

Division of Marketing
Agricultural Development and Diversification (ADD) Program
1997 Grant Final Report

Grant Number 12099

Grant Title An Industrial and Nutraceutical Use Market Development for Extruded Soybean Oil

Amount Awarded \$19,060.00

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Agriculture Development & Diversification Program (ADD)

Contract #12099

1998 Grant Project Final Report

SOYCO LLC

Adams, WI 53910

The original *intent* of ADD grant #12099, *An Industrial and Nutraceuticals Use Market Development for Extruded/Expelled Soybean Oil*, was to determine expelled soybean oil markets for SOYCO LLC.

Results of research made possible from this grant, along with market analysis, product development, and in-depth discussions with existing distributors such as feed dealers and industrial markets, has increased the likelihood of success for this new Soy-based Wisconsin Industry. SOYCO has identified markets which can utilize bulk expelled soybean oil through examination of industrial adjuvant crop oils, hydraulic oils, drip oil specialty lubricants, feed additives, and nutraceuticals.

Determined through a previous ADD grant (Agricultural Development and Diversification) from the DATCP (Wisconsin Department of Agriculture, Trade and Consumer Protection), a local extruded/expelled processing plant could increase farmer/ member earnings by as much as \$.25 cents per bushel. Results of those premiums could increase the amount of soybeans planted in Central Wisconsin and increase infusion capital into rural economies in central Wisconsin through success of a local crushing plant. Job creation and additional community revenues earned through taxes would also result from such industrialization.

Adjustments to the grant were made as we determined inherent features of our expelled soybean oil. High levels of Vitamin E, lecithin, and phospholipids were found to be present, either in our light or heavy oils. No other vegetable oil compares in merit, possible variety and amount grown nutritional values or industrial characteristics, to the degree that extruded/expelled soybean oil products do.

A distinction resulted from this grant: SOYCO could not, nor should not, compete against solvent oil processors on the merits of price alone. Solvent oil prices averaged \$.23 cents per pound annually based upon the Chicago Board of Trade. Expelled mechanically soybean oil averaged \$.33 cents per pound, and can be viewed as cold pressed oil not exposed to volatile chemicals.

Distinct physical differences were illustrated between expelled soybean oil and solvent processed soybean oil. Through basic analysis of the expelled oil properties by university and private sources, along with consultations with experts, product development trials, market analysis and consumer feedback, we were able to enter and perform in specific niche markets.

Focus toward food supplement applications for horses, household pets, and nutraceuticals, in the way of skin moisturizer for humans, has taken center stage for Soyco. Illustrating our success, two markets have provided premiums our oils used as ingredients to food supplements for dogs, cats, horses and wildlife, along with skin moisturizers for people. Over twenty packages have been introduced to consumers, with eight different products to choose from.

“Natural Shine”, is our chemical free soybean oil marketed as a fat supplement for horses. Increasing performance in competitive racehorses, and providing increase coat shine while supplementing daily energy needs for horses, ‘Shine’ is now sold in Wisconsin, Illinois and Iowa in bulk and individual bottles. ‘Shine’ competes very well with corn, coconut, wheat germ, and ‘Crisco’ oil products.

“Apple Jack” a soybean meal and fat supplement, provides Isoflavons and lecithin, along with protein and fat calories which allows the horse increase metabolism. As a result, increase weight gain for older horses or lactating mares and their yearlings is a benefit. This product increases playability of existing grains, and often is used to disguise medicine that needs to be fed orally. Packaged in one, twenty-five, forty, seventy, and one hundred-pound packages, “Apple Jack” is moving briskly in local and regional horse markets.

“Apple Jack” can also be marketed as a companion product for wildlife, such as deer and turkey feeding. This product, with its 20% fat and 35% protein, is an excellent nutritional top dress for corn piles, and effective as an aromatic ‘apple flavored’ source to draw animals to the feed area.

The success of these two products alone is encouraging. Marketing techniques have allowed us to develop a product list (see appendix) for equine and 'companion' pet markets. As a result, SOYCO has begun setting up dealers to market these products through various networks. New product sales related to these products is providing income as a result of this grant.

