# PIONEERING A NEW, SCALABLE MODEL FOR SUSTAINABLE, DECENTRALIZED INDUSTRIALIZATION

Travis Remington - Travis@HempSweet.net
John Ferguson - John@ValueChoice.net

## Synopsis

Modern society is addicted to refined sugar, and it is a serious, pervasive problem.  That it *is* a problem is not a new understanding. Quite to the contrary, it has been known by everyone for decades but there has been little motion to improve the situation, and mostly it gets worse. In this paper we lay out a plan to address the problem at its roots. The plan has several parts and has ramifications far beyond simply handling the sugar situation itself.  The roots of the problem go much deeper than just sugar, and have to be addressed.

First we lay out a comprehensive direct handling for the problems of refined, harmful sugars: the production of healthy xylitol sugar from hemp. We show the overwhelming benefits of substituting xylitol for the sugars currently in use. We show that hemp, as an agricultural crop, is overwhelmingly beneficial, and is poised to revolutionize many aspects of commerce and industry, especially in the United States.  We show how xylitol production can be scaled up, along with the expansion of the hemp industry, providing a very viable line of xylitol production (eventually directly competing with the problematic sugars currently in use), while supporting and being supported by the hemp industry overall.  We show how producing xylitol from hemp in this way is superior to other methods, which methods will be less and less price-competitive as time goes forward.

We show how the use of new technologies in networking and decentralized consensus formation can create a new sort of collaborative open-source industrial ecosystem, one that can build and scale around the world cooperatively without having to rely on centralized corporate control or deep-pocket investors.  This is a model that can not only scale without

depending on centralized interests, but can resist the negative influences of those interests to a large degree. A key feature described is how HempSweet xylitol will only be obtainable from HempSweet through redemption of a unique HempSweet Token.

And finally, as a default part of this model, we show how we will form what is effectively the first decentralized, transnational soft-commodity exchange. Our pilot program and transition to full-scale production will hopefully inspire others to use and advance our model and the underlying technologies for the benefit of all.

# Topical Outline

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# An Intractable Addiction


**Everybody talks about the weather, but nobody does anything about it.** --Mark Twain


Modern society is addicted to refined sugar--behaviorally, physiologically, economically and politically. The overabundance of refined sugar in most available foods today is a problem which has been broadly recognized, yet shows little sign of being remedied by institutions and systems currently in place.


The World Health Organization (WHO) and other internationally known health institutions have estimated that 75% of all first-world chronic disease is attributable to the consumption of refined sugar, and this health crisis is quickly expanding to all other areas of the world[1,2,3]. Throughout human history, sucrose and fructose have been extremely scarce ingredients in food, and what sources we did consume would be accompanied by a natural balance of other nutrients and fibers which buffered the sugar's effect on the metabolism[4,5].  When consumed too regularly, in unnatural quantities, such sugars become harmful in far-reaching ways, because humans were never meant to consume it that way[6,7].  Instinct has trained the body to

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[1] Publication: WHO Global Action Plan for the Prevention and Control of NCDs (2013-2020)
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[3] WHO. Guideline Sugars intake for adults and children iv WHO Library Cataloguing-in-Publication Data Guideline: sugars intake for adults and children.
[4] Drewnowski A, Krahn DD, Demitrack MA, Nairn K, Gosnell BA. Taste responses and preferences for sweet high-fat foods: evidence for opioid involvement. Physiol Behav 1992;51:371–379.
[5] Foley KA, Fudge MA, Kavaliers M, Ossenkopp KP. Quinpirole-induced behavioral sensitization is enhanced by prior scheduled exposure to sucrose: A multivariable examination of locomotor activity. Behav Brain Res 2006;167:49–56.
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eagerly consume sugar-rich foods such as berries, etc., when and as they are available, to store energy for leaner times[8].  When overused, sugar (sucrose, fructose and artificial sweeteners) and other drugs become pervasive in creating/modifying neurologic reward pathways. Sugar has been shown in studies to be exponentially more effective than cocaine at stimulating addictive reward systems, and also increases the likelihood of developing other drug and behavioral addictions, including but not limited to heroin, alcohol, tobacco, eating disorders and gambling[9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26].

Several studies evaluating all foods available in common United States grocery stores have found that roughly 80% of all food for sale is tainted with refined sugars (listed under 50+

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different, often deceptive, ingredient names)[2728]. It is easy to understand why: Sugar stimulates a core human survival instinct and easily motivates us to consume more and more of foods containing sucrose and extracted fructose[293031323334]. From a short-sighted, profit-motive perspective, sugar has been the most successful drug on the planet, earning immeasurable profit (world soft-commodity market capitalization is in the trillions and sugar/artificial-sugar is the largest component). But the long-term destructive consequences related to sugar are no longer being ignored[353637]. Despite push-back from various vested interests with multi-decade scientific misinformation campaigns[38], this societal shift taking place is starting to gain traction at every level of healthcare (bans on refined sugars from hospitals)[39], government (soda taxes, sugar taxes)[404142], and food manufacturing (explosion in the increased demand for healthy sugars like stevia/erythritol/xylitol). Even Nestle, arguably the largest producer of sugary foods, is reducing sugar in their products by 40% and is also creating a full line of products exclusively using healthy 5-carbon sugars like xylitol. As demand for these healthy sugar alternatives grows, we will very quickly see another problem: Current means of producing these healthy alternatives cannot scale to meet the cost requirements and demand[4344].

[27] Stern D, Poti JM, Ng SW, Robinson WR, Gordon-Larsen P, Popkin BM. Am J Clin Nutr. 2016 Apr;103(4):1125-34. Where people shop is not associated with the nutrient quality of packaged foods for any racial-ethnic group in the United States.

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[39] Dietary Sugars Intake and Cardiovascular Health: A Scientific Statement From the American Heart Association. Rachel K. Johnson, Lawrence J. Appel, Michael Brands, Barbara V. Howard, Michael Lefevre, Robert H. Lustig, Frank Sacks, Lyn M. Steffen, Judith Wylie-Rosett and on behalf of the American Heart Association Nutrition Committee of the Council on Nutrition, Physical Activity, and Metabolism and the Council on Epidemiology and Prevention

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Solving the problem, however, is not as easy as simply identifying it[45]. Most of the population is literally addicted to the taste of sugar[46]. Individuals, industries and government connections who have been making vast profits off of the addiction are reluctant to change. Many might be inclined to make better choices if they were available, but the interdependencies are complex are seemingly intractable. Using the force of government to "do the right thing" too often results in unintended consequences and just makes matters worse.

The HempSweet plan, as outlined herein, involves making it possible and profitable for individuals and companies all over the world to "do the right thing" while profiting in response to rational market incentives. But moving to address the culture's sugar addiction is just getting the ball rolling. We are fully intending that others will add to the effort, and take it in new, even more profound directions.

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# A Comprehensive Remedy

**Let food be thy medicine and medicine be thy food.** -- Hippocrates

Because our addiction to sugar is society-wide and involves economics and politics as well as personal choices, the remedy has to address all of these as well. Substituting a healthy alternative that is also an economic boon addresses the problem at a more basic level. HempSweet's effort is to demonstrate and profit from a use-case for incentivizing rational decentralized progress which can be mirrored and improved upon by others. The solution to this aspect of the problem involves biochemistry and agriculture, as well as refining and manufacturing advances.

