, CBGV, CBLV, CBCV, and more. As recently as 2015 another 7 were discovered.

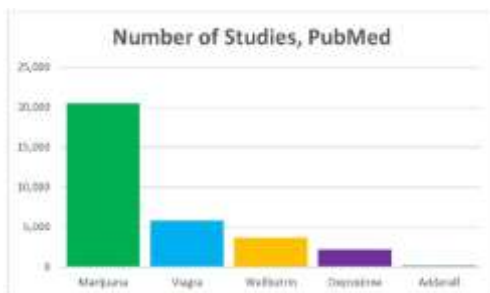


Some cannabinoids interact with the body's own Endocannabinoid System (ECS), which evolved over millions of years concurrently with *Cannabis*. The ECS is found in any animal with a nervous system, controlling many functions, and is estimated to be over 600 million years old. The two most important Endocannabinoids are anandamide and 2-arachidonoyl glycerol.

Mankind's long coevolution with *Cannabis* might be due to the cannabinoid receptors found in the body, which compose the ECS. Endocannabinoids and phytocannabinoids act upon these receptors. Cannabinoid receptor 1 (CB1) is most plentiful in the brain, spinal cord, some peripheral organs and tissues such as the spleen, white blood cells, endocrine gland and parts of the reproductive, gastrointestinal and urinary tracts. Cannabinoid receptor 2 (CB2) is most plentiful in the white blood cells, the tonsils, and the spleen. *Cannabis* is one of mankind's most-studied plants.



My work starting in 1994 included making sure



hempseed used for commercial food products in the US had no cannabinoids transferred to the food, for legal and quality assurance reasons. Difficult to remove from the outside shell, that's how I came to realize we have been eating minute amounts of cannabinoids for thousands of years. Removing the shell reduces cannabinoid content, but shelling of hempseed is

a relatively new invention, only 22 years old. And Oil pressing is still performed on whole, not shelled, Hempseed. I believe that many of the healthful and healing qualities attributed to Hempseed oil may actually be from the cannabinoids in the oil.

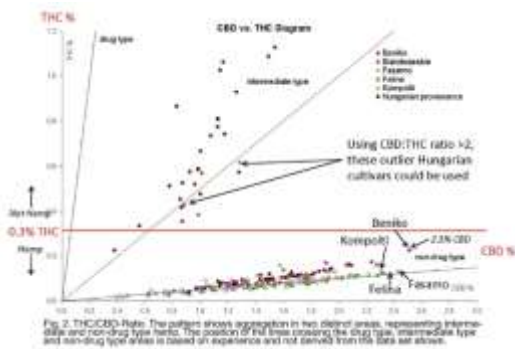
Here, I conflate "hemp," "*Cannabis*," and "marijuana": it's all the same genus, only end-use dictates whether it is drug *Cannabis* (marijuana) or fibre *Cannabis* (hemp). Today's legal definition (0.2% to 1% max THC depending on nation; a standard only 60 years old) is too rigid to confine what our ancestors also called "Hemp" for thousands of years.

Hemp (genus "*Cannabis*," also known as Hemp, Hamp, Chanvre, Canapa, Cañamo, Hanf, Hennep, Ma, Asa, Kanab, Dagga, Ganja, Maconha, and Konopi) is indigenous to the Russian plains, the Caucasus, Transcaucasia, the Crimea and the Urals, from China to the Balkan Peninsula. *Cannabis* pollen millions of years old has been identified in Eurasia.



Figure 1. Map showing the world by regions of activities assigned to its African and Asian gene pools. The arrows suggest human-related dispersal from the presumed origin of *Cannabis* in Central Asia.

Humans and animals have consumed Hemp flower products (and thus cannabinoids) for many millennia around the world, including the USA where Hemp has been grown continuously since at least 1606, in Jamestown. The most-predominant cannabinoid in Hemp is Cannabidiol (CBD).



That is because the resin adhering to the female flowers as well as fine particles of flower are inevitably consumed when the seed is eaten or pressed for its edible oil. This sticky resinous adherent on the outside of the shell of the hempseed is difficult to remove, and often includes Hemp flower particles. Even with modern cleaning methods removing that resin from Hempseed is difficult, one study

shows as high as 117.5 parts-per-million THC remaining in common health food store Hempseed oil. So difficult in fact, that the Hempseed oil industry won a suit in 2004 to be allowed to leave any amount of undisclosed THC in their oil, due to this sticky resin. The THC limit on all hemp products in the U.S. is now 3.000 ppm.

Hemp has been used in human cultures since prehistoric times, at least since the end of the Pleistocene era. From Africa to Japan to Scandinavia to Eastern and Southern Europe to the Americas, Hempseed has been an essential commodity to eat, grow, and trade. The use of Hempseed for food is many millennia older than even the use of Soybean for food.

Hempseed is high in essential amino (23%, edestin and albumin types) and fatty (25%, including *omega*-3 and GLA) acids, vitamins and minerals, and fibre (35%). It contains more protein than beef and more *omega*-3 than fish. It can be eaten raw or cooked. Even the protein type is called "edestin," from the Greek *edestos* meaning "to eat." Highly versatile, hempseed could be eaten even years later, fed to animals, converted to oil for eating or lamps, or planted as a seed or fibre crop.

In the U.S., Hemp enjoys a legal exemption from the Controlled Substances Act (stalk and nonviable seed), protections for viable seed, flower and cultivation in Section 7606 of the 2014 Farm Bill, and protections afforded by the Ninth Circuit Court in 2004 as to incidental THC or other cannabinoids remaining in products. Natural cannabinoids were never Scheduled by Congress, only the plant.



Δ⁹-Tetrahydrocannabinol Content of Commercially Available Hemp Products*

Manufacturer	Type	Date Tested	Results (µg/g)
Spectrum Essentials	Oil	20-Mar-08	117.5
Spectrum Essentials	Oil	20-Mar-08	117.5
Spectrum Essentials	Oil	20-Mar-08	117.5
Hempola	Oil	20-Mar-08	11.5
Hempstead	Oil	20-Mar-08	21.0
Health from the Sun	Gamma	05-Mar-08	48.6

Discovering its fibrous properties was most likely a byproduct of seed collection for food. The use of Hemp most likely predates the dawn of agriculture. Ancient Chinese texts and archeological evidence suggest that Hempseed use for food in China reaches back into the early Neolithic period and perhaps to the late Paleolithic.

Encyclopedia of Indo-European Culture noted "There are... at least three chronological horizons to which the spread of hemp might be ascribed: the early

distribution of hemp across Europe; during the Neolithic c5000 B.C. or earlier; a later spread of hemp for presumably narcotic purposes around 3000 B.C.; a still later spread, or, at least, re-emergence of hemp in the context of textiles during the first millennium B.C.". Indeed, the use of *Cannabis* in Europe goes much further back than recorded history and it was an integral part of pre-historic and pre-Christian European culture.

Examples of early dates for Hempseed recovered in East Asia are quite old (4800, 3500, and 2500 B.P.) yet with one exception from Japan (10000 B.P.) not as old as some from northern Europe (7000 and 5000 B.P.). Moldova (6000 B.P.), Hungary (5000 B.P.), Sweden (2000 B.P.), Italy (1900 B.P.), Switzerland (1800 B.P.), the Netherlands (1900 to 1750 B.P.), the British Isles (1600 B.P.), Norway and Denmark (1150 to 1100 B.P.) all have sites where ancient Hempseed has been found.

Hemp may have been one of the first cultivated foods in China. By comparison, soybean has been cultivated for only about 3.000 years, also in China. In regions where Hempseed was common it was often considered an animal fodder and famine food, eaten only during times of shortage of more-desirable foods. However, in ancient northern China, Hempseed was one of the most important "royal" grains. Hempseed is still enjoyed as a snack food throughout China.

In the 6th century B.C., the *Ch'i Min Yao Shu* advises: "*Some of China's most important crops, like rice, millet, and hemp, have been cultivated since Neolithic times.*" Hempseed was the sole source of edible vegetable oil in areas of Asia where imported vegetable oils were unavailable or prohibitively expensive.

Its use as a fibre as well as a grain was mentioned in such classical literature as the *Shi Ching (Book of Odes)* in the 11th century B.C., and *Chou Li* and the *Li Chi (Book of Rites)* in the 2nd century B.C. or earlier. Detailed instructions on the cultivation of hemp as both a fibre and a grain crop were given in the most ancient works on agriculture in existence.



Definitive records of the medicinal and physiological effects of *Cannabis* are found in the earliest pharmacopeia in existence. *Pn-ts'ao Ching*, attributed to the legendary Emperor Shen-nung of about 2000 B.C., was compiled in the first or second centuries A.D., but was undoubtedly based on traditions passed down from earlier - even prehistoric - times. In *Cannabis* recovered from a 2.700-year old grave in northern China were found the Cannabinoids CBN, THC, CBO, CBD, CBC, CBE, CBL, CBNV, and THCV.

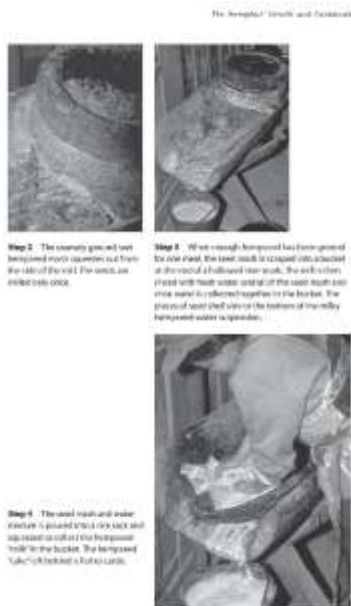
Hempseed was formally recognized in the Chinese book *Pen Ts'ao Kang Mu* (1596 A.D.). It refers to works from previous authors dating back centuries in a discussion of Hempseed use as a food. According to the book, the Chinese had developed Hemp cultivars to such an extent that seeds grew as large as garden peas and were reputed to have been of the highest quality. Today it's a widely-

accepted food for the elderly in China, supplying easily-digestible protein and dietary roughage.

