



**Canapa Sativa Italia (CSI):** hemp generates a crucial and precious food sector and the Italian chain supply must be rebuilt and defended

**Canapa Sativa L. seed:** a walking pharmacy and the most valuable food supplement to enhance the immune, circulation and nutritional balance

**Hemp oil, seed and flour:** the nutritional intake and the use for human and animal diets

**Francesco, Elia, Davide:** 3 stories of young Italian agricultural entrepreneurs - members of Canapa Sativa Italia (CSI) - who return to their native lands thanks to hemp cultivation

**Canapa Sativa Italia (CSI)** is a **non-profit association**<sup>1</sup> bringing together the most committed exponents of Italian hemp industry from all over the peninsula: born as an online group in 2014 with about 15,000 members, it was legally constituted in 2018; the members created a very rigorous adhesion process, validated by an internal ethics committee. The association offers a solid agricultural, technical and commercial counseling to its members as well as having created a group of *in-house* suppliers who offer goods and services on a competitive basis to members. CSI is, together, a **non-profit house organ for the general public** and a **competent advocate** that illustrates the benefits of the plant, the areas of application and the importance for the Italian agri-food industry to policy makers and the final consumers.

Canapa Sativa Italia (CSI) tells the entire hemp supply chain which in Italy is ruled by L. 242/16 in the framework of an institutional communication campaign: it highlights its criti-

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<sup>1</sup> Italian only: CSI Statute: <https://www.canapasativaitalia.org/chi-siamo/>

calities and potential, each time giving voice to its different members: today, for instance, to those active in the food and nutraceutical use of hemp for human and animal use. CSI will present the great constructive, textile and design qualities of industrial hemp in the next press launches.

Hemp Sativa seed is a walking pharmacy and the most useful food supplement for immune, circulatory and nutritional balance.

A sportsman gains anti-inflammatory qualities, great recovery capacity and muscle relaxation. Nutritionists combine its cholesterol-lowering effect with an increase in metabolism. The contribution of Omega (3, 6) together with the terpenes guarantees anti carcinogenic, antithrombotic, antiallergic and cyto-protective properties.

Antiviral, antifungal, antipyretic, cardioprotective, essential antioxidant rich in vitamin E (tocopherol), hemp seed is also anticonvulsant and anti-epileptic, thanks to its contribution in cannabidiol. Like oil, it treats psoriasis, eczema, rheumatoid arthritis, osteoporosis, menopause, premenstrual syndrome, diabetes, depression, memory and learning deficits, respiratory system diseases, degenerative diseases of the immune system.

**Francesco Procacci (1984), farmer in Cervinara:**

It's easier for cherries, chestnuts, ancient grains and my other crops: today it's a challenge with sativa hemp

**'It was already clear to ancient botanists, healers, artisans:** hemp is a walking pharmacy, a versatile fiber and also a super-nutrient that provides 20-30% carbohydrates, 20-30% proteins and 10-15% fiber without mentioning all the essential amino acids. In the 1930s, Italy was the country with the best hemp in the world grown on an area of over 135,000 hectares. Then the South was at the head of an empire made up of knowledge and important economic returns. Today we are less than 5,000 hectares across the state.' says Francesco Procacci (1984), founder of the [Cereris organic farm in Cervinara](#) (AV), Campania. Among the members of CSI, he sits on the Board of Directors of the association for which he deals with ethics and communication.

'After graduating in marketing and collecting working experiences other than agricultural ones, I cultivated my first hemp field in Umbria in 2014, in 2015 with the new cultivation I also followed the transformation processes for the first time and then I decide to return to my native land, Cervinara (AV) where, in 2016, I founded my organic farm and I also dedicate myself to the cultivation of sativa in my fields starting from sowing: I get oil, flour and seeds - hulled and not - ideal to be eaten alone or accompanied with muesli, soups and salads. It is easier for cherries, chestnuts, ancient grains and my other crops: with hemp sativa today it is a challenge, because **Italian market is flooded with oils and other food products that come from abroad and are much more poor, but cheaper.** '

'There are many varieties of hemp seeds from which to obtain oil and flour, the fact that today it is a **little practiced crop** (also for textile purposes and not only for pharmaceutical ones) also depends on the lack of a healthy district economy. **This tough, leathery plant with spectacular properties has high processing costs and could become building material with unique insulating and constructive qualities after having fed and dressed us, but this enhancement is still absent in our country and invalidates the first, that of food processing.** '

'The *Finola* variety, whose seeds are tiny and tapered, produces a very fine oil while the *Futura 75* with its large and straight seeds, produces an oil tending to yellow. Hemp seed oil, strictly obtained by cold pressing, is to be consumed raw to dress and accompany salads and vegetables or on hot bread, boiled potatoes and fish: it has a flavor close to ripe hazelnut and surprisingly enhances the flavors.'

