

HEMP CULTIVATION IN EUROPE: key market details and opportunities

A detailed overview of industrial hemp cultivation and use across Europe

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HEMP CULTIVATION IN EUROPE



Monica Raymunt Hemp Industry Daily International Hemp Reporter

emp is seeing a new heyday. More countries are expanding their industrial hemp programs, even as confusion continues to rein around the plant's valuable extract, CBD.

One just needs to look at Europe to see the opportunities that abound—if the finer details of legality can be navigated.

Welcome to *Hemp Industry Daily*'s first Hemp in Europe report, a comprehensive look at the rules and regulations that dictate what can and cannot be done with this versatile plant across the continent.

As with so many things, the first factor to keep in mind is that while many of these countries are part of the European Union, the finer details of what is and isn't allowed vary from country to country.

Consider this a basic handbook for understanding the diverse markets and opportunities that exist in Europe for hemp producers.

You'll find insights on:

- International rules related to the production of hemp and related products.
- Price analysis of CBD products by country.
- The latest cultivation data from the top hemp-producing countries.
- Key players in each country's hemp industry.

Those tools will help you assess where and how to focus your business plans in Europe and to serve as a resource to help you along the way.

If you have any questions about this report or want to provide feedback, please contact me at **monica.raymunt@hempindustrydaily.com**.

Monica Raymunt International Hemp Reporter

Download your copy of the European marijuana and hemp testing information kit

Extensive resource kit to help drive improvements in cannabis testing

As the cannabis market is rapidly growing, lawmakers are redefining regulations. There is a great consumer push for quality, purity and safety. For cannabis producers, dispensaries and authorities, this means it's important to have sensitive techniques and technologies to analyze products for:



- Potency and Profiling—quantification of key components including THC, CBD, CBG and CBN for legal compliance and label claims. Investigation of concentration and identification of other cannabinoids and terpenes offers a means to help ensure quality of products.
- Chemical residues—local and regional legislation regulates the acceptable levels of contaminants such as pesticides and mycotoxins in cannabis-based products. Accurate, reliable LC-MSMS analysis helps to improve confidence in reporting confirmed values at low levels in challenging matrices.

SCIEX has compiled some requested marijuana and hemp testing publications for quick reference to help to verify the safety and quality of cannabis products.

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U.N. COMMISSION ON NARCOTIC DRUGS (CND) VOTE IN DECEMBER

Overview of the Single Convention on Narcotics Drugs (1961) and the Convention on Psychotropic Substances of 1971

Products containing CBD or any of the other more than 100 cannabinoids from the cannabis plant exist in murky legal territory as a result of the plant's inclusion in the Single Convention on Narcotics Drugs (1961) and of tetrahydrocannabinol (THC) in the Convention on Psychotropic Substances of 1971.

In short, under these treaties, the World Health Organization makes recommendations for changes to the narcotics conventions, but the U.N. Commission on Narcotic Drugs decides to accept or reject those proposed changes.

Plant-derived CBD is not specifically listed in either of the international treaties, but the WHO has taken the stance that cannabidiol is covered by the 1961 convention, both as a "preparation" and as an "extract or tincture" of cannabis.

The organization made several recommendations in January 2019 for changing how cannabis is scheduled in the 1961 and 1971 conventions, two of which are relevant to CBD products:

- **Recommendation 5.4:** "Extracts and tinctures" be deleted from Schedule I of the 1961 convention.
- **Recommendation 5.5:** A footnote be added to the 1961 convention's Schedule I entry for cannabis and cannabis resin to read, "Preparations containing predominantly cannabidiol and not more than 0.2% of *delta*-9-tetrahydrocannabinol are not under international control."

The motivation behind Recommendation 5.4 is to reduce confusion or repetition. Extracts and tinctures don't need to be listed, as these products are also considered preparations and thus are subject to control.

Recommendation 5.5's proposal to add a footnote on cannabidiol preparations is rooted in the conclusion that CBD is not likely to result in the same level of abuse of other substances included in the treaties.

The Single Convention on Narcotics Drugs (1961) aims to limit to medical and scientific purposes the possession, use, trade, distribution, import, export, manufacture and production of drugs. It also seeks to deter and discourage drug trafficking through a coordinated international response.

The Convention on Psychotropic Substances of 1971 was developed to control psychoactive drugs such as amphetamines, barbiturates and psychedelics after increased experimental drug use during the 1960s. The convention focuses on trade restrictions and rules to limit drug use to scientific and medical purposes and took effect on Aug. 16, 1976. Today, 175 nations are parties to the treaty.

An independent group of drug and medical experts at the World Health Organization is responsible for assessing the health risks and benefits of the use of psychoactive substances. This group, known as the Expert Committee on Drug Dependence, advises the United Nations Commission on Narcotic Drugs (CND) on which substances should be placed under or removed from international control.

The CND convenes annually in Vienna to analyze the global drug situation, consider the recommendations of the WHO and take appropriate action through resolutions and decisions. As part of the U.N. Commission on Narcotic Drugs' plan to move forward with a vote on the recommendations in December, the drug-policy body proposed that CND member countries participate in three closed-door topical meetings and one intersessional meeting in the run-up to the vote. As of the time this report was published, the proposed schedule for those meetings is as follows:

- First topical meeting: June 24-25
- Second topical meeting: Aug. 24-25
- Third topical meeting: Sept. 16-17
- Intersessional meeting: Sept. 18

Before the first topical meeting in June, the United Nations' International Narcotics Control Board (INCB) conducted an analysis of how the six WHO recommendations, if adopted, could affect U.N. member countries.