Also in China the oldest agricultural treatise is the *Xia Xiao Zheng* (1600 B.P.) which names Hempseed as one of the main food crops that were grown then, along with millet, wheat, beans, and rice. Records from a Chou Dynasty state banquet show that boiled Hempseed was served in cereal dishes in 1000 B.P.

Just as they have for millennia, farmers living in remote mountainous regions of southwestern China still make porridge with

Hempseed, and the seeds are also commonly parched, milled, and mixed into buttered tea by Tibetan peoples such as those living in northwestern Yunnan province. The Hmong have long made a bean curd similar to tofu from the milk of the Hempseed.



Hempseed was found in an excavated latrine in Japan, indicating that Hempseed was eaten by people at that time (710 A.D.). Hempseed was also a part of the traditional Japanese diet, eaten as porridge. When armies of the feudal age went to war in Japan, they often subsisted on balls of ground Hempseed and brown rice gluten to keep them strong. In contemporary Japan, Hempseed is found in the diet as part of the traditional *shichimi* (seven spices) seasoning powder used to flavor *udon* noodles, and also a dish called *Asanomi* ("asa" means "Hemp").

Rice farming is younger than Hemp farming in Japan. From *The Japan Times* (2014): “Most Japanese people see cannabis as a subculture of Japan but they’re wrong,” Takayasu says. “Cannabis has been at the very heart of Japanese culture for thousands of years.” According to Takayasu, the earliest evidence of cannabis in Japan dates back to the Jomon Period (10000-200 B.C.), with pottery relics recovered in Fukui Prefecture containing seeds and scraps of woven cannabis fibres. These are the oldest known Hempseeds in the world and belong to the early Holocene period. “Cannabis was the most important substance for prehistoric people in Japan,” he says. “They wore clothes made from its fibres and they used it for bow strings and fishing lines.”

For many centuries people living in the northwestern Himalayan foothills of India and Nepal have grown Hemp for fibre and also roasted and ate the seeds. In modern India, Hempseed is still eaten by many poor people. An Indian food called *bosa* consists of the seeds of goose grass and Hemp, and another, referred to as *mura*, is made with parched wheat, amaranth or rice, and Hempseed. *Badil*, a chutney mix featuring Hempseed, is one of the traditional dishes of a tribal people located in India. A smooth paste condiment consisting of ground Hempseed with chopped onions, chili peppers, and turmeric is commonly served throughout the Nepali Himalayas as a savory and nutritional supplement in the ubiquitous staple dish of beans and rice.

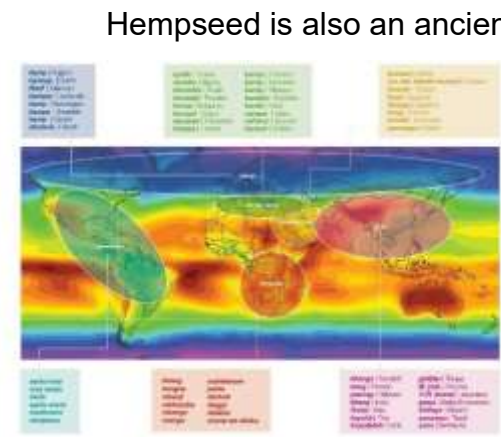
Perhaps the most popular *Cannabis* drink in the world is India's *Bhang*, a milk and Hemp concoction used as early as 1000 B.C. by millions of Hindus annually.

Cannabis was available in Mesopotamia during the 6th century B.C. at the time when the Hebrew *Bible* was compiled in Babylon, thus even the *Bible* mentions Hemp. In Genesis 1:29: "And God said, 'Behold, I have given you every herb bearing seed [such as *Cannabis*], which is upon the face of all the earth, and every tree, in the which is the fruit [hempseed is actually a fruit] of a tree [hemp can grow like a tree] yielding seed [hempseed]; to you it shall be for meat [hempseed protein is a high quality protein]." *Cannabis* is mentioned 5 more times as the healing oil *Kaneh Bosm*. Some scholars consider the "Tree of Life" in Genesis 3 to be a *Cannabis* plant.

Cannabinoid Facts	
Portion size: 5 oz	
Portions per package: 0	
Calories per portion	
Total Cannabinoids	0 mg 0%
THCA	0.00 mg 0%
CB-THC	0.00 mg 0%
CB-THC	0.00 mg 0%
THCV	0.00 mg 0%
CBGA	0.00 mg 0%
CBG	0.00 mg 0%
CBGV	0.00 mg 0%
CBDA	0.00 mg 0%
CBDA	0.00 mg 0%
CBG	0.00 mg 0%
CBG	0.00 mg 0%
CBN	0.00 mg 0%
CBDF	0.00 mg 0%
Total Terpenoids	0.00 mg 0%
Carophyllene	0.00 mg 0%
Limonene	0.00 mg 0%
Linalool	0.00 mg 0%
Myrcene	0.00 mg 0%
Pinene	0.00 mg 0%

Depictions of the *Cannabis* plant can be seen in sealings from as early as 4th century B.C. in present-day Iran. Also in Persia Hempseed was used as a source of food and oil since at least the 10th century A.D. A 6th century dish contained Hempseed and was called *sahdanag*, the "royal grain." The Jewish people had a lengthy and valuable association with the Hemp plant, and learned to make *sahdanag* from the Persians, preserving their name for it long ago. This adopted meal of roasted Hempseed became well-liked during the medieval period in Europe, where immigrant Jewish merchants sold it in marketplaces.

In Pakistan, Iran, and Turkey, baked Hempseed is sold by street vendors and is popular among children as nuts for snacking. The drinks *Soma* and *Haoma* (3rd century B.C.) likely contained *Cannabis*. The Knights Templars are reputed to have made a drink called "Elixir of Jerusalem," using *Cannabis* grown under contract by the Saracens in Spain.



Hempseed is also an ancient crop in Russia, with a range reaching far to the north. A collection of Russian manuscripts probably written during the 16th century A.D. provides details about how a proper Russian home should be managed. In the sections dealing with food products, it indicates that provisions of Hempseed and Hempseed oil should be stored in the home. It also includes three references to Hempseed used principally as an oil source but also how to make Hempseed cakes. Hemp was an important

trade item in Russia for centuries.

The Altai nomads of northern Russia cultivated early Hemp crops and used it as a food source rather than a fibre crop (300 B.C.). They relied mainly on the oil but the high content of protein made it a valuable food that was also easy to transport.

Russians and Poles bruise or roast Hempseed, mix them with salt, and eat them on bread. There are many Baltic and Eastern European ethnographic references to people preparing and eating Hempseed. In Poland, Hempseed was

stewed into a popular porridge eaten in monasteries, military barracks, and among the less-affluent.

Russians traditionally used few fats besides butter, Hempseed oil, and imported olive oil. Hempseed or its oil were used in a variety of dishes, either integrated into the meal directly or the oil was used as the medium in which the dishes were cooked, and Hempseed was a common part of food grants or donations to the needy in the 16th century.

The Svaneti of Georgia:

"... Yet as soon as I say the word "cannabis," he grins. "People don't know about this important part of our history," he says, explaining that until Soviet inspectors arrived in the '70s, every Svan household grew cannabis plants, which were used in their entirety. People plied the stem fibres into cloth and rope, and pressed the seeds for oil. Buds, flowers, and leaves (plus ground-up seeds) found their way into gooey cheese breads (knash), vegetable-walnut spreads (pkhali), and juicy meat pies (kubdari).

Charqseliani misses the oil most. "It was a cure-all, for everything from upset stomach to insomnia to earache," he muses, adding that Svan cannabis oil was pressed using five-ton machines and so prized along the Silk Road that the Greeks paid top dollar for it.

I asked if the cannabis-based dishes were psychoactive. "Absolutely not," he says, though his wife, Iza, remarks that she always slept like a baby after eating knash for dinner. (That's probably the CBD talking.)

Non-psychoactive cannabis seeds, which contain trace amounts of THC, were once a common ingredient in dishes across Europe and Asia, prized for their piquancy and nutrient-packed oil. Russians added them to peas, Poles boiled them in a Christmas soup called siemieniarka, and, in some parts of China, people still eat them by the handful like popcorn."

<https://www.atlasobscura.com/articles/cannabis-cooking-in-georgia> and

Seshata Sensi

The ancient nomadic Scythians have an even older history with Hemp, trading along the Silk Road and using Hemp ropes to domesticate horses. These ancient nomadic horse riders spread the name and use of *Cannabis* to many cultures, leaving traces in some of the world's oldest cultures.

Hempseed use was widespread across temperate Eurasia early on, and after about 2000 B.P. in other major regions such as Africa. For example, Suto tribal women "grind up [hemp] seeds with bread or mealie pap [porridge] and give it to children when they are being weaned."

In the Czech Republic has been found hemp rope dated to 26900 B.C., and Hempseed in a well dated to the Middle Ages. These seeds indicate cultivation and use of Hempseed for food. In the Medieval period in Prague Hempseed was added to gruel. Hempseed was found in a tomb dated to the 5th century B.C. in Brandenburg, northern Germany.



In the Zemaitija region, boiled potatoes were served with Hempseed. In Estonia, Hempseed was traditionally used in preparations of butter, milk, and porridge and in Finland, Hempseed was consumed as a ground meal mixed with barley, buckwheat, and salt. This preparation served as a "dipping food for boiled turnip roots." When cereal meal was in short supply, Finns sometimes added "hempen meal" with flour to produce bread. Oil derived from pressed Hempseed was an important part of traditional societies in Finland, Russia, Poland, and other Eastern European countries.

Hempseed is also revered in ritual settings. On March 25 Lithuanians traditionally celebrated Stork Day with a feast dedicated to remembrance of Angel Gabriel's announcement that heaven chose Mary to be the Mother of Jesus. In the 19th century, Samogitians (a Lithuanian ethnic group) prepared special foods for this feast day, including pastries made of Hempseed and *krupninkas* (spiced honey liquor made with sweet vodka seasoned by herbal mixtures). Throughout Lithuania eating these ritual pastries and special breads baked from a mixture of many grains, and including Hempseed, assured an abundant harvest.