'Hemp oil is sold in small formats like 250 ML because it has a short consumption time. **The price of an organic seed oil pressed at temperatures below 28° like my oil cannot cost less than 12/15 euros.** As well as for raw dressing, it is often taken in regular doses by spoonful in diets thanks to its contribution of iron, calcium, manganese and phosphorus, vitamins A, E, PP, C, and group B. 'says Francesco. 'Each bottle of my oil, a bag of seeds or flour, brings to the plate a choice of ancient and sustainable processing that starts from plowing and fertilization and includes milling, sowing, harvesting with threshing up to mowing and to the raking. Finally, it ends with the packaging of the straw resulting from threshing '.

**Hemp flour**, which benefits from all the nutraceutical properties of oil and seeds, is ideal for bread and biscuits, has a low calorific value coupled with an important protein intake. It is ideal for enriching smoothies and soups in vegan diets. Gluten-free, it is usually added to any bread making at the rate of 5/10% of the required amount of flour: from biscuits to pizzas, from savory pies to sandwiches. The use of hemp flour enriches the flavor and makes the color of your baked product more amber.

**'After the extraction of the seeds for food use, the rest of the plant - from 70 to 80% - is disposed of without being valorized**, due to a lack of plants in many parts of my country, the external green part - suitable for becoming technical short fiber - and the internal white part, the canapulo: if mixed with lime it becomes an eco-mortar with great insulating, sound-absorbing and transpiring power. 'concludes Francesco Procacci.

## **Elia Barban (1987), farmer in Castelfranco Veneto:**

My passion for hemp comes from afar. In addition to human nutrition, it is an excellent zootechnical food

**Elia Barban (1987)** became an agricultural entrepreneur in 2017 thanks to the law 242/16 which allows the cultivation of hemp (*Cannabis Sativa* Linnaeus, *Cannabis Sativa* L.) in Italy for the agro-industrial chain, with a tetrahydrocannabinol limit set at 0.2 %.

His passion for hemp comes from afar: on 2006, when he was employed in a furnace, he became acquainted with hemp in green building industry (to produce bricks, panels, coatings).

In 2014, working in a company producing flour, he had the opportunity to see hemp flour, touch it, smell it and appreciate its nutritional values.

After a trip to Australia, he decided to return and take care of the family business, although this meant no more hours, holidays or weekends off. As an agricultural entrepreneur, he tried to learn new practices that can increase animal welfare and improve meat.

Barban's company is one of the three included in the project *Producing hemp in the food and agro-industrial chain*, funded by the Rural Development Program of the Veneto Region and led by Coldiretti Rovigo, which has networked the agricultural companies interested in growing hemp with specialized partners in the scientific field of varietal research, food enhancement and transformation for the zootechnical field. The goal is the reconstruction of the hemp production chain, addressing the problems of agro-mechanical processing and food and agro-industrial processing of the different parts of the plant, to allow for improving the productivity and competitiveness.

Scientific partners include the Department of Comparative Biomedicine and Nutrition of the University of Padua. **The mission of the project is the traceability of Omega (3, 6) on meat.** Currently, the sources of Omega for animal feed derive from flax, a product which in Italy mostly imported from abroad. And the administration of hemp to "white meat" calves has never been proven in the world. The aim is to understand what the percentage of hemp flour may have on the rest of the meal, in order not to create imbalances that can lead to altering the color of the calves' meat. The experimental stable of Elia's company was divided into three parts: one for control (without hemp flour), the other two with different percentages of hemp flour. Cameras were also installed to monitor the behavior of the animals before and after the administration of hemp.

