

Identification: Industrial Hemp or Marijuana?

Marijuana and industrial hemp are different varieties of the same plant species, *Cannabis sativa* L. Marijuana typically contains 3 to 15 percent THC on a dry-weight basis, while industrial hemp contains less than 1 percent (Blade, 1998; Vantreese, 1998). Most developed countries that permit hemp cultivation require use of varieties with less than 0.3 percent THC. However, the two varieties are indistinguishable by appearance. DeMeijer et al. (1992), in a study of 97 *Cannabis* strains, concluded that short of chemical analysis of the THC content, there was no way to distinguish between marijuana and hemp varieties.

Industrial hemp can be grown as a fiber and/or seed crop. Grown for fiber, it is planted in dense stands to maximize stalk production. Grown for seed or for seed and fiber, plants are spaced farther apart to encourage branching and seed production. Marijuana varieties are grown for their leaves and flower buds, and therefore are grown under low-density conditions to maximize

branching. Thus, planting density and other production characteristics do not offer a reliable way to distinguish varieties for law enforcement purposes.

Health Canada announced regulations on March 12, 1998, that control activities relating to the production, import, export, transport, and sale of industrial hemp (see Appendix I for the fact sheet from Health Canada). Production is highly regulated, with farmers required to obtain annual government permits. Farmers cannot have had a drug offense in the past 10 years and need to have a criminal background check done at their own expense. Federal agronomists and police will check fields and test plants to make sure that no narcotic plants are grown along with the industrial hemp.

The European Union (EU) issued rules governing hemp production in 1989, which include registration of the area to be planted in advance, the use of seed from certified low-THC varieties, and testing of fields to determine THC content.