Peasants planted hempseed on saint's days. Eating Hempseed porridge, they were more resistant to disease than the nobility, who considered Hempseed a food of the lower classes. Monks were sustained by three meals a day of Hempseed in the form of porridge, gruel, or soup.

Hempseed was an abundant food of the rural poor in 15th century Europe because of increased hemp cultivation for fibre to supply colonial ships with sails and rope. The seed by-product came from the traditional hemp cultivation zones in northeastern Europe, where it was made into vegetable oil, hempseed meal, and a smooth paste similar to peanut butter.

In the Baltic nation of Latvia, hempseed is traditionally included in festival foods on St. John's Day. A soup made from Hempseed, called *semientiatka*, is eaten ritually on Christmas Eve in Poland, Lithuania, Latvia, and Ukraine. Southern Slavs offered *Cannabis* seed at weddings to ensure happiness and wealth. In both Latvia and Ukraine, a dish made of Hempseed was prepared for Three Kings Day on January 6.



A Lithuanian tale related to the beginning of Lent concerns the epic battle of Gavenas and Mesinas in the threshing barn at midnight between Shrove Tuesday and Ash Wednesday, 40 days before Easter. The protagonist Gavenas symbolized Hemp, while Mesinas represented bacon or ham. During the Lenten fast, foods were prepared with Hempseed oil since animal fat and meat were forbidden. Thus the beginning of Lent represented the victory of Gavenas and the defeat of Mesinas. In another Lithuanian tradition, before Candlemas on February 2, the maidens pooled their money and bought liquor, which they boiled together with poppies, Hempseed, and honey; roughly symbolizing happiness, well-being, and love.

Hempseed butter is typically spread on toast or rye bread, or may be used as an ingredient in various recipes. Chefs use Hempseed butter as an ingredient in many local dishes, as it is said to impart a pleasant accent to the overall flavor.

The first literary evidence that ancient Greeks consumed Hempseed appeared around the middle of the 4th century B.C. During this time at special gatherings were eaten *kannabides*, which translates as "a confection of *Cannabis* seeds and honey." Several centuries later, the famous Greek physician Claudius Galen tells us that cakes containing Hempseed were still being eaten. A dish was served after the main meal in the form of "small cakes" at banquets and was popular among the Romans of his time. The Greek physician Dioscorides (40-90 A.D.) describes and extols the benefits of Hempseed, including the use for food.

Hempseed dated to the Gallo-Roman period in northern France found the seeds among stored food plants in the burnt attic of a granary building dated to the end of the 2nd century A.D. Rabelais praises Hempseed in his book *The Histories of Gargantua and Pantagruel* (1534) saying that Hemp is the king of the vegetable world and that Hempseed is part of any great meal.

Many Hempseeds from Roman times up through the Middle Ages have been recovered from sites in the British Isles, suggesting Hemp began to be cultivated in this region in Anglo-Saxon times.

Hemp has been discovered in iron age contexts in western Europe, such as a Celtic burial site in Germany. Other Celtic evidence of *Cannabis* is evidenced by reports of hemp fibres from objects recovered at St. Andrews in Scotland from 800 B.C.

Cannabis may also have been a sacred plant of the Druids. According to ancient literature the most-prized plant of the Gallic Druids was known under the name *verbena*, and this has generally been interpreted as the plant, *vervain*. But due to the fact vervain fills little of the ancient attributes of the magical verbena, its identity has been called into question. "*An Old High German Gloss*" stated that "*vervain, which is called hanf*" [*Hanf* is German for Hemp]. Thus the Gauls used the Germanic word for Hemp to refer to the magical "*vervain*" of the Druids. There is also evidence for a Gallic-Celtic use of Hemp as a fumigant.

The presence of Hemp in Italy during Roman times is supported by the discovery of nine Hempseeds found along with many seeds of other useful plants at the bottom of a storage vat near Pompeii. Ancient Hempseed has also been recovered from sites in Italy that date to the sixth to seventh centuries A.D. In addition, ancient *Cannabis* seeds were discovered in northern Italy and dated to the 10th to 12th centuries A.D. Fibre as old as 11,500 years has been found next to Lake Albano, near Rome, Italy. Chisled in marble over a building entrance in Milan is a saying translated as "*Hemp for strength.*"



It was so popular in Italy that the oldest cookbook ever written (known as "*De Honest Voluptate Et Valetudine*" *Of Honest Voluptuousness and Health*, 1465), contains a recipe calling for *Cannabis*/hemp flower products. It is even decarbed, in "nard oil" (spikenard or muskroot, aromatic amber-colored essential oil derived from *Nardostachys jatamansi*, a flowering plant of the valerian family). Written in Latin by Bartolomeo Platina, it was largely a translation of recipes by da Como from his *Libro de Arte Coquinaria* (1465). The book was frequently reprinted over the next century, and translated in French, German and Italian.

The English Translation of the recipe is:

*"To make cannabis yourself known as flax for thread [the fibre hemp variety]
Use a mallet to crush clods [flowers or buds] collect after good harvest
Taken as food in wine or cake
Add cannabis to nard oil in an iron pot
Crush together over some heat [thus decarboxylated to convert any nonpsychoactive
THCa to psychoactive THC, and CBDA to CBD] until juice
A health drink of cannabis nectar
Carefully treat food and divide for the stomach and the head
finally remember everything in excess may be harmful or criminal."*

Cultivation of Hemp was widespread by the 19th century in Canada, and prospective migrants were offered free plots of land and Hemp seed to cultivate as an incentive. The Doukhobors, a sect of spiritual Christians which arose in 18th century Russia, migrated to Canada in the late-19th century to escape persecution. They brought their traditional uses to the newly-established territories along with the seeds themselves, and even after *Cannabis* was outlawed in 1923 it was widely used in soups, cereals and other foods. In the New World, they resumed growing and using hemp for food and fibre before and after prohibition.

Hemp was a major economic crop in the American colonies because of the demand for rope. Growing was mandatory and taxes could be paid in hemp. In "*Hemp: American History Revisited - The Plant with a Divided History*" is the mention that colonial Americans brewed Hemp flowers as a tea.

But eating or drinking various forms of *Cannabis* products was not the sole method of consumption. "*I believe that the acceptance of tobacco in Europe was*

undoubtedly enhanced by European familiarity with smoking hemp. Tobacco was, in many ways a counterpart to hemp, all the familiar features were there. Brought to Spain from the New World as a medicinal plant, it came to be regarded as a cure-all; the Amerindian ritual use of tobacco may also have been known, and eventually also its psychoactive qualities. Even the use of pipes for smoking tobacco in the Near East was adopted from the water-pipes used for smoking hemp. Like hemp, tobacco is chewed, sniffed and smoked. Perhaps the spread of tobacco was so rapid and overwhelming in the Old World, because a receptive ground had been laid by the traditional folk uses of hemp.” S. Benet, 1975.

Pre-dating the U.S. Food and Drug Administration by almost 100 years is the "safe, efficacious cannabinoid product grown and made in the U.S. in a consumer package recommended and dispensed by licensed pharmacists" model, so-called *patent medicines*. Maltos, a Scandinavian drink formulated with Hemp, was sold in the US in 1895.



In 1937 the general counsel of the National Institute of Oilseed Products testified before the Ways and Means committee of the U.S. House of Representatives studying Marijuana prohibition. Hempseed was known as a primary survival food during times of famine in China, Europe, and Australia. Near the end of World War II, hempseed saved multitudes of starving people in northern China. He referred to its significance:



“Hempseed... is used in all the Oriental nations and also in a part of Russia as food. It is grown in their fields and used as oatmeal. Millions of people every day are using hempseed in the Orient as food. They have been doing this for many generations, especially in periods of famine.” He also claimed that

Hempseed was the finest bird seed available.

The California company Sharon's Finest introduced many commercial Hempseed products into international distribution, including Hemp Hummus (containing Hemp flowers, Hemp stalk, and Hempseed), HempRella cheese alternative, Hempter Burger and Hempseed oil. All are pre-DSHEA, being introduced before the October 1994 cut-off date.



Conclusion

Today in the U.S. we continue to see a denial of the potential and safety of cannabinoids despite Congressional intent, 90% public support, and 81 years of unconstitutionality. It is **not** actually *prohibited* as an illegal drug, rather it is *permitted* as a controlled substance. Thus the federal government retains a monopoly with thousands of patents issued to itself and its friends ([DEA Licensees](#)), [even actually growing and selling Cannabis to researchers](#), a mockery of equal protection under the law and social, academic, and medical justice.

Few factors have degraded respect for the government, police, and the rule of law as much as *Cannabis* prohibition. The harms of enforcement of Marijuana laws **far exceed** even the exaggerated potential harms of the plant, restricting patient and doctor access to the safe, efficacious medicine of their choice. Human rights and public health are diminished when research into an efficacious and ancient plant is reduced by unnecessary government interference.

"The prestige of government has undoubtedly been lowered considerably by the Prohibition law. For nothing is more destructive of respect for the government and the law of the land than passing laws which cannot be enforced." — Albert Einstein

Humans and the animals humans eat have been ingesting cannabinoids for many thousands of years, in cultures around the world, with no toxicity. Therefore, the question should not be as though CBD and the other cannabinoids were a new substance for humans and animals to consume, or that there's some question about safety, or that they should be Scheduled, Novel, or Controlled.

Therefore new regulations should not be treat CBD and the other cannabinoids as though they were a **new** substance for humans and animals to consume, or that there's some question as to safety or toxicity, or that they should be Scheduled, Novel, or Controlled.

Rather, we should recognize that consumption of Hempseed and thus cannabinoids, trace and not, is ancient and therefore worthy of **Grandfathering** into food and drug regulations as a food pre-existing regulation for millennia, same as rice or millet. After more than 12.000 years with no regulation, it constitutes the world's longest, broadest, and largest toxicology study, with not one death.