## Biochemistry

Xylitol is a naturally-occurring form of sugar with interesting and useful properties. Unlike other natural or synthetic sweeteners, xylitol is actively beneficial for dental health by reducing caries (cavities) to a third in regular use and has the unique ability to aid remineralization of teeth. It is a natural anti-fungal, anti-bacterial, and anti-inflammatory, and has many other beneficial properties. Even more importantly, xylitol does NOT have the detrimental effects of sucrose, non-native fructose, maltose, high fructose corn syrup, aspartame, etc., which are creating

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[46] Rolls ET. Brain mechanisms underlying flavour and appetite. Philos Trans R Soc Lond B Biol Sci 2006;361:1123–1136.

such havoc on health. The body and its beneficial organisms do not process xylitol in the same way as "regular" sugars. Laboratory studies comparing xylitol to natural and artificial sweeteners have found that xylitol had fewer or no side effects, with fewer calories.

Xylitol is naturally found in low concentrations in the fibers of many fruits and vegetables, and can be extracted from various berries, oats and mushrooms, as well as fibrous material such as corn husks, as well as sugarcane and sorghum stalks.

## Agriculture

Birch trees and corn cobs are the two current sources for large-scale xylitol manufacturing, but neither plant source is highly scalable or sustainable, and the production cost alone has been enough to inhibit full adoption of xylitol by food industries. *Cannabis* (in the form of industrial hemp) is not only a rich plant source for xylitol's precursor, xylose, but is arguably the most sustainable, scalable and versatile plant species cultivated by humans.



*Cannabis* is the plant species which includes both industrial hemp and marijuana as separate varieties. The distinction is made according to the quantity of the psychoactive component tetrahydrocannabinol (THC) that the variety contains. Though the terms are often indiscriminately applied, general usage (including herein) is that *cannabis* refers to all varieties, *marijuana* refers to varieties containing greater than (>) 0.3% THC and *hemp* (or more distinctively *industrial hemp*) refers to varieties containing lesser than (<) 0.3% THC.

Prior to the beginnings of the "War on Drugs" in the United States, some eight decades ago, hemp was a staple crop in the US and around the world. With the discriminatory taxing and then banning of marijuana (starting in 1937) restrictions on hemp varieties became more onerous, and hemp as a leading cash crop went out of cultivation. Hemp has continued to be grown in many areas of the world and though it is it has not been broadly cultivated in the US, the US is one of the largest consumers of imported hemp products: cloth, paper, food, oils, soap and many, many more.

Hemp is a very fast-growing plant and is excellent as a rotation crop. Cultivating hemp helps restore healthy topsoil, even in places of radiation-poisoned and otherwise-contaminated soil. It can produce as many as three to four crops per year, depending upon conditions, and because of its low water requirements and resistance to cold, it can be grown in more parts of the world than any other agricultural plant. Additionally, because of hemp's rate and density of growth, it generally requires no pesticides, alleviating the need to genetically modify it to be resistant to pesticides (GMO).

Hemp can be refined into a huge variety of commercial items, including medicines, paper, textiles, biodegradable plastics, paint, insulation, biofuel, food and animal feed. It is one of the earliest domesticated plants known. Documented history shows hemp has been cultivated, consumed and used by many civilizations for over 12,000 years.

It can be easily argued that hemp has been, and should be again, a close companion crop for human civilization.  Its nutrient profile matches the needs of humans almost perfectly. The human body contains a biochemical receptor system specifically designed to receive a broad variety of compounds produced only by the hemp plant.

As legalization of medical and recreational marijuana progresses in more US states, cultivation of hemp is progressing as well and is poised to erupt in an agricultural and industrial revolution, so many are the virtues of hemp as a crop and so many are its uses. For a much more thorough treatise on hemp, we recommend *Hemp Bound: Dispatches from the Front Lines of the Next Agricultural Revolution,* by Doug Fine, though there are many other worthy reference sources, as well.

## Refining/Manufacturing
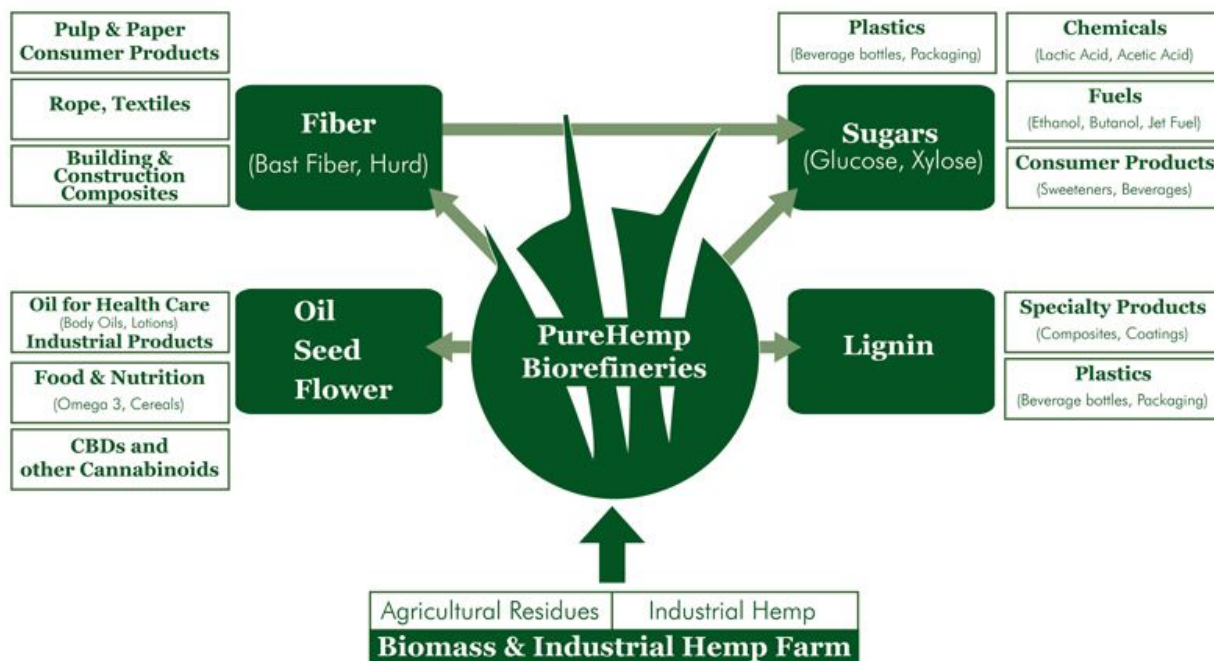


All parts of the hemp plant have multiple valuable uses with a variety of different processing requirements, depending upon the desired end product. There is virtually no component of the hemp plant which is without value, if it can be extracted economically. This means that there are many branching paths from plant to end product.

The part of the hemp plant which is best-suited to follow the path to xylitol is the stalk.

To understand the factors in producing xylitol from hemp, and to fully appreciate the advantages of HempSweet's approach, it is important to review the existing options for manufacture of the xylitol that is currently available.

As touched on above, existing sources of the raw material inputs for xylitol sugar (birch hardwood, corn cobs) are not sustainable or scalable for broad global sweetener demand and are thus prohibitively expensive to allow xylitol to play a part in improved health as a "refined sugar" replacement. Large-scale conversion of xylose to xylitol currently employs a hydrogenation process using nickel as a catalyst to add a hydrogen bond. While the function of a catalyst in a chemical conversion is to facilitate rather than take part in the conversion (and thus ideally not cause contamination to the end product) the fact that nickel is a highly toxic substance to human biology does cause concern to some. Almost all of current xylitol production is only done in a few industrialized areas, mostly in China at this time, rather than being able to be profitably produced closer to consumers all over the world.

