

## Hemp Seed, the Royal Grain

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... the hemp seed's use as a food and oil source... can be traced back to the very beginnings of civilization. The German researcher Immanuel Low referred to a sixth century Persian name for a preparation of cannabis seed, *Sahdanag* -- *Royal Grain*; or *King's Grain*, which demonstrates the high regard the ancient Persians held for the nutritious oil rich seeds that came from the same plant which provided them with their only means of religious revelation in the form of the drink *banga*. *Sahdanag* was generally prepared in the form of a heart shaped cookie, possibly indicating that the ancient Persians recognized the seed's close relationship with health and vitality (Low, 1925; reprinted 1967).

Sometime after the Persian Empire took control of the ancient world, the Jews adopted this Persian preparation of hemp seed and retained its name of *Sahadanag*, which is really not so surprising as like their Persian benefactors, the Hebrews already had a long and beneficial relationship with the useful plant, known to them as *qaneh-bosm*, (the root name for our cannabis). Immanuel Low also suggests that the formerly unidentified Hebrew word, *Tzli'q*, (Tzaddi, Lamed, Yod, Quoph), makes reference to a Jewish meal of roasted Hemp seeds that was popular into medieval times and was sold by Jews in European markets. (The first part of the name simply means roasted, the final Quoph, an abbreviation of *q'aneh*).

As with an ancient world food source, hemp seed as a lighting fuel is possibly as old as the invention of the oil lamp itself. "Hemp seed oil lit the lamps of the legendary Aladdin, [and] Abraham the Prophet... It was the brightest lamp oil." (Herer 1995).

At the same time as countless Jews and Persians were feasting on "Royal Grain" in the Near East, in the Far Eastern land of China hemp was celebrated as one of the seven main grains, and was popularly used up until the sixth century AD in a variety of oriental recipes (Abel 1980). Some centuries later, in the fourteenth century AD, hemp started to become an important Chinese medicine and a large section of the famous Chinese pharmacopoeia text, the *Pen T'sao Kang Mu*. The texts compiler Li Shih Chen referred to works from previous authors dating back centuries before his own time in his discussion of hemp seed as both a food and medicine. According to the ancient author, the Chinese had hybridized hemp to such an extent that it grew as large as garden peas and was reputed to have been of the highest quality. The ancient text recommended hemp for everything from urinary problems, blood flow, palsy, increasing the amount of mother's milk for suckling infants, the growth of muscle fiber, both dysentery and constipation and a variety of other applications. (Jones 1995)

Meanwhile in India, according to the legends of Mayhayana Buddhism, Buddha subsisted on a single hemp seed a day during the six steps of asceticism which lead him to enlightenment. (Schultes & Hofmann 1979). In modern India Hemp seed is still eaten by "many of India's poor people: a mixture called *bosa* consists of the seeds of goosegrass (eleusine) and hemp, and *mura* is made with parched wheat, amaranth or rice, and hemp seed. The seeds are said to make all vegetables more palatable and complete foods." (Robinson 1996).

The ancient physician Claudius Galen (130-200 AD) wrote of a cannabis seed dessert that was popular with the Romans. In this case the preparation likely included whole tops as it was reported to leave the guests feeling warm and elated. A century or so earlier the Roman historian Pliny (23-79 AD) recorded hemp seed oil's use in the extraction of "worms from the ears, or any insect which may have entered them" ( a comment that likely refers to the common earache, which like toothaches was believed to have been caused by the burrowing of parasitic "worms" or insects up until medieval times). As well hemp seeds were believed to be beneficial in the treatment of gout and other maladies.