###

- Abel, E. 1980. *Marijuana: The First Twelve Thousand Years*.
- Accorsi, C., et al. 1998. "Evidence of the cultivation of Cannabis in Roman Times in the Holocene Pollen Diagrams of Albano and Nemi Lakes (Central Italy)." *Proceedings of the VII International Congress of Ecology—INTECOL*, Florence, Italy, July.
- Accorsi, C., et al. 1998a. "Analisi pollinica di saggio per l'insediamento palafitticolo di Cànar-Rovigo, 680–700 (Antica Età del Bronzo)." In *Cànar di San Pietro Polesine. Ricerche archeoambientali sul sito palafitticolo. Padusa Quaderni*, 2, edited by C. Balista and P. Bellintani, 131–49. Rovigo, Italy: Centro Polesano di Studi Storici Archeologici ed Etnografici [in Italian].
- Ahokas, H. 2002. "Cultivation of Brassica Species and Cannabis by Ancient Finnic Peoples, Traced by Linguistic, Historical and Ethnological Data; Revision of Brassica Napus as B. Radice-Rapi." *Acta Botanica Fennica* 172:1–32.
- Ahokas, H. 2003. "Major Discharge and Floods of the Kymi River (Kymijoki) over the Salpausselkä lesker to Coastal South Finland Traced by 14C datings, Unequal Land Upeaval." *Oral Tradition and Onomastics*.
- Ambrasevicius, R., ed. 1996. "[Lithuanian Roots: An Overview of Lithuanian Traditional Culture](#)." Lithuanian Folk Culture Center.
- Ames, F. 1958. "A Clinical and Metabolic Study of Acute Intoxication with Cannabis Sativa." *Journal of Mental Science* 104:972–99.
- Arobba, D. 2001. "Macroresti botanici rinvenuti nei livelli tardoantichi e medievali del Battistero della Cattedrale di Ventimiglia." *Rivista Studi Liguri* 66:197–212.
- Arobba, D., et al. 2003. "Ricerche archeobotaniche nell'abitato medievale di Finalborgo (Savona): primi risultati." *Archeologia Medievale* 30:247–58.
- Bandini Mazzanti, M., et al. 2005. "Plant Use in a City in Northern Italy during the Late Mediaeval and Renaissance Periods: Results of the Archaeobotanical Investigation of 'The Mirror Pit' (14th–15th century A.D.) in Ferrara." *Vegetation History and Archaeobotany* 14 (4): 442–52.
- Barber, E. 1999. *The Mummies of Urumchi*.
- Barber, K., et al. 1987. "Late Quarternary Palaeoecology of the Severn Basin." *Palaeohydrology in Practice*, edited by K. J. Gregory, J. Lewin, and J. B. Thornes, 217–50.
- Beales, P. 1980. "The Late Devensian and Flandrian Vegetational History of Crose Mere, Shropshire." *New Phytologist* 85:133–61.
- Benes, J. 1996. "Archeologický a archeobotanický výzkum pozdnestredovekého vodovodního díla z Prachatic" [Archeological and archaeobotanical studies of late medieval water pipe works at Prachatic]. *Zlatá stezka* 3:158–81.
- Benet, S. [S. Benatowa]. 1975. "Early Diffusion and Folk Uses of Hemp." *Cannabis and Culture*, edited by V. Rubin, 39–49.
- Bennett, C, et al. 1995. *Tree of Life: Marijuana in Magic and Religion*.

- Bennett, C. 1999. "Hemp Seed, the Royal Grain." Cannabis Culture Magazine January.
- Bennett, C. 2001. Sex, Drugs, Violence and the Bible.
- Bennett, C. 2010. Cannabis and the Soma Solution.
- Bennett, C. 2018. Liber 420: Cannabis, Magickal Herbs and the Occult.
- Booth, M. 2003. Cannabis: A History.
- Bosy T., et al. 2000. Consumption and quantitation of delta9-tetrahydrocannabinol in commercially available hemp seed oil products. J Anal Toxicol. 2000 Oct;24(7):562-6. <https://goo.gl/u6NgVi>
- Butrica, J. 2006. "The Medicinal Use of Cannabis among the Greeks and Romans." Handbook of Cannabis Therapeutics: From Bench to Bedside, edited by Russo, Ethan B. and Franjo Grotenhermen, 23–42.
- Chang, K. 1979. Food in Chinese Culture: Anthropological and Historical Perspectives. New
- Chopra, R. 1958. Indigenous Drugs of India. 2nd ed.
- Clarke, R. 2007. "Traditional Cannabis Cultivation in Darchula District, Nepal—Seed, Resin and Textiles." Journal of Industrial Hemp.
- Clarke, R., et al. 2013. Cannabis Evolution and Ethnobotany.
- Clarke, R., et al. 2016. "[Introduction to the Special Issue on Cannabis](#)." Critical Reviews in Plant Sciences, 35:5-6, 289-292.
- Clarke, R., et al. 2016. "[Cannabis Domestication, Breeding History, Present-day Genetic Diversity, and Future Prospects](#)." Critical Reviews in Plant Sciences, 35:5-6, 293-327.
- Clarke, R., et al. 2017. "[Current and Future Needs and Applications for Cannabis](#)." Critical Reviews in Plant Sciences, 35:5-6, 425-426.
- Costantino A., et al. 1997. "[Hemp oil ingestion causes positive urine tests for delta 9-tetrahydrocannabinol carboxylic acid](#)." J Anal Toxicol. 1997 Oct; 21(6): 482-5.
- Damania, A. 1998. "Diversity of Major Cultivated Plants Domesticated in the Near East." In The Origins of Agriculture and Crop Domestication, edited by A. B. Damania, J. Valkoun, G. Willcox, and C. O. Qualset, 51–64.
- Deferne, J., et al. 1996. "Hemp Seed Oil: A Source of Valuable Essential Fatty Acids." Journal of the International Hemp Association 3 (1): 1, 4–7.
- Deitch, R. 2003. Hemp: American History Revisited - The Plant with a Divided History.
- Dembinska, M. 1999. Food and Drink in Medieval Poland. Translated by M. Thomas with revision by W. W. Weaver.
- Doolittle, J. 1966. Social Life of the Chinese: Religious, Governmental, Educational, and Business Customs and Opinion.
- Du Toit, B. 2013. Man and Cannabis in Africa: A Study of Diffusion.

- EISohly, M., et al. 2015. "[Isolation and Pharmacological Evaluation of Minor Cannabinoids from High-Potency Cannabis sativa.](#)" J. Nat. Prod., 78 (6).
- EISohly, M., et al. 2017. Cannabis sativa L. - Botany and Biotechnology.
- Forbes, R. 1964. Studies in Ancient Technology. Vol. 4. 2nd. ed.
- Ghildiyal, R. 2005. Garhwali Cuisine, Savvy Cook Book, April.
- Greimas, A. 1992. Of Gods and Men—Studies in Lithuanian Mythology.
- Grey, E. 1928. The food of Japan.
- Gustafson R., et al. 2003. "[Urinary cannabinoid detection times after controlled oral administration of delta9-tetrahydrocannabinol to humans.](#)" Clin Chem. 2003 Jul; 49(7): 1114-24.
- Hai, H., et al. 1994. Das Hanf-Handbuch.
- Hall, A., et al. 1980. "Environmental Evidence from Roman Deposits in Skeldergate." In The Archeology of York 14(3):101–56.
- Hayatghaibi, H., et al. 2007. "Hypercholesterolemic Effect of Drug-Type Cannabis Sativa L. Seed (Marijuana Seed) in Guinea Pig." Pakistan Journal of Nutrition 6 (1): 59–62.
- HIA v DEA. 2004. [Ninth Circuit Court.](#)
- Hillig, K., et al. 2004. A Chemotaxonomic Analysis Of Cannabinoid Variation In Cannabis (Cannabaceae).
- Holler J., et al. 2008. "[Delta9-tetrahydrocannabinol content of commercially available hemp products.](#)" J Anal Toxicol. Jul-Aug; 32(6): 428-32.
- Hong, S., et al. 1996. "Taxonomic Studies of Cannabis in China." Journal of the International Hemp Association 3 (2): 55–60.
- Huang, H. 2000. Science and Civilization in China. Volume 6: Biology and Biological Technology. Part V: Fermentations and Food Science. Cambridge University.
- Jankovská, V. 1996. "Pylová analýza uloženin pozdne stedovkého vodovodu z Prachatic" (Pollen analysis of deposits from the late medieval water supply at Prachatice). Zlatá Stezka 3:182–88.
- Jianying, H. 2004. "Ambrosia of the Ancients." China Today.
- Khorikhin, V. 2001. "The Late Seventeenth-Century Tsar's Copy of Domostroi: A Problem of Origins." Russian Studies in History 40 (1): 75–93.
- Koenig, F., ed. 1893. Chemie der menschlichen Nahrungs- und Genussmittel. Zweiter Theil. Ihre Herstellung, Zusammensetzung und Beschaffenheit, ihre Verfaelschungen und deren Nachweis.
- Kokassaar, U. 2003. "Kanepiseemnetest tehti vanasti jurssi, piima ja putru" [Hemp seeds were used for making hemp butter, milk and porridge].
- Kolesov, V. V. 2001. Domostroi as a Work of Medieval Culture. Russian Studies in History 40 (1):6–74.
- Korber-Grohne, U. 1987. Nutzpflanzen in Deutschland.