Another product showing promise is "Silky Gold", an all-natural hand cream / conditioner. The phospholipids and Vitamin E characteristics of this crème are extraordinary. Packaged in one ounce and eight ounce bottles, this 'value-added' nutraceuticals product promises to be highly successful for SOYCO. We are currently refining production capabilities for this product in its current application, along with crop spray applications for exotic and decorative plant markets.

Bulk Oil sales to industries or mills developing feed products of their own have been a result of this grant. We sell bulk oil to four industries at premiums of approximately \$. 07 cents per pound over solvent soybean oil. Premiums realized for soybean oil sales during the latter half of this grant approximated \$4,900.00.

Challenges of this grant project include determination that some industries desire thinner vegetable oil with lower viscosity ratings. An objection that food industries have toward this oil is its nutty fragrance, a result of an enzyme present in our oil.

About fifteen private industries, initially interested in our oil, after receiving samples, indicated the oil was too crude for their application.

There is a refining facility being designed for installation in Vinton, Iowa. This facility will refine extruded/expelled soybean oil by the middle of 1999, and could conceivably refine special orders for SOYCO to meet specific customer's criteria. A refinery such as the one in Iowa may be required for Wisconsin. Any refining of our oil will drive the price upward. SOYCO will pursue study of this during this next year.

Another challenge is public education regarding chemical free vegetable oils. Compare and contrast campaigns will be expensive and take time. Advantages utilizing chemical free food products are clear and more people are choosing chemical free.

A third challenge has been to identify specific niche markets not addressed in the initial stages of this grant. Industrial applications vary, and there is opportunity to expand applications as

research and marketing efforts educate consumers and industries. Technical research and marketing is expensive, yet essential, and has had direct impact on SOYCO's survival.

Public outreach during this grant included:

- ✓ **Wisconsin Business Innovation Corporation Conference (300) attendees**
- ✓ **Midwest Horse Fair (40,000)**
- ✓ **Corn & Soy Conference (800)**
- ✓ **Center for Cooperatives (300)**

Literature produced included: (see appendix)

- ✓ **Brochures**
- ✓ **Insert materials**
- ✓ **Banner**
- ✓ **Newsletter**
- ✓ **Grant Reports**

Media outreach included articles about SOYCO:

- ✓ **AgriView, (cir. 46,000);**
- ✓ **The Country Today (cir. 30,000);**
- ✓ **Wisconsin State Farmer, (cir.30, 000);**
- ✓ **The Adams County Times (cir. 4,700) for a total of 110,700 circulation.**

Results varied from the original intent of the grant. Premiums have been paid to local farmers for their soybeans as a result of this processing plant. Research has verified that there are endless applications for chemical free vegetable oil. Health conscious consumers indicate they appreciate the results that these value added products provide.

Our challenge is to perform due diligence for product creation, and maintain profitability of products marketed as a result of this grant. Strategies for these products, packaging and distribution to specific niche markets are costly investments.

Results include local rural economic stimulation affecting local farmers and communities. Job creation may progress from a few employees to as many as fifteen employees by 2005. Wisconsin

farmers benefit due to higher premiums paid, accessibility to markets, through local technical and informational support, and innovation / variety of market applications with value added products, i.e. (feeds, nutraceuticals, pharmaceuticals, and edible oil applications).

Wisconsin agriculture has benefited from the information gathered in this grant. Specific farmers, Dairy, Beef, Swine, Poultry, and Aquaculture farmers can obtain locally produced *chemical-free feed*, and producing exceptional results for pet owners as well.

SOYCO's value added product lines such as feed supplements have increased weight gain and performance, enhanced form and appearance, and ultimately contributed to higher economic return.

Information used to develop industries similar to SOYCO in other rural areas of the Wisconsin is available. Research projects pursuing a variety of applications using our oil, from skin disease applications, to metal polishing, or other industrial production applications, is a direct result of SOYCO's participation with the Dept Of Agriculture, and the Wisconsin Soybean Marketing Board's support from this grant.

Production and marketing experience is at hand for expansion of chemical free extruded / expelled soybean 'value-added' products. A revolution is underway to substitute petroleum based products with soybean based oil products, and within that context, to utilize chemical free, extruded-expelled technology for the benefit of man and beast.

