

**Welcome to Finola!**

**8 January 2008**

Thank you for asking about the availability of certified Finola planting seed for 2008. We have eliminated the middle man this year, and for the first time we are offering EU-certified Finola planting seed directly to you. Additional ISTA certification for shipping outside of the EU can be arranged at additional cost, and with sufficient advance notice.

### **Current Status of Finola in the EU**

Finola was removed from the EU list of hemp varieties that receive the so-called Common Agricultural Policy (CAP) subsidy for spurious reasons early in 2007, but Finola remains listed in the EU Common Catalogue of recognized plant varieties and on the Finnish national list of corps and cultivars. This means that is NOT illegal to cultivate Finola in the EU, but it also means that you may not receive a subsidy for Finola in 2008. An official complain against this unfair treatment of Finola has been lodged with the Finnish Ministry of Agriculture, and there is still some hope that the EU Commission may reverse this illogical decision.

### **Prices**

We offer EU-certified Finola planting seed in bulk (500 kg sacks) and in small sacks (20 kg). We encourage you to buy in bulk to save on costs for both seed and transportation. For bulk, in units of 500 kg, the price is €6/kg. For small sacks, the price is €8/kg. In either case, transportation costs are not included and prepayment is required before shipping. Additional reductions may apply with larger orders.

### **Payment**

We must receive full payment before shipping, and our prices do not include shipping costs. If you are ordering from outside of the EU, it will be your responsibility to receive this shipment at your nearest port of entry, to clear customs and then organize you own transport to a final destination. You are also responsible for insuring this shipment; otherwise shipping will be at your own risk. After making your payment, please inform me that this transaction has been made, and also provide a delivery address for the seed by contacting me by e-mail ([jcallaway@finola.com](mailto:jcallaway@finola.com)), so your payment can be verified and provide tracking information for delivery.

Payments are to be made to:

Finola ky                      EU VAT number Y-1706848-2

Bank account number        560005-20083091

IBAN FI21 5600 0520 0830 91

SWIFT OKOYFIHH

Bank name: Kuopion Osuuspankki

Branch name: Kauppatorin aluekonttori

Bank Address: PL 47, FIN-70100 KUOPIO, Finland

Bank Telephone number: + 358 17 198 273

**Things you should know about Finola:**

Finola was developed in Finland. As a plant variety, Finola is a short, dioecious, early-maturing hemp crop that is harvested by conventional harvesters for its grain and fiber. The unprocessed stalk is over 40% cellulose. Finola grows best in temperate regions, between latitudes 40 and 50 with continental climates, and will benefit from irrigation in areas that are prone to drought. Finola is the prototypical oilseed hemp variety, with high yields, ease of harvest and unique fatty acid profile of the pressed seed oil. This oil is important for both food and industrial purposes. This highly unsaturated oil can be added to bio-diesels for the purpose of lowering the diesel freezing point, for example. The recovered fiber, hurd (shive) and unprocessed biomass from the Finola crop can be used for such non-woven purposes as insulation, geotextiles, as compost substrate or animal bedding.

As a company, we are Finola ky, which is an incorporated partnership that maintains and licenses the Finola variety of hemp. In 1995, JC Callaway, Ph.D. and his associates began breeding Finola in Finland, secured the Plant Variety Rights in 1999 and continue to provide legal stewardship for the Finola hemp variety.

**For sound biological reasons, it is simply not possible to use Finola for drug purposes!** This is also true of any hemp variety. Unfortunately, “cannabiphobia” continues to shadow anything related to hemp. This irrational fear is easily treated with factual information and regular exposure to hemp! Unfortunately, hemp is still suffers the same legal classification as drug cannabis in some parts of the world today, such as the USA. Please be sure that you are fully informed about your local laws and customs before ordering hempseed, and be aware of potential subsidies or penalties for the cultivation of hemp in your nation. Also, do understand that we have very limited resources to advise on matters of legislation or general agriculture, or even provide small amounts of personalized advice. Consulting and even general information is only available to those who have purchased certified Finola planting seed. Some basic agronomic information on Finola is provided at the end of this letter.

Note: We will only ship to those individuals who live in countries where hemp is allowed to be cultivated. Viable Finola seed will not be shipped to the USA (please, vote for smarter politicians over there!). For those of you in Canada, please contact Shaun Crew for your Finola planning seed: [shaun@hempoilcan.com](mailto:shaun@hempoilcan.com)

Thank you again for your interest in Finola!

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<http://www.finola.com>

Please use this e-mail address to inform on payments made [jcallaway@finola.com](mailto:jcallaway@finola.com)

Please use this telephone number to discuss business +358 40 725 2534

## Tips on Finola Agronomy for 2008

### Plant Economy

The Finola variety of industrial hemp (non-drug *Cannabis sativa*) is a versatile, dioecious, oilseed crop that is grown for both grain and fiber/biomass. The typical 1000 seed weight for Finola is about 11.5g /1000 seeds, and up to 12.5 g/1000 seeds under optimal conditions (i.e.; warm, continental climates with well drained, sandy loam soils that are high in organic matter). Hempseed is a highly valued food product, containing a rich blend of polyunsaturated oils, an easily digested protein, carbohydrates, vitamins and minerals. Hemp fiber is perhaps the strongest of plant fiber, which is used in a variety of commercial applications, from rough non-woven insulations to composites for the automotive industry. The unprocessed stalk is over 40% cellulose and about 15% lignan. At its simplest, the fiber and biomass make excellent animal bedding, geotextiles and compost substrate.