While hemp stalk has other uses, which require different processing techniques, it is an excellent source from which to extract the xylose, which can then be converted to xylitol. Great efforts are being made on several fronts to facilitate farmers' conversion to hemp as a crop, including seed availability, and knowledge of farming techniques and regulatory navigation. Hemp stalk is relatively abundant and inexpensive in relation to the current and foreseeable processing demand. With the rapid expansion of hemp agriculture in the United States which is projected to keep accelerating rapidly, this supply should easily pace, and likely exceed, demand for xylitol production as it scales. The processing path from the raw plant stalk to finished xylitol involves two basic steps: xylose extraction and conversion to xylitol.

## Xylose Extraction

HempSweet has chosen to partner with PureVision Technology, and its wholly-owned subsidiary PureHemp Technologies. PureVision has pioneered a highly disruptive technology that has many advantages over current biomass conversion technologies. Based on years of R&D and favorable results, PureVision's patented continuous countercurrent reactor ("CCR") technology along with other in-line equipment rapidly



converts hemp stalks and other biomass into raw materials to manufacture a wide variety of products. Countercurrent processing (where the solid hemp stalks move in the opposite direction of the liquid reagent) has proven to cause highly effective reactions. Processing hemp
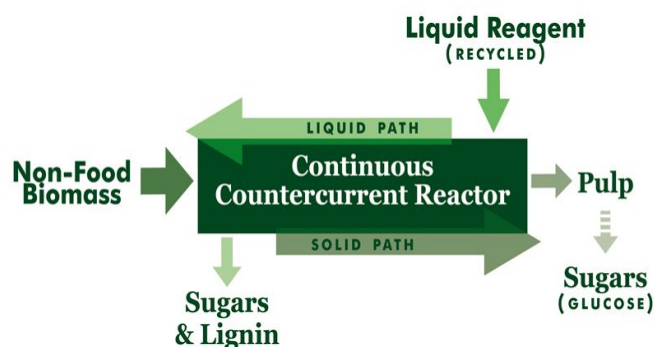
in the CCR results in the production of pulp as one product, and the existing extract liquor is further refined into lignin and sugar co-products.

Xylose derived from this stream is but one part of a process which yields other byproducts of great market value, including pulp, lignin and other sugars. This CCR technology has not been mastered by any other party, and is ready to be exploited broadly. PureVision has developed extraction and processing methods which can scale and be spread around the world in a very decentralized fashion, providing multiple other cash products in the same process. In order to accomplish its aim of making healthy xylitol broadly available, HempSweet realizes that it will have to be very profitable for those who will build the infrastructure to provide it. PureVision's CCR refining technology makes that more than possible.

## Microbial Bioproduction of Xylitol From Hemp Xylose Fermentation



Rather than employing a common industry chemical hydrogenation process using nickel as catalyst, HempSweet has chosen to pursue an industrial-scaled bioreactor fermentation process employing microorganisms to accomplish the final conversion to xylose to xylitol crystal. Similar bioreactors are in broad use and the general technology is well understood and available, but isolating the exact, best pathway to the desired end production at scale requires R&D. Development of this phase is to be funded by HempSweet's xylitol presale and all research will be lead by PureHemp's seasoned staff who have been wholly responsible for advancing its biomass refining technology.

The microbial bioproduction of xylitol from natural xylose coming from lignocellulosic materials appears a sustainable and a promising alternative to chemical synthesis, which works at stronger reaction conditions and generates undesirable co-products that must be removed. There are several studies proving successful yields with various metabolic pathways in wild and transformed xylitol-producing yeasts and the culture conditions that enhance xylitol accumulation with yields ranging from 82% to 87% and improving as test volumes increase, which are mainly related to the need of microaerobiose for the best-producing wild yeasts. Biotechnological xylitol production is an integral process of microbial species belonging to Candida genus which is influenced by various process parameters such as pH, temperature, time, nitrogen source, and yeast extract level. One particular study proves scaling up on 3 L fermenter, with a fed-batch strategy, the best xylitol yield was 86.84% (w/w), against a 90% of theoretical yield. The hyper-acidophilic behaviour of C. tropicalis makes this strain particularly promising for industrial application, due to the possibility to work in non-sterile conditions. Nevertheless, there are relatively few studies focusing on the engineering aspects related to

scalable systems and bioreactors that could result in a final industrial stage; this is the specific focus our last stage R&D process.[47][48][49][50]

President and CEO Ed Lehrburger is the longest standing CEO within the cellulosic biorefining industry. Ed's focus is to commercialize the PureHemp CCR technology and provide leadership in the emerging hemp refining industry. MIT Ph.D. Dick Wingerson, the inventor of the CCR technology, has recently retired and is now consulting for PureHemp. Dr. Wingerson has been supported by individuals with academic and professional distinctions who provide depth and experience that separates PureHemp from most other technology companies in the hemp refining industry. Sara Chmelka, Director of Hemp Technologies, has earned her stripes after successfully managing two challenging technical biomass fractionation programs for PureVision. Dr. Dhrubo Laskar, Director of Scientific Development, is a world renowned lignin scientist and manages PureHemp's laboratories. David DeCoster, Director of Process Development, has expertise in research, development and commercialization and leads the day-to-day operations of the technical team and is also PureHemp's lead pulp and paper engineer. Kirk Firestone has experience in design, R&D, scale-up and production and is PureHemp's Lead Mechanical Engineer.

All results from this R&D process will be open-sourced 24 months after the close of the official public presale, but for "Research Participants"--like universities, labs and producers who wish to further development or exploit the process in production (discussed further below)--will receive all data as it is generated and have access to PureHemp's R&D team, as well as have access to the hemp xylose syrup PureHemp currently produces.

## An additional perspective on the scope of refining and manufacturing:

Some of the following has been touched upon, but the potential scope of refining and manufacturing from hemp deserves further emphasis. Every part of the cannabis plant has multiple nutritional, medical, agricultural, commercial and/or industrial uses. Exhaustive lists may be found elsewhere, but 25,000+ uses have already been identified, and research is adding to that list all the time. Also, a functioning countercurrent reactor can process all manner of plant biomass.

HempSweet's choice to pursue xylitol has to do with a number of factors, including but not limited to: (1) the desperate need to address the refined-sugar problem, (2) the fact that the

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[49] Kwon SG, Park SW, Oh DK. "Increase of xylitol productivity by cell-recycle fermentation of Candida tropicalis using submerged membrane bioreactor." J Biosci Bioeng. 2006 Jan;101(1):13-8.
[50] Jeon, Y.J., Shin, H.-S. and Rogers, P.L. (2011), Xylitol production from a mutant strain of Candida tropicalis. Letters in Applied Microbiology, 53: 106–113. doi:10.1111/j.1472-765X.2011.03078.x

hemp stalk from which the product stream is derived is now and likely will continue to be the least used and cheapest part of the plant, (3) PureVision's CCR refining technology makes the processing of xylose very cost effective and, most pertinent here, (4) setting up and running a CCR line for xylitol also delivers into the hands of the refiner the ability to produce a fantastic array of other derivatives from the whole plant, depending on prevailing availability and other conditions.

This last benefit will help drive the entire hemp industry forward, to the benefit of all. Even current industry leaders in any related product stream can revolutionize their products by incorporating hemp and PureVision's patented technologies.