Among its conclusions, the board found that the recommendation to exempt plant-derived CBD extracts and tinctures with less than 0.2% THC from international control could be difficult to enforce, given that authorities in some countries might not have the lab technology or manpower to evaluate the cannabinoid content of CBD preparations.

How might the rules change?

| 5.4 REJECTED, 5.5 REJECTED: | Products containing plant-derived CBD would continue to fall under international control as a cannabis "preparation" and/or "extract or tincture." |
|--------------------------------|--|
| 5.4 REJECTED, 5.5 APPROVED: | Products containing plant-derived CBD could possibly remain under international control as an "extract or tincture." |
| 5.4 APPROVED, 5.5 REJECTED: | Products containing plant-derived CBD would continue to fall under international control as a cannabis "preparation." |
| 5.4 APPROVED, 5.5 APPROVED: | Products containing plant-derived CBD would no longer fall under the jurisdiction of the 1961 convention. |

If recommendation 5.5 is adopted, introducing a footnote that contains a THC threshold, Article 28.2 of the 1961 treaty— which says only the cultivation for industrial or horticultural purposes is not under the control— remains in effect. To many, this distinction is important, because it implies that narcotics control depends not on the phenotype of the crop but on the grower's intent or cultivation purpose. The INCB has said that if recommendation 5.5 is adopted, the preparations of mostly CBD with less than 0.2% THC won't be controlled, but the cultivation of cannabis for any purpose other than industrial still remains under the rules laid out in the treaties.

EUROPEAN GREEN DEAL

The European Green Deal is a plan championed by European Commission President Ursula von der Leyen to reduce emissions and make Europe the world's first climate-neutral continent by 2050.

Hemp advocates in Europe have long said the sector could contribute to the sustainable economy envisioned by the European Green Deal.

According to Europe's main hemp industry group, the European Industrial Hemp Association, the plant can help accelerate the transition toward an economy built on regenerative growth and help create "many thousands of new green and highly skilled jobs in rural areas and in manufacturing."

Status and the road ahead

Germany took over the rotating presidency of the European Union on July 1, meaning its representatives will chair meetings of EU ministers until the end of 2020. In June, Environment Minister Svenja Schulze said Germany intended to use its presidency to push for a climate-friendly economic recovery from the COVID-19 pandemic, including raising the bloc's 2030 emissions target to a 50%-55% reduction against 1990 levels.

One of the six guiding principles of Germany's six-month EU Council presidency is a "sustainable Europe," and adherence to the principles of the European Green Deal is mentioned as a concrete goal:

"Our goal is to overcome the economic and social consequences of the COVID-19 pandemic sustainably and inclusively and thereby help shape the transition to a sustainable economy. ...

"We will provide broad-based support for the implementation of the Green Deal and to this end ensure close coordination between all Council configurations involved. We will work to ensure that the Green Deal helps overcome the consequences of the COVID-19 pandemic and promotes a sustainable and competitive economy."

Progress on Green Deal ambitions might nevertheless take a back seat to recovering from the historic recession caused by the global Covid-19 pandemic. In the wake of the downturn, the European Commission has proposed a rescue and recovery plan that would make 750 billion euros available to EU countries hardest hit by the coronavirus.

"What started with a virus so small your eyes cannot see it has become an economic crisis so big that you simply cannot miss it," the commission president, von der Leyen, told European Parliament lawmakers in May as she presented the Next Generation EU proposal.

The 750 billion-euro recovery fund of loans and grants would be added to the seven-year budget for 2021-27 of 1.1 trillion euros. The proposal is expected to top the agenda when the bloc's leaders meet in Brussels on July 17-18.

COMMON AGRICULTURAL POLICY REFORM

The EU's Common Agricultural Policy (CAP) is a program that supports agriculture across the bloc in three key ways:

- 1. Providing income support to EU farmers via direct payments and rewarding farmers for environmentally friendly farming practices.
- 2. Enacting market intervention measures to stabilize agricultural markets, prevent crises from escalating, boost demand and help EU agricultural sectors better adapt to market changes.
- 3. Supporting rural development programs in EU countries to address the country-specific needs and challenges of those in the agri-food and forestry sectors.

Hemp is considered an agricultural crop under the current CAP, meaning farmers are eligible for direct payments.

Status and the road ahead

The CAP program is being reviewed and updated for 2021-27, and the European Industrial Hemp Association (EIHA) is lobbying EU officials to consider several changes.

One of the EIHA's proposals would permit EU countries to allow additional financing for the hemp sector for a group of farmers rather than just a single operator.

In 2019, EU agriculture ministers called for funding and incentives to support carbon-sequestering crops under the revamped CAP—a policy hemp farmers would stand to benefit from.

The EIHA has also proposed that reform address acceptable levels of THC for industrial hemp. The industry group has asked that THC content limit in the field be raised from the current 0.2% to the pre-1999 level of 0.3% and thereby allow the breeding of new hemp varieties. According to EIHA Senior Policy Adviser Francesco Mirizzi, the European Parliament's Agriculture Committee has supported a THC-limit increase and is expected to confirm that support in a full OR full-member session.

The EIHA is also asking that hemp be added to the list of products to which marketing standards and product regulation may apply.

"The establishment of specific marketing rules is absolutely necessary in order to ensure the proper functioning of the common market and a consistent protection from fraudulent imports," Mirizzi said. "This is a needed change in the legislation if we want to establish specific rules for the hemp market in Europe in the medium to long- erm."

Other EIHA proposals:

- The EU should maintain common control over hemp imports to ensure the highest quality and avoid fraudulent products.
- The EU should collect hemp cultivation and production data, as is the case for many other agricultural commodities.
- The EU should allow the registration of geographical indications—signs or symbols that identify the geographic origin of a product—for hemp.

