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#### AN ICON TURNS 25

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## HempConsult















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#### Venue



**HempToday Center** HempToday Center The Palace at Nakło Lelów, Poland

#### Agenda

#### **Fast-moving sector**

The summit will look at the current status of the CBD sector and the many opportunities that exist in the exciting field of medical hemp & health products. We will explore the basics of sub-sectors, products and supporting industries that are coming into play.







#### Letter from Brussels

## Taking charge of the future now upon us

Telcome to the 16th Annual European Industrial Hemp Association's International conference.

**V** With my appointment as EIHA Managing Director earlier this year and the establishment of a representative office in Brussels, your Association now has a strong voice at the EU level 365 days per year.

Nowadays, professional EU lobbying is a high-end management discipline at the intersection of politics, economy and society. EIHA's presence in the European capital gives us an effective platform from which we are strengthening long-standing relationships with EU institutions and stakeholders who gather there.

EIHA's role in Brussels is to provide relevant and reliable information to both industry and regulatory decisionmakers as both sides work together to create laws that encourage our industry to grow.

#### What we're doing

To that end, we're actively engaged in a number of initiatives on behalf of our members:

- We recently published a Press Note backgrounder stating EIHA's position regarding hemp extracts vis a vis the EU's Novel Food Catalogue.
   Several members contributed to this effort, and the document is getting
  - wide distribution.

Lorenza Romanese

- We continue to work on issues related to THC limits in planting seed with the intention to consolidate the vote of the AGRI Committee of the European Parliament. We seek a 0.3% THC threshold like the rest of the world.
- Regulations related to CBD in cosmetics are also getting our attention as we inform that debate while formulating proposed guidelines most advantageous to our members who make these products.
- We are closely monitoring the matter of THC residues in food in direct link with the European Food Safety Authority.
- We have expanded our institutional outreach by establishing partnerships with other stakeholder groups, primarily farmers' organizations in Brussels.
- We are in the beginning stages of developing a paper about the solutions that hemp can provide in the fight against climate change.
- Our Association membership program has been remodeled, and we're actively recruiting new members as the number of companies entering the market multiplies.
- Earlier this year we established a partnership with HempToday that expands our activities in professional education and networking via a series of micro-summits. We're also working closely with HempToday as we widen our communications footprint.

#### Busy, exciting times

Needless to say, these are busy, exciting times for all of us. I'm happy to report that EIHA is on the leading edge as this dynamic industry continues its march into all sectors and products for which the amazing hemp plant has application.

After 16 years, our annual EIHA Conference is an international institution. No hemp gathering on the planet brings together representatives from as many countries as does EIHA.

For his continuing work on the Conference through nova institute, and for his help in establishing our initial network in Brussels, we thank Michael Carus, whose stewardship of the Association as Managing Director for 15 years helped set the foundation for the future that is now upon us.

Lorenza Romanese was named EIHA Managing Director in February 2019



## EIHA Board of Directors

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#### Join EIHA to support the Hemp Industry

- · All your questions about Hemp business are passed on to all **EIHA** members
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- · Opportunity to support the networking, lobbying and publishing of information on Hemp by EIHA
- · You will be supporting the environmentally conscious Hemp Industry

**EIHA** is involved in all areas of the Hemp Industry, including:

- Hemp Fibres
- Hemp Food Supplements
- Hemp Shivs
- Hemp Oil
- Hemp Seeds
- Hemp Cannabinoids

#### The European Industrial Hemp Association (EIHA)

EIHA was originally founded as an association of the members of the European hemp industry. Companies can only apply for Regular Membership. Only private persons (or NPO) can join as Associate Member. Founded in 2005, EIHA today has more than 150 members.

EIHA was founded to give industry a voice at the European Commission in Brussels. It has rapidly become a respected industry association that provides effective lobbying and serves as an become an attractive opportunity for members and visitors to meet, learn about developments and exchange views with their colleagues.

#### Join EIHA and support the Hemp Industry.

Regular membership is restricted to companies. Regular members are invited to join special workshops on CBD, THC and Fibres and they have exclusive access to important documents, e.g. statements from lawyers.

Each regular member has 10 votes or more depending on the turnover. Regular members are also member of several special interest groups (CBD, THC, Fibres, Shives). The membership fee is starting from 2,500 € for one year (turnover ⟨ 1 Mio. € in 2017⟩ up to 10,000 € (turnover) > 20 Mio € in 2017).

**Associate membership:** Any private person (or NPO) may become an associate member. Associate members may attend the annual EIHA meetings, having the right to speak, to make proposals and to vote. Each associate member has 1 vote. The membership fee for associate members is 350 € per year (or a larger voluntary contribution).

Apply now: www.eiha.org/membership-application

For more information please contact: Dominik Vogt

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or visit www.eiha.org





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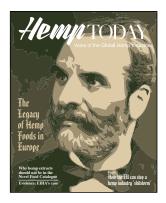


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## In This Issue



#### **COVER STORY**

A matter of history: EIHA builds a case for hemp extracts – 8

#### PLUS:

How to stop a 'shitstorm' – **10**The Evidence: EIHA's case – **11** 

**COMPANIES** 

## HempFlax marks its 25th Anniversary – 12





- Hempro lends its voice to industry initiatives 16
- HANF FARM moves operations to N. Germany 18
- Interview: Corralling the CBD cowboys 20
- Sexy meets sustainable at The Hemp Line 22

TECHNOLOGY

A solar-powered hemp food factory goes on line – 24





LATIN AMERICA

HempToday sets LatAm & Caribbean Hemp Summit – 26 PLUS: Hemp as a change agent in Colombia

ASIA

#### Continent on the rise -28

- India must chart its own hemp path
- China moving quickly on hemp



NORTH AMERICA

After hemp's legalization in the USA, more challenges ahead - 30

• Biggest hemp states in America – 32

CANNABIS POLICY

Failed drug policies and the search for a new regluatory path -33



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#### COVER STORY

# Matter Of EIHA builds a case for hemp extracts

t's 1420 at the Vatican, in the kitchen where meals are prepared for the current Pope, Martin V. The pontiff's chef pulls a hand-written recipe, ink on parchment, from a thick leather portfolio. It's a dish based on hemp flowers and leaves: "Boil, extract, add bread crumbs, cooked onion. Add slowly the (CBD-rich!) water, saffron and spices."

Fifty years later, the use of hemp extracts in food is expanded upon with the publication in 1475 of De Honesta Voluptate Et Valetudine, one of the world's oldest cookbooks in French, German and Italian translations. It includes a contemporary recipe for making CBD oil in which the decarboxylated flower extract was blended with nard oil, a traditional Indian essential oil.

Jump forward to the 20th century, and there's a clear reference to extracts in European food in the 1940s studies of Dr. Carlo Erba, who references extraction methods for, among other things, hemp flower extracts mixed with honey as a food substance.

#### What we know

Study European food history down to the details, and one thing becomes clear: There's nothing "novel" about hemp seeds, leaves, flowers and extracts in food. Cannabis in general, and hemp in particular have been consumed in Europe through the ages.

We don't know Pope Martin's eating habits or much about what people were eating in the 15th century, but one thing is clear: There's nothing novel about hemp in European food.

That's a fact the European Industrial Hemp Association (EIHA) is working hard to illustrate, hoping to reverse recent food rules changes that have the potential to hit the continent's hemp food players in their pocketbooks.

Language in rules affecting CBD and

datteri tagliati in quarto. Di colore a questa vivanda con gruogo e se fosse troppo agra, tempeala con zuccaro. 26 (xxvj) Se vuoi tortelli con fiori di canapaccia. Togli questi fiori di canapaccia sanza foglie e cuocili colla puncia del porco. Quando ella è presso che cotta (metti) a bollire li fiori e (quando) la carne e cotta, batti ciascuno per se. Togli finissimo cascio, altrettanto quanto è la carne, e fine spezie e fa tortelli. 27 (xxvij) Se vuoi torta di latte vivo. Fooli no manos ornato di latta viso lat mas libra di

A recipe for Tortellini: Hemp flowers & leaves formed an integral part of Italian cooking, with written recipes spanning over 500 years! This recipe says that for Tortellini filling, use the hemp flowers as the vegetable like rucolla is used today. "When the bacon is almost cooked add the flowers, finish cooking, chop everything, add grated cheese."

other hemp extracts, updated this past January in the European Commission's Novel Food Catalogue have sparked blowback by EIHA as the Association embarked on an intense research effort aimed at reversing the changes, later taking its documentation to the European Commission's Standing Committee Working Group on Plants, Animals, Food and Feed (PAFF) in March.

In a nutshell, the updated rules now require producers of hemp extracts used in food - including, importantly, CBD - to undergo stringent and costly registration requirements. The rules guide the Novel Food Catalogue, a listing of foods that were not commonly eaten in the member states before 1997. The Catalogue is essentially

a food safety mechanism, intended and invented to control new, genetically or synthetically designed food products before market entry - not to hinder products that have been consumed for ages.

#### 'Cycle of compliance'

Some stakeholders realized last year that changes in the Food Catalog (which officially took effect Jan. 20, 2019) were coming, and began filing registration paperwork.

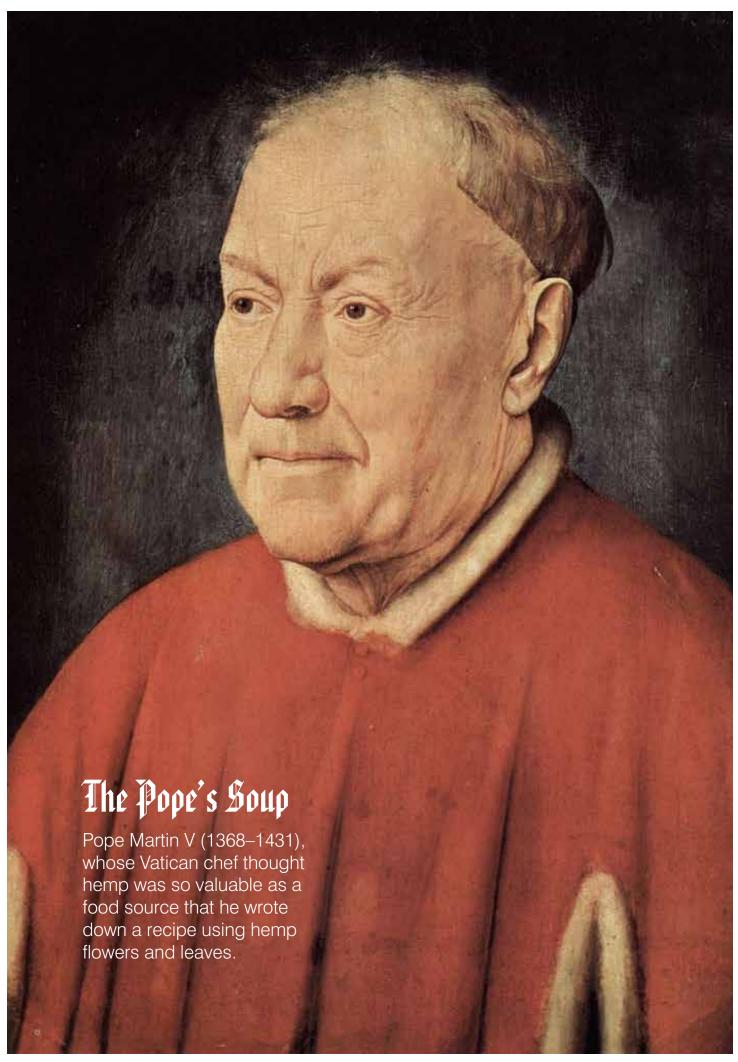
That started what we might call a "cycle of compliance" in which producers who filed for Novel Food status were confirming their products should be thus categorized.

Other stakeholders have since argued the newly written rules could hurt Europe's chances in the exploding global hemp food marketplace where big players such as China, Canada, the United States and Switzerland are aggressively competing.

#### Warnings from EIHA

Calling for a reconsideration of the Catalogue update, EIHA warned the newly written rules will:

- Bring the "end of the internal (EU) market, creating a vacuum which will be filled by the grey market" as a Dutch study shows 54% of consumers are willing to buy CBD even if it should be deemed illegal.
- · Lead to "loss of market control" and the risk that products that do not meet safety, labeling and other compliance standards.
- Mean the loss of jobs in hemp production, processing and sales.



#### **COVER STORY**

• Cause loss of all the environmental benefits of cultivating hemp across the Union.

But how did the rules get changed in the first place? And who is responsible?

These are questions that can sometimes be difficult to answer given the confidential nature in which the Commission and Member States conduct the affairs of the Union. However, there's a hint of an answer in testimony delivered to the PAFF meeting in early March.

"Surely there is an industry out there that makes profits by having sick customers," EIHA Board Member Daniel Kruse, a 26-year veteran of the hemp business, told Commission and Member State representatives in prepared remarks (opposite). "There might be a conflict of interest," he noted dryly.

Kruse left it at that, reminding those assembled that "Our hemp industry, similar to the natural food and food supplements industry, makes profit by keeping customers healthy."

Certain Member States pushed for the changes. That much is clear. Which ones, for now, remains a mystery.

#### Time wasted

But the upshot is unnecessary shortterm confusion, and precious time wasted by the switch from what was previously a "workable" framework for hemp foods to one that threatens the industry, according

"The situation before was not perfect," he said. "But the previous rules did not place CBD-bearing foods in the Novel Food Catalogue.

"In 1998, the commission ruled that food containing parts of the hemp plant was not novel food," according to Kruse. "Hemp leaves and flowers were not under Novel Foods Catalogue restrictions."

Those rules made CBD acceptable as a normal food ingredient under a logical guideline that products derived from hemp plants contain a level of CBD molecules no greater than those of the plant in the field.

"We were basically able to live with that," Kruse said.

#### Get some science

To Kruse, one thing is apparent from the latest round of confusion over hemp foods in Europe: All EU member state delegates who serve on bodies responsible for food safety in Europe should have backgrounds in science, he suggested.

Nonetheless, they only need to understand one rather general fact: "Hemp flower has been farmed, processed and consumed in Europe for thousands of years. It is one of the oldest crops and vegetables of mankind," Kruse said.

### Here's how the EU can stop a hemp industry 'shitstorm'

(This commentary is based on remarks by Daniel Kruse, Board Member, European Industrial Hemp Association, before the European Commission's Standing Committee on Plants, Animals, Food and Feed, March 12, 2019 - Brussels.)

ue to this hemp business, hard work and good investments I am financially secure and could retire tomorrow. I am telling you this to make it very clear that my personal case is not about more profit. In fact my case is about legality of industrial hemp products, consumers health and a free European market. Obviously, hemp flower as a vegetable has been farmed, used, processed and consumed for thousands of years. It is one of the oldest crops of mankind.

Obviously, due to 70 years of discrimination and prohibition of all kind of cannabis products including industrial hemp, product developments in the recent years sound new to you - but they are for sure not. Meanwhile just one single part of the

worldwide hemp industry, the modern market of hemp extracts and CBD products in North-America, is worth billions of dollars. Since 2011 the North American CBD market has proofed to yield safe and healthy food and food supplements.

Obviously, there have been so called "cowboys" in the very beginning of the market, riding for the fast profit. But meanwhile the market regulated itself.



Kruse

When the boom came: Three years ago the "CBD boom" crossed over to Europe. EIHA wants to work with the commission and the member states to have a safe and regulated but successful hemp market in Europe. EIHA wants to ensure the safety of the consumer and at the same time establish a professional European hemp industry. We are not only talking about billions of Euros

turnover, we are talking about additional income for farmers and new jobs for the working class. But additionally, we also talk about the political idea of a free European market.

Europe is built on the idea of a united liberal market as well as united liberal

I do consider myself a European first, and then a German. I show this by wearing a blue tie every time I come to Brussels – as Mr. Verstraete will confirm.

Stop the discrimination: As a European I urge you to stop the discrimination against industrial hemp and create sound scientific, legally correct and liberal regulations.

The demand for hemp products, hemp extracts and CBD oils is real. The information and knowledge regarding their health benefits is public.

Due to the internet and globalization, the success story of the American hemp industry is known to the European people.

Please take this not only as a forecast but also as a fact: that if we do not find together a sound scientific, reasonable and realistic regulation for our market, the European hemp industry and the European people will find a way to make them hear: By press and media and "shitstorms" louder and more stormy than you have ever heard.

Enough 'exits': And does Europe really need more unsatisfied people looking at Brussels? I believe we already have enough "exits" and right wing propaganda against the European idea.

Our hemp industry, similar to the natural food and food supplements industry, makes profit by keeping customers healthy. Surely there is an industry out there that makes profits by having sick customers. Hoping that this other industry is not having direct influence on the current discussed regulations, it might create doubts and uncertainty regarding the benefits of our natural products. There might be a conflict of interest.

It is up to you and us to find the legal and correct way to handle hemp products comparable to other food and food supplement products with a similar history to hemp – like valerian, garlic and hops.

I'm sure you will agree that this is in the best interest of Europe!

Daniel Kruse is Founder and Managing Director of Hempro International GmbH & Co. KG, and HempConsult GmbH, Dusseldorf

## The Evidence

#### Why hemp extracts are **not** novel

Compiled by Catherine Wilson CANNAWELL & EIHA BOARD MEMBER



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 / Wine is Joy" / Cannabis is Protection (= homeostasis).

Vatican: Chef of Pope Martin V (1368–1431) thought hemp was so valuable as a food source that he wrote down a recipe using hemp flowers and leaves, 'Boil, extract, add bread crumbs, cooked onion, add slowly the (cannabinoid rich) water, saffron and spices.'



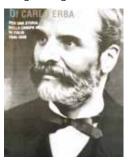
Italy, Germany, France: One of the oldest cookbooks in the World, De Honesta Voluptate Et Valetudine, published in 1475 was translated into German, Italian and French. It includes a recipe for making modern day CBD oil. The decarboxylated flower extract was blended with nard oil. a traditional Indian essential oil.



Germany: Regional Medieval Cuisines Research lists a recipe for hemp soup by the Tegernsee Monks. Today's recommended daily intake for hemp seeds is 30g. Calculating the recipe quantities used, this equates to 67g hemp per monk and suggests green parts were included.



Italy 1884: Italian recipe from cookbook for Tortellini with hemp flowers. Hemp flowers & leaves formed an integral part of Italian cooking, with written recipes spanning over 500 years! For Tortellini filling, use the hemp flowers as the vegetable (like rucolla is used today). 'When the bacon is almost cooked add the flowers, finish cooking, chop everything, add grated cheese."



Italy: Doctor Carlo Erba studies (1945-1958) quoted two methods of "cannabina" extracts commonly used at that time; ether extraction and extract with fat & honey by Valerzi who used Veneto region Sativa hemp to extract into distilled water. essential oils, alcohol tinctures. food, syrups and liquors.



Sweden: Maltos Cannabis, a nourishing food remedy was widely sold throughout Scandinavia. It specifically states -Hampfroeextract: Extrakt-Cannabis och Maltos Cannabis. It was advertised as a health promoting drink for various ailments.



World Exhibition, Antwerp 1894, visited by more than 3 million people lists in it's official catalogue in category "Alimentaires" (meaning Food) Maltos Cannabis. Various ads at the time display a prize awarded at the World Expo.

Poland: A 1904 book on Polish cuisine reserves the greatest admiration by the number and variety of commonly used vegetables and garden plants. Among them the most popular were: red beets, onions, horseradish, garlic, peas, cabbage, hemp, carrot, cucumbers, parsley, turnip, radish, lentils and more.

Poland: During the famine suffered by Polish Siberian villages and the north-eastern Polish borderland, people ate different grasses. These 'edible grasses' included amongst others nettles and hemp.



Poland: Siemieniotka was and remains the most traditional Polish dish served on Christmas eve. It is a Silesian recipe made from hempseeds cherished for its unique taste and health benefits - in folk medicine, hemp, or konopia, was used as a remedy against scabies and ulcer.

Lithuania 1984: The dish called "šnitka" was prepared in the lands of the north-eastern GDL. The dish is made from hemp leaves and is used to improve overall well-being.

Lithuania 1986: Herbal teas are as old as time. "Sick person with pneumonia, were given hemp (Cannabis Sativa L.- cannabis) tea to drink."

Lithuania 1992: "Hemp flower tea was given to children with measles, fright, cough and all sorts of pain. Adults used to drink this tea to help pneumonia. It was known that hemp flower tea helps with kidney diseases and bladder inflammation. Village people used to drink boiled milk mixed with hemp to release fright (anxiety)."



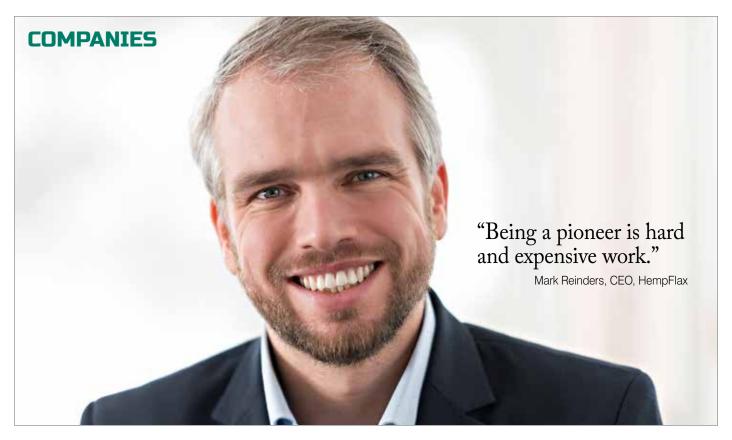
Germany, UK & Italy: Manufactured by Designer Food GmbH, Germany, this drink contained "hemp extract" and was on the market before 1997 in significant quantity. The Italian certificate of marketability confirms hemp extract was used In the formulation.



Germany: A survey was undertaken on request of the EU Commission to obtain data on volume of hemp products sold prior to May 1997. Out of 40 companies contacted, 23 responded showing that 115.000 litres of flowers/ leaves were used for drinks and 2 tonnes for snacks. 55 tonnes of hemp ready made products.

EU Commission (1998): The letter stated "that hemp flowers used for the production of beer-like beverages are considered to be food ingredients... "Secondly it was decided that foods containing parts of the hemp plant do not fall under the scope of the Regulation (EC) 258/97."

**Slovakia** 2015: Decree 09/2015 Z.z. of Ministry of Agriculture and Rural Development of Slovak Republic, 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.



## An icon turns 25

#### HempFlax looks to build on a legacy of innovation

ur factory and farm yard looked like a graveyard of all kinds of agricultural machines," remembers HempFlax CEO Mark Reinders.

Victims of an early flurry of trial and error harvesting and processing hemp fiber, the idle machinery was a reflection of the dream of HempFlax visionary Ben Dronkers, who founded the company in 1993.

"Ben founded HempFlax mainly to prove to all the skeptics that hemp could be a modern industrial crop," Reinders said. Dronkers had been active in the cannabis industry for decades, and he knew the extent to which hemp had been used for industrial purposes in the past, Reinders noted.

"When we started operations in the early '90s, nobody knew how to harvest or process hemp because the crop had been forbidden for 60 years," Reinders recalled. As a result, no technological advancements for harvesting and turning hemp into products had been made for decades.

"We first tried to process hemp in a flax mill on a traditional flax scutching line (the genesis of "Flax" in the company's name)," Reinders said. "Very soon we found out that hemp processing needed specialized technology"





Nature wins!

#### **HempFlax BV**

Founded: 1993

Headquarters: Oude Pekela, Holland Operations: Holland, Germany, Romania Processing facilities: Oude Pekela, Neth-

erlands; Alba Iulia, Romania

Activities: Farming, processing of fiber & food, technology development, consulting Suppliers for: Technical applications, animal care, nutraceuticals, construction. genetics and cultivation, horticulture

Number employees: 50 **CEO**: Mark Reinders www: hempflax.com

- technology robust enough to handle what's generally considered to be the toughest of nature's fibers.

#### Global icon

Fast forward to today and Hemp-Flax has a corporate identity known to hemp stakeholders and enthusiasts all over the world. It is the very model of a 21st Century, international, vertically integrated hemp company working to exploit the entire plant for all its promise.

Through 25 years, HempFlax's list of achievements is remarkable:

- From 140 hectares of Dutch hemp fields from its first planting in 1994, the company expanded into 2,600 ha in three countries by 2018.
- By 2009 HempFlax began widening its portfolio, first to textiles when it acquired a needle punch non-woven line suitable for hemp fibers.
- Through the years, HempFlax has established relationships with blue-chip automakers Mercedes, BMW, Jaguar, Bentley, Porsche, and Bugatti to whom it supplies interior car parts.

 In a major development for the industry, the company has advanced the hemp harvesting process via its Double



## From one man's vision to a group's passion!



In 1994 HempFlax started with 140 ha to revive the postwar industrial hemp industry.

Today HempFlax is leading the industry with operations in Netherlands, Germany and Romania!















#### **COMPANIES**

Cut Combine, which debuted in 2014. Developed with giant U.S. farm implement maker John Deere, the technology features an upper header that catches leaves and flowers as a lower unit harvests the hemp stalks. HempFlax runs three of those machines in its own operations, has built and sold three others, and is sitting on an additional three orders due for delivery this year, according to Reinders.

- In 2015, the company opened a state-of-the-art decortication factory that added 40,000 metric tons of annual capacity to bring the company's total potential to 55,000 tons.
- Other technology investments include development of controlled drying facilities that turn out super highquality biomass, started in 2013; and a production line that makes pelletized hemp fiber for the injection molding and compounding industries started in 2016. HempFlax is a leading developer of new applications for hemp fibers in these sectors.
- Perhaps most significantly, Hemp-Flax entered the CBD sector in 2013, and since that time has been adding downstream CO2-based processing for whole plant extracts that go into capsules and tinctures sold through Hempure, its white-label division.

#### Focus on sustainability

"Being a pioneer is hard and expensive work," Reinders said looking back over the company's two-and-a-half decades in business.

"Next to developing technology the company also needs to develop markets, and most of the times markets for the products are not there," he said. "On the other hand without being able to supply significant volume of hemp products, it is impossible to build a market.'

The key, according to Reinders, is to capture the value of the whole crop. "Focusing on only one revenue stream from the crop makes you vulnerable to market developments," he cautioned.

#### **Emphaizing sustainability**

Through it all, HempFlax has always put sustainability front and center, emphasizing the role hemp can play in cleaning up the planet.

"We embrace and promote the philosophy of the circular economy," an economic system aimed at minimising waste while maximizing raw materials, Reinders said.

"We do a lot to stimulate awareness of hemp's possibilities among entrepreneurs around the world. In this way, we contribute to the sustainability of their companies too," he added.

With plans to expand growing fields to 3,500 hectares by 2020, HempFlax is projecting demand will be strongly driven by the CBD sector.

"Although some said CBD was overhyped, it now looks like it will be an accepted and widely used food supplement or additive. We think it can have the same position as vitamin C in the near future," Reinders said.

He expects continuing developments beyond what he calls the current 'Generation One' CBD products now available.

"Continous developments on formulations and applications are necessary to further develop this market," he said. To keep up with the pace of change, the company brought on board a nutraceutical professional, as it continues to explore disruptive extraction methods and technologies, according to Reinders.

#### Plastics & construction

Meanwhile, HempFlax will invest in developing hemp raw materials for such things as pellets for injection molding and hemp-based construction materials; the company is already making pre-fabricated roof panels, has orders for at least a couple pre-fab homes this year, and added a construction expert to staff to serve that division of the company.

"Our biggest dream is to replace cotton with hemp," Reinders said of the company's R&D into fabrics.

As for its international plans, Reinders said HempFlax has followed closely developments in the USA, which this year legalized hemp federally under the U.S. Farm Bill. "We think it is time to cross the ocean and are looking for the best opportunity to bring our knowhow and technology," he said.

#### What's next?

Though HempFlax has gotten big, the company has maintained the experimental, entrepreneurial drive that gave it life back in 1994 when that first crop went into the Dutch soil.

With decades of experience in hemp growing and processing among its key managers and a staff just as passionate and dedicated to hemp as Dronkers, Reinders believes HempFlax is well positioned in the firmament of the world's iconic hemp brand names.

"Our many years in the business give the company a major competitive advantage in knowhow," Reinders said. "Our horizon is broad, as is our approach to the whole plant. So we feel we're positioned for whatever the next 25 years might bring."

#### **MILESTONES**

HempFlax through the years



**1993**: ▶ Founding of the company

**1994**: ▶First crop of 140 ha planted, with initial processing in a flax mill.

1996: ▶Relocation of headquarters to Oude Pekela

2003: ►Acquisition of

Venaro, a German processor

► Acquisition of of Hempron, a German processor

**2009**: ►Takeover of Nafgo, German non-woven producer

**2011**: ▶ First ISO 9001 certification

**2012**: ► First crop grown in Romania



2014: ► Acquisition of 800 ha farmland in Romania

> ▶ Debut of the Double Cut Harvester

**2015**: ▶Opening of new Factory in Romania €10 million investment

European Industrial Hemp Association

**2016**: ►CEO Mark Reinders becomes President of EIHA

> ► Startup of fiber pellets producton for injection molding and compounding

▶ISCC plus certified

► HempFlax straw certified sustainable

**2018**: ▶2600 ha hemp grown and harvested

►ICCI implementation

## Trust.







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Rebecca Kruse, CEO, Hempro International GmbH & Co. KG

#### Hempro lends its voice in shaping regulations

egacy German hemp firm Hempro International GmbH & Co. KG is throwing its full shoulder to the wheel to help clear the playing field for European hemp food and cosmetics players. As a founding member of the European Industrial Hemp Association, Hempro Int., which has been around since 2002, has a considerable voice based on its 16 years of selling hemp foods, and 15 years spent developing and marketing hemp cosmetics.

"The work is continuous," Rebecca Kruse, CEO, said of the firm's contribution to EIHA's regulatory efforts at the EU level. "But it's important we spend time and concentrate on this work as we're truly at a formative stage. The framework we set now will affect the industry for years and years to come. We must get these things right, especially to capitalize on the period of fast growth for the sector that we expect. That's why Hempro invests in these initiatives."

#### Issues from food to THC

Among the issues Hempro Int. has worked on with EIHA:

- Most recently, Hempro has played a big role in helping to shape EIHA's position regarding hemp extracts vis a vis the EU's Novel Food Catalogue.
- THC limits in planting cultivars; EIHA is working to consolidate the vote



#### **Hempro International** GmbH & Co. KG

**CEO:** Rebecca Kruse Founded: 2002

**Headquarters:** Dusseldorf

Profile: Producer / wholesaler of hemp for foods, textiles, cosmetics. Online

Brands: The Hemp Line (clothing); PURE (accessories); HANF FARM (consumer foods).

Edge: Strong foothold in China and Europe; organic production. Strategic partnership with HempConsult GmbH; established international player.

of the AGRI Committee of the European Parliament as it pushes to raise the THC limit for hemp cultivars from 0.2% to 0.3%.

- Helping to shape the COSING regime, a European Council directive on cosmetics ingredients that affects regulations related to CBD in cosmetics. Rules are needed to clear up confusion among producers as well as consumers.
- Hempro Int. is also shoulder-to-shoulder with EIHA in efforts to set down sound scientific guidance values for hemp-based

products.

Hempro Int., which marked its 15-year anniversary in 2018, has its main business in industrial scale hemp food production and bulk distribution; it also has the HANF FARM brand line of consumer foods.

#### Fashions & accessories

The company also makes hemp fashions and accessories. Clothing is under The Hemp Line brand, a house collection of men's and women's garments made of 100% hemp and hemp-cotton blends, with cotton from controlled organic fields, and produced under the Global Organic Textile Standard (GOTS) certification regime.

Hempro Int. has sold the PURE brand line of hemp backpacks, rucksacks and bags since 2001, became a licensee of the brand in 2005, and in 2016 purchased the manufacturer outright.

Hempro Int. makes its food products in Europe, while its textiles are woven in China. In both cases, the company works closely with local suppliers, guarding quality where it begins - in the field.

Hempro Int. also helps private-label firms with product development and then makes the products for them under contract, and goes as deep as the directto-consumer market via hanfhaus.de, its online shop that offers a wide assortment of reasonably priced hemp products.

























#### Relocating to lands historic for organic farming

eading European agri-business and food producer HANF FARM GmbH has relocated its headquarters and is now operating out of a 25,000 sq. m complex near the village of Melz in the state of Mecklenburg-Vorpommern in northeast Germany. The company was previously headquartered in Berlin.

"We now find ourselves in a situation in which demand, production capacity and acreage are all positively dependent on each other," CEO Rafael Dulon said of the move. "We're much better set up now to play our part in the broader sustainable regional economy," Dulon said of the company's philosophy.

Dulon said the area around Melz has a high concentration of biologically certified organic agricultural land. "Many of these areas have a long history in organic farming and are therefore particularly suitable for hemp cultivation," he said.

#### Space for greenhouses

The relocation gives HANF FARM 3,000 square meters of production halls at the highest technical and hygienic levels, and provides better production and storage conditions, Dulon said. More importantly, the overall complex offers plenty of space for production in on-site greenhouses, he noted.

"We put a lot of energy into the development of gentle harvesting methods and the treatment of the raw materials during and after drying," said Dulon, whose company developed the MC HC 3400, a combine that can harvest short and long



Rafael Dulon, CEO, HANF FARM



Dorfstr. 58 17209 Melz info@hanffarm.de www.hanffarm.de Tel: +49 151 118 78 108



HANF FARM is also the developer of the Multi-Combine HC 3400 hemp harvesting technology.

varieties of hemp, taking the tops, blossoms and seeds without damaging the plants as the machine moves through the field. HANF FARM harvests hemp with its own machines and processes them immediately after harvesting with either stationary or continuous process technology. The raw materials are then further processed in separate production halls that turn out seeds, leaves, flowers and straw.

"In order to further increase our added value on site, we will also install different extraction technologies in the future," Dulon said.

HANF FARM was the first European hemp processor to receive certification for hemp seeds, leaves and flowers under the International Sustainability and Carbon Certification (ISCC-PLUS) regime. Furthermore, HANF FARM is intensively involved in publicizing the great advantages of hemp cultivation in meeting the United Nations Sustainable Development Goals.

#### Another busy year

It's been a year of expansion for HANF FARM. Always innovating, the company recently added organic quality tea leaves in different sizes and finenesses to its product line along with new powder products from the leaves and blossoms, and a hemp root powder. Future plans call for production of a new line of oil extracts made with various solvents. In view of the increasing demand for organic fiber, HANF FARM also started offering straw-based products as it continues to research new methods for fiber harvesting and processing.

HANF FARM also makes a range of own-brand foods and provides whitelabel finished foodstuffs to other major German hemp foods brands. In both cases German "drogeria" chains like D&M and Rossman that sell over-thecounter medicine and health & beauty products are expanding into food, giving HANF FARM added distribution power. Some are large-volume buyers who package and sell HANF FARMproduced white label foods under their own brand names.



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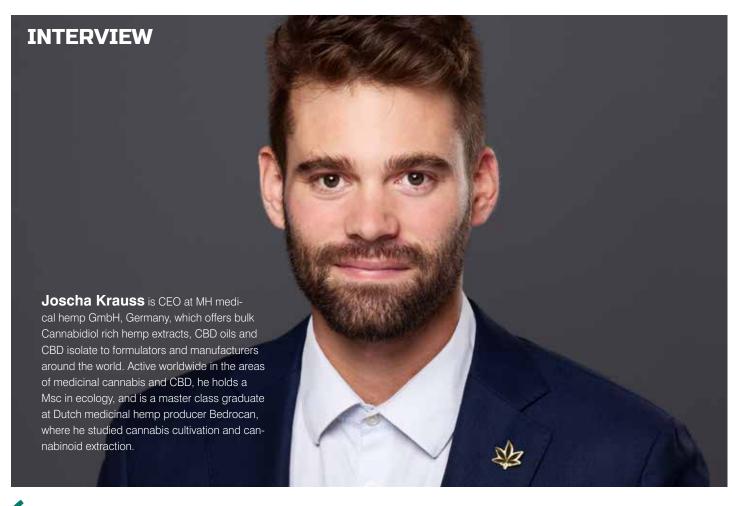


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#### If we let the cowboys of the CBD industry set the agenda, we'll be left to clean up after them.

HempToday: What does the European market look like from a consumer perspective these days?

Joscha Krauss: There's clearly growing interest in CBD products as indicated by a greater awareness of its effects and uses among the consumers.

The current market in Europe is still young and small, but as more medical personnel gain more knowledge on how to medicate with cannabis, we estimate a stable and continuous growth of this

#### HT: Where in Europe are we seeing the fastest CBD market takeup?

**JK:** The UK, with its liberal approach to marketed products and cultural proximity to the U.S., has been the fastest growing market for CBD in Europe, but we've also seen Germany catching up lately.

As information comes across from the U.S., however, a lot of consumers and first time investors are led to believe that this is a market for quick money and

Unfortunately, with more and more information out there, we have noticed an equal amount of misinformation. That's a big challenge to the sector.

#### HT: What's the best way to confront that challenge about investor and consumer perceptions vs. reality?

JK: We can work with NGOs to consolidate information on CBD as one way to bridge the knowledge divide and curb expectations regarding the real potential of cannabis and cannabinoids. There's a move afoot to create industry driven quality tests and we expect something to happen in this area.

We believe in establishing data driven guideposts and tools, and total transparency. It's fundamental that we need to share information on what is actually real and what is not.

Of course, this requires a greater level of investment on the part of the industry as a whole, to eliminate false expectations that can damage the reputation of the product. But if we let the cowboys of the CBD industry set the agenda, we'll be left to clean up after them. Only a consolidated industry can assure the quality of products -- and prosperity for all.

#### HT: You launched Phytalize, the cosmetics brand, just last year. What's been the

JK: Our cosmetics line was very well received in trade shows and expos, with CBD being

the buzzword of the year. Big cosmetic brands from all walks of life show growing interest in our products.

Development of regulations for these products, however, has been slow. With the big shifts in the CBD world, with so many new products being launched, regulators continue to play catch up.

#### HT: The horizon seems to be racing toward everybody? What's on MH medical hemp's horizon.

**JK:** Besides our core business as a supplier of raw materials for the nutraceutical cosmetic industry, our focus right now is more on the development of the pharma branch with the corresponding certifications (GDP + GMP). Discussions with the competent authorities in Germany are still tough in regard to cannabis. But we just recently achieved a major breakthrough and are very confident that MH will be able to expand this segment even further. We're in talks with Portuguese and Thai companies for the production of pharmaceutical grade products, and those discussions are moving fast.

We expect to have our first pharmaceutical products in the market from next year, with an emphasis on flower and extracts.



#### **FASHIONS**





# Sexymeets Sustainable

Hempro's underwear line offers the perfect blend of style and comfort

ut aside for a moment all the benefits of hemp clothing - its durability, breathability, comfort, antibacterial properties and eco-friendliness. With The Hemp Line brand underwear collection from Germany-based Hempro Int.

GmbH & Co., now it's downright sexy.

That's exemplified most recently by the latest creation from The Hemp Line's design shop in Dusseldorf, the figurehugging Brazil Slip for women. Elastic and with a bordered hem, the garment's flat seams make it invisible under clothing - a perfect blend of comfort and design.

Getting that blend perfect has been the goal of The Hemp Line brand since the clothing line started back in 2008. Underwear was added with a collection that debuted in 2009, and which has continually been updated through the years.

#### Soft, supple, firm

A major advancement was marked in 2017 when the company revamped its material composition

for The Hemp Line undergarments to 28% hemp, 66% organic cotton (kbA), and 5% elastane, resulting in a softer, more supple and firmer textile.

For women, The Hemp Line underwear series includes an assortment of bras, slips, panties, t-shirts, and strap tops.

For men, the line offers slips, boxer shorts, t-shirts and vest tops.

Items in The Hemp Line underwear collection come in undyed natural, black, steel grey and marine blue, and are environmentally friendly as the dyes used in the garments are completely degradable and tested for harmful substances

Hempro's focus on sustainability is also reflected in details such as the labels, for which only biodegradable paints and water-based inks are used. And the label-making process is checked every season to make sure no harmful substances are present.



The Brazil Slip, above, is the latest design in The Hemp Line collection. All garments are offered in the colours black, steel grey, marine blue and natural. Women's sizes available are 36, 38, 40 and 42 with S, M, L and XL for men.

#### Respect for nature

From the raw material to the weaving of fabrics to the finished product, The Hemp Line production is with Hempro's long-standing partners in China. As a member of the International Association of the Natural Textile Industry (IVN), they guarantee the responsible treatment of workers and respect for nature in the manufacture of textiles used in The Hemp Line garments. The production site is also GOTS-certified All subcontrac-

tors work in accordance with the socially responsible guidelines of the International Labour Organization (ILO), which regularly visits work sites to ensure that production conditions and human rights are observed. That gives a guarantee that The Hemp Line garments are ethically produced in addition to being of highest quality as well good for the earth.

## The Hemp Line NATURAL CLOTHING



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BASIC MEN



UNDERWEAR MEN



#### TECHNOLOGY



## Powered by the sun

#### Solar 'Hemp Factory' goes online thanks to Mother Nature

emp Factory, a fully solarpowered food processing facility, has gone online in Borken, Germany near the German-Dutch border, Hemp Factory is the biggest hemp food manufacturer in Central Europe.

Development of the facility was guided by HempConsult GmbH, the Dusseldorf-based hemp industry advisory. HempConsult founder and CEO Daniel Kruse is also interim CEO at Hemp Factory.

#### Doubling down

"We all know hemp food can contribute to environmentally friendly and healthy nutrition for the growing world population," said Kruse. "This highly efficient, clean-energy factory is our way of doubling down on our commitment to sustainability. It's intended as an example to the hemp industry that we can be the leaders in shrinking our

carbon footprint."

Hemp Factory produces hemp foodstuffs for the processing industry with a ratio of almost 100 % certified organic, and the remainder of conventional production.

Hemp Factory's facilities include systems for cleaning and sterilization to produce sterilized whole hemp seeds; hulling technology for hulled or shelled hemp seeds; and in addition a milling and sieving operation for hemp protein and dietary fiber.

#### Careful quality control

Another production line turns out fodder, concentrated feed stuffs and fodder oil for the animal feed industry, and supplies livestock businesses with high-quality feed concentrates from by-products such as oil, oil cake and coarse meal.

With careful quality control, Hemp Factory offers comprehensive analysis;

continuous improvement of production standards; and certification under Organic, Kosher, Halal, HACCP and GMP+ standards. The plant's quality management system is to be extended in the near future.

#### Impressive customer base

Hemp Factory's no-emissions, cost optimized complex features a solar roof that provides electrical power for all facilities, production and heating. The plant optimizes waste separation, and the enterprise is using electric forklifts and electric vehicles in its transportation fleet.

Hemp Factory's customers include well-known food and baked goods producers as well as leading wholesalers. The factory turns out a variety of bulk hemp food products for sister company Hempro International GmbH & Co. KG, which has been selling hemp foods for 16 years.



CEO Daniel Kruse of Hemp Factory.







Among products turned out at the new processing facility **Top**: Hemp seeds being cleaned and separated. Middle: Hulled hemp seeds. Bottom: Hemp protein powder.



Ground floor view of the Hemp Factory production line. The facility is the biggest hemp food processor in Central Europe.



Solar panels that power the facility



Hemp Factory is located at Borken, Germany near the Dutch border

#### LATIN AMERICA

## LatAm & Caribbean Hemp Summit set

rganizers of the first ever Latin American & Caribbean Hemp Summit have issued a call for speakers to inform the event, set for Montevideo, Uruguay Nov. 8-9, 2019.

The Summit is a collaboration among HempToday; Hemp Engineering, Perth, Australia; Hempoint, Czech Republic; and the Cannabis & Hemp Studies Center, Uruguay.

#### Expansive program

Set for the Hyatt Centric in Montevideo, the program will survey legal and regulatory developments across the region, review hemp research and development, and point to investment opportunities.

"Ît's important to cover all sectors and to look at possibilities for processing of the whole plant," said Ramon Granados, CEO at Hemp Engineering and General Director at HempToday en Espanol. "This starts with everything from consideration of the laws in different countries through processing and marketing," Granados said. "The potential is truly staggering for the region when you think of all the sectors hemp can fit into."

#### Local speakers are sought

The organizers are particularly seeking representatives of countries in the Latin America and Caribbean region: Uruguay,



View from the Hyatt Centric in Montevideo, venue for the Lat-Am & Caribbean Hemp Summit.

Colombia, México, Brazil, Jamaica, Guyana, Aruba, Barbados, Chile, Argentina, Puerto Rico, Ecuador, Haiti, Trinidad & Tobago, Virgin Islands, Bahamas.

"But we're also bringing in leading European, Asian and North American speakers to inform local stakeholders what's happening in hemp around the world and, most importantly, for the networking opportunity," Granados said.

Speakers scheduled to address the Summit so far come from as far away as Nepal, Australia, Germany, Poland and Washington State in the USA.

The Summit also will feature Hemp-

Today's HempBoutique pop-up showroom, an exhibition of premium hempbased products from around the world. Space for about 20 exhibitors is still available.

#### Tickets & sponsorships

Tickets for the Latin American & Caribbean Hemp Summit go on sale this Friday, May 3, 2019 at the Early Bird rate of \$579 per person until August 15. Accreditation is \$799 per person starting Aug. 16. A limited number of sponsorships also are available for the Summit.

#### Hemp as change agent in former Colombian war zone

Avelino Martinez Sandoval, CEO at ApagroCOL S.A.S., works with the Colombian national government's Territorial Renewal Agency (ART), which advances rural reform in the areas most affected by Colombia's armed conflict. Sandoval works on



economic development initiatives that uplift rural communities and indigenous peoples, within the framework of peace agreements between the Colombian government and the Revolutionary Armed Forces of Colombia (FARC).

HT: You've taken important work on your shoulders, a very important burden for the industry. Being at the epicenter of so many interests, seeking to do good,

#### what's your biggest challenge?

AV: The biggest challenge is to make Colombian industry understand the advantages that industrial hemp offers and how it can help us in developing a circular economy. That the national hemp industry has the capacity to develop products of all kinds and help reverse climate change. It's important that the country's new regulations go in that direction.

#### HT: With Colombia offering so many opportunities in industrial hemp, which sector or products are most inviting for international investment?

AV: One of the areas that draws the attention of the Colombian industry is production of hemp paper. And fiber production for other applications, as well as food and oils. These areas are not at all addressed on an industrial scale; that's where investors should concentrate their

#### HT: What comparative advantages does Colombia offer for the hemp industry?

AV: Most importantly, the clarity of regulation of industrial hemp in Colombia. It's legal to plant, process and transform hemp into products. The other advantage is large tracts of unused land. The climate is very suitable for hemp. A local industry with large demands for raw materials can create and supply a new circular economy.

#### HT: How is progress with your initiative?

AV: Our group has obtained the licenses to plant and transform hemp in Colombia. We're now bringing in different varieties of hemp seeds to start small pilots with research centers, universities and other interested stakeholders. We're looking for varieties that best adapt to our soils and climate, and can produce plants with less than 1.0% THC. This will let us make strategic decisions regarding our direction in the various hemp sectors going forward.

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Montevideo









## Rising fast

The continent is only beginning to wake up to its full hemp potential

sia is well positioned to embrace hemp in an innovative and unique way, with stakeholders only beginning to capitalize on the rich genetic diversity of the hemp plant across the continent.

That was the key finding from the first-ever Asian Hemp Summit held earlier this year in Kathmandu, Nepal as more than 100 stakeholders from 25 countries across the globe convened to survey opportunities in Asia's potential powerhouse hemp nations.

And innovation is happening in both big and small enterprises - among new-era stakeholders ranging from giant industrial consortia in China to nascent startups in India and beyond.

Many valuable traits, such as improved yields, improved fiber quality, improved seed oil/protein content, disease



resistance and attractive cannabinoid profiles are already being discovered within Asian hemp populations.

These varieties are being grown because they are high-quality, high-yielding crops with a long history of cultivation, despite their more "colorful" cannabinoid profile.

Though the modern hemp value chain necessitates creating improved varieties, Asia's historic varieties can easily be used to kick-start hemp industries across the continent, with native landraces offering the enticing potential for producing varieties well-adapted to local conditions and domestic production.

Collecting these varieties and establishing well-managed gene banks will be critical to conserving cannabis biodiversity and valuable traits as Asian industrial hemp revives its history and culture around the plant going forward.

#### Indian Hemp must chart its own path

Indian stakeholders are determined to recover their country's rich hemp history, and capitalize on the plant's potential for economic development. There is a lot of interest among entrepreneurs, and the urge among these startups to work hemp into broader initiatives that help people is very strong in India.

But when it comes to hemp, India needs to operate differently than other parts of the world. The abundance of raw materials offers real potential to develop rural economies in India, however the current difficulty in accessing raw materials was highlighted by a number of attendees.

In the process of legalization, India is at a place right now where the U.S. and Europe were couple of years ago – giving the country an opportunity to learn from their experiences setting frameworks for the industry. There's also a vast gap in knowledge of the processes involved in bringing products to market. Investors in Indian hemp can see returns from ventures in cultivation, research and other fundamental areas initially.

There are Indian entities looking into every application of industrial hemp including health products such as CBD.

#### China is moving quickly across entire hemp spectrum

Despite its severe drug laws, Chinese authorities are turning a blind eye to some production areas so that the People's Republic can rapidly become the world leader in hemp.

Through international partnerships and government programs, the Chinese are creating new hemp varieties with modern breeding and their extensive genetic resources, creating high-yield varieties that perform under a diverse array of conditions.

At the same time, Chinese hemp

concerns are intensively researching cultivation, harvesting methods and equipment, and applications ranging from food to bio-plastics, nano-technology to building materials.

But China is also somewhat of a mystery. The Chinese hemp industry is notoriously secretive. If China is to better integrate itself into the industry globally, more transparency is called for.

Also, there are concerns over the use of genetically modified hemp seeds in China as well as the lack of intellectual

property protection in the country, a endemic problem.

Despite those drawbacks, the exceptional knowledge and research within China could be beneficial for the wider hemp industry if meaningful collaborations can be arranged.

While it's only possible to know a snippet of what research and development is being conducted in the country, glimpses reveal that these efforts are well funded, forward-thinking and progressing rapidly.

#### **AROUND ASIA**

Japan: Despite its modest potential for production, there is growing enthusiasm for hemp, an ancient crop in Japan. Stakeholders see massive potential in the consumer market, projecting a need for significant imports as awareness of hemp products grows - especially food and medical hemp. Current day enthusiasts are working hard to pass along hemp traditions and to bring young entrepreneurs into the fold.

Kazakhstan: Hemp cultivation in Kazakhstan continues to expand, and last year the Agriculture Ministry said around six square kilometers of hemp were cultivated in the southern Almaty region. The hopes are to increase that to 40 square kilometers this year. Currently, harvested seeds are exported to the Netherlands while fiber is exported to Russia and China, although Kazakhstan officials hope to open new markets

Mongolia: The Mongolian government is developing a strategic plan for agriculture to create an economic growth

model – and hemp fits in perfectly. The new policies, aimed at creating scalable employment and diversifying the country's economy by focusing on sustainability, innovation and new technologies, are driving public finance programs - and giving the agricultural sector momentum. With engineering and agricultural knowhow in a rapid development phase in Mongolia, early entrants can tap into a rich pool of human resources coming out of the country's historically strong educational system.

Nepal: In Nepal they are building houses from shivs produced from their own local cannabis "wild crop," using the technical fibers in textiles, and seeds to produce hemp oils and extracts in cosmetics.

**Pakistan:** In Pakistan, they successfully produce quality hemp seed oil from high-yielding but under-domesticated varieties, with an appreciable amount of oil - up to 31.5% - from wild hemp growing in the mountainous regions, and filled with protein comparable to the best of "industrial" (read: low THC) hemp. It's of course difficult to quantify their yield/hectare, as very rarely have these varieties been grown in strict agricultural trials.

South Korea: Imports to the Asian nation are rising rapidly as South Korean consumers have swiftly taken to hemp foods as a replacement for fish oil, and spurred by consumer uptake of hemp foods driven primarily by their entry onto tele-marketing programs. Along with foods, hemp has been a source of fabric for Korea since ancient times

Thailand: With the Thai government now allowing the cultivation of hemp for research purposes, entrepreneurs are incorporating the multipurpose plant in their products and exporting them around the world. While hemp fields are still heavily regulated and for government purposes, that's expected to change, first to meet local demand for



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#### **USA**



By Karen Haywood Queen

s the euphoria brought on by passage of the U.S. Farm Bill begins to fade, American hemp stakeholders face the challenges of crafting and living with federal and state standards for cultivation and finished products. Some in the industry are eager to work with the U.S. Food & Drug Administration (FDA) to develop standards for hemp-based consumer products. Others threaten lawsuits.

Meanwhile, exponential growth, driven primarily by soaring demand for CBD, means many twists and turns ahead for hemp in the USA.

"În four years, we went from zero acres to almost 80,000 acres in hemp cultivation, said Robert Hoban, managing partner of Colorado-based Hoban Law Group. "That's pretty impressive for agriculture. The CBD industry is growing dramatically. I don't expect to see it slow down. I don't see the government putting the brakes on the industry at the federal level. But there are many challenges ahead...many."

The 2018 Farm Bill essentially legalized hemp by removing it from the Controlled Substances Act and out of the purview of the U.S. Drug Enforcement Agency (DEA), expanding the definition of industrial hemp, and categorizing hemp as an agricultural product. Moving

forward, the USDA plans to have federal cultivation standards for hemp in time for the 2020 growing season.

Meantime, states can develop their own standards that meet USDA minimums and submit those standards to the FDA, which must respond within 60 days, said Eric Steenstra, president of Vote Hemp, a lobbying group.

The 2018 farm bill also turns the clock back 30 years, in a good way, to when hemp was first being promoted as a super food, Hoban said.

The door is cracked open for cannabinoid-enriched foods," Hoban said. "We're going to see more large-scale farms and more government policies and regulations. This is something that can and should exist."

As the industry works to shape the regulatory framework for hemp, here are the critical considerations:

#### Who is the regulator?

Hoban's firm believes the FDA is the logical regulator. He also cites the importance of a seat at the FDA's table.

"We don't have a choice," Hoban said. "People complain that no one gave the regulatory authority to the FDA. The FDA already has authority over all products that go into human beings on a mass scale. Regulation is something that needs to be embraced by a new industry—not revolted against. If you embrace regulation, it becomes mainstream. We want these products to be available for people's well-being."

Instead of fighting the FDA, "We talk to the FDA every week," Hoban said. "We're intimately involved in crafting what the FDA is doing."

The FDA does have the experience and the power to establish and enforce regulations, said hemp food veteran Richard Rose, a product developer and consultant. "They already are regulating it; it's in their wheelhouse and they have fines and jail backing them up," he said.

But the agency is not well-suited to set standards for CBD and hemp because of its "long demonization of cannabis and the fact that for medicinal products, they prefer a one- or two-molecule approach, which is directly contrary to the cannabis industry's molecule approach," Rose said. "The way the FDA views appropriate products and the way the industry views appropriate products are diametrically opposed. It's two trains heading at each other and I don't think the FDA will win this one. Science is not on their side.'

The FDA is qualified only to regulate the accuracy of labeling—whether a product contains the amount of CBD claimed on the label, said Rick Trojan, founder of Hemp Road Trip, vice president of the Hemp Industries Association (HIA) and director of Colorado HIA. Beyond that, the FDA is not the correct entity to develop and enforce standards, Trojan said.

"The FDA has no understanding of cannabis, is blind to the situation and can't create regulations,"Trojan said. "Any FDA standards are going to be insufficient and inaccurate. While the FDA is the regulating authority for pharmaceuticals, it shouldn't be the regulatory authority for cannabis."

#### Slow pace of the FDA

Beyond the recent approval of Epidiolex as a treatment for children with epilepsy, it could take years before the FDA has regulations and classifications for other CBD products claiming therapeutic benefits.

"The FDA is very slow," Steenstra said. "They're going to look at this in a slow, methodical, scientific process. It's going to be a long time before they finish."

Some standards that have been put forward are inadequate. "U.S. Hemp Roundtable's proposed standards are quite weak, basically just AHPA's (American Herbal Products Association) but rushed to the market without sufficient vetting or industry input," Rose said. "Everybody seems to have a set of standards. At the end of the day, it will be a marketing problem more than a technological one: who will the people believe?"

#### Legality of CBD

"There is no absence of standards," Rose



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said. "The FDA already regulates (CBD) as a food or dietary supplement. The biggest problem is the perception there is a lack of regulations as well as the perception that CBD is not fully legal."

"We're facing a lot of challenges because the FDA has taken a position at the federal level that you can't sell CBD as a dietary supplement," Steenstra said.

#### New standards unnecessary

Consumable hemp should be regulated like other foods and supplements—no new standards are needed anyway.

"We've convinced the FDA they need to regulate these products like any other food or supplement," Hoban said. "You don't need to create new standards for industrial hemp."

"The FDA has been regulating dietary supplements for some time," Steenstra said. "Hemp fits in like any other herbal. Companies should be meeting FDA standards. We just want hemp to be treated like any other supplement. We don't need to reinvent the wheel here."

#### Lawsuit against FDA inevitable

"The reality is: we're going to have to sue the FDA,"Trojan said. "HIA sued the DEA three times and won two times out of three. One of our members will take the lead and we'll support it on the back end."

Some states are moving ahead, Steenstra said, but many states are waiting for federal regulations. "The USDA told us a few weeks ago that they had already received three state plans and at least one tribal plan to regulate hemp," he said. "Someone from another state (that he declined to name) told me that they weren't waiting on the USDA 60-day approval process, he said.

"It's an exciting time and an exciting opportunity. But states can't sit back and wait for the federal government to solve their problems," Hoban said. "States don't understand that they can use their agencies that are the equivalent of the USDA to make sure products are standardized. The states need to take the lead. Colorado stepped up and did it."

Ironically, many conservative states that normally don't want federal government oversight are, in this case, waiting for federal-level answers, Hoban said.

#### Standardized seed testing

Agricultural testing of hemp needs to be standardized. "From a farming perspective, there are problems with testing the plant material," Hoban said. "Do you homogenize the content over the entire plant or do you simply test the flowers?"

Moving forward, "There's a lot of pent up excitement about hemp and people want to move forward," Steenstra said. "You're going to see lots of hemp grown this year."

#### **Biggest hemp growers**

The USA has jumped into the top ranks of global hemp growing nations, recording a tripling of land under hemp to reach a total 78,176 acres (about 31,000 hectares) in 2018, according to the American hemp advocacy group Vote Hemp. Globally, that puts the USA third, behind world leader China (400,000 acres/162,000 ha.) and northern neighbor Canada (100,000 acres/40,000 ha). Montana surpassed Colorado last year as the biggest hemp growing state in the USA. They are followed by No. 3 Kentucky. Acres and year-on-year growth in %:



41 STATES ARE ACTIVE: have defined industrial hemp as distinct and removed barriers to its production; Alabama, Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Hawaii, Illinois, Indiana, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, Nevada, New Jersey, New Mexico, New York, North Carolina, North Dakota, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming

#### Crop report

Hemp fields, state by state in the USA



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		New states which started in 2018 (5 states)
	✓	States which grew hemp in 2017 (19 states)
		States with enacted hemp legislation (41 states)
		Say.
W. Care		78,176
7		Acres of hemp grown in 23 states
		40 Universities conducted research
		3,546

State	2017 Acres	2018 Acres
Colorado	9,700	21,578
Hawaii	1	2
Illinois	N/A	0.1
Indiana	5	5
Kentucky	3,271	6,700
Maine	30	550
Massachusetts	N/A	21
Minnesota	1,205	710
Montana	542	22,000
Nebraska	1	0.5
Nevada	417	1,881
New York	2,000	2,240
North Carolina	965	3,184
North Dakota	3,020	2,778
Oklahoma	N/A	445
Oregon	3,469	7,808
Pennsylvania	36	580
South Carolina	N/A	256
Tennessee	200	3,338
Vermont	575	1,820
Virginia	87	135
Washington	175	142
West Virginia	14	155
Wisconsin	N/A	1,850
Total	25,713	78,176*

## A New Path

**Kenzi Riboulet-Zemouli,** Head of the Drug Policies & Human Rights Program at Knowmad Institute, says we must find alternatives to failed drug laws and policies.

HempToday: You're in intense study of "alternative pathways for Cannabis policy reform." What does that really mean? In action.

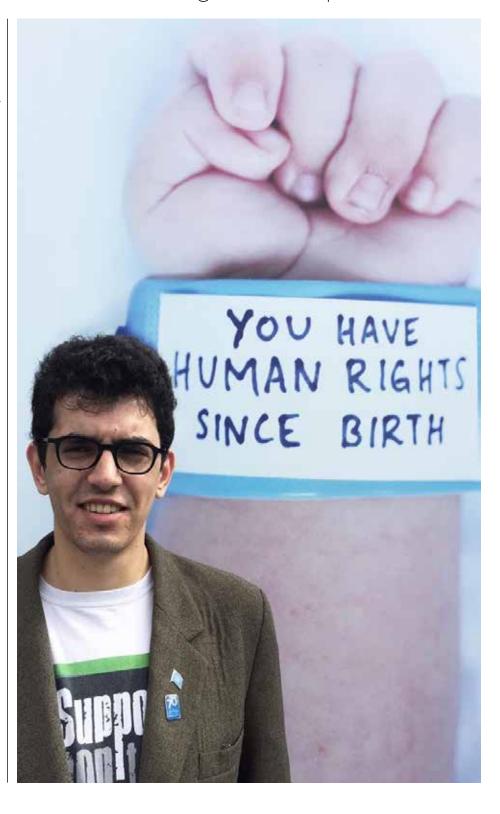
Kenzi Riboulet-Zemouli: Too often the debate on Cannabis policy reforms has been polarized between either a continued prohibition or a sudden "legalization" mimicking alcohol or tobacco regulations. Yet such approaches are neither desirable nor efficient. The pioneering reforms that took place in the previous decade show many adverse effects, in particular in terms of social impact, health and environmental sustainability.

By alternative pathways, we mean addressing laws and policies with a strong focus on people and community demand, and what we could call "spontaneous" or "self-" regulations. Because in practice, prohibition has meant renunciation and resignation of the State to its duty in many fields – a rupture of the social contract.

People have started to gather and organize by themselves, either through civil disobedience or finding grey areas to evolve in. These are much better starting points to shape fair, efficient and sustainable legal systems than mimicking the failed regulatory models of tobacco, alcohol or pharmaceutical industries. And these are also undeniable socio-economic realities that must be dealt with.

One of the most beautiful and promising examples is the concept of "Cannabis social clubs," a users and growers-based non-profit model of production and supply in a relatively small closed loop. Born in Spain, this grassroots initiative has gained recognition by all stakeholders at the local level (city hall, police, health and social services, neighbors) and allowed for a sort of transitioning way out of prohibition. Later on copied and adapted in several European countries, Cannabis clubs are currently in the focus of numerous civil society groups among the globe seeking to launch similar transitioning models, but also seriously considered by government officials that understand the need of a multi-modal regulation where different ways of access (including users' clubs) coexist.

Explaining the concept and helping



#### **POLICY**

stakeholders articulate it with local idiosyncratic background is one of the tasks we've taken on at Knowmad Institut.

#### HT: Please talk a bit about the process of linking international law with local grassroots initiatives; why that's critical and the key benefits.

KR-Z: The UN has often been seen (sometimes accurately) as pushing back on policy changes, as burying its head in the sand. Nowadays however, the UN strongly promotes sustainable development, ending discriminatory laws, and putting "human at the center" of all public policies. Our world is increasingly multipolar. Knowledge crosses borders, and many different backgrounds now feed global debates. Nowadays, the UN system – and international law – become real forums for debate and meaningful inputs: they become reliable allies.

Old tools such as the Drug Control Conventions are being revisited, re-read and reanalyzed, and other instruments are being reconsidered – such as those affecting human rights, rights of indigenous people, rights of peasants and workers in rural areas, technical background on biological diversity and community-owned genetic resources, changes of WHO scheduling, policy framework on traditional and herbal medicines, and others.

If we look at it calmly, we can see that all of these are victories of social movements, from the Rio Earth Summits to the Peasants movements, from the WHO scheduling review to the analysis of the hierarchy of norms between Human Rights and Drug Control treaties. All of these changes at the top come from far, and from the bottom. Now, it's up to us to re-link both reflexions and trap our national governments (the last fortresses of conservatism) between ground-up needs and top-down solutions that match.

## HT: What's your vision for matching academics and researchers with citizens to effect social change?

**KR-Z:** More than my vision, "Action research" is an extremely useful research methodology developed at the MIT in the immediate post-WWII, that I learnt (much later) with academics of the CNAM, the oldest French University, yet one of its most innovative.

Wikipedia provides a very interesting introduction to that aspect of research (en. wikipedia.org/wiki/Action\_research) which is fundamental to challenge Cannabis-related issues, always shrouded in misunderstanding, bias or direct disinformation, and always missing either methodology or linkage with affected populations (if not both).

Multidisciplinary Action-research is also a tool that can be used by Cannabis

activists to question and cautiously consider the scope and implications of their social missions and goals. In a word: it's a roundtrip research process between academia and those at ground level, and Knowmad Institut is a perfect hub where action and research are in constant dialogue.

## HT: What's been the reaction to the publication of the Cannabis & Sustainable Development report? What are the further plans for the book?

KR-Z: The report was launched on March 15 at the United Nations drugs meeting, in a high-level event hosted by the government of Uruguay. This enabled us to have direct access to worldwide key government authorities in charge of Cannabis and hemp policies. The unanimous feedback is gratitude and interest – which shows what we knew, and what's behind the book: a huge knowledge gap among our decision makers.

We distributed about 3,000 copies to UN and government officials from all conti-

"The hyper-connected world . . . demands urgent protection of the planet, of human beings, and of the way human beings relate to the planet."

nents, and the same amount to key civil society stakeholders around the globe. If you haven't been able to get the printed copy, don't worry! You can read it online free of charge at bit.ly/CannabisReportSDG.

We are currently collecting funding with Knowmad Institut to publish translations in Spanish, French, German, Greek, Italian, and we look for support for Arabic, Chinese and Russian versions in a near future.

Because the most frequent question was "when will you continue more in-depth?", we have started developing targeted education and training modules based on the report that we will announce in HempToday!

## HT: Among other disciplines, Knowmad Institute studies new technology – as well as the preservation of cultures and cultural practices. Is there an optimal intersection where those two things meet?

**KR-Z:** Traditions and modernity permanently intersect, everywhere! We need to be conscious of the Fourth Industrial Revolution in which we are currently living; the hyper-connected world which demands urgent protection of the planet, of human beings, and of the way human beings relate to the planet – what we can call the

ethnosphere.

While this is fundamental to maintaining the richness of cultural diversity, we believe that the modalities of adoption of emerging technologies (Blockchain, robotization, Artificial Intelligence) are key to that urgent protection. These tools could indeed be misused and provoke increased human-created harms on the ethnosphere. But used ethically, new technologies can contribute to, for instance, reducing precarious employment, increasing financial independence for those living in poverty and strengthening privacy and rights in our modern societies.

#### HT: What's the role of Blockchain technology in your work?

KR-Z: Knowmad Institut promotes the use of Blockchain-based technologies as tools to protect Human Rights and enable self-defense in terms of protection of the dignity of people. We believe the adoption of this technology and cryptocurrencies are an opportunity to enhance individual freedom and democracy in the context of a rapidly-digitalizing planet.

The transparency, privacy, traceability and financial independence that define this revolutionary technology have always been at the core of our work – on Cannabis policy for example. But the Blockchain can increase potentialities much beyond; this is why we not only use it, but we promote it.

### HT: Who makes up the membership of Knowmad Institute? What are the requirements to be a member?

**KR-Z:** Knowmad Institute is registered as a public-interest research institute. For this reason, we have different ways of engagement to support our work. There are two types of membership (for entities and for individual persons) detailed on our website. (knowmadinstitut.org/membership).

But there are other ways to engage. Volunteership is open to everybody (and welcome), and scholars can also consider joining as Academic Members (subject to approval by our Experts Committee) as can journalists. It is also possible to participate in specific research streams. Finally, we also welcome support via donations (in conventional or cryptocurrencies) and are open to discussing partnerships with other entities.

#### Kenzi Riboulet-Zemouli

is a multidisciplinary researcher and advocate for sustainable drug policy reforms, and head of the Drug Policies & Human Rights program of Knowmad Institut: the European Institute for Multidisciplinary Studies on Human Rights and Science. He is also co-founder of NORML France and of the think-tank FAAAT. Riboulet-Zemouli recently led a team that compiled and published the landmark report "Cannabis & Sustainable Development."

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