Hemp Refining Platform

PureHemp has secured global technology licensing rights to convert industrial hemp into hemp-based products. PureVision Technology, Inc. ("PureVision") based in Ft. Lupton, Colorado, has developed and patented biorefining technologies to rapidly convert non-food biomass such as corn stover, wheat straw, grasses, wood and hemp into biobased products. PureHemp has demonstrated the unique capabilities of its refining technology that deconstructs hemp into its fundamental components that then become intermediate materials including:
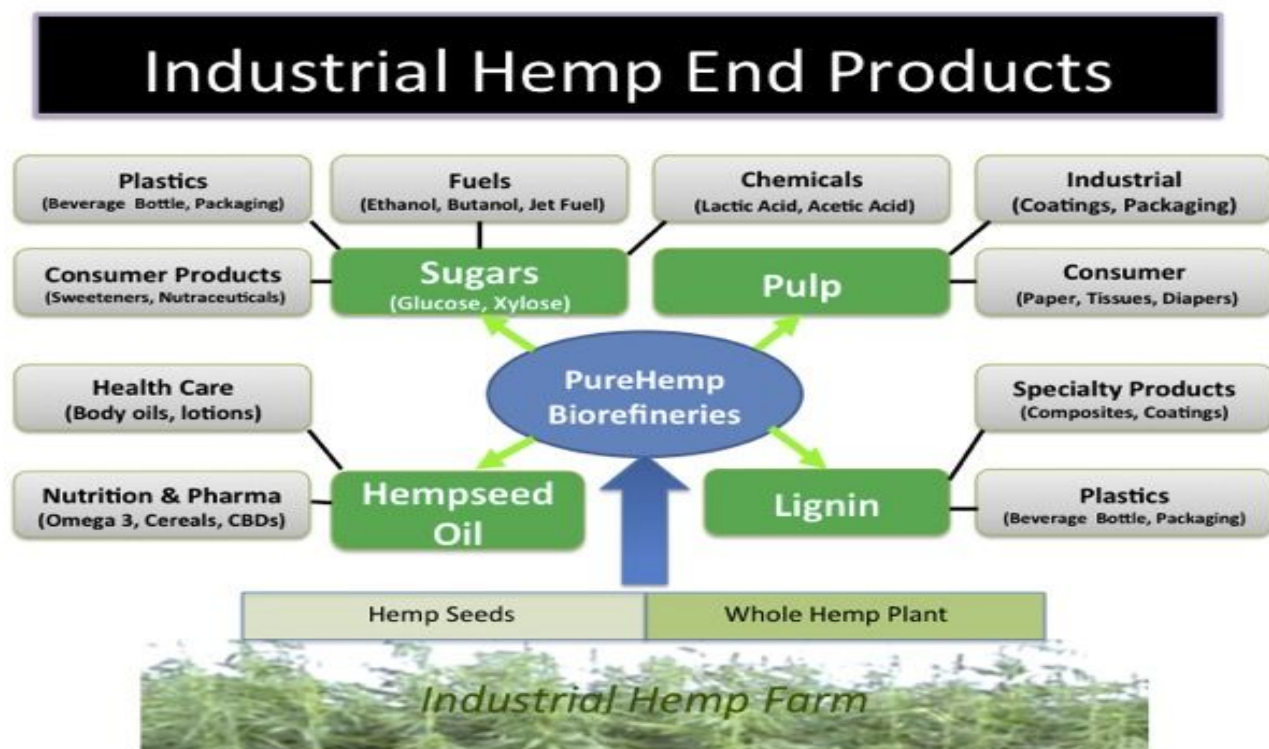
- Pulp, one of the products exiting the CCR, is made from the cellulose and hemicellulose fractions of the hemp stalks. Pulp is used for making a wide variety of products including paper products, alpha cellulose, dissolving pulps, composites and building products.
- Lignin, which makes up about 20% of hemp stalks, is the "glue" that protects the fibers. PureHemp is able to fractionate lignin from hemp stalks, which can then be used as a raw material to make many products, including chemicals and plastics.
Sugars from the cellulose and hemicellulose fractions of hemp, primarily xylose and glucose, can be used to produce products including sweeteners, beverages, chemicals and plastics.
- Oils can be produced from two sources from the hemp plant. At a PureHemp refinery, hemp seeds and flowers will be converted into hemp oils, including cannabidiol (CBD) oil, now being used by health and wellness practitioners.

Working with Farmers

PureHemp and HempSweet's multi-industry partnerships will continue to work with farmers and farming communities. With dwindling water supplies and continuing drought throughout much of the world, traditional irrigation practices are now changing in many areas. The versatile hemp plant offers an alternative to fertilizer- and pesticide-dependent crops with high water demands. Hemp refineries will pay farmers to cultivate hemp to sell to the PureHemp refinery.

Promoting Industrial Hemp

PureHemp is on the ground floor of a new hemp refining industry. HempSweet plans to benefit from this new opportunity not only by becoming an important link in the emerging value chain from farmer to consumers, but also prove companies can be profitable in an open source, decentrally controlled, and collaborative environment.

Building PureHemp Biorefineries

PureHemp's mandate is to work with partners interested in developing refineries that convert hemp into intermediate and final products. PureHemp has built a successful commercialization pilot program that proves it is a world leader in industrial hemp biorefineries and HempSweet is determined to progress their plans in place to develop hemp refineries throughout the world. This one product revenue stream of xylitol alone should be enough for any industry leader to see the value proposition that hemp as a whole offers.  With decreasing commodity prices in almost all sectors, increasing production costs related to fragile global socioeconomic conditions, dwindling access to fossil resources, and a marked increase in environmental awareness with a demand for sustainable practices, HempSweet's solutions should offer an amazing benefit to its Research Participants.

## Packaging and Fulfillment

Once xylitol liquor has been produced, various paths are open, depending upon the form and demand for the final products. Initially, HempSweet is partnering with [Streamline Manufacturing, LLC](#) in Lindon, Utah USA, to produce the final forms required by customers, and see to packaging and fulfillment, according to the terms laid out below.  As the project continues, further partnerships will certainly be formed and existing ones expanded.  In addition to being exceptionally capable of supplying the final product handling and packaging, Streamline Manufacturing was selected because of its willingness and ability to integrate cryptocurrency solutions as discussed below.

Streamline Manufacturing is an FDA registered cGMP compliant Utah-based, privately held contract manufacturing company which manufactures personal care products (including but not limited to skin care, hair care, topical ointments, and oral care) dietary supplements, pet and equine products, custom food products and more. The estimate a cost of ****/per retail package and world region shipping estimates are *******

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# The Deeper Problem

*"We cannot solve our problems with the same thinking we used when we created them."*  --
Albert Einstein

Unfortunately, our "sugar problem" goes much deeper, closer to the nature of how we interact socially and economically.

One method that HempSweet could employ to bring hemp-derived xylitol to market would be to use "tried and true" approaches of gathering capital, securing offensive patents, scaling production and distribution by traditional mean, exploiting the most profitable geography for human and natural resources, etc., etc.  We are quite sure that this could be done successfully and result in a very sought-after product and booming business.  We're honestly not in a position to do that, and wouldn't if we could.  (There's a much more interesting game afoot.)

Would such an approach really do anything to affect the refined-sugar problem?  Not much.  Neither would the problem yield to the "War on _____" approach that has been demonstrated to fail over and over in such disastrous ways.

The pervasion of refined sugar and its devastating effects are--largely, at least--a result of a long era of ever-increasing centralized finance, production, distribution and regulation. The more we depend on centralized, hierarchical authority to solve these sorts of problems, the worse they seem to get. The near banishment of mankind's most historically useful crop, cannabis, could arguably be placed at the same door.

While many advantages can be gained by pooled resources, centralized manufacturing, etc., there comes a point where broad, centralized decision-making becomes problematic, and in fact harmful, to a greater and greater proportion of the individuals involved.  We see evidence of this all over, not only regarding sugar and cannabis.

