

SOME GENERAL INFORMATION ABOUT FINOLA

FINOLA is an oilseed hemp variety that was developed in Finland. We began to develop this unique variety in 1995, under the breeder's code FIN-314. The variety name is correctly spelled with all capital letters. The European Union (EU) Plant Variety Rights were granted for the FINOLA variety in 1999, while FINOLA was already accepted onto the Canadian list of hemp cultivars in 1998, where it has remained to this day. After additional delays in Europe, FINOLA was eventually admitted to the EU list of hemp cultivars, after a special category for oilseed hemp was created in November of 2003. Before that time, only fiber hemp varieties were recognised as hemp in the EU. So, FINOLA was the first industrial hemp variety to be registered as an oilseed crop. FINOLA has been cultivated in many countries around the world, and in the United States since 2014.

Crop Description

FINOLA is short, dioecious, auto-flowering and early maturing hempseed crop. The grain (called "hempseed") is harvested by a conventional combine. In terms of grain yield, it is still the most productive variety for grain. A record grain yield of 3200 kg/Ha was produced in Alberta, Canada on a 100 hectare plot under irrigation. Organic farmers should not swath fields that have been fertilised with un-composted manure! Up to 5-7 tons/Ha of straw may be produced from this variety. FINOLA grows best in continental and temperate regions, between latitudes 40° - 60°. It is shorter and less productive at lower latitudes. Irrigation is recommended in drought prone areas. FINOLA's high grain yield, ease of harvest, sweet nutty taste and unique oil profile make it the oilseed crop of choice for both foods and animal feed. This variety is also [an excellent source of CBD](#) (cannabidiol).

Rich in Oil and Protein

Hempseed oil is a rich source of polyunsaturated *omega*-3, -6 & -9 fatty acids, and the oil typically accounts for 30-35% of the seed weight. Hempseed also contains a high quality vegetable protein (25%) that is easily digested, plus carbohydrates (30%), moisture, vitamins, minerals, terpenes, phytosterols and polyphenols. In a botanical sense, hempseed is a very small nut with a delicious nutty taste.

Unlike other industrial oil seeds and seed meals, raw hempseed lacks anti-nutritional factors that are found in soya (protease inhibitors), rapeseed (glycosinolates), and linseed flax (cyanogenic glucosides). Hempseed and hempseed meal can be safely fed to all ruminants, pigs, fish and birds. Horses benefit from a cup (2-3 dl) of hempseed meal/day. Dogs enjoy hempseed oil. Dogs with dry skin will benefit from 2-3 tablespoons of hempseed oil per week. Cats do not enjoy vegetable oils. Most birds, squirrels and other rodents will aggressively eat whole hempseed. Hens fed whole hempseed, seed cake, oil sediment or hempseed oil will produce fine tasting *omega*-3 eggs.

Hempseed oil is highly unsaturated, with an optimal metabolic balance of *omega*-6 and -3 essential fatty acids (EFAs). This high degree of unsaturation is also useful in certain industrial products, for example; as a drying oil in the production of specialty inks, paints and other technical coatings. A few percent of hempseed oil in conventional diesel fuels will lower the solidification point in very cold environments.

Uses for the fiber

Hemp fiber is about 50-70% cellulose and 5-7% lignin. This bast fiber is still used in a variety of commercial applications that range from rough non-woven insulations, bio-mats, geo-

geo-textiles, nets, composites for construction and automotive industries, tea bags, cigarette papers and other specialty papers. The whole, unprocessed stalk is about 35-40% cellulose and 15-20% lignan. As a simple non-woven material, hemp hurds, shives and biomass make excellent animal bedding, geotextiles and other geo-remediation products, compost substrates and hempcrete- a light construction material made of hemp hurds (shives) mixed with water and lime or cement. FINOLA is dioecious, with both male and female plants, so the fiber quality is not even, and may not be suitable for industrial scale woven applications. The male finer is extremely fine, and worth collecting for the production of hand crafted products.

Finola OY is a limited liability corporation that is registered in Finland, which maintains the FINOLA oilseed hemp variety and owns Plant Variety Rights for this variety. Our main product is OECD certified FINOLA planting seed. <http://www.finola.fi>

Finola® is a registered trademark that is reserved for food products made from FINOLA, such as Finola® Hempseed Oil. You may purchase and grow certified FINOLA planting seed, and then produce your own products, but please do not sell or otherwise promote your products under the Finola® trademark without prior agreement.

Can FINOLA be used for drug purposes? No. Since 1995, many determined individuals and numerous government agencies have consistently confirmed that the THC levels in FINOLA are far too low for illegal drug purposes. However, mature FINOLA female flowers produce respectable amounts of another cannabinoid; CBD (cannabidiol), a non-psychoactive polyphenol with potent antioxidant properties. For this reason, FINOLA has become the industrial variety of choice for CBD production, first in Europe and now in other countries.

Hemp cultivation still suffers from the same legal restrictions that apply towards drug-*Cannabis* in some parts of the world. In other places, hemp continues to be a thriving legal business. Be sure that you are fully informed about your local laws and customs before importing viable hemp seed into your country, and be aware of potential subsidies or penalties for the cultivation of hemp in your country. Also, please understand that **we have very limited resources to advise on matters of legislation or general agriculture**. Our consulting time is generally limited to customers who have already purchased certified FINOLA planting seed. Free and useful information on various aspects of hemp and hempseed are posted on the Finola web pages- please have a look: <http://www.finola.fi>

For US growers, we have done our best to work with you since the 2014 Farm Bill. Now we are under the 2018 Farm Bill, which is administered by the USDA. Unfortunately, the administrative burden is still too high for us to send individual 25 kg bags to customers in the US. In other words, the administrative work is the same if we send one 25 kg bag or multiple tons. For this reason, we are not able to service all customers in the US. Also, there is still no federal provision in the US for the normal interstate commerce for viable *Cannabis* seed, which basically makes distribution of hemp planting seed within the US risky and difficult. We hope that your situation will improve some day, and we apologise for our inability to keep up with the political chaos and administrative foolishness that seem to go hemp in the US.

Dr. Jace Callaway, CEO

Finola OY

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