Suggested Retail Price List

Price	Description	Quantity	Total
<u>NATURAL SHINE™</u> energy booster. Vegetable Oil- (P) plain , (G) garlic, or (A) apple			
\$ 8.80 ea.	Natural Shine Round- one gallon	_____	_____
\$ 8.80 ea.	Natural Shine Oval- one gallon	_____	_____
\$ 34.30 ea.	Natural Shine - 35 lb. 4.5 gallons /plastic	_____	_____
\$212.40 ea.	Natural Shine- 236 LB 30 gallons / drum	_____	_____
<u>Hardware</u>			
\$ 5.00 ea.	Pump Dispenser - disperses one-ounce	_____	_____
<u>APPLE JACK™</u> - Protein /Lecithin / Meal			
\$ 1.80 ea.	Bag Sampler	2 pounds	_____
\$ 13.00 ea.	Yellow Bag	25 pounds	_____
\$ 23.10 ea.	Pail /reusable white	33 pounds	_____
\$ 19.20 ea.	Box	40 pounds	_____
\$ 38.00ea.	Per Hundred	100 pounds	_____
<u>Silky GOLD™</u> Conditioner/Multi-use			
\$ 8.95 ea.	Plastic squeeze bottle	8 ounces	_____
<u>Clean & Moist™</u> - Hand cleaner			
\$ 1.80 ea.	Plastic squeeze bottle	4 ounces	_____
<u>TopDog/TopCat™</u> -A lecithin/ vitamin E additive for energy / nutrition, (C)Cheese (G)Garlic.			
\$ 3.40 ea.	Plastic squeeze bottle	16 ounces	_____
\$15.90 ea.	Plastic pour bottle	one gallon	_____
\$ 15.90 ea.	Plastic round bottle	one gallon	_____
<u>FERT Grow™</u> -All Natural, Slow Release, Nitrogen Fertilizer for lawns, gardens and pastures.			
\$ 15.00 ea.	Granulated	50 lbs. dry	_____
<u>Hoof Balm™</u> - Vitamin E with Lecithin			
	Paste	16-oz	Coming Soon
\$ 212.40/ drum	<u>Dust AWAY™</u> - Oil Condition your Arena to reduce dust & flies		

**ARE YOU INTERESTED IN THESE ALL NATURAL PRODUCTS?
PROVIDING EXCEPTIONAL RESULTS AT LOW COSTS**

CONTACT:

SOYCO, LLC, ADAMS, WI.



P.O. Box 1419
301 S. Main St. Adams, WI 53910-1419
PHONE (608) 339-2326 FAX (608) 339-2053

Marketing Solicitation Example

Dear Manager,

Last week I telephoned you regarding a new product line manufactured by SOYCO LLC.

Characterization of these products should be summarized as follows:

- ✓ Chemical Free Biodegradable Non Petroleum Products Made from WI Soybeans
- ✓ Utilized in a variety of applications from vitamin rich skin care to pet feeds
- ✓ Long Storage life (beyond one year).
- ✓ Vitamin E
- ✓ Lecithin
- ✓ Estrogen

We represent a rural economic development LLC that is composed of twenty-one farmers, five full time employees, and operating in central Wisconsin since February 1997.

Grant Support from Dept. Of Agriculture/ ADD and the Wisconsin Soybean Board for research and market exploration has contributed to the development of these products.

At this time, we need the help of distributors to take these wonderful natural products to the marketplace.

Why might you consider these SOYCO Products?

"Natural 'Shine", garlic flavored 100% pure vegetable oil with Vitamin E.

"Apple Jack", a *protein* energy meal for wildlife, with lecithin, isoflavin, estrogen and Vitamin E.

"TopDog/TopCat", flavored oil with lecithin and vitamin E used to supplement dry feed.

"ReNew", a multi-purpose cleaner/lubricator for car interiors, bike chains, and furniture.

"Fert Grow", all natural nitrogen rich slow releasing fertilizer that is safe for everyone.

"Silky GOLD", a soothing hair and skin conditioner, which revitalizes dry skin.

Supermarket News (July 13, 1998) indicated in their Home & Health section that:

"Last year alone skin care product launches increased by 40%, and a significant number of these were multifunctional products, infused with vitamins and formulated to help slow the aging process". "Facial moisturizers/cleansers introductions up (13.9%), with supermarket sales increasing to 14.7%; hand / body lotions introductions up by (6%), with supermarket sales increased by (3.7%). Overall, we see new skin care products with vitamins and other healthy ingredients as a new and emerging product line."