Albert Einstein's quote, above, is very applicable, no? Different thinking is surely called for.

As people we **do** need to work together, we **do** need to organize, and we **do** need for our interactions to be rationally regulated.  But we need to think differently about how to accomplish these things to meet both the long term and short term needs of building an industry.  Technologies that are now allowing more and more centralized control and oversight are, at the same time, enabling individuals to share and organize in new and fulfilling ways that bypass many of the problems of unwieldy and/or oppressive centralized control and management.  These tools and technologies allow people to communicate, organize and develop trust relationships in ways not possible before.

Also, whether rationally or not, people respond to incentives.

We at HempSweet have isolated one path, one use-case, for individuals and groups to organize and interact in new ways that will scale xylitol production globally in an open-source, decentralized fashion, using existing technologies in new ways.  We think this is a major next-step in the ongoing effort to utilize decentralized consensus models to efficiently handle real-world research, production and manufacturing.  Such solutions have been dreamed of, and their creation is inevitable, but as far as we can determine this is the first time these tools have been employed in this way.

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# Thinking Differently and Using New Tools

Using modern networking and consensus-forming tools, it is possible to create an entirely different playing field on which to cooperate and compete.

Our primary objective is to operate HempSweet to not only be profitable, but to act as a pilot project that can be duplicated and improved, so that others across the world can succeed and profit, both in producing xylitol and the near-infinite number of use-case variations we envision

for this and similar models.  We do not consider this as a matter of creating competitors.  We hope to create many, many partners in this project, even if we do also compete.

We have done personal and scholastic R&D on different aspects of this project.  We have done due diligence with other entities and established suitable contractual agreements, as appropriate.  We have been completely open with what we are attempting to accomplish and, within the limits of discretion, have shared everything.  All these practices will continue.

We have not even attempted to get traditional investors, because we would much rather create and prove-out a model by which physical commodities can be researched, produced and scaled, while obviating the need for centralized capital sources.  Crowdfunding, both using cryptocurrencies and fiat money, has shown itself to be successful in the development of software. Kickstarter and similar companies have shown good success in funding specific real-world  products by large and small presales, etc.  These and other models have been of great inspiration.

The HempSweet model has another aspect that is unprecedented:  It by default creates the first decentralized soft-commodity exchange market based on the decentralized consensus technology underlying Bitcoin.

The objective has been to use available tools to allow all concerned parties to interact on a voluntary basis, maintaining control over their options, so that they can balance the incentives presented by HempSweet, the market generally, and their own unique circumstances.

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# The HempSweet Value Model

This is a function outline of the key features of how HempSweet Participants maintain, track and exchange value, and acquire HempSweet products within the HempSweet ecosystem.

★ Funding for the final research phase and bootstrap of production will be gathered by sale of HempSweet Token digital receipts (HST).

HempSweetToken digital receipts are created and exchanged on the BitShares decentralized exchange platform.  The current owner of a token has sole control of the token by virtue of controlling a unique cryptographic key.  The current owner can transfer ownership to another using their exclusively controlled private key, in which case they cease to have control of that token.

★ Each HST digital receipt represents ownership of a 1 lb, retail-packaged container of HempSweet xylitol or 1 liter of xylose syrup produced by HempSweet, redeemable at a HempSweet fulfillment associate. (Delivery costs borne by redeemer.)

★ HST digital receipts may be bought, sold or traded amongst individuals as they choose, using any BitShares-compatible interface.

★ HempSweet accepts **only** HST digital receipt as payment for its products and services, according to the following list.

Redemption: as product is available, HST digital receipts may be redeemed as follows:

- Retail, per 1 lb in retail packaging      1   HST
- Wholesale per ___** retail units      __** HST
- Manufactures (soda, edibles, etc.)
- granular      __   HST/____
- syrup      __   HST/____
- Xylitol Refiners - xylose syrup      1   HST/1 liter
- Research Partners - one-time fee      __   HST

*** One HST digital receipt will always be redeemable for 1 lb of retail-packaged HempSweet xylitol. Other categories of redemption will be established and modified (with due and equitable notice) depending on production and market factors.*

★ Fulfilment : When an HST holder wishes to redeem the token(s) for HempSweet product, the holder transfers the HST digital receipt to the nearest fulfillment center along with arrangements to pay shipping. Product is delivered in the order the orders are received.

★ A broad campaign serviced by OpenLedger will be announced as soon as timing is established. *(See "How to Participate" below to arrange notification.)* The target for funding the R&D, marketing and bootstrap phase is 2.1 million USD equivalent. If this minimum is not met, a prorated amount of the offered value will be returned to HST holders after minimal up-front obligations relating to the pre-sale are met.

★ For those wishing to get involved prior to the launch of the campaign, and assist testing the different components of the marketplace, HTS is currently offered in exchange for Bitcoin on HempXylitol.com and bitUSD/USDT markets in the OpenLedger Decentralized Exchange ecosystem. Lowest price started at 3 bitUSD ($3 USD) and will slowly be increased in response to increased demand to a target crowdsale price of 5 bitUSD. It is highly unlikely HempSweet will sell more than 20,000 lbs of xylitol (in the form of HST digital receipts) before the global campaign begins. All HempSweet Xylitol Pre-sale purchasers agree to the risk that if the minimum estimated goal of 2.1 million USD equivalent is not reached then a prorated amount will be refunded after satisfying all sunk costs for the presale.

★ Token Circulation and Markets: HST digital receipts may be bought, sold or traded via any BitShares-compatible client interface.  HempSweet uses the OpenLedger ecosystem by default.  The trade price of HempSweet xylitol in the form of the HST digital receipt is market-determined following close of the initial presale.

★ Ongoing creation and distribution of HST digital receipts:  HempSweet will create and sell directly into the market sufficient HST to balance production of xylitol products with redemption of HST.  All data regarding availability of final product or backlog of delivered-vs-backlogged orders will be published in real/near-real time, so that HempSweet's actions can be publicly audited at any time, by anyone.

★ Research Participants: Universities and others who wish to participate in quickly proofing and scaling hemp-to-xylitol production by running bioreactor programs in parallel with HempSweet's program will receive immediate access to research findings as they are made.  This information will be made open to everyone twenty-four months following the end of the initial HempSweet product presale. *(See in section "Nitty Gritty" below for more data,)*

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# Finding Common Points of Trust

New but well-proven technologies enable new ways of organizing and exchanging value. A basic understanding of Bitcoin and blockchains is important because they are a key part of the HempSweet model.

Arguably the most profound socio-economic breakthrough of modern times is Satoshi Nakamoto's 2008 invention many know as the blockchain or Bitcoin.  At a functional level what blockchain technology allows is a means of establish a factual, immutable record of fact which can be trusted, without having to place trust in any specific third party with the ability to betray that trust.  It is, it would seem, something very new in history. It therefore opens the way for very new ways of thinking about many things, including how humans can coordinate their actions with less hierarchical control required and essentially has no geographical limitations. Again, the Einstein quote: "We cannot solve our problems with the same thinking we used when we created them."