- Kudo, Y., et al. 2009. "Radiocarbon Dating of the Fossil Hemp Fruits in the Earliest Jomon Period from the Okinoshima Site, Chiba, Japan." *Japanese Journal of Historical Botany* 17, 27–32.
- Laitinen, E. 1996. "History of Hemp in Finland." Translated to English by Anita Hemmilä. *Journal of the International Hemp Association* 3 (1): 34–37. Originally published 1995 in Finnish as "Hampun Historia Soumessa" in *Hankasalmen hamppuseminaari, Hankasalmen kunnan monistamo*, edited by U. Kolehmainen, J. C. Callaway, and A. M. Hemmilä.
- Leson G., et al. 2001. "[Evaluating the impact of hemp food consumption on workplace drug tests.](#)" *J Anal Toxicol.* 2001 Nov-Dec; 25(8): 691-8.
- Li, H. 1974. "The Origin and Use of Cannabis in Eastern Asia Linguistic-Cultural Implications." *Economic Botany*, Vol. 28, No. 3 (Jul. - Sep., 1974), pp. 293-301.
- Low, I. 1924–34. *Die Flora Der Juden*.
- Mack, G., et al. 2005. *Food Culture in Russia and Central Asia*.
- Mallory, et al. 1997. *Encyclopedia of Indo-European Culture*.
- Matterne, V., J.-H. Yvinec, D. Gemehl, and C. Riquier. 1998. "Stockage de plantes alimentaires et infestation par les insectes dans un grenier incendie de la fin du 2e siecle apres J.-C. a Amiens (Somme)." *Rev Archéol Picardie* 3 (4): 93–122.
- McKenny, M. 1939. *Birds in the Garden*.
- McPartland J., et al. 2004. "[The evolution of Cannabis and coevolution with the cannabinoid receptor—a hypothesis.](#)" *The Medicinal Use of Cannabis and Cannabinoids*.
- McPartland, J. et al. 2018. "[Cannabis sativa is indigenous to Europe and cultivation began during the Copper or Bronze age: a probabilistic synthesis of fossil pollen studies.](#)" *Veget Hist Archaeobot.*
- Mechtler, K., et al. Undated. "Variations of D9-THC Content in Single Plants of Hemp Varieties." Federal office and research centre of agriculture, Austria.
- Mercuri, A., et al. 1999. "Seeds and Fruits from the Town of Ferrara (Emilia Romagna—Northern Italy) in the Middle Age (10–12th Century A.D.)." *Archeologia e Ambiente*, edited by F. Lenzi, 231–36.
- Mitchell, J. 2014. "[Cannabis: the fabric of Japan.](#)" *The Japan Times*, online.
- Okazaki, H., et al. 2011. "Early Holocene Coastal Environment Change Inferred from Deposits at Okinoshima Archeological Site, Boso Peninsula, Central Japan." *Quaternary International* 230:87–94.
- Olson, D. 1997. "Hemp Culture in Japan." *Journal of the International Hemp Association* 4 (1).
- Opravil, E. 1979. "Hedera helix L. aus der mittelalterlichen Stadt Most (Tschechoslowakei)." In *Veröffentlich mit Mittelen des Landschaftsverbandes*

- Rheinland, edited by M. Ludwig. Bonn, Germany, 209–15: Rheinisches Landesmuseum.
- Opravil, E. 1983. "Z historie šíření konope seté (*Cannabis sativa* L.)" [From the history of hemp cultivation]. [In Czech.] *Archeologické rozhledy* 35:206–13.
- Pouncy, C. J., ed. 1994. *The Domostroi: Rules for Russian Households in the Time of Ivan the Terrible*.
- Ratsch, C. 2001. *Marijuana Medicine: A World Tour of the Healing and Visionary Powers of Cannabis*.
- Rein, J. 1889. *The Industries of Japan*.
- Reininger, W. 1941. "Zur Geschichte des Haschischgenusses." *Ciba Zeitschrift* 7 (80): 2765–88.
- Reininger, W. 1967. *Remnants from Prehistoric Times*.
- Robinson, R. 1996. *The Great Book of Hemp*.
- Rose, R., et al. 2000. *The HempNut Health and Cookbook*.
- Rose, R., et al. 2004. *The HempNut Cookbook*.
- Rubin, et al. 1975. *Cannabis and Culture*.
- Russo, E., et al. 2008. "Phytochemical and genetic analyses of ancient cannabis from Central Asia." *Journal of Experimental Botany*, Vol. 59, No. 15, pp. 4171–4182.
- Russo, E. 2011. "Taming THC: potential cannabis synergy and phytocannabinoid-terpenoid entourage effects." *Br J Pharmacol*. 2011 Aug; 163(7):1344-64.
- Russo, E., et al. 2017. "Cannabis Pharmacology: The Usual Suspects and a Few Promising Leads." *Advances in Pharmacology*.
- Schultes, R. 1970. "Random Thoughts and Queries on the Botany of Cannabis." *The Botany and Chemistry of Cannabis*, edited by C. R. Joyce and S. H. Curry, 11–38.
- Schultes, R. 1973. "Man and Marijuana," *Natural History*, Vol. LXXXII, No. 7, 1973.
- Seydibeyoglu, M., et al. 2017. "[Effect of Extraction Methods on the Properties of *Althea Officinalis* L. Fibers](#)." *J. Natural Fibers* 15(9):1-12.
- Shen-nung. 2000 B.C. *Pn-ts'ao Ching*.
- Sherratt, A. 1995. "Sacred and profane substances: the ritual use of narcotics in later Neolithic Europe." *Sacred and profane: proceedings of a conference on archaeology, ritual and religion*.
- Shurtleff, W., et al. 2013. *History of Tofu and Tofu Products (965 CE to 2013)*.
- Simpson, B. et al. 1986. "Economic Botany: Plants in Our World." *Brittonia*, Vol. 38, No. 3.
- Small, E., et al. 2002. "Hemp: A New Crop with New Uses for North America." *Trends in New Crops and New Uses*, edited by J. Janick and A. Whipkey, 284–326.

- Small, E., et al. 1975. "The Evolution of Cannabinoid Phenotypes in Cannabis." *Economic Botany* 29 (3): 219–32.
- Smith, R., et al. 1984. *Bread and Salt: A Social and Economic History of Food and Drink in Russia*.
- Sneader, W. 2005. *Drug Discovery - A History*.
- Stein, D. 2009. "Winged Disks and Sacred Trees at Nuzi: An Altered Perspective on Two Imperial Motifs." *Studies on the Civilization and Culture of Nuzi and the Hurrians*.
- Stein, D. 2017. "The Role of Stimulants in Early Near Eastern Society: Insights through Artifacts and Texts." *At the Dawn of History: Ancient Near Eastern Studies in Honour of J. N. Postgate*.
- Sucha, R., et al. 1996. "Výsledky archeobotanické makrozbytkové analýzy stredovekeho vodovodu v Prachaticích" (Results of archaeobotanical macrofossil analyses from medieval water pipes in Prachatice).
- Unknown. 1600 B.C. Xia Xiao Zheng.
- Unknown. 1200 B.C. Shi Ching.
- Unknown. 300 B.C. Chou Li.
- Unknown. 300 B.C. Li Chi.
- Unknown. 1596. Pen Ts'ao Kang Mu.
- Vavilov, N. 1926 Tzentry proiskhozhdenia kulturnksh rastenii [Centers of origin of domesticated plants]. *Trudy no Prile Bot. I. Ser. XVI*: 109.
- Watt, G. 1908. *Commercial Products of India*.
- Winton, A., et al. 1932. *The structure and composition of foods: Vol. I. Cereals, starch, oil seeds, nuts, oils, forage plants*.
- Zajaczkowa, J. 2002. "Hemp and Nettle: Two Food/Fibre/Medical Plants in Use in Eastern Europe." *Slovo, the Newsletter of the Slavic Interest Group*.

--END--

Contact:

Richard Rose

Click to send an email: rr@richardrose.com

Click for Skype: [richardrose1956](https://www.skype.com/user/richardrose1956)

Click for Richard Rose on [Twitter](https://twitter.com/richardrose1956).

Click for Richard Rose on [LinkedIn](https://www.linkedin.com/in/richardrose1956).

Click for Richard Rose on [Instagram](https://www.instagram.com/richardrose1956).

Click for the [Medicinal Hemp Association](https://www.facebook.com/medicinalhempassociation) on Facebook.

Click for [Hemp Flower Products Association](https://www.facebook.com/hempflowerproductsassociation) on Facebook.

Click for [Richard Rose](https://www.facebook.com/richardrose1956) public page on Facebook.

Does cannabis and its herbal extract have nutritional value? (pgs 3 – 5 Historical and Present Use)

Written by Jaskarn Nottay

Historical and Present Use:

It is safe to say that the historical data surrounding the use of cannabis and its subsequent products (oils, teas, extracts, seeds and so on) have been used for thousands of years across many parts of the world, predating any modern stereotypes and conclusions arising from social and political rhetoric. Stemming from central Asia the earliest known recording of its use in therapeutic extracts is of China's earliest pharmacologist, Shen Nung whom consumed the plant in various forms as experimentation into not only the nutritional value but medicinal value of the plant. Ancient history records cannabis being searched for ropes, textiles, foods and pharmaceuticals. Some varieties were not fit for fabric and rope, but their sticky psychotropic flowers had a better purpose. The plant was typically harvested and either eaten, juiced or smoked. Wine infusion, water extraction and fumigating the dried flower were the most common methods of ingestion. Recent archaeological evidence and surviving documents gives us a window into the historical use of cannabis.

In Mesopotamia, whose Assyrian and Babylonian culture left behind a large cache of cuneiform clay tablets, dated between 1,000 and 500 BCE, some describing medical and religious practices. The cuneiform word for cannabis was *azullu*. It was used for treating depression, as well as in different herbal recipes. Under the name *kunubu*, it was one of the ingredients in their religious incense, which they traded with Egypt and Judaea. The Mesopotamians were likely importing cannabis from Bactria (modern-day Afghanistan and Turkmenistan), where Zoroastrian priests prepared the plant as an ingredient in their religious drinks, called *Haoma* (Vedic: Soma). Zoroastrianism, one of the oldest religions known, flourished among pre-Iranian cultures around the 7th century BCE, although its roots go back to the second millennium BCE.

In the Kara Kum desert, near the Hindu Kush mountains, a Zoroastrian temple was excavated in the ancient city of Margiana. The city was an oasis along the Silk Road, an informal trade route across Asia and China. Cannabis was traded along the mountain routes of northern Asia. Cannabis and its drinks were exported from Margiana into India and other places, possibly even Egypt and Judaea. Scientists found residue of cannabis, ephedra and opium poppy in different pottery at Margiana, dated to about 1,000 BCE.

