

Hemp seed and oil – a highly nutritious source of food



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Introduction

Cannabis sativa L. (Linnaeus) is an annual herbaceous plant in the Cannabis genus, a species of the Cannabaceae family. People have cultivated *Cannabis sativa* throughout recorded history as a source of **industrial fibre**, **seed oil**, **recreation**, **religious** and **spiritual** mood, and **medicine**.

Industrial hemp ≠ Marijuana
0,2 % THC >5 % THC

OBJECTIVE: Collect and analyze the available literature about hemp. Try to describe the production, the benefits in human health, the characteristics of oil for human consumption and extensive use this plant has in the food and cosmetic industries, among others.

Production of hemp seed and oil

Cannabis sativa L. is a **dioecious**, flowering plant (Figure 1). The plant requires 12-13 hours of **light** per day, enough **water**, the **pH** of soil between 5-7,5, to obtain products of high quality (Figure 2).



Figure 1. *Cannabis sativa* L. Female plant (a) Male plant (b). Adapted from <http://www.tecnicoagricola.es>

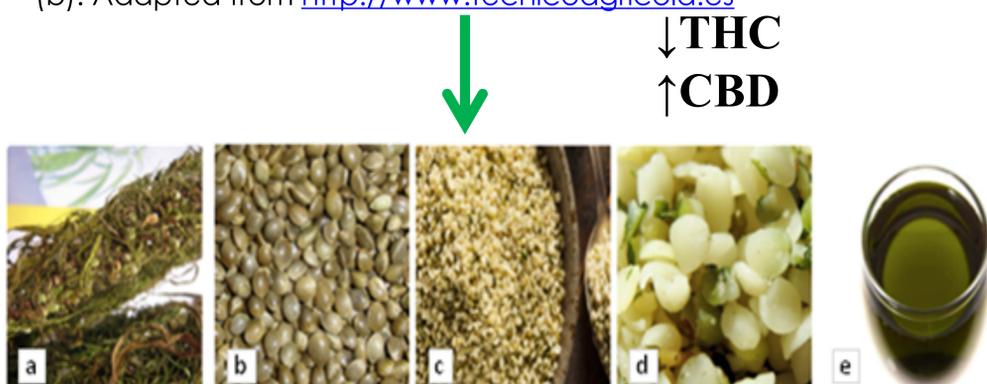


Figure 2. a. Hemp seed on plant, b. Hulled hemp seed, c. Dehulled hemp seed, d. Dehulled hemp seed (enlarged detail), e. Hemp seed oil

Nutritional and medicinal benefits

- hemp seed is **25% protein**
 - hemp seed is **36 % essential fatty acid** (90% polyunsaturated fats : **omega 3, 6**)
 - contains all **9 essential amino acids**
 - rich in trace **minerals**
 - high in dietary **fiber** (Callaway, 2004).
- ✓ hemp seed may reduce the **risk of heart disease** (Peh et al., 2005).
 - ✓ hemp seed and oil may benefit skin disorders = **eczema** (Callaway et al., 2005).
 - ✓ whole hemp seed may aid **digestion**

The main cultivation areas

WORLD	SPAIN
France	Sevilla
China	Granada
Chile	Alicante
Ukraine	Lugo
Russian federation	Galicia
	Madrid
	Barcelona

Conclusions

Hemp seed and oil have an excellent properties. Among its fat profile, content of protein, vitamins and minerals, its widespread use in the alimentation, medicine and cosmetics, *Cannabis sativa* L. has shown big power. It should be introduced in the diet of each person, taking advantage of all its benefits to improve health.

References :

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- Peh, H. Y., Tan, W.S.D., Wupeng, L., Wong, W.S.F. (2015). "Vitamin E Therapy beyond Cancer: Tocopherol versus Tocotrienol."