NOVEL FOOD AUTHORIZATION

Under EU law, food that has not been consumed to a significant degree by humans in the EU before May 15, 1997, is considered "novel food." Foodstuffs in this category are more strictly controlled than regular foods under **EU** Novel Food Regulation.

According to the European Commission, a novel food will only be authorized if it is:

- Safe for consumers.
- · Properly labeled and does not mislead consumers.
- Not nutritionally disadvantageous when replacing a similar food.

According to the European Commission, premarket authorization of novel foods based on an evaluation in line with the above principles is necessary.

In January 2019, the European Commission's Working Group of Novel Foods classified all hemp extracts and hemp-derived products containing CBD and other cannabinoids as novel food.

Here is the entry for Cannabis sativa L.:

In the European Union, the cultivation of Cannabis sativa L. varieties is permitted provided they are registered in the EU's 'Common Catalogue of Varieties of Agricultural Plant Species' and the tetrahydrocannabinol (THC) content does not exceed 0.2 % (w/w). Some products derived from the Cannabis sativa plant or plant parts such as seeds, seed oil, hemp seed flour, defatted hemp seed have a history of consumption in the EU and therefore, are not novel. Other specific national legislation may restrict the placing on the market of this product as a food or food ingredient in some Member States. Therefore, it is recommended to check with the national competent authorities.

Here is the entry for cannabinoids:

The hemp plant (Cannabis sativa L.) contains a number of cannabinoids and the most common ones are as follows: delta-9-tetrahydrocannabinol (Δ 9-THC), its precursor in hemp, delta-9tetrahydrocannabinolic acid A (Δ 9-THCA-A), delta-9-tetrahydrocannabinolic acid B (Δ 9-THCA-B), delta-8-tetrahydrocannabinol (Δ 8-THC), cannabidiol (CBD), its precursor in hemp cannabidiolic acid (CBDA), cannabigerol (CBG), cannabinol (CBN), cannabichromene (CBC), and delta-9-tetrahydrocannabivarin (Δ 9-THCV). Without prejudice to the information provided in the novel food catalogue for the entry relating to Cannabis sativa L., extracts of Cannabis sativa L. and derived products containing cannabinoids are considered novel foods as a history of consumption has not been demonstrated. This applies to both the extracts themselves and any products to which they are added as an ingredient (such as hemp seed oil). This also applies to extracts of other plants containing cannabinoids. Synthetically obtained cannabinoids are considered as novel.

Under these guidelines, manufacturers of CBD supplements and edibles products must have their goods assessed by EU authorities before they placing the products on the market.

The EU provides guidelines for the submission of a novel food authorization application here:

https://efsa.onlinelibrary.wiley.com/doi/epdf/10.2903/j.efsa.2016.4594

Status and road ahead

U.K. DEADLINE

The United Kingdom's Food Standards Agency (FSA) has set a deadline of March 31, 2021, for current CBD-product sellers to gather data on their products and have their novel food applications validated by EU authorities.

Two European hemp associations—the European Industrial Hemp Association in Germany and the Association for the Cannabinoid Industry in the U.K.—have launched separate initiatives to pool resources to meet the application's requirements.

European Industrial Hemp Association (EIHA)

Members of the EIHA agreed in 2019 to submit a joint novel foods application with "a range of CBD extracts" to U.K. and EU authorities. At the general meeting in June, EIHA members agreed to move forward with studies on cannabidiol and THC as part of the application.

The EIHA's consortium applications will contain four products. It remains unclear what the products or formulations will be. The EIHA novel food applications will be filed separately to the U.K.'s Food Standards Authority and the European Food Safety Authority. The anticipated cost of the project is around 3.5 million euros, which is to be invested over the next two to three years.

Lorenza Romanese, managing director at the EIHA, said companies outside the European Union can join its novel foods consortium and would be eligible to sell products on the EU market if the joint application achieves authorization.

Association for the Cannabinoid Industry (ACI)

In June, the Association for the Cannabinoid Industry announced it would launch a CBD Safety Study Consortium to generate data to assess the safety of CBD and to discern exactly what the recommended daily dose should be.

The consortium will help companies provide safety data sought by food-safety regulators in Europe and elsewhere while sharing the costs of the studies.

"Answers that need to be gathered include whether CBD causes potential drowsiness, liver toxicity or has any interaction with other drug substances," the ACI said in a statement. "Once complete, the ACI's Regulatory and Compliance Unit will be able to integrate this data into the novel foods application of our members."

According to the organization, CBD isolate will be the first primary product for the safety consortium project to provide a baseline for finished product assessment. "The same approach can then be applied for all primary CBD products, including isolate, narrow spectrum, broad spectrum or full spectrum," the group said.

Consortium study timeline:

- July 2020: Deadline for consortium members.
- August 2020: Testing and equivalency reports sign-off.
- September 2020: Share protocol with regulators.
- December 2020: Submission of scientific dossier for CBD isolate.

UNCERTAINTY ABOUNDS

European authorities have been wrestling with the question of whether extracts from hemp flower constitutes a drug under the 1961 U.N. Convention on Narcotics. The issue is an important matter to resolve in the scope of the EU's novel food regulation: If CBD is determined to be a narcotic, it cannot legally be considered a food and renders moot the EU novel food approval process.

According to a June report from CBD-Intel, uncertainty about the narcotics question has led the European Commission to freeze the review process on all novel food applications for nonsynthetic cannabinoids, including CBD.

At the time of this report's publication, the European Commission and European Food Safety Authority had not responded to *Hemp Industry Daily*'s request to confirm the CBD-Intel report.