**'I believe that animal husbandry can have and make an excellent contribution to the development of supply chains both absorbing volumes of production waste but above all with new systems of feeding and animal welfare.** The importance of the research project goes beyond the zootechnical sector itself as it analyzes the various parts of the plants and the possible, real and concrete uses in the agri-food industry first of all or as a new crop and source of income also for small medium farms. For example, the hemp flower could be inserted with human food as well as the fried zucchini flower. The most interesting aspect of the flower in animal husbandry is also given by the medicinal and healthy properties as anti-inflammatory and stimulant of the animal's endocannabinoid system', Elia Barban adds.

'Since self-sufficiency is a corporate goal, both my father and I have always had an eye for particular crops: soy (when it was not yet widespread in Italy), sunflower, rapeseed. When we focused on hemp, however, we have always found a wall made up mainly of

ignorance in all sectors, in addition to the fact that it is mistakenly associated with drugs,' Elia Barban remarks.

'Veneto is one of the regions where hemp has always been widely cultivated - its marshy areas make it an ideal habitat - and the Serenissima used it for many naval and construction activities. **The novelty is that now - since the early 2000s - we have discovered its nutritional value. Unfortunately, during the post Second World War period, while the world moved forward with research and innovation from the mechanical point of view of its processing, Italy banned its cultivation.** There has never been a 360° vision of hemp, often limited only to the textile sector, so I **am very proud to be part of Canapa Sativa Italia (CSI) because for years it has been a guide for those starting from scratch and for those who**, like me, had already some experience but want to consolidate their practices or innovate' Barban specifies and also adds: 'in order to grow hemp for food use, you need to own by yourself all the needed means, otherwise there is no supply chain in Italy that allow a reasonable return. And CSI was elected to participate in the Supply Chain Table from which we all hope to have useful results in creating this supply chain. 'I would like to complete the production cycle: from the cultivation of hemp, to animal feed, to the marketing of the finished product'.

## The Samnite experience of **Davide Petrollino (1979)** with **Vitelium** and **Hemp Grain Specialist**

Going further south, we meet **Davide Petrollino**, 42, biotechnologist and seed specialist, **partner of CSI since the beginning**. The farm of Davide and his partner Constanze Engelbrecht is Vitelium and is located in Provvidenti (CB), Molise. This region was included in the Augustan Age in the Royal IV Samnium, populated by people of Samnite lineage.

"Vitelium's main interest is the **production and marketing of products derived from hemp seeds, olive oil and truffle-based products**. The sale of Cannabis sativa seeds for sowing is more a necessity dictated by the desire to establish virtuous supply chains in Italy - underlines Davide Petrollino - one of the critical points of the supply chain is the supply of seeds for sowing which is always very difficult in terms of variety, availability, prices and quantities. **The distribution of semen deliberately places my company at the center of a network of producers**. It becomes, in this way, possible to coordinate multiple realities, the transfer of knowledge and above all the collection and sharing of real data on the progress of crops in different areas. **In 2017 we followed more than 30 medium and small companies, embracing a latitude between the 42nd and the 46th parallel across eight Italian regions**. This made it possible to cross-reference data on sowing, crop trends and yields that are extremely precious for improving productivity in the field ".

**As he recently declared to Canapa Oggi, Petrollino insists on the real nature of the 'hemp' supply chain:** "It is not here that we intend to exhaustively address the problems of the sector but I would like to emphasize sowing seeds. This is an aspect that affects all hemp producers and that can undoubtedly be decisive for the qualitative and quantitative yield and, consequently, positively influence competitiveness. **The possible supply chains of hemp are many but we can summarize them in three macro-areas, namely: rod, seed and flower**.

- The rod - therefore fiber and hemp or biomass as it is - is of primary importance because it represents the largest part of the plant and can have very important repercussions in the sector of biomaterials (bio-building and bio-plastics), fabrics and fine papers. It suffers from a technological delay in terms of mechanization of operations in the field and the lack of performing processing plants.
- Seed production is, if you like, the most widespread model in Italy due to the great tradition and transformation capacity of the agro-food sector. The fragmentation makes the management of the seed in post-harvest particularly onerous and difficult and the lack of cultivars selected for the Mediterranean environment exposes to the risk of significant losses in non-irrigated crops.
- The inflorescences to date represent a potential millionaire induced. In this case, the lack of a specific legislative regulation represents the major limit of development. Even the impossibility of using selected varieties for the production of CBD or with THC contents higher than 0.2-0.6%, enormously limits the variety spectrum and forces the not skilled entrepreneurs of the sector to fall back on varieties selected for other purposes which however show a satisfactory aptitude also for the production of the flower.