### Field Selection

For best results, sow Finola in well-drained fertile soils that are rich in organic matter with high nutrient availability. High microbiological activity in the soil will support vigorous growth through mycorrhizal symbiosis. A light to medium textured soil is preferable, with a pH of 6.0 to 7.5. The seedbed should be fine, uniform, moist, warm (+10 C min) and weed free before sowing. Hemp is best preceded by perennial alfalfa / grass breaking, green manure plow downs, legumes, barley, potatoes, and soybeans. Corn, oilseeds, and wheat can be vectors for disease and aren't recommended as forecrops. Spice crops are also not recommended as they can impart unwanted flavors into hemp oil during pressing.

### Seeding

Sow hemp as shallow as possible (1- 2 cm), but into moist soil after the soil temperature has reached +8- 10 C, with May 15-25 as an optimum sowing window. Expect germination in 2 to 4 days and emergence within 4 to 7 days, depending on temperature. An optimal plant density of 100 plants / m<sup>2</sup> can be achieved for grain production with 25- 30 kg/Ha. Hemp seedlings are frost tolerant to about minus 4 C. A hemp bushel weights 44 lbs.

### Fertilizer

Under optimum conditions, Finola will grow vigorously and requires moderate nutrient availability. Conventional NPKS fertilization is recommended for Finola at the same levels required to grow 13.5% wheat or rapeseed. Finola grain and fiber yields are most responsive to N & P fertilization, and optimum yield and returns are often realized at about 60-70 kg of actual N/Ha. Phosphate should be applied at about 55-80 kg of actual P/Ha. Hemp will tolerate some seed-placed N and P (~15-20 kg/Ha). Apply additional K and S where soils are deficient.

Organic producers are recommended to precede a Finola crop with a perennial alfalfa breaking or green manure plow down, with added urine or manure to increase nutrient availability, rapid growth and thus reduce weed pressure. **Please note!** Good soil, farming experience and proper nutrient levels are essential for successful organic hempseed production. It is best to consider hemp as a two-year crop within an organic production system and use the first year to control weeds and improve soil fertility and the second year for production.

### **Weed Management**

Given a good start, Finola can be an effective weed suppressant. A quick, even emergence is the key to enable Finola to effectively compete by rapidly creating a dense leaf canopy within the first month of growth. However, producers are still recommended to minimize weed pressure by fall and (at least) spring tilling, or through the use of perennial forages or green manure plow downs. Problem weeds include buckwheat, wild oats, rapeseed, pigweed, volunteer wheat, coriander and other spice crops.

### **Disease and Pest Management**

Hemp has very few disease and pest problems. The most important disease issue is *Sclerotinia* stem rot (in wetter conditions). Another diseases to note is *Botrytis* (gray mold / head blight). Grasshoppers, gophers, bertha armyworm, hemp borer and lygus plant bugs have been known to attack hemp in some places. Note there are no pesticides registered for use on hemp, and normally none are required. Birds will be attracted to the mature seed in the late autumn.

### **THC Test Sampling**

Finola is a rapidly maturing variety of hemp, which requires vigilance to recognize to correct sampling time, in accordance with established national protocols. According to EU regulations, a 10 day interval after the ‘end of flowering’ is the proper sampling time for hemp, which is typically between 50-60 days after sowing for Finola. Later sampling dates may give higher THC values.

### **Harvest**

Approximately 135 days after sowing, Finola may be combined for grain while it is still “green/ immature”, in order to minimize fiber wrapping and fiber strength. This should be done when the crop and the weather are as dry as possible, and drying facilities must be nearby and ready to receive the harvested grain. Finola can be swathed at 85% seed head maturity in a warm continental environment, such as France, being cut near to the ground and combined dry at ~10% seed moisture. Preferably, Finola can also be straight combined at about 12 to 15% seed moisture during dry autumn days. Aerate grain immediately off the combine down to about 9% moisture – this is critical to prevent seed heating, reduce mold and to preserve seed quality. Cut or hay-bind the remaining stalk (ranging between 1- 1.5 meters in height) within a few days and bale. Reduce cylinder, rotor and unloading auger speeds to prevent seed damage while harvesting. Watch for fiber wrapping around shafts, particularly the drive shaft and sprockets of the feeder chain, or front beater, and front drum for the feeder chain. While producers use all types of harvesters, CIH rotaries, JD & NH conventional harvesters with draper headers seem to work best. There are some combine modifications that limit fiber wrapping and speed up harvesting, and modest combine speeds and input rates also help limit potential problems with wrapping.

### **Storage**

Ensure hemp grain is slowly and carefully dried at low temperatures (20- 25 C) to about 9% moisture, with proper aeration and turning, to preserve freshness and general seed quality. Be sure that your moisture meter is pre-calibrated for hempseed!