The Cannabis Papers Publius

#27

# Omega cannabinoid economics

### Money and an unbalanced diet

Oil from cannabis seeds, marketed as "Hemp oil," is of high nutritional value because of its 1:3 ratio of Omega-3 to Omega-6 essential fatty acids (EFAs). This perfectly matches the ratio required by the human body.

It is well known that America has a diet problem. The problem is fat – an imbalance of EFAs. Western diets typically have ratios between 1:10 and 1:30. These are dramatically skewed toward Omega-6 and toward imbalance.

Here are the ratios of Omega-3 to Omega-6 in common oils:

Cannabis/Hemp	1:3
Flax	3:1
Canola	1:2
Soybean	1:7
Olive	1:3–13
Corn	1:46

Oils like cottonseed, grapeseed, peanut and sunflower lack significant amounts of Omega-3.

The corn ratio of 1:46 is the big news here. Publius is pro-corn. It's an amazing plant just like cannabis. Corn's lopsided ratio of 1:46 is the issue and it contributes to our diet problem. American farm policy is pro-corn. The most recent version of the Farm law is the 2008 Food, Conservation and Energy Act. It subsidizes the growing of corn – the one with the 1:46 ratio. Perhaps in 2013, as this 2008 law is in effect for five years, our President and Congress will consider subsidizing the good oil plant – the one that provides the perfect ratio of 1:3.

*The first step would be to make it legal for American farmers to grow cannabis for oil.* There would also be a need for investment in equipment, transportation, processing factories, and distribution centers. Sounds like something like this would create jobs. As it stands, the hemp consumed in our country is imported from Canada, China and France.

#### Omegas Living Harvest® Tempt<sup>™</sup> Hempmilk

Meet the Good Fats. Have you heard about those great Omega-3's & Omega-6's? Guess what? They're fats! Like their name suggests, these Essential Fatty Acids (EFAs) are required for life. More than any other plant on Earth, hemp seeds provide the perfect balance of naturally-occurring Omega-3's with SDA and Omega-6's with GLA. They have no known allergens, and provide a valuable source of protein, magnesium, phosphorus, vitamin E, iron & zinc.

Hemp oil is special. It has two Omega-3s referred to as DHEA (*docosahexaenoyl* ethanolamide) and EPEA (*eicosapentaenoyl ethanolamide*), which some 2010 research suggests are cancer fighters. They seem to work better than their parent Omega-3 fatty acids, DHA (*docosahexaenoic acid*) and EPA (*eicosapentaenoic acid*). Both showed significant potency when activating ECS receptors.

Omega economics hinge on inflammation. Corn oil is pro-inflammatory: hemp oil is anti-inflammatory. Thus by paying farmers to grow corn, then have that product turned into inflammatory oils that unbalance our diet ... well that's nonsensical. It also isn't competitive capitalism.

#### Omegas Living Harvest®

## Hemp seeds - little giants of nutrition

How did Living Harvest Foods become the #1 hemp foods company? We have more hemp food experience than anyone, always improving our products to bring out the rich, smooth and creamy tastes that only hemp can provide. Hemp is an environmentally-friendly renewable resource that requires neither pesticides nor herbicides. Drinking Tempt<sup>™</sup>, you'll feel good about nourishing your body and taking care of the planet. We offer a whole line of taste bud-pleasing foods: Tempt Hempmilk, Tempt Frozen Desserts, Organic Hemp Protein and Organic Hemp Oil. Our hemp foods deliver a big taste you won't forget.

*Taste bud-pleasing* – sounds wonderful!

Monetarily, the economics of repealing cannabis prohibition show that there are many politically influential industries: farmers and pharmaceuticals top the list. That's not a conspiracy, only good old economics.

On the other hand, it's bad policy to keep good things from people. That's not the role of government.

Hemp oil, with its one tablespoon of EFAs per day, offers a solution to balancing America's diet. That's a goal worthy of pursuit.

*Publius* (2011)

#### Search terms

Compare EFAs in corn vs. cannabis (hemp) oil; *docosahexaenoic acid* (DHA) and *docosahexaenoyl ethanolamide* (DHEA); *eicosapentaenoic acid* (EPA) and *eicosapentaenoyl ethanolamide* (EPEA); Canadian Consortium for the Investigation of Cannabinoids (CCIC); William Courtney; 2008 Food, Conservation and Energy Act.

#### Research and selected readings

2011: R Yang, et al, *Decoding functional metabolomics with docosahexaenoyl ethanolamide (DHEA) identifies novel bioactive signals*, Biological Chemistry, 12 July 2011 [Epub].

2010: F Labrie, *DHEA, important source of sex steroids in men and even more in women*, Progress in Brain Research, 2010:182:97-148.

2010: T Bisogno and V Di Marzo, *Cannabinoid receptors and endocannabinoids: role in neuroinflammatory and neurodegenerative disorders*, CNS & Neurological Disorders Drug Targets, November 2010:9(5):564-73.

2010: M Balvers, et al, *Docosahexaenoic acid and eicosapentaenoic acid are converted by 3T3-L1 adipocytes to N-acylethanolamines with anti-inflammatory properties*, Biochemical and Biophysical, October 2010:1801(10):1107-14.

2010: K Birnie, et al, *Psychological benefits for cancer patients and their partners participating in mindfulness-based [yoga] stress reduction (MBSR)*, Psycho-oncology, September 2010:19(9):1004-9.

2010: I Brown, et al, *Cannabinoid receptor-dependent and -independent anti-proliferative effects of omega-3 ethanolamides in androgen receptor-positive and - negative prostrate cancer cell lines*, Carcinogenesis, September 2010:31(9):1584-91.

2010: F Massa, et al, *Alterations in the hippocampal endocannabinoid system in diet-induced obese mice*, Neuroscience, May 2010:30(18):6273-81.

2009: D Hoffman, et al, *Toward optimizing vision and cognition in term infants by dietary DHA and ARA supplementation: a review of randomized controlled trials*, Prostaglandins, Leukotrienes and Essential Fatty Acids, Aug-Sep 2009:81(2-3):151-8.

2008: M Radwan, et al, *Non-cannabinoid constituents from a high potency cannabis sativa variety*, Phytochemistry, October 2008:69(14):2627-33.

2007: D Boudreaux, The politics of prohibition, Reason, 31 July 2007.

2005: J Miron, The budgetary implications of marijuana prohibition, MPP, June 2005.

2003: N Auestad, et al, Visual, cognitive, and language assessments at 39 months: a follow-up study of children fed formulas containing long-chain polyunsaturated fatty acids to 1 year of age, Pediatrics, September 2003:112(3 Pt 1):e17783.

2002: A Simopoulos, *Omega-3 fatty acids in inflammation and autoimmune diseases*, American College of Nutrition, December 2002:21(6):495-505.

1995: T Smart, *Other therapies for wasting*, GMHC Treatment Issues, May 1995:9(5):7-8, 12.