In ancient India, cannabis was called *bhang* and *ganjha* (twisted rope). Their pharmaceutical texts (ca. 1600 BCE) prescribe the plant for treating anxiety, among other common ailments. It was likely an ingredient in Soma (drink for consumption) and appeared in their Vedic texts.

Cannabis usage in Egypt is first mentioned during the New Kingdom (ca. 2350 BCE). The hieroglyphic symbol *shemshemet* indicated cannabis and hemp. Other terms were employed in Egyptian medicine. It was used in their pharmacy up to the 1800s CE.

In ancient Judaea, cannabis appears as one of the ingredients in holy incense and anointing oil under the name *kaneh bosm* in Exodus (30:22-25), dating to 9th or 8th century BCE. The *Talmud*, another Hebrew text, contains a recipe for wine infused with cannabis and myrrh.

There are many references to cannabis in the writings of the Roman doctor Galen (2nd century CE). He writes in his *On the Properties of Foods* that it was cooked into desserts and consumed as a food source.

Recent studies in Israel have shown that our own human bodies have an endogenous cannabinoid system which is used to control cellular functionality and this is impacted from the direct consumption of naturally occurring phytocannabinoids and other phytochemicals found within the cannabis plant. Utilising the compounds as dietary sources have shown to have positive effects to aid in a broad spectrum of nutritional values – similar to those values found within other food sources and extracts from foods.

Conclusion:

Humans and both animals, which humans also consume, have been ingesting cannabinoids for thousands of years within various parts of the world for various reasons, all without toxicity with zero recorded deaths as a result of its consumption. Cannabinoids and naturally occurring phytochemicals found within the plant or plant products such as cannabis extracts should not be considered new substances for humans, especially with the historical data proving otherwise. Current regulations should consider cannabinoids derived from the Cannabis (particularly Cannabis Sativa L.) genome as ancient historic and safe sources of nutrition for both human and animal consumption and as a result should not be scheduled, novel or controlled substances.

Reference:

Andre, C. M., Hausman, J., & Guerriero, G. (2016). Cannabis sativa: The Plant of the Thousand and One Molecules. *Frontiers in Plant Science*, 7. doi:10.3389/fpls.2016.00019

Audu B.S, Ofojekw P.C, Ujah A, Ajima M.N.O. (2014). Phytochemical, proximate composition, amino acid profile and characterization of Marijuana (Cannabis sativa L.). *The Journal of Phytopharmacology*. 3(1). 35-43. Retrieved from the web.

Bang-Tian Chen, Wei-Xi Li, Rong-Rong He, Yi-Fang Li, Bun Tsoi, Yu-Jia Zhai, and Hiroshi Kurihara. (2012). Anti-Inflammatory Effects of a Polyphenols-Rich Extract from Tea (*Camellia sinensis*) Flowers in Acute and Chronic Mice Models. *Oxidative Medicine and Cellular Longevity*. Vol 2012. doi:10.1155/2012/537923

Callaway, J. C. (2004). Hempseed as a nutritional resource: An overview. *Euphytica*, 140(1-2), 65-72. doi:10.1007/s10681-004-4811-6

Maria E. Lima, Ana C. Colpo, Willian G. Salgueiro, Guilherme E. Sardinha, Daiana S. Ávila and Vanderlei Folmer. (2014). *Ilex paraguariensis* Extract Increases Lifespan and Protects Against the Toxic Effects Caused by Paraquat in *Caenorhabditis elegans*. *Int. J. Environ. Res. Public Health*. 11, 10091-10104; doi:10.3390/ijerph111010091

USDA National Agricultural Library. (2016, March 11). hemp - Food and Nutrition Information Center. Retrieved March 12, 2016



EIHA presentation on Hemp Extracts

Historical evidences

May 2019

Who is EIHA and who we represent



- Originally formed almost 19 years ago; **officially founded in 2005**.
Based in Brussels and Cologne
- The **only pan-European consortium** in the industrial hemp sector
- Membership encompasses **25 EU states** and 12 additional countries including members in North America and APAC; total membership 200, primarily farmers, processors and manufacturers.
- **Policies:** CAP reform, Hemp extracts/NF regulation, THC limits in feed and food, Life Cycle Assessment of hemp materials, CO2 impacts, environment concerns, cosmetics

Evolution of consumers life-style

- Before using so called medicines as we know it, humans balanced their health with **natural foods** (vegetables):
→ plants (leaves and flowers), seeds, fruits, grains and nuts
- After so many decades of highly **processed food**, consumers are increasingly attracted by what is "**natural**"
- **Consumers trends:** physical activity, balanced and healthy diet enhanced with functional food, non-allergic ingredients and food supplements → Healthy life-style model
- To maintain "**homeostasis**" in challenging modern conditions consumers seek out food supplements of botanical origin

EU Institution approach to this shift in consumers' behavior

- 2008 Council of Europe: one of our society's main characteristic is people's growing desire to **improve** one's health condition, **reduce** the risk of disease and try to find the best possible **quality of life**
→ education's improvement/increased general knowledge and awareness
- **Homeostasis:** status of a person whose physiological parameters function within the limits considered normal – optimal balance
- **Food supplements' aim:** support, maintain or optimize the normal physiological condition = balance (homeostasis)
- **Medicines' aim:** bring back physiological functions from critical condition into normality (homeostasis)

What are hemp extracts? (focus on Cannabidiol)

- **Definition** of hemp extracts: from latin "*extrahere*" = draw out, remove) means any method that uses a (solid, liquid or gaseous) extraction agent to remove one or several components from a substance mixture (of solid, liquid or gaseous substances)
- Coffee → Coffee extract / tea → tea extract
- Cannabidiol (CBD) is the **most abundant cannabinoid naturally presents** in the industrial hemp plant and their extracts
 - Non psychotropic, non-intoxicating, not addictive, very well tolerated by humans even in large doses
- Hemp extracts are used in food/supplements for their health maintaining properties

How hemp extracts are made from hemp plant?

1. **Cold pressing:** the most simple extract from hemp fruiting tops is hempseed oil
 2. **Ethanol extraction:** using alcohol to whole fruiting tops (infructescence) and leaves
 3. **CO2 extraction:** using Carbon Dioxide to whole fruiting tops (infructescences) and leaves
 4. **Fat extraction:** can easily be used for home-made preparations
- Moreover...
 - Extract can be left raw or decarboxylated and added to consumer products without further processing
 - Extracts are usually winterized in order to remove plant waxes
 - Extract can be further distilled/rectified in order to remove unwanted elements such as chlorophyll

NF Catalogue last change

- On the 20th of January, 2019 MSs and COM agreed on a **new wording** for the NF catalogue.
- In item Cannabis sativa L:
 - hemp seeds and their derivatives are not assessed as NF
 - leaves and inflorescence are left in a grey zone
- Moreover, a new item “Cannabinoids” was introduced into NF catalogue → **hemp extracts are considered NF**
- Conclusion: major confusion regarding interpretations and negative impact on the hemp sector (regarding investments, level playing field)

EIHA already demonstrated in October 2018

- Food Business Operators in EU have been acting in GOOD FAITH based on guidance represented by the information provided in Novel Food Catalogue → investments
- Use of hemp leaves and inflorescence have NOT BEEN discriminated in listing for item Cannabis sativa
- Catalogue item Cannabidiol has provide a clear guidance: products with “natural” levels of CBD have been considered “traditional”
- **Only traditional propagating practices** are used for processing hemp inflorescence
- Such practices include pressing or solvent extraction
- Presence of cannabinoids in human diet is also well documented across middle ages to the modern age. We will demonstrate it on 14 examples.

Traditional cannabinoid-rich products Evidence #1: ITALY



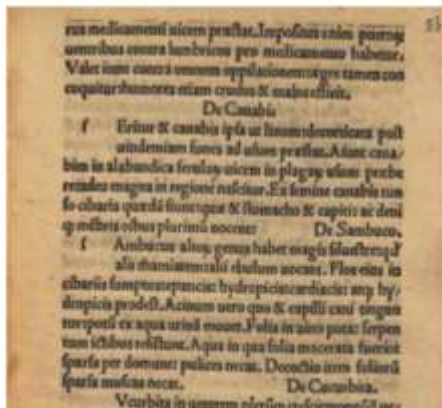
Inscriptions on the Tower of the Escape, Bologna

Constructed from 1220, the vault of the Canton de 'Fiori carries the following Latin inscription:

*"Panis Vita / Canabis Protectio / Vinum Laetitia" -
"Bread is Life / Cannabis is Protection* / Wine is Joy"*
*Protection = homeostasis

Traditional cannabinoid-rich products Evidence #2: ITALY

Use of aerial parts of the hemp plant within European perspective is CLEARLY demonstrated by two citations from [one of the oldest] cookbooks **De Honesta Voluptate Et Valetudine**, published in 1475 AD by Bartolommeo de Sacchi Platina



On Canabis.

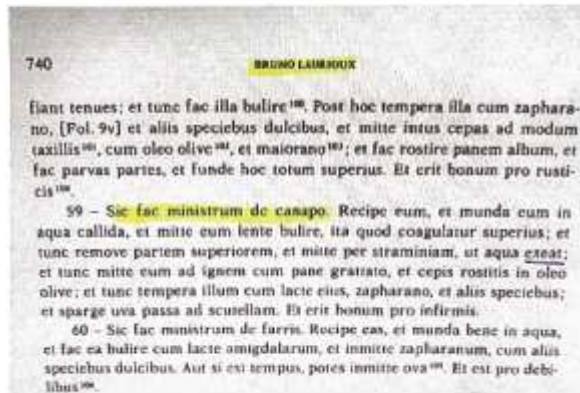
To make cannabis yourself known as flax for thread.