Centuries later hemp seed became a key ingredient in the forerunner of the modern medicinal pill as well as a key ingredient in a number of therapeutic applications; "many complex recipes, including the exotically titled and famous - Pelotus of Antioch (the pellet or pill *inter alia* of Antioch: in modern Syria/Turkey). It is part of the salve and the dressing of wounds, and a variety of ointments, salves and plasters." The well known medieval nun and poet Hildegard of Bingen recommended "hempseed" for the relief of pain in her *Physica*. Hemp was commonly used in English medicinal recipes of the 14th and 15th centuries and records of the St. John the Baptist Hospital in Winchester report a whopping 36 gallons of seed being purchased "for the use of the sick".(Sharp 1989) The 1794 edition of the *Edinburgh New Dispensatory* referred to an emulsion of hemp seed oil in milk that was given as treatment for venereal disease and as a cough remedy. In his still popular and in print *Complete Herbal*, Nicholas Culpeper (1616-1654) wrote that a preparation of cannabis seeds was used to ease the suffering colic, in the treatment of certain bowel problems and to stop "bleeding at the mouth, nose and other places"

According to the Hemperor himself, in medieval Europe many porridges, soups and gruels contained hemp seed and "monks were required to eat hemp seed dishes three times a day" (Herer 1985). A soup made from hemp seeds called semientiatka is eaten ritually on Christmas Eve in Poland and Lithuania, and in Latvia and Ukraine, possibly in remembrance of the Persian *King's Grain*, a similar meal is eaten in the celebration of Three King's Day.(Abel 1980).

In South Africa, Suto women not only burn cannabis flowers as an aid in childbirth, after the baby is born "they also grind up the seeds with bread or mealie pap and give it to children when they are being weaned"(Ames, M.D.1958) In this last aspect, the Suto women may have instinctively tapped into the fact that hemp seed contains rare gamma linoleic acid, a substance found in human mother's milk.

In the first half of the twentieth century, one of the few sane voices that spoke out against the de-hemping of America through the Marijuana Tax Act of 1937, was Ralph Loziers of the National Oil Seed Institute, who testified to the unhearing bigots of the Tax Act committee that "hemp seed... is used in all the Oriental nations and also in a part of Russia as food. It is grown in their fields and used as oatmeal. Millions of people every day are using hemp in the orient as food. They have been doing that for many generations, especially in periods of famine....". As Loziers noted, it wasn't just the possibilities of an important food industry which would be squashed by the Marijuana Tax Act, but also the paint and varnish industry would be greatly effected as hemp seed oil was a valuable drying agent and in the two years prior to the installation of the Tax Act 179 million pounds of hemp seed had been imported into the US for this purpose alone.

With the hemp seed's long-standing relationship with humanity, it is interesting to learn that modern science has revealed that they contain all the essential amino acids and essential fatty acids necessary for human life, as well as a rare protein known as globule edestins that are very similar to the globulin found in human blood plasma. Because of this, hemp seed has been touted by some as "Nature's perfect food for humanity". Four short years after the Marijuana Tax Act passed in the US, a researcher writing for a 1941 edition of *Science* lamented the loss of access to the hemp seed's rare and important globule edistins; "Passage of the Marijuana Law of 1937 has placed restrictions upon trade in hempseed that, in effect, amount to prohibition.... It seems clear that the long and important career of the protein is coming to a close in the United States." Still, research continued elsewhere, and in 1955 the Czechoslovakian Tubercular Nutrition Study concluded that hemp seed was the "only food that can successfully treat the consumptive disease tuberculosis, in which the nutritive processes are impaired and the body wastes away" (Robinson 1996). Hemp seeds contain the most balanced and richest natural single source of essential oils for human consumption. The E.F.A.'s not only help to restore wasting bodies, but also improve damaged immune systems, so it is not so surprising that modern researchers have studied them in relationship to the modern immune attacking AIDS virus. (Eidman, M.D., Hamilton, ED.D, Ph.D 1992).

The seven time Nobel Prize nominee, Dr. Johana Budwig, a pioneer of E.F.A research, reported success in treating heart infraction, arthritis, cancer and other common diseases with massive doses of E.F.A.'s. Budwig's research indicates that many of these killer and crippling diseases may be caused in part by our diet of saturated fat and trans-fat, which are present in much of the food we eat. According to this healing sage in Doctor's whites, saturated fat and trans-fat befuddle the electronic charge of the unsaturated oils which are present in cell membranes. This decreases the cells ability to receive and store electrons from the sun, which according to Budwig is a key factor in human health. Alternatively, a balanced diet of E.F.A.'s keeps the charge of the unsaturated fats in the cells membranes working properly and electron rich. As Budwig herself explains:

"The sun's rays are very much in harmony with humans. It is no coincidence that we love the sun. The resonance in our biological tissue is so strongly tuned to the absorption of solar energy that physicists who occupy themselves with this scientific phenomena, the quantum biologists, say that there is nothing on earth that has a higher concentration of solar energy photons than humans. This enrichment with solar energy depends strongly on the 'like energy' aspects, a wavelength that is compatible with humans, and this is supported when we eat foods that have electromagnetic waves of solar rays--the photon. An abundance of these electrons, which are tuned to the solar energy frequency, exist, for example, in many seed oils. Scientifically these oils have even been designated as electron-rich, 'essential,' highly unsaturated fats...." (Budwig 1992) Budwig states that when we began to homogenize vegetable oils so that they would store better, we unknowingly changed their E.F.A. content into saturated fats in the ensuing heating process. These E.F.A. robbed, thus electron poor foods "promote the emergence of cancer.... They behave like tar, as insulators relative to the transport of electrons in living tissue." Alternatively, "electron-rich highly unsaturated oils... increase the absorption, storage and utilization of the sun's energy". Budwig relates that after her ailing patients have been treated with an E.F.A. rich diet and then "lie in the sun, they notice they feel much better--rejuvenated"; (Budwig 1992) "On the other hand, nowadays we frequently observe that the heart fails on sunny beaches, and not infrequently heart attacks occur. We can observe both: some individuals in our time experiencing stress from exposure to the sun's energy, whereas others respond with dynamic improvement in all vital functions. The stimulating effect that sunshine has on the secretions of the liver, gall bladder, pancreas, bladder, and salivary glands is easy to observe. These organs only dry out upon exposure to sunshine when the substance that stimulates secretions are missing. The decisive factor in all these observations is whether the surface-active, electron-rich, highly unsaturated fats are present as a 'resonating system' for solar energy, or, if they are missing. The doctor tells cancer patients to avoid the sun; that they can't tolerate the sun. That is correct. As soon as these patients--also cancer patients--were placed on my oil-Protein diet for just 2-3 days, i.e. a diet that contains an abundant supply of essential fats, they were able to tolerate the sun very well. Yes, they emphasize how well they suddenly feel in the sun, how the life forces are stimulated and that they feel dynamically energized."(Budwig 1992)

Budwig's word are definitely "food for thought". Perhaps the saturated fat diet of many of hemp's bigoted opponents is causing them to be "deep-fried" under the sun's ray's, whereas the hemp-savvy hipster, well dosed with the best source of E.F.A.'s the beloved hemp seed, is being continually re-energized? In times of worry about increased exposure to the sun's rays (and an ensuing rise in skin cancer) due to the hole in the ozone, the E.F.A. rich oils provided by hemp may offer us a "seed" of hope. In her writings about the sun's effect on the cell membrane's electrons, Budwig referred to the work of the quantum physicist Dessauer, writing "If it were possible to increase the concentration of solar electrons tenfold in this biological electron rich molecule, man would live to be 10,000 years old." (Budwig 1992). I'll have a hempy burger, and a hemp seed smothie to go please, the sun is out and I'm headin for Wreck Beach!

**Sidebar:** With the advent of Canada's new hemp seed industry, it is interesting to note that in the future, the biggest consumer of the seed may not be humans, but livestock, and more curiously fish! Hemp seed cake, the byproduct of pressed hemp seed oil already has a long history as animal feed and it has been estimated that it could provide an almost complete diet for

domesticated animals, birds, and much livestock. Research has been done in the aquaculture industry concerning using hemp seed in the feed of carp, as well as, in Norway, with farm-salmon. Fish-farming is a steadily growing business on both Canadian coasts, and like it or not, a reality in these times of depleted natural fish-stocks. Interestingly, salmon like hemp and other vegetable oils are rich in E.F.A.'s. Currently, a common additive in farm salmon feed is flaxseed, (I've heard unofficial reports of up to 50%), perhaps a legal hemp industry will see a change in commercial farm fish food recipes?

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