

APPLICATION A1039

LOW THC HEMP AS A FOOD

Submission – Industrial Hemp Association of Queensland

Questions for submitters:

- (a) Are there other methods of distinguishing between the seeds of hemp and drug varieties of cannabis? Please provide evidence in support of these methods.
- (b) Are there other methods of rendering hemp seeds non-viable that will also result in the whole seed being distinguishable from the seeds of drug varieties of cannabis? Please provide evidence in support of these methods.
- (c) Can you provide any evidence on whether hulled hemp seeds remain viable?

Identifying Industrial hemp seeds.

Expert plant breeders can recognise different varieties of Industrial hemp seeds by the colour and the markings on the seeds, and in fact these traits are used in the registration of different varieties.

It takes a significant amount of training to achieve this level of skill, but it also takes a level of skill to distinguish between marijuana and other crop seeds such as millet and sorghum. See photos below.



Tegege variety of Industrial hemp seed



Bundy Gem Industrial hemp seed



Marijuana seed advertised on the Internet.



Millet and Grain Sorghum seeds are a similar size and could be confused with marijuana

The inability of enforcement officers to identify seeds would not be a restraint if the seed is dehulled or ground by a licensed seed processor.

Denaturing Industrial Hemp seed

Hemp seed has an outer leathery coating to prevent the soft endosperm from drying out and to stop oxygen from oxidizing the unsaturated fatty acids in the oil. If this hard outer layer is removed, or if it is cracked the seed is not viable as the embryo is exposed and will shrivel and die from dehydration or attack from soil or air borne pathogens.

Other methods used to render the seed non-viable include cracking the seed, steaming or grinding.

Once the seed is dehulled, cracked or ground, a rapid oxidation process begins if oxygen is present, leading to rancidity and a reduction of the important nutritional benefits of the product.

For the production of high quality hemp food, the extracted oil or dehulled or cracked seed should be vacuum sealed and kept in dark conditions to preserve the healthy properties. Whole seed has the protection of the hull which contains antioxidants to slow the oxidation process affecting the oils contained in the seed.

From our experience in planting research trials we have observed while diagnosing emergence failures that seeds that are accidentally cracked in the planting process almost always die and seeds accidentally dehulled ALWAYS die. Viability of dehulled hemp seed is zero.



Coarsely ground Hemp Seed – Not viable.



Dehulled Hemp seed is not viable.

Submitted on behalf of IHAQ.

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