CBD-Intel cited the European Commission's Directorate-General for Health as saying authorities were unsure how hemp flower extract should be interpreted under the 1961 UN Single Convention on Narcotic Drugs.

The convention currently includes "cannabis extractions" under its purview, and some European authorities are unsure how CBD fits in that classification.

According to CBD-Intel, EU authorities could decide on the matter as early as September or defer their final say until after the United Nations has voted on the WHO recommendations for rescheduling cannabis. The Court of Justice of the European Union's decision in the French Kanavape case could also impact the EU stance, as the ruling will have implications the legality of CBD sales within the European Union. In that case, the CJEU is considering whether France's ban on CBD products conflicts with the EU's free movement of goods rule.

CBD TRENDS

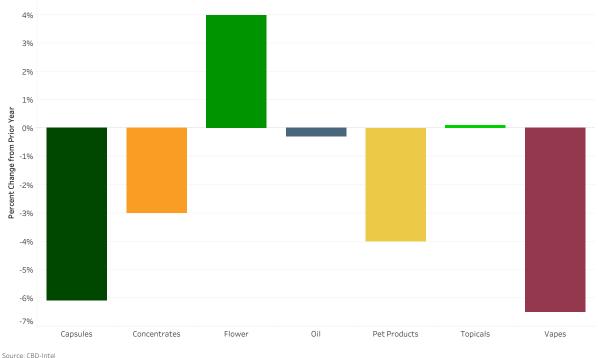
CBD is what's behind so much of the excitement around hemp in the current environment. Yet, it faces many different legal and regulatory challenges related to its production and sale.

As noted in the previous section, under current European Union rules, any edibles product containing CBD must receive additional review under the novel foods guidelines. However, these products are also readily available in stores around the continent.

And regulators will be hard-pressed to eliminate these products from retail shelves entirely.

Beyond product availability, price pressure on standard formats—the most popular products—increased from 2019 to 2020, with the median price per milligram decreasing in most categories and markets.





Variation of Median Price per Milligram Across Markets: 4Q2019 vs. 1Q2020

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While some categories saw stable price per milligram, most CBD product categories experienced price declines from the fourth quarter of 2019 to the first quarter of 2020. Flower, the most distinct exception, saw solid price increases, likely the result of wider product availability in the form of smokable cigarettes.

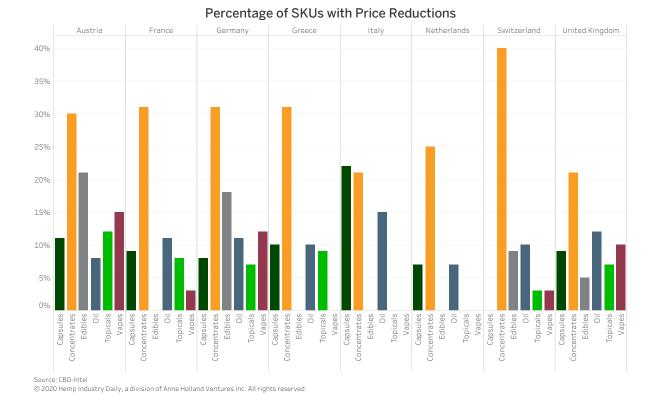


CHART: Percentage of SKUs with Price Reductions

Looking at each market individually highlights how widespread the price reductions were in each product category. The concentrates category, which is generally the cheapest per milligram anyway, is also one of the most competitive segments, making it more vulnerable to downward price pressure.

FRANCE

CURRENT LEGAL STATUS, UPCOMING LEGISLATION

Cannabis is considered a narcotic substance under France's Code of Public Health. Article R. 5132-86-I of that code specifically prohibits the production, manufacture, transport, importation, exportation, detention, sale, transfer, purchase or use of "cannabis, plant and resin, products containing it, or those obtained from cannabis, plant or resin."

A subsection of the article established that the cultivation, import, export and industrial and commercial use of cannabis that is free of narcotic properties may be authorized via ministerial order from the director general of the National Agency for the Safety of Medicines and Health Products (L'Agence nationale de sécurité du médicament et des produits de santé or ANSM).

A ministerial order was issued Aug. 22, 1990, authorizing the use of specific cannabis varieties under the conditions that:

- The delta-9-tetrahydrocannabinol content of these varieties is not more than 0.2%.
- The evaluation of the delta-9-tetrahydrocannabinol content and the sampling method for carrying out this evaluation are carried out according to the conditions stipulated in the order.

The order's list of authorized varieties includes:

| Carmagnola | Fedrina 74 | Futura |
|--------------|-------------|-------------|
| CS | Felina 32 | Futura 75 |
| Delta-llosa | Felina 34 | Futura 83 |
| Delta-405 | Ferimon | Orion 33 |
| Dioïca 88 | Fibranova | Santhica 23 |
| Earlina 8 FC | Fibrimon 56 | Santhica 27 |
| Epsilon 68 | Fibror 79 | Santhica 70 |
| Fedora 17 | Finola | Uso 31 |
| Endora 10 | | |

Fedora 19

Authorities limit the cultivation, processing and marketing of hemp to the plant's fiber and seeds. Products from the entire plant or the flower are outlawed.

RELEVANT AUTHORITIES

According to Article III of the ministerial order, the parties responsible for executing the hemp cultivation regulations are:

- The director of pharmacy and medicine at the Ministry for Solidarity and Health (Le ministère des Solidarités et de la Santé).
- The general director of food at the Ministry of Agriculture and Food (Le ministère de l'Agriculture et de l'Alimentation).
- The general director of industry at the Ministry for Industry and Regional Development (ministère de l'industrie et de l'aménagement du territoire).