A blockchain—the technology underlying Bitcoin and most other modern cryptographic currencies—is a shared digital ledger, or a continually updated list of all transactions. This decentralized ledger keeps a record of each transaction that occurs across a fully distributed or

peer-to-peer network, either public or private. A blockchain's integrity hinges on strong cryptography that validates and chains together blocks of transactions, making it nearly impossible to tamper with any individual transaction record without being detected.[51]

Bitcoin is the most broadly known and successful implementation of blockchain technology to date, though there are other notable implementations. Bitcoin was the first to effectively deal with the "Byzantine Generals' Problem."[52] The Byzantine Generals' Problem is a computer networking thought-experiment about the difficulty of reaching a consensus on the truth of something, in an environment where any participant might be untrustworthy, as in a peer-to-peer computer network. Effective solution of this problem allows decentralised consensus to be achieved with a blockchain, rather than having to trust a third party (such as a bank) to maintain (and potentially alter) the records.  This makes blockchains also suitable for the recording of events, medical and other records, management activities, identity management, transaction processing, and proving chronology of ownership.[53][54][55] These are the blockchain advantages HempSweet is leveraging to facilitate its decentralized industrialization model.

The first blockchain was conceptualised by Satoshi Nakamoto in 2008 and implemented the following year as a core component of the digital currency Bitcoin, where it serves as the public ledger for all transactions.[56] Through the use of a peer-to-peer network and a distributed timestamping server, a blockchain database is managed autonomously. The invention of the blockchain for Bitcoin made it the first digital currency to solve the double spending problem, without the use of a trusted authority or central server.

The Bitcoin design has been the inspiration for other applications and is set to be the perfect complement to a growing multi-billion dollar cannabis industry that is almost completely unbanked in America.[57][58][59] To increase adoption rate of Bitcoin and related technologies, the

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[51] http://www.pwc.com/us/en/technology-forecast/blockchain/definition.html

[52] Lamport, L.; Shostak, R.; Pease, M. (1982). "The Byzantine Generals Problem" (PDF). ACM Transactions on Programming Languages and Systems. 4 (3): 382–401. doi:10.1145/357172.357176.

[53] "Blockchains: The great chain of being sure about things". The Economist. Retrieved 18 June 2016. The technology behind bitcoin lets people who do not know or trust each other build a dependable ledger. This has implications far beyond the crypto currency.

[54] Morris, David Z. (2016-05-15). "Leaderless, Blockchain-Based Venture Capital Fund Raises $100 Million, And Counting". Fortune (magazine). Retrieved 2016-05-23.

[55] Iansiti, Marco; Lakhani, Karim R. (January 2017). "The Truth About Blockchain". Harvard Business Review. Harvard University. Retrieved 2017-01-17. With blockchain, we can imagine a world in which contracts are embedded in digital code and stored in transparent, shared databases, where they are protected from deletion, tampering, and revision. In this world every agreement, every process, every task, and every payment would have a digital record and signature that could be identified, validated, stored, and shared. Intermediaries like lawyers, brokers, and bankers might no longer be necessary. Individuals, organizations, machines, and algorithms would freely transact and interact with one another with little friction. This is the immense potential of blockchain.

[56] Trottier, Leo (2016-06-18). "original-bitcoin" (self-published code collection). github. Retrieved 2016-06-18. This is a historical repository of Satoshi Nakamoto's original bit coin sourcecode

[57] Tom Huddleston, Jr. Fortune: The Opportunities and Pitfalls for the Legalized Marijuana Industry. Nov 10, 2016

[58] Keri Geiger, Jesse H. and Elizabeth D. Bloomberg: Does Anybody Want $3 Billion in Cash From Pot Sales? Big Banks Say No, Thanks. May 12, 2015

rapidly advancing cryptocurrency industry would significantly benefit by building trust and empowering an industry that has already proved its resilience during a 70 year era of global cannabis prohibition.  Despite the fact that hemp (<0.3 THC) products are legal to sell, ship and use in the United States, producer and sellers have regularly faced arbitrary and obstructive barriers to doing business by financial institutions. Such producers and sellers could well utilize the first transnational, borderless, permissionless money, Bitcoin, and its cryptocurrency peers. Andreas M. Antonopoulos, one of Bitcoin's most well known and respected proponents, calls Bitcoin "The Internet of Money."[60]

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# HempSweetToken (HST) Digital Receipt and Markets

The HempSweet Token (HST) is what tie all Participants together and keep them and HempSweet accountable.

An HST is a digital proof of ownership of one physical pound of hemp-derived xylitol sugar produced by HempSweet. Our planned xylitol is the only thing being pre-sold. This digital receipt uses a unique blockchain that also enables a decentralized exchange (DEX). Because of its features, the DEX provides participants a number of useful features: (1) access to real-time commodity-availability and market-price information, (2) an essentially permissionless soft-commodity futures market running on the DEX, (3) access to proof-of-manufacturer, wholesale-, retail- and institutional-participation data as provided by the redemption accounts. This proof of ownership ledger is inherently resistant to modification of the data — once recorded, the data in a block cannot be altered retroactively. This Graphene blockchain is open-source software (under a MIT license), maintaining a distributed ledger that can record transactions between two parties efficiently and in a verifiable and permanent way. Users of this ecosystem also benefit from the evolutionary security, privacy and freedom afforded by the BitShares Decentralized Exchange (DEX) where there is no central point of control or failure.

**Proof of Ownership Token**

Hempsweet's goal is for a free open market to decide where HempSweet will focus its expansion and in the future could be the global commodity market index of hemp-derived xylitol.  We will be utilizing a single token proof of purchase that will be tiered to accommodate our xylitol product for a single pound retail customers, merchants interested in resale, bulk manufacturers and research institutions interested in commercializing their own hemp-derived product streams.  Due to limited quantities of discounted sale price, there is significant incentivization for early purchasers.

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[59] Sophie Quinton. The PEW Charitable Trust: Why Marijuana Businesses Still Can't Get Bank Accounts. March 22, 2016
[60] Andreas M. Antonopoulos. Internet of Money. Merkle Bloom LLC; 1 edition (September 5, 2016)

**Hempsweet Token (HST)**: a digital, transferrable receipt, designating **Proof of Ownership** of 1 lb. of xylitol or 1 Liter of Xylose Syrup produced by HempSweet.  After a pre-sale of a limited number of discounted HST, initial price will be $5/HST during the crowdsale serviced by OpenLedger. After the sale of 400,000 HST the price will increase to $7 each for an additional 200,000 and finally to $10 each until the completion of the sale.  The sale of HempSweet xylitol will discontinue once ∑ HempSweet redemption accounts have received an estimated twelve months of backorders for xylitol as noted on the Graphene ledger (current one planned xylitol bioreactor plant = 495,470 HST); the research redemption will not count towards the total redeemed HST since we will be able to provide xylose syrup immediately after redemption. Estimated maximum production rate for twelve months is 495,470 pounds per bioreactor plant we build. Our production rate can potentially increase with the addition of each bioreactor plant that comes online.

**Creation and Sale of Additional HST**

After the initial presale, HempSweet will only consider selling additional HST [xylitol] on the DEX if the HST redemption receiving account's volume falls below an estimated six-month backlog of total active xylitol production rate; which will be dynamic as additional bioreactor facilities come online and total production rate estimates change.  HempSweet and possibly an independent auditing entity will provide transparency for secondary verification of published production rates, redemption backlogs, total HST in circulation and estimated shipping times that will be extrapolated from the Bitshares Graphene blockchain ledger.  The inclusion of this single case for further HST issuance is to address a scenario where the majority of HST in circulation has not been redeemed (ex. speculative holders) and HempSweet is faced with an undesired overstock of product. Once HempSweet is producing and shipping xylitol, there will likely be several bridge service layers to include legacy purchase options, but HempSweet will only provide its xylitol to redeemed proof of purchase token holders.

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# Participants and Redemption

There are four types of Participants in the HST ecosystem, and four forms of redemption for HempSweet products.