SOYCO desires to serve your distribution network. Please give these products a try.

Cordially yours,

Doug Bradfield
Sales & Research Division

Reference Data on File

November Grant Update to Erwin Sholts, Dept. of Ag.

Bob Leaders Email on oil components to test for.

Rock River Laboratory Nutrition Tests on our Oil.

Medallion Laboratories Vitamin E and phosphorus (lecithin)Test on Oils.

Burning Grains, Tina Domier's fax on chemical composition of E/E oil.

Specifications on Aromatic oil from Nygra Industries.

Specifications on Arista Industries oil requirements in CT.

Technical Inquiry on Bioscape; application to organic emulsifiers and non toxic pest control in CA.

Technical Inquiry on ADM Cocoa/ Ambrosia relating lecithin to local chocolate production.

Material Safety Data Sheet of InstaPro Extruded/Expelled oil.

Material Safety Data Sheet of FloraLife Fresh Flower Food (Preservative) Solvent.

Vegetable Oil Based Tractor Lubricant

Biostar Hydraulic Oil

Amolite Oils Form Release Applications

Drip Oil Specifications

Contacts: Grant II July-June 1998

<i>Wardley Fish Food Products</i>	<i>Agro Management</i>
<i>Arista</i>	<i>Georgia Dept. of Ag.</i>
<i>Midwest Biologicals</i>	<i>Drews Products</i>
<i>Orthor Molecular</i>	<i>RDM</i>
<i>Biotheraputics</i>	<i>APS Concrete</i>
<i>LeCressant Coldgrowers</i>	<i>Wilbert Vault Comp.</i>
<i>Patton Cement</i>	<i>Clark County Hwy Dept.</i>
<i>United Airlines</i>	<i>Ambrosia Chocolate</i>
<i>UW Madison Food Science</i>	<i>Kimon Industries</i>
<i>UW Madison Dept of Agriculture</i>	<i>Henkel</i>
<i>UW RiverFalls</i>	<i>Milk Specialties</i>
<i>Medallion Labs</i>	<i>TC Products</i>
<i>Consolidated Papers</i>	<i>Kwik Trip</i>
<i>Fire X</i>	<i>Iowa State University</i>
<i>Vickers Pumps</i>	<i>Blooming Prairie</i>
<i>Rexoca Lab</i>	<i>Spectrum</i>
<i>Went Library</i>	<i>University of Kentucky</i>
<i>Forest Products Laboratories</i>	<i>AgroVisions</i>
<i>United Soybean Association</i>	<i>Annies Naturals</i>
<i>Omi Tech</i>	<i>Midwest Marketing</i>
<i>Viro Research</i>	<i>Spruce Foods</i>
<i>HAACO</i>	<i>University of Purdue</i>
<i>Patrick Cudahy</i>	<i>Red Star Bio</i>
<i>Terra</i>	<i>Walt Disney Institute</i>
<i>ADM</i>	<i>Gliatech</i>
<i>Honeymead</i>	<i>A.C.Humko</i>
<i>Cargill</i>	<i>INCON</i>
<i>Pioneer Technologies</i>	

Natural Shine

NATURAL SHINE IS AN ALL NATURAL, CHEMICAL FREE, HIGH VITAMIN E OIL.

Soybean oil helps make horses' coats soft and shiny, but that is just one of the many benefits of this versatile feed supplement. *Natural Shine* contains two times as much energy as carbohydrates; it's an excellent concentrated source of energy for high-level performance horses. High level performance horses such as hunters, jumpers, barrel racers expend a great deal of energy during training and competition. Usually these horses are fed high levels of grain to provide energy. If the grain level in the feed is too high, however, it may cause compaction, founder, digestive disturbances or other problems.

Performance horses have unique energy and nutritional requirements. Energy is the most important nutrient needed by the performance horse, since the exercising muscles needs extra energy. Proper training for competition enhances the horse's capacity for energy utilization and performance.

There has been a great deal of interest in the value of adding soybean oil to equine diets. Fat in the equine diet serves a number of functions:

1. Providing essential fatty acids
2. Supplying concentrated energy
3. Aiding in the absorption of fat soluble vitamins
4. Increases palatability of feeds
5. Reducing dustiness