INDUSTRY ASSOCIATIONS

FNPC (Fédération nationale des producteurs de chanvre, or the National Hemp Producers Union)

InterChanvre

CULTIVATION DATA: HECTARES, USE AND SEED STRAINS

According to France's Annual Agricultural Statistics (AAS) report, the country's farmers planted 14,546 hectares of hemp in 2019—nearly 2,000 fewer hectares than in 2018 (when it planted 16,458).

KEY PLAYERS/MAJOR COMPANIES

La Chanvrière

AgroChanvre

Planète Chanvre

Interval / Eurochanvre

GERMANY

CURRENT LEGAL STATUS, UPCOMING LEGISLATION

Germany banned the cultivation of cannabis in 1982 but legalized the cultivation of industrial hemp in 1996.

Hemp is subject to Germany's Narcotics Act, §24a, BtMG (Betäubungsmittelgesetz), but exceptions exist for certain hemp products, such as hempseeds for food and food products.

According to a report from the U.S. Department of Agriculture's Foreign Agricultural Service, requests for exemption permits and approval to handle hemp varieties with a THC content above the legal limit are handled by the Federal Institute for Drugs and Medical Devices, BfArM (Bundesinstitut für Arzneimittel und Medizinprodukte).

RELEVANT AUTHORITIES

The Federal Office for Agriculture and Food (Bundesanstalt für Landwirtschaft und Ernährung, BLE) collects and publishes statistical data on hemp production and implements mandated THC testing of hemp crops.

The BLE acts with the authority of the Federal Ministry of Food and Agriculture (Bundeministerium für Ernährung und Landwirtschaft, BMEL).

With respect to CBD regulations, the German authority responsible for the approval of novel foods is the Federal Office for Consumer Protection and Food Safety (Bundesamt für Verbraucherschutz und Lebensmittelsicherheit, BVL).

INDUSTRY ASSOCIATIONS

Cannabis Business Industry Association (BvCW)

CULTIVATION DATA: HECTARES, USE AND SEED STRAINS

According to official data, German farmers planted 4,508 hectares of hemp in 2019–a 45% increase over the 3,114 hectares planted the previous year.

Germany is one of the few European countries to have collected data on hemp cultivation since 1996, allowing the country's hemp industry to track its growth.

PRICES

German authorities do not keep records on the economic viability of hemp cultivation, and transparent price information is hard to come by. This is due to the small amount of hemp grown in the country and the fact that many hemp growing operations also organize their own processing and marketing.

Rough estimates for the profitability of hemp cultivation in Germany have been drawn up by the Thuenen Institute, which led talks with hemp-growing operations and German lawmakers in the Bundestag in July 2019. Because of the thorny regulatory landscape for CBD in Germany and the EU, the institute's profitability analysis concentrates on pure hempseed production and on combined seed and straw production.

The sale of hempseed can generate revenues of about 800 euros per ton, while organic hempseeds fetch as much as 2,000 euros per ton. The overall profitability of organic hemp cultivation is significantly higher than conventional hemp growing because of similar costs and the yield level being only somewhat lower in organic crops.

Harvesting costs differ considerably between the two types of hemp use. The more expensive short-straw varieties for pure seed harvesting can be harvested with conventional combine harvesters at comparable costs to wheat (135 euros per hectare). In the case of a combined harvest for both seeds and fiber, special machines that simultaneously thresh seeds and chop straw are required, resulting in a harvesting cost of 250-300 euros per hectare.

After accounting for materials and operating costs, the profitability of industrial hemp grown for seed alone (253 euros per hectare) falls short of the yield for wheat (343 euros per hectare).

HOW TO EXPORT TO GERMANY

The Federal Office for Agriculture and Food (BLE) is responsible for hemp import regulations from non-EU countries.

ITALY

CURRENT LEGAL STATUS, UPCOMING LEGISLATION/REGULATION

Farmers in Italy have been allowed to cultivate EU-certified strains of industrial hemp since 2017, and Italian legislation is unique in that it provides a range of acceptable THC levels for hemp farmers.

Under the law, growers are not penalized if plant samples taken during field inspections yield an average of 0.2% to 0.6% THC. The special upper limit of 0.6% was granted to exempt farmers from criminal liability in the event that unforeseen factors cause a hemp crop to run "hot," but the cap ended up creating ambiguity and confusion in the industry, said Giuseppe Croce, president of Italy's Federcanapa industrial hemp association.

Current legislation does not explicitly mention processing or selling the plant's flowering tops. This flower loophole led many growers to sell "ornamental flower"—widely known as "cannabis light" because of a THC content below 0.6 %—in hundreds of shops across Italy.

In January, the Health Ministry set a maximum THC level of 2 milligrams per kilogram for hempseeds, hempseed flour and supplements containing hemp ingredients and 5 milligrams per kilogram for hempseed oil.

On May 13, Undersecretary for Agricultural Policies Giuseppe L'Abbate hosted a meeting of 25 hemp professionals as part of his plan to form a hemp advisory group composed of industry professionals, agricultural associations, regulators and researchers. This hemp roundtable is not expected to convene before September.

RELEVANT AUTHORITIES

The Council for Agricultural Research and Economics (CREA), which is supervised by the Ministry of Agricultural, Food, Forestry and Tourism Policies (Mipaaft), is responsible for controlling crop registration and inspection.

A specialized branch of Italy's Carabinieri gendarmerie known as the Corpo Forestale is responsible for drug inspections.