## Participants

1. **Retail Participant:** this category is **the base intrinsic value of one HST that is backed by a single physical item**, which is exactly one pound of xylitol sugar crystals in a retail package produced by HempSweet from the hemp plant.
2. **Merchant Resale Participant:** Intended for wholesale purchasers who typically resell products into the retail market.
3. **Manufacture Participant**: For large producers of food, beverage, energy, textile and medicine products derived from the hemp plant; HempSweet's first proof of concept [soft] commodity is xylitol sugar because of its remarkable health benefits, long-term global acceptance as food safe for human consumption and its unlimited ways xylitol can be used by existing manufactures all over the world.
4. **Research Participant:** For any academic and/or commercial entity who wants to have access to all data created during HempSweet's R&D processes for scaling hemp xylose to xylitol via microorganism pathway (Non-disclosure agreement must be signed) and/or produce their own hemp derived products to sell independently or directly to HempSweet.
   a. There could be additional offers made for this category, which includes licensing of PureVision's patented CCR, licensing of patented microorganisms, industry expert consultation for a local hemp commercialization program and/or any future partnership technologies HempSweet creates.

   *\*\*\*Detailed review of HempSweet's current value proposition \*Except for the pegged value (1 HST=1lb HempSweet's future hemp-xylitol), categories are subject to change at anytime. All non-retail participant category changes will be made public prior (Minimum 24 hours) to changes in HempSweet's redemption rules that will specify the ledger's block number signifying the last point in time before new rules become active.*

## Redemption Details

1. **Retail Participant:** single 1lb. retail packaged bag(s) of xylitol for each one HST digital receipt redeemed by any BTS account owner sending the token(s) to redemption account "**hempsweet-retail**"; when HempSweet produces xylitol it will be shipped based on the chronological order of oldest HST sender transaction received will be the

first retail participant to receive an offer to set up shipment.  Shipping will be an added expense calculated at the time of shipping. The desired **shipping address must be included in the memo** (only visible to HempSweet) section of the transaction; address can only be changed by the originating redeeming transaction account owner who will send exactly 1 HST with new address included in the memo field.

    a. Initial presale offer is **3 bitUSD for 1 HST**; the price at the time of purchase can vary, but will not be sold by HempSweet below $3 USD equivalent.

2. **Merchant Resale Participant**: single BTS account owner sending publically published HST specifications required to participate in this quantity to redemption account "**hempsweet-merchant**" will then own the time stamped position in the ledger, which will later dictate who will receive a shipment offer as HempSweet starts producing xylitol.  The current offer at the time of writing this document will remain in effect until at least 24 hours after changes published with HempSweet's STEEM account (@hempsweet) on its graphene, time-stamped blockchain.  For any changes to this agreement to be valid there must be an inclusion of specific quantity required to participate in this category, current USD equivalent market value, active gross production rate and active estimates of time before completion of current backorders. Shipping will be an added expense calculated at the time of shipping. The desired **shipping address must be included in the memo** (only visible to HempSweet and shipping partners) section of the transaction; address can only be changed by the originating redeeming transaction account owner who will send exactly 1 HST with new address included in the memo field. Here is the current category participation requirements.

    a. **100 HST = 150 individual-packed retail bags of HempSweet xylitol product**. This limited time offer equates to **$2 USD equivalency per Retail 1lb. package,** if all 100 HST where purchased at the fixed bottom $3 USD price equivalence.

3. **Manufacture Participant:** A single BTS account owner sending publically published specifications required--as required to participate in this relationship--to redemption account "**hempsweet-manufacture**" will then own the time stamped position in the ledger, which will later dictate who will receive a shipment offer as HempSweet starts producing xylitol.  The current offer at the time of writing this document will remain in effect until at least 24 hours after changes published with HempSweet's STEEM account (@hempsweet) on its graphene, time-stamped blockchain.  For any changes to this agreement to be valid there must be an inclusion of specific quantity required to participate in this category, current USD equivalent market value, active gross production rate and active estimates of time before completion of current backorders. Shipping will be an added expense calculated at the time of shipping. The desired **shipping address must be included in the memo** (only visible to HempSweet and shipping partners) section of the transaction; address can only be changed by the originating redeeming transaction account owner who will send exactly 1 HST with new

address included in the memo field. Here is the current category participation requirements.

    a. **1000 HST = one ton (2,000 lbs) super sack bag of HempSweet's xylitol**. Best possible value is **$1.50/pound** of xylitol; based on all 1000 tokens at 3 bitUSD each.

4. **Research Participant**: single [BTS](#) [account](#) [holder](#) sending the minimum quantity required to participate in this category to redemption account "**hempsweet-research**" will then own the time stamped position in the ledger, which will dictate who will receive PureHemp Tech's actively produced rich xylose syrup first, as well as all benefits offered to this category participant at the time of redemption. The current offer at the time of writing this document will remain in effect until at least 24 hours after changes are published with HempSweet's STEEM account (@hempsweet) on its graphene, time-stamped blockchain. For any changes to this agreement to be valid there must be an inclusion of specific quantity required to participate in this category, current bitUSD equivalent market value of HST, active gross xylose syrup production rate and active estimates of time before completion of current backorders. Shipping cost will be an added expense calculated at the time of shipping. The desired **shipping address must be included in the memo** (only visible to HempSweet and shipping partners) section of the redemption transaction; address can only be changed by the originating redeeming transaction account owner who will send exactly 1 HST with new address included in the memo field. The current category participation requirements:

    a. **>199 HST = >199 liters of hemp xylose syrup** produced by PureHemp Tech for HempSweet. Additionally, every redeemed HST beyond the minimum 200 HST will receive an additional one liter of xylose syrup. See further details on our added value for Institutions who would like to participate in our open collaboration research and development process. This includes a **special licensing offer from PureHemp's patented CCR technology**, which would also allow **commercialization and direct funding from HempSweet**. The goal is transparency, collaboration and global redundancy of scaled industrial microorganism conversion of rich hemp xylose syrup to xylitol method. Like many open decentralized systems, competition with collaboration is encouraged and a valuable feature that ensures the sustainability of our decentralized industrialization approach to solving world problems with a whole plant philosophy.

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# Nitty-Gritty

This section contains more detailed plans, information flow, research and development plans, partnerships, and budget.

HempSweet's decentralized industrialization model will be the first time a blockchain is used to fund, research, develop and produce a physical solution to what is arguably one of the single largest threats to human wellness. Our objective is not become the king of xylitol, but to alter the playing field so that there are numerous others doing similar models, with whom to partner or compete.

More significantly, our method of approaching decentralized industrialization, as proven out, should be readily adaptable to a large number of industries and activities, allowing needed infrastructure to scale to whatever demand exists for the commodity or product under consideration. In our case the goal is to quickly scale global production of xylitol that will competitively operate alongside legacy refined sugar producers. Our objective is to provide a bridge to more efficient, scalable models that force adaptation, lest existing players become obsolete over time. As xylitol supply increases in a relatively more organic/natural evolution, the global commodity index price will lower enough to give food manufactures an additional economical choice in how they sweeten their products. The ready and economical availability of xylitol would also give other industries, such as pharmaceuticals, another ingredient to use for their natural antimicrobial therapeutics and, ironically, even for their "benign placebo pills" that currently all contain refined sugar.

Hemp xylose to xylitol is just one application stream from the 25,000+ already-discovered ways we can use this unique plant resource. This situation exponentially increases the value proposition for any institution that may not have a direct interest in xylitol distribution, though HempSweet could theoretically provide immediate ROI for any xylitol they produce. Regardless, current industry leaders in any product stream can revolutionize their products by incorporating hemp and PureVision's patented Continuous Countercurrent Reactor (CCR). Some obvious examples already being produced at small scale are cement (already proven to be stronger and more durable than regular, aggregate types), medicines (including CBD, CBN, CBC and 100+ cannabinoids/terpenes), polymers and plastics (anything petro produces), paper (sustainable and more durable than wood sourced paper), fuel for any internal-combustion engine, and other food nutrients such as protein. We are combining an ancient human technology, hemp cannabis, with a cutting-edge, modern computerized-blockchain technology that allows individuals/companies to only require trust in mathematically verifiable and auditable proof of ownership. The solution for the largest threat to our very existence is not going to be solved with fear campaigns, which mainstream media has proved fear-based motivation lacks sustainable success and causes undesirable side-effects; law enforcement and imprisonment suffered in the "Drug War" has removed all hope of this approach being a viable solution; or forced taxation and subsidies that inhibit free markets[61][62]. HempSweet recognizes Bitcoin and other decentralized technologies have proven the existence of effective solutions for solving many human challenges that are historically

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[61] Brownell KD, Ludwig DS. JAMA. 2011 Sep 28;306(12):1370-1. doi: 10.1001/jama.2011.1382. The Supplemental Nutrition Assistance Program, soda, and USDA policy: who benefits?

[62] Andreyeva T, Luedicke J, Henderson KE, Tripp AS. Am J Prev Med. 2012 Oct;43(4):411-8. Grocery store beverage choices by participants in federal food assistance and nutrition programs.

considered insurmountable. Decentralization achieves these successes by making unscalable centrally controlled methods obsolete.

## Research, Development and Production - Where Your Money Will Go

[PureHemp Technologies, LLC](#) is currently refining 1,000 lbs of hemp a day, which produces approximately 400 lbs of xylose syrup with their patented Continuous Countercurrent Reactor (CCR).  They have already begun scaling their successful industrial hemp biomass refinement pilot program to meet the demands of industries utilizing their whole-hemp refinement process. Examples of products already being produced are medicine, textiles, food and beverage. HempSweet is designing this project to fund the R&D needed to utilize a large-scale microorganism conversion of PureHemp Tech's xylose syrup to xylitol. At this time it is unknown what bioreactor configuration will be most optimal (main focus of our R&D), but through comparative processes (combined with small volume tests) we estimate a processing capacity of 30,000 liter bioreactor fermentation process every four days with a theoretical max yield of 90%. Current 3 liter tests prove a 87% yield of 80 grams of xylose to one liter of syrup. Scaling these initial findings results in a theoretical max production rate of 4,594 lbs of xylitol produced every four days; 30,000 L / 80 grams = 2400 kilo / 0.87 = 2088 kilograms (4,594 pounds) per 4 day (81 hour) fermentation-conversion cycle. The current estimation of maximum production rate for our initial fully-functional bioreactor plant for six months is 247,735 pounds of xylitol; 1,361.185 lbs per day x 168 days = 247,735 lbs.

The majority of hemp plant strains are comprised of approximately 40% xylose, which is the direct precursor to xylitol in the process. By preselling our planned xylitol sugar commodity we will have the anticipated capital needed to complete this last step of scaling provable 3 liter microorganism conversion lab studies to 30,000 liter bioreactor plant(s), and be delivering packaged HempSweet xylitol.

"Research Participants," as covered above, will have real-time access to all research findings as they are produced.  Twenty-four months after the start of this R&D process, all data collected will be made fully public  It is hoped that this feature will help the expansion of hemp growth and processing to mirror the massive global adoption seen happening with open-source decentralized software technologies. This category of participation will be ideal for university or state agricultural programs with refineries in areas where hemp cultivation is permitted. (As the 2014 US Farm Act makes it legal for [any state](#) to start a pilot commercialization program. There are already [30 states who have legalized cultivation of hemp](#).) The reason why we can do this is our discovery of an incentive model that rivals any decentralized technology available to us today. With the whole hemp plant already having over 25,000 documented applications, arguably there is not one single living organism on earth that will not benefit from the increased cultivation and use of this near-universally valued plant.

Every discovery and invention that comes from this R&D funded by this project will have an open-patent license. Additionally, a summary of research and development by PureHemp will be published via HempSweet's monthly online progress report. Since diverse people all over the world will be funding this last crucial step of mass production of a healthy sugar, the world will be the benefactor of all knowledge gained. Research Participants will be required to sign a non-disclosure agreement of shared information to ensure all redeemed Research Participants are given first-to-market advantage for this novel product stream development.

## Current Partnership Agreements

PureHemp Technologies LLC, Streamline Manufacturing LLC, OpenLedger and HempSweet Partnerships
Click here to view full contract. Here are some highlights to PureHemp agreement:
Click here to view the full Streamline agreement. Here are some highlights of Streamline agreement:
Click here to view the full Open Ledger Contract. Here are some highlights of the agreement:

## Budget:

PureHemp 12 month R&D to scale microorganism conversion of hemp xylose to xylitol: $1,000,000
HempSweet Project Management, Equipment Purchase, and Contract Packing: $1,000,000
OpenLedger Facilitation and Marketing Services: $ ___(to be determined)___

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# How to Participate

Visit www.HempSweet.net and sign up email updates to keep you up to date, including timetables as soon as finalized or altered.

Those not wanting to wait for the official presale can visit HempSweet's Active Markets on the bitUSD and USDT markets, create an account with OpenLedger and buy HST right away. There is already a small market to buy, sell or trade HST digital receipts. Feedback on the experience would be appreciated as we ramp up for the official presale, and dial in the user experience to make it as easy and intuitive as possible.

Feedback, questions, partnership or Participant inquiries, etc., can be addressed to hello@hempsweet.net.

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**laws, statutes, and regulations or intended to cause harm towards any human, animal, company, government or dishonestly persuade you to invest your time or money**.  We will do our best to clearly state promises here in this document that will be placed into the STEEM Graphene Blockchain for a level of immutability, but do know that just like life, there are absolutely no guarantees. Do not trust anything particular in this document, or the technologies we recommend to use, but only trust your judgement after thorough verification.  This is an open source project done on the internet with contributors from countries/communities with different values and laws so it is assumed that specific things here will likely violate social law in some areas of the world, but there is zero intent to violate natural human law.  **Please be aware often the first human response to ideas that are foreign is fear** (great emotion to remind yourself that you are human), and also be aware everyone handles that fear differently.  The only request asked is for a fair chance and give this experiment of how humans work and try to include happiness with that fear and work with us to get to a place where you can let go of that fear and just keep the happiness.  If you honor that request and you are unable to just let this project go by and move on, and that fear is still so significant that you feel the desire to commit violence towards any author or participant then please state your case here on a public forum so we can all learn from your contribution and hopefully find common ground so we can all move forward without aggression.

***Open-Invite**: If after you have reviewed enough of this proposed plan to heal our species and the world with the best technologies available to us (that is the primary motivation that started this project) and are satisfied enough to trust your personal judgement to join us, then we openly employ you to contribute.  After you are done listening to us then listen to yourself.  Like the great philosopher Socrates, I admit that I only know more than some, but the most I can only know more than another is that I know nothing. If you voluntarily decide to contribute then you are agreeing to be as transparent, honest, open and rational as you are capable.  Do not contribute based on anything specific in this documentation, but only trust your yourself and your passion and if you want to contribute with your thoughts, money, time, or whatever has value to you then please join us in finding a non-violent, non-destructive way to empower ourselves and our planet.