*Use a mallet to crush clods collect after good harvest
Taken as food in wine or cake.*

*Add cannabis to nard oil an iron pot. Crush together over
some heat until juice.*

*A health drink of cannabis nectar. Carefully treat food and
divide for the stomach and the head. Finally remember
everything in excess may be harmful or criminal.*

Traditional cannabinoid-rich products Evidence #3: VATICAN



59 - On Ministrium de canapo
Jean de Bockenheim, Registre de cuisine, p.740
n° 59. Reference to Bruno Lauriou, chef of
Pope Martin V

*Boil **flowers and leaves** (canapo) in water. Once ready press them to **extract water**. Add the mixture with bread crumbs and cooked onion. Slowly add the water in which canapo was boiled to the mixture and add saffron and spices.*

Traditional cannabinoid-rich products Evidence #4: ITALY



Carlo Erba focused his studies between 1945 and 1958 on hemp extracts.

Doctor Erba quoted two methods of "cannabina" extracts commonly used at that time:

- British chemist, Smith
- French chemist, Decourtive

Erba after having analyzed these two method he proposed the **ether extraction** as with ether there is no need to heating, no need to use metals and acids elements that could alterate the hemp properties.

Moreover in his book, Doctor Erba mentioned the studies of Doctor Valerzi (from university of Naples) that studied hemp extracts with fat and honey (1887).

It is written that in July 1887, Valerzi went to Veneto region in Italy and harvested Sativa hemp. From the harvest Valerzi extracted distilled water, essential oil, tinctures alcohol, syrup, liquors, decortications and instilled.

Traditional cannabinoid-rich products Evidence #5: ITALY



[Frammento di un libro di cucina del Sec. XIV; edito nel di delle nozze Carducci-Gnaccarini"](#)

Traditional cannabinoid-rich products Evidence #6: GERMANY

Germany – Monk Recipe for Hemp Soup Regional Cuisines of Medieval Europe: A Book of Essays edited by Melitta Weiss Adamson

nineteenth-century editor calls the dishes Lenten fare. However, a closer look at the material reveals that the Tegernsee monks marked feast days by indulging in little pleasures, among them eggs, milk, and dairy products, as well as the occasional luxury such as almonds, figs, rice, and saffron. At the time the meal plans were written, the monastery must have housed approximately forty monks, because the quantities mentioned in the cookbook section are usually for forty people.⁸⁸ Hemp soup for forty monks required six pounds of hemp, three quarts of wine, one white bread, mashed apples, vinegar, and spices.⁸⁹ By medieval standards, these recipes are quite unusual in that they provide the quantities for ingredients but no cooking instructions. Normally, medieval culinary recipes contain information on ingredients and their processing but no quantities, as the following analysis of the oldest German cookbooks will show.

Six pounds = 2.7 kgs hemp. / 40 monks
= 67g per person
RDI is 30g hemp seeds for western
modern diet
Monks lived subsistence life. This
indicates that 67g/pp included green
parts

Traditional cannabinoid-rich products Evidence #7.1: SWEDEN

The add specifically states:

Hampfroextract: Extrakt-Cannabis och Maltos Cannabis

This ad confirms that hemp extract was used in the preparation of Maltos Cannabis nourishing food remedy.



Traditional cannabinoid-rich products Evidence #7.2: SWEDEN

World Exhibition in Antwerp
1894 – official catalogue

Exhibition was held from 5 May to 5 November 1894 attracting 3 million visitors.

In category XIV – Industries
Alimentaires (Food Industries),
point 39:
Tekniska fabriken Roeda korset,
Stockholm

Maltos Cannabis



Traditional cannabinoid-rich products Evidence #8 LITHUANIA 1984

šnitka

ENG: The dish called "šnitka" was prepared in the lands of the north-eastern GD. The dish is made from hemp leaves and is used to improve overall well-being.

Podczas głodu, którego doznał młody mężczyzna podczas polowania w okolicy Rybickich, jak i w podobnych okolicznościach, polecały mu krasowcy, jeśli na ochotę, z rybkami „pobawiać” (nie smarować) Wódę z nasionami sznurka, kłosek i liście „sznurka”. Wódę z nasionami sznurka, kłosek i liście sznurka (Cannabis sativa) należało pić, co miało na celu poprawę apetytu. (Krasowcy to i. d. b. M.A.), kłosek i liście sznurka i wódę z nich (SBI 4, 1984, s. 514); wódę z nasionami sznurka, kłosek i liście sznurka (Cannabis sativa) należało pić (SBI 4, 1984, s. 441). Wódę z liści i kłosek sznurka i wódę z nasionami sznurka (Cannabis sativa) należało pić (SBI 4, 1984, s. 441). Wódę z liści i kłosek sznurka i wódę z nasionami sznurka (Cannabis sativa) należało pić (SBI 4, 1984, s. 441).

Wódę z nasionami sznurka, kłosek i liście sznurka (Cannabis sativa) należało pić (SBI 4, 1984, s. 441); wódę z nasionami sznurka, kłosek i liście sznurka (Cannabis sativa) należało pić (SBI 4, 1984, s. 441).

Wódę z nasionami sznurka, kłosek i liście sznurka (Cannabis sativa) należało pić (SBI 4, 1984, s. 441); wódę z nasionami sznurka, kłosek i liście sznurka (Cannabis sativa) należało pić (SBI 4, 1984, s. 441).



Natalia Ananiewa, "Nazwy potraw w polskich gwarach na Litwie, Białorusi i Syberii wobec przemian cywilizacyjnych", Rozprawy Komisji Językowej CTN, t. LXIV, 2017 (teksta Sibirskii- SBH 4, 1984 s. 514; SBH 5, 1986 s. 489).

Traditional cannabinoid-rich products Evidence #9 LITHUANIA 1986

Cannabis Sativa Tea

ENG: "Sick person with pneumonia, was given to drink hemp (Cannabis Sativa L.- cannabis) tea."

Wódę z nasionami sznurka, kłosek i liście sznurka (Cannabis sativa) należało pić (SBI 4, 1984, s. 441); wódę z nasionami sznurka, kłosek i liście sznurka (Cannabis sativa) należało pić (SBI 4, 1984, s. 441).



Leibovos TSR paminklų apsaugos ir kraitotyros draugija, "Upytė", Vilnius "Mizis", 1986

Traditional cannabinoid-rich products Evidence #10: LITHUANIA 1992

Hemp Milk

ENG: "Hemp is also suitable for treatment. Seedless hemp blossom tea have been given to children from measles, fright, cough and all sorts of pain. Adults used to drink this tea to help pneumonia. Hemp milk was also given to children to treat measles. It was known that hemp blossom tea helps with kidney diseases and bladder inflammation. Hemp compress helps with any kind of pain. Steamed seedless hemp blossoms were mixed with rye flour and applied to sore spot of the body. People in Kalnyčių village used such compress to treat ear inflammation. In some villages, such as Paragaudžio village people used to drink boiled milk mixed with seedless hemp blossoms to release fright."




Vladas Statkevičius, "Šilūkiškiai. Works and customs", Vilnius "Mokslas", 1992

Traditional cannabinoid-rich products Evidence #11: POLAND

Podczas głodu, którego doznali zarówno mieszkańcy polskich wiosek syberyjskich, jak i użytkownicy północno-wschodniej polszczyzny kresowej, jadło się różne trawy. Z tych „jadalnych” traw mieszkańcy Widge wymieniali *osyt*, lituanizm *v'iksva* 'turzycza', *pokšyva* 'pokrzywa', *konop* i 'konopie', *šn'itka* (por. *сніт'ка*, *сніт'ка*; *Сніт'ка* – ланцетная трава, спінним, каронам і *самі сніт'ку парпаі...* (kursywa tu i dalej – N.A.); *капіць і сніт'ку парпаі і елі* [SBH 4, 1984, s. 514]; *сніт'ка: Шніт'ку елі і наіны, Дзіснай шніт'ку парпаі*; *Шніт'ка –*

Anastasia N. 2017. Nazwy potraw w polskich gwarach na Litwie, Białorusi i Syberii wobec przemian cywilizacyjnych. Roczniki Komisji językowej IJN, t. 100, s.

During the famine suffered by both the inhabitants of Polish Siberian villages, as well as users of the north-eastern Polish borderland, ate different grasses. From these "edible" grasses, the inhabitants of the Widge exchange *osyt*, and lituanizm *v'iksva* 'sedge', *pokšyva* 'nettle', hemp 'hemp', *šn'itka*

Traditional cannabinoid-rich products Evidence #12: POLAND

Kuchnia polska dawna

Wrywki z jej dziejów od czasów najdawniejszych do końca wieku XVII.

Wzrostki i opisy
Dr. Med. JÓZEF PESZKE.

Konopie w „Rachunkach” wymieniane bywają częstokroć jako siemię konopne (*semen canopi*), w dni postne. Wiemy już, że wybijano z nich olej, do kraszenia potraw służący w postcie, ale bardzo byc może, iż siemienia owego używano już wtedy do przyrządzania potrawek, jadanych i dziś jeszcze tu i owdzie u nas, szczególnie na wiochę w wigilję Bożego Narodzenia, ale tego nie mówią nam „Rachunki” **). Konopie uprawiano w dobrach królewskich, stół kupowano też siemię na targu.

Peszke J. 1904. Kuchnia polska dawna. wrywki z jej dziejów od czasów najdawniejszych do końca wieku XVII. Gazeta Domowa nr 9, 133.

Jednak największy podów musi budzić liczba i różnorodność używanych jarzyn i ogrodnin (warzyw). Wśród nich najpopularniejsze były: buraki czerwone, cebula, chrzan, czosnek, giera, później już niezwykły, kucmorka (kucmorka) jadalna w polsce wafliak, groch, kapusta, konopie, kminek, koper, mak, marchew, ogórki, pietruszka, rzępa, rzodkiew, rzodkiszka, szarłat, szarłatka. Powyższy zestaw wskazuje, że polska kuchnia średniowieczna była wyjątkowo dobrze zaprzęzona w jarzyny i warzywa, a ich stosowanie było dość powszechne (Peszke 1904, nr 9, s. 133-134). Na uwagę zasługują też owoce, wśród których spotykamy: czereśnie, gruski, jabłka, orzechy, śliwki, poziomki oraz również często spotywane figi i morele.

Ormiel A. 2015. Kuchnia i Rzeczpospolitej. ZMUM, 45(7):11.

Translation:

However, the greatest admiration must be aroused by the number and variety of used vegetables and garden plants (Vegetables). Among them the most popular were: red beets, onions, horseradish, garlic, grysz, later unused, kucmork (kucmorka) eaten in a great post, peas, cabbage, hemp, cumin, dill, poppy, carrot, cucumbers, parsley, turnip, radish, cress, lentils. The above set indicates that Polish medieval cuisine was exceptionally well stocked with vegetables and vegetables, and their use was quite common (Peszke 1904, No. 9, pp. 133-134).

Traditional cannabinoid-rich products Evidence #13: POLAND



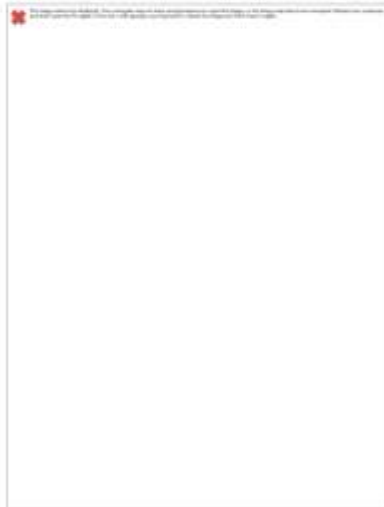
<https://alchetron.com/Siemieniotka>, 6.03.2019

HEMPSEED SOUP, SILESIAN (*siemieniotka, siemianka*): Riase 1½ c hempseeds in cold water and drain. Scald with boiling water, bring to boil and drain again. In pot combine hempseeds with 5 c warm water, bring to gentle boil, reduce heat and simmer until seeds begin to burst. Drain, reserving liquid. Transfer hempseeds to sieve and with wooden spoon squeeze out their contents (hempseed milk). Scald seeds in sieve with a little boiling water and continue squeezing out their milk. Transfer partially crushed seeds from sieve to another bowl add a little boiling water, mix well, drain and squeeze them some more. When no more juice can be extracted, discard seed husks left in sieve. Combine hempseed milk (squeezings) with 3 c milk and the reserved stock (in which the hempseeds were cooked). Thicken with 3 T flour dissolved in a little water, add 2 t salt, and 1-2 T sugar. Mix, bring to boil and simmer several min, stirring so it doesn't burn. Remove from heat, add 1 T butter and serve. This is a traditional Christmas Eve soup in Silesia (Śląsk).

Stryker R. 2007. Polish Holiday Cookery. Hippocrate Books, INC, Nowy Jork: 44.

Traditional cannabinoid-rich products

Evidence #14: GERMANY



The Nova Institute was commissioned by the Hanfgesellschaft to undertake a survey on the request of EU Commission to obtain data on volume of hemp products sold prior to May 1997.

Out of 40 companies contacted, 23 companies from Europe, including Germany, Austria, the Netherlands and the UK responded:

Hempseeds	ca 200 tonnes
Hempseed oil	ca 33,000 litres
Hemp ready made products (snacks, flour, muesli, bread, bakery & pasta)	ca 55 tonnes
Drinks with hemp flowers/leaves	ca 115,000 litres
Snacks with hemp flowers	ca 2 tonnes

The letter also states “unfortunately several large hemp companies did not participate in the survey because they did not want to share their data, especially from the drinks sector.”

Traditional cannabinoid-rich products

Evidence #15: GERMANY



The letter of European Commission, dated 03.02.1998, to Mr Kreutner (Öko-Handels GmbH, Austria) stated “that **hemp flowers used for the production of beer-like beverages are considered to be food ingredients** and not additives since they are used in the same manner as hop flowers.”

Important, paragraph 2:

“Secondly it was decided that foods containing parts of the hemp plant do not fall under the scope of the Regulation (EC) 258/97.”

NOTA BENE: Hemp flowers (EU) are not Cannabis in the meaning of the UN SC, otherwise contradiction to definition of food in Reg. (EC) 178/2002, Art. 2 (g).

Traditional cannabinoid-rich products Evidence #16: GERMANY



Betreff: Ihre Anfrage bezüglich Pflanzenöle von Cannabis sativa
Datum: Ihre Telefaxnachricht vom 26. Februar 1998

Sehr geehrter Herr Dupetit,

Bezüglich Ihrer am 26. Februar 1998 an mich gerichteten, auf die Standard-
Lichtmikroskopische Untersuchung des Cannabis sativa-Lössensatzes bezüglichen
Anfrage beziehe ich mich auf die Frage der Klassifizierung von Cannabis
sativa-Produkten, welche unter die Verordnung (EG) Nr. 258/97 des Europäischen
Parlamentes und des Rates über neuartige Lebensmittel und Zutaten (Lichtmikroskopische
Untersuchung) fallen.

Mit freundlichen Grüßen



J. J. J. J. J.
Kunde Name: Prof. Dr.
Dupetit, J.
Str. 123456789

Bitte beachten Sie, dass die Informationen in diesem Dokument nur für den Empfänger
bestimmt sind. Wenn Sie nicht der Empfänger sind, werden Sie gebittet, den Absender
hierüber in Kenntnis zu setzen.

Letter of the European Commission to Mr Dupetit, dated 03.03.1998, saying
the Standing Committee on Food agreed on 18.12.1997 that

**foods which contain parts of the
hemp plant do not fall under
Regulation (EC) No. 258/97 on
Novel Food and Novel Food
Ingredients."**

Traditional cannabinoid-rich products Evidence #17: SLOVAKIA

Official use of hemp leaves for making teas can also be demonstrated on a case of
Slovak Republic:

**SLOVAKIA - DECREE 09/2015 Z.z. of Ministry of Agriculture and Rural
Development of Slovak Republic, of December 4, 2015, on spices, table salt,
dehydrated food, soup preparations and on aromas contains item konopa siata -
Cannabis sativa L. - **leaf**, seed in Annex III, Table 1:**

**LIST OF PLANTS AND THEIR PARTS SUITABLE FOR PRODUCTION OF TEAS
without recommending any restrictions on the amount [of herb] used.**

Traditional cannabinoid-rich products Evidence #18: GERMANY

A **hemp soft drink** containing hemp extracts have been patented and authorised in Germany in 1997.

The FBO intended to place the hemp soft drink on the Spain and UK markets. According to the two mandatory certificates released by the National Authority in both countries the drink was allowed to be marketed.



www.eiha.org

27

EiHA position on hemp extracts

- **Leaves and flowers of industrial hemp plants are non NF** → regulated like food and food supplements (rules and labelling)
- Extracts, with **traditional extraction technologies**, from hemp plants legally growing in EU are **not NF**
- **Naturally occurred cannabinoids** in the whole plant extracts are **not NF**
- For consumer safety EiHA proposes a **maximum daily intake of 160 mg** (for an average adult) for food or\and food supplements
- **Genetic modified plants** and synthetic material are **NF**

www.eiha.org

28

Further reflections

- Hemp flower products such as hempseed and its extract - hempseed oil - are traditional food exempt from authorization as Novel foods due to demonstrated consumption in Member States prior to May 1997.
- Naturally incidental to the long history of consumption of the hempseed is a sticky resin, on the outside of the seed shell → cannabinoids are found inside this resin
- Cannabinoids are found on seeds and other part of the plants (which are not NF) as residues and are therefore consumed without authorisation.
 - In the process of pressing, the hempseed oil can get contaminated with other elements of infructescence of the plant that contain cannbinoids, resulting in cannabinoids presence in hempseed oil
 - In the past, up until the beginning of the 20th century, when the mechanical threshers were introduced, any seeds - be it wheat grain or hemp seed - were obtained in the process of manual threshing with flails. The inevitable presence of such combination from which the oil was pressed results in inflated levels of cannabinoids in the hempseed oil.
- In the pre-industrial era hempseed oil obtained in this way was the primary source of plant oil in human diet, hence cannabinoids have been consumed in larger amounts than today and have a long history of consumption prior to 1997
- The parts making up the whole are inseparable from the whole; if the whole is exempt then so are the parts.

Further reflections

- It must also be considered that hemp and hops are the same plant family of **Cannabaceae**, which includes about 170 species grouped in about 11 genera, including *Cannabis* (hemp, marijuana), *Humulus* (hops) and *Celtis* (hackberries). (<https://en.wikipedia.org/wiki/Cannabaceae>)

One will surely not question that hops, its flowers, leaves and whole tops are used as food, ingredients and extracts.

- As long as the product
 - has no added Cannabidiol isolate or synthetics, and
 - is less than 2.000 ppm THC and recommended intake to fulfill the guidance values re THC, and
 - is from an approved Hemp cultivar or non-Cannabis source...

...then it must be considered a traditional product, not Novel Food needing pre-marketing authorization

Implications if MSs enforce the NF Catalogue

- **End of the internal market** creating a vacuum which will be filled by the 'grey market' (54% of consumers are willing to buy CBDs if they are illegal)
- **Loss of jobs** in production, processing and sales
- **Loss of market control** represents significant potential consumer risk as they access products which do not comply with any safety, labeling or compliance standards.
- **Loss of competitiveness** for EU enterprises (vs Canada, the US, China and Switzerland) → no equal level playing field for all actors
- **Discrepancy on the labelling** → impossible for consumers to compare products
- All the **environmental benefits** of cultivating hemp (e.g. CO² absorption) will be **outside of Europe** (not in line with CAP orientations)

Benefits for MS

- CBD helps maintain homeostasis; which in turn supports better health for all = improved productivity and **reduced public health service costs**
- Facilitating the growth of the CBD industry will create **new jobs** at a range of skill levels and deliver **increasing tax revenues** (VAT and income tax)
- Hemp extracts represent an **additional income for farmers**
 - Enabling farmers to utilise the entire hemp plant including the leaves will encourage **much more cultivation of this key crop** with numerous additional benefits including carbon sequestration, enhanced biodiversity, land reclamation and phytoremediation.
- Safe and clear framework which will guarantee an **even playing field** for all actors in the hemp sector (SMEs vs big companies)

[

Thank you for
Your attention!

For further information:

S40 (2) and (3)
EIHA

]