INDUSTRY ASSOCIATIONS

- Federcanapa (Italian Hemp Federation)
- Associazione Nazionale Coltivatori Italiani di Canapa (National Association of Italian Hemp Farmers)
- Consorzio Canapa Italia (Italian Hempseed Consortium)
- Assocanapa Group

CULTIVATION DATA: HECTARES, USE AND SEED STRAINS

The Ministry of Agriculture estimates that 2,000 hectares of hemp were grown in 2019, while industry group Federcanapa estimates that cultivators grew approximately 2,000 to 2,500 hectares last year, less than its estimate of 3,000 made in 2018. Italy's hemp law does not require growers to report the area of land they cultivate. Only those seeking financial support via the EU's Common Agricultural Policy are required to tell authorities how much hemp they grow.

The main industrial hemp strains grown in Italy, according to a report from the U.S. Department of Agriculture's Foreign Agricultural Service released earlier this year, are:

| Fedora 19 | Vibranova | Kompolti |
|------------|------------------------|---------------|
| Felina 32 | Carmagnola Selezionata | Dioica 88 |
| Juzo 31 | Eletta Campana | Tiborszallasi |
| Futura 75 | Finola | Antal |
| Carmagnola | Tisza | |

According to the USDA report, roughly 80% of Italian hemp is used in the food industry, while the remaining 20% goes to construction materials, cosmetics and nutraceuticals.

PRICES

The government does not collect data on prices for hemp biomass or CBD. A report from the USDA's Foreign Agricultural Service released earlier this year said the latest industry estimates indicate that hemp yields a profit of approximately 600 euros per hectare. That compares with net earnings of around 300 euros per hectare for durum wheat.

According to Croce of Italy's Federcanapa industrial hemp association, the average price of biomass for extraction is 2-3 euros per kilogram for a single CBD percentage point.

KEY PLAYERS/MAJOR COMPANIES

According to Federcanapa, the largest hemp growers in Italy are BioHempTrade of Puglia, which said it will grow 600 hectares of hemp with third-party growers this year, and Veridia Italia of Abruzzo, which has around 100 hectares.

Canapar, a processor in Ragusa, Sicily, is working on establishing an extraction facility.

No fiber processing plants are in operation in Italy.

THE NETHERLANDS

CURRENT LEGAL STATUS, UPCOMING LEGISLATION

Hemp is regulated by the Opium Act of 1928, which distinguishes between soft and hard drugs and falls under the jurisdiction of the Ministry of Health, Welfare and Sport; the Ministry of Justice and Security; and the Ministry of Agriculture, Nature and Food Quality.

The Opium Act was amended in 1999 to allow the cultivation of industrial hemp with a THC content of less than 0.2% for the purposes of fiber extraction or for seed production.

The extraction of CBD remains prohibited under Dutch law.

CBD products with a THC percentage of up to 0.05% is legal for sale.

The Dutch Food and Drug Administration (NVWA) classifies CBD as a food supplement and requires CBD products to comply with the associated labeling requirements.

RELEVANT AUTHORITIES

Ministry of Health, Welfare and Sport; Ministry of Justice and Security; and Ministry of Agriculture, Nature and Food Quality

INDUSTRY ASSOCIATIONS

Vlas en Hennep

CULTIVATION DATA: HECTARES, USE AND SEED STRAINS

According to the Dutch Hemp cultivation in the Netherlands totaled 1,877 hectares (ha) in 2019. The crop is commonly grown in rotation with beets and potatoes and is cultivated almost exclusively in the northeastern part of the country, according to the USDA's Foreign Agriculture Service. The province of Groningen contains nearly 70% of the country's total hemp acreage and more than half of the Netherlands' 140 grow operations.

In 2019, the Adzelvieši, Austa SK, Earlina 8 FC, Glecia, Gliana and KCA Borana varieties were added to the permitted varieties in the Netherlands. Adzelvieši is allowed only as a conservation crop.

Permitted hemp varieties: Adzelvieši (conservation crop), Antal, Armanca, Lipko, Lovrin 110 Austa SK Beniko, Bialobrzeskie Marcello, Markant, Monoica Canna Pump, Carma, Carmagnola, Carmaleonte, Rajan, Ratza Chamaeleon, Codimono, CS Santhica 23, Santhica 27, Santhica 70, Dacia Secuieni, Delta-Ilosa, Delta-405, Denise, Diana, Dioica 88 Secuieni Jubileu, Silvana, Succesiv, Szarvasi Earlina 8 FC, Eletta Campana, Epsilon 68 Tiborszallasi, Tisza, Tygra Fedora 17, Felina 32, Ferimon, Férimon, Fibranova, Uniko B, Uso-31 Fibrante, Fibrol, Fibror 79, Finola, Futura 75 Glecia, Gliana, Glyana Villanova Henola Wielkopolskie, Wojko Zenith lvory KC Bonusz, KC Dora, KC Virtus, KC Zuzana, KCA

THE STATE OF CBD

According to Mark van Weeren at Netherlands law firm Blenheim, CBD products are widely offered on the Dutch market, and authorities are not enforcing any novel food rules to stop sales.

The Netherlands allows food supplements and cosmetics that are high in cannabidiol and low in various forms of tetrahydrocannabinol if:

- The product has no more than 0.05% THC.
- The product has no medical claims.

Borana, Kompolti, Kompolti Hibrid TC

• The buyer is not advised to take in more than 160 milligrams of CBD per day.

KEY PLAYERS/MAJOR COMPANIES

The Netherlands has two hemp-processing facilities in Oude Pekela. One is operated by HempFlax and the other by Dun Agro.

HempFlax, founded in 1993, has roughly 2,200 hectares of hemp in cultivation in the Netherlands, Germany and Romania.

Dun Agro engages in hemp cultivation, processing and the manufacture of products for the food and fiber sectors.

IMPORTS/EXPORTS

The Netherlands is reportedly the largest exporter of "true hemp"—defined as Cannabis sativa l.that is raw or retted, processed but not spun, or is made up of the tow and waste. According to Trade Data Monitor, 71% of global true hemp exports, or 10,550 metric tons valued at 6.4 million euros, came out of the Netherlands in 2019. The USDA's FAS report on the Netherlands this year said the largest export markets for Dutch true hemp were:

- Germany (31%)
- Spain (17%)
- United Kingdom (9%)

Based on the European Union's Article 189 of Regulation (EC) 1308/2013, the Netherlands allows the import of hemp and hempseed from non-EU countries under several conditions. Dutch companies interested in importing hemp or hempseed from a non-EU country are required to have an import certificate for one of the following Combined Nomenclature (CN)14 codes:

- CN code 1207 99 91: hempseed not intended for sowing.
- CN code 1207 99 20: hempseed intended for sowing.
- CN code 5302 10 00: hemp fiber.

An importer can also import raw or rotated hemp under CN code 5302 10 00 from third-party countries. However, the importer must declare that the THC content does not exceed 0.2%. The Dutch customs service checks shipments by sampling whether the imported hemp meets the requirements.

UNITED KINGDOM

CURRENT LEGAL STATUS, UPCOMING LEGISLATION

Under Britain's Misuse of Drugs Act 1971, cannabis is a Class B controlled drug. This means it is illegal to possess, supply, produce, import or export the plant without a license issued by the Home Office. A license is also required to cultivate any cannabis variety.

British authorities enforce two separate licensing schemes for cannabis cultivation depending on the varieties cultivated and the intended end use. Licenses can be issued for the cultivation of low-THC cannabis (industrial hemp) for hemp fiber or to obtain seeds for oil. For both uses, licenses are granted to allow the use of the uncontrolled parts of the plant (i.e., the seeds and mature stalk).

It is illegal to harvest, process, extract or transport hemp leaves or flowers in the U.K. According to the British Hemp Alliance, those who receive a license to cultivate hemp must agree to destroy the flower in the field.

A new license application to cultivate cannabis with a THC content of 0.2% or lower will cost 580 pounds. Repeat growers seeking to extend a license before it expires are expected to pay a renewal fee of 326 pounds.

Licenses for outdoor cultivation of industrial hemp are typically valid for three growing seasons, or up to three years, and are always issued to expire Dec. 31. For example, a license application that is approved March 31, 2020, would yield a license that expires Dec. 31, 2022, to cover three growing seasons.

Each grower must be individually licensed.

Applications should be made online via the Home Office Drugs Licensing website:

https://eforms.homeoffice.gov.uk/outreach/DrugsConsole.ofml

Applicants must complete enhanced background checks for each person named on the license application before submission.

The British government provides a factsheet and application guidance for industrial hemp licensing on its website:

https://www.gov.uk/government/publications/industrial-hemp-licensing-guidance

RELEVANT AUTHORITIES

Home Office's domestic licensing authorities Email: dflu.dom@homeoffice.gov.uk Phone: 020 7035 8972

This address deals with domestic controlled substance licenses such as precursor chemicals, applications, renewals, compliance visits, thefts and losses, surrendering or returning a license or general inquiries about domestic licensing.

INDUSTRY ASSOCIATIONS

- British Hemp Alliance
- Cannabis Trades Association (CTA)
- Cannabis Professionals (CannaPro)
- UK's Association for the Cannabinoid Industry

PRICES

United Kingdom prices are under pressure as more products become available in stores and online. Data from CBD-Intel shows the only CBD product category in which the median price of products increased during the first quarter of the year was the edibles market. For oils, topicals, vapes, capsules, concentrates and some edibles, any change in price from the fourth quarter of 2019 tended to be a decrease on the U.K. market.

THE STATE OF CBD

British authorities have set a deadline of March 31, 2021, for all current CBD product manufacturers to obtain a validated application for novel foods authorization.

Recent data from CBD-Intel also suggests that topicals are a growing market in the U.K., with leading brands reportedly adding more than 30 CBD topical products to their product portfolio in the first quarter of this year compared to the fourth quarter of 2019.

Isolate has a strong presence in the vape, concentrate and topical markets, while full and broad-spectrum products dominate the oil, capsule, edibles and pet-product categories, according to CBD-Intel.

LITHUANIA

CURRENT LEGAL STATUS, UPCOMING LEGISLATION

Lithuania's first hemp law, which took effect in 2014, granted farmers permission to grow EU-approved strains of the crop to produce fiber and seeds.

Under current legislation, the processing of leaves and flower is allowed only for research and development purposes. The flowering tops must be exported, and CBD products are illegal on the consumer market.

Since January 2019, Lithuanian lawmakers have inched forward with an overhaul of the country's hemp law. The draft law sets out to legalize hemp extraction and processing within Lithuania's borders and allows CBD products to be imported, exported and sold to consumers.

Under the new legislation:

- Lithuanian farmers and processors would be able to process all parts of the plant—including the leaves and flower—if they have a license.
- Any final hemp-derived product that contains less than 0.2% THC will not be considered a narcotic, can be produced and sold to customers in Lithuania and can be imported and exported.
- The government would be responsible for creating the framework for granting licenses for hemp cultivation, extracting and processing.

The draft law passed two earlier votes but stalled in April because of concerns about the legislation's compatibility with EU law. Some lawmakers voiced concern about the law's implications for the European single market and free movement of goods in the EU.

As a result, Parliament's Rural Affairs Committee suspended the third and final vote and sent the proposed hemp regulations to Brussels, the seat of the European Union, for review.

By using the EU's draft notification procedure, Lithuania triggered a three-month freeze to allow the European Commission and other EU-member states to examine the hemp legislation and respond to it.

RELEVANT AUTHORITIES

The State Plant Service, an arm of the Agriculture Ministry, is responsible for enforcing Lithuania's current cultivation and marketing regulations.

FARMING AND HEMP INDUSTRY ASSOCIATIONS

- KAPVIA
- Lithuanian Farmers' Union (Lietuvos ūkininkų sąjunga, LŪS)

THE STATE OF CBD

Hemp leaves and flower can be processed on a small scale only for research and development purposes. Flowering tops must be exported for CBD extraction, and CBD products are illegal on the consumer market.

KEY PLAYERS/MAJOR COMPANIES

Aurora Cannabis

Andoca

ESTONIA

CURRENT LEGAL STATUS, UPCOMING LEGISLATION

Estonian law allows hemp to be grown for agricultural production under the requirements set out in the European Union Common Agricultural Policy. That means hemp grown in Estonia must be included in the common catalogue of varieties of agricultural plant species, and the THC content must be less than 0.2%.

The cultivation of hemp is currently regulated only within the framework of European Union law and EU direct payments. Producers who do not apply for direct payments can grow hemp without asking for a separate license. The country does not regulate production and separate use of different parts of the hemp plant (seed, flower, leaf and stem).

The area of hemp cultivated in Estonia has increased in recent years, and different parties (e.g., growers, police, the country's Veterinary and Food Board, Agency of Medicines and the Ministry of Rural Affairs) interpret the cultivation and use of hemp legislations differently, creating some ambiguity.

WHOM TO CONTACT: RELEVANT AUTHORITIES, INDUSTRY ASSOCIATIONS

The Estonian Chamber of Agriculture and Commerce (http://epkk.ee/kontakt/)

CULTIVATION DATA: HECTARES, USE, SEED STRAINS

Industrial hemp variety Finola, which is classified as seed hemp, is the most-grown cultivar in Estonia. The seller of Finola seed is Perfect Plant OÜ (https://www.perfectplant.ee/). In addition, Santhica 27, Fibror 79, Futura 75, Uso - 31, Secuieni Jubileu, etc. have been grown on small areas.

| | 2018 | 2019 |
|-----------------------|-------|-------|
| Growing area, hectare | 3,536 | 4,455 |
| Finola, hectare | 3,483 | 4,393 |

PRICES

The Estonian government does not collect data on the price of hemp biomass.

THE STATE OF CBD

CBD products can be produced as a novel food in Estonia only if the product or food raw material is marketed directly to a non-EU-member state where its use is permitted. The Veterinary and Food Board of Estonia must obtain confirmation from the competent authority of the country of destination that the CBD is permitted to be marketed in that country.

KEY PLAYERS/MAJOR COMPANIES

The Estonian government does not compile statistics on hemp growers and processors.

HOW TO EXPORT TO ESTONIA

The general EU trade regulations with nonmember countries apply for hemp exports and imports to and from Estonia. The country is currently preparing legislation that would regulate hemp imports from non-EU countries, and the law is expected to enter into force by the end of 2020, according to the Ministry of Rural Affairs.

ROMANIA

CURRENT LEGAL STATUS

Growers are required to seek authorization from the County Directorate for Agriculture before planting industrial hemp for fiber and seeds. Only varieties registered in Romania's Official Catalog of Cultivated Plant Varieties and Hybrids or the Catalogs of the European Communities are allowed for cultivation.

Agricultural producers applying for a cultivation authorization must have a production capitalization contract and are required to verify the THC content of the crop in question.

HOW TO IMPORT/EXPORT

The Payment Agency and Intervention in Agriculture (APIA), which acts through the Foreign Trade and Agricultural Products Promotion Service, issues import and export licenses under EU trade rules for agricultural products.

Imports of hempseed intended for sowing are subject to licensing under CN code ex 1207 99 20 and must be accompanied by proof that the THC level of the variety does not exceed that fixed amount, in accordance with Article 32(6) and in Article 35(3) of Regulation (EU) No 1307/2013.

Imports of raw or retted hemp are subject to licensing under CN code 5302 10 00 and meeting the conditions specified in the two EU articles referenced above.

Imports of hempseed intended for uses other than sowing are subject to licensing under CN code 1207 99 91 and can be imported only by individuals or entities that receive authorization from the Ministry of Agriculture and Rural Development in order to ensure that the seeds are not intended for sowing.

Any trade between Romania and another EU-member state is considered an intra-community exchange and does not require a license issued by the Payment Agency and Intervention in Agriculture.

The import and export of agricultural products for which an import or export license is not required falls under the jurisdiction of the general directorate of customs at the National Agency for Fiscal Administration. The general directorate is authorized to provide information about the conditions of such exports and imports.

More information regarding the import/export of the agricultural products for which a license is issued can be obtained by accessing the official website of the institution at the Market Measures Section Foreign Trade Department (www.apia.org.ro), at phone number +40 21 3054968 / +40 21 2005034 / 35 or via email at comert.exterior@apia.org.ro.

More information about the relevant European legislation and the management of the common market organization mechanisms for agricultural products under the Common Agricultural Policy can be found at https://eur-lex.europa.eu/homepage.html?locale=en

WHOM TO CONTACT

Romania's Ministry of Agriculture and Rural Development

INDUSTRY ASSOCIATIONS

For additional information about the cultivation of industrial hemp for fiber and seeds, contact Laurențiu Pintrijel at the Asociației Cultivatorilor de Cânepă (National Association of Industrial Hemp Producers) via email: anpci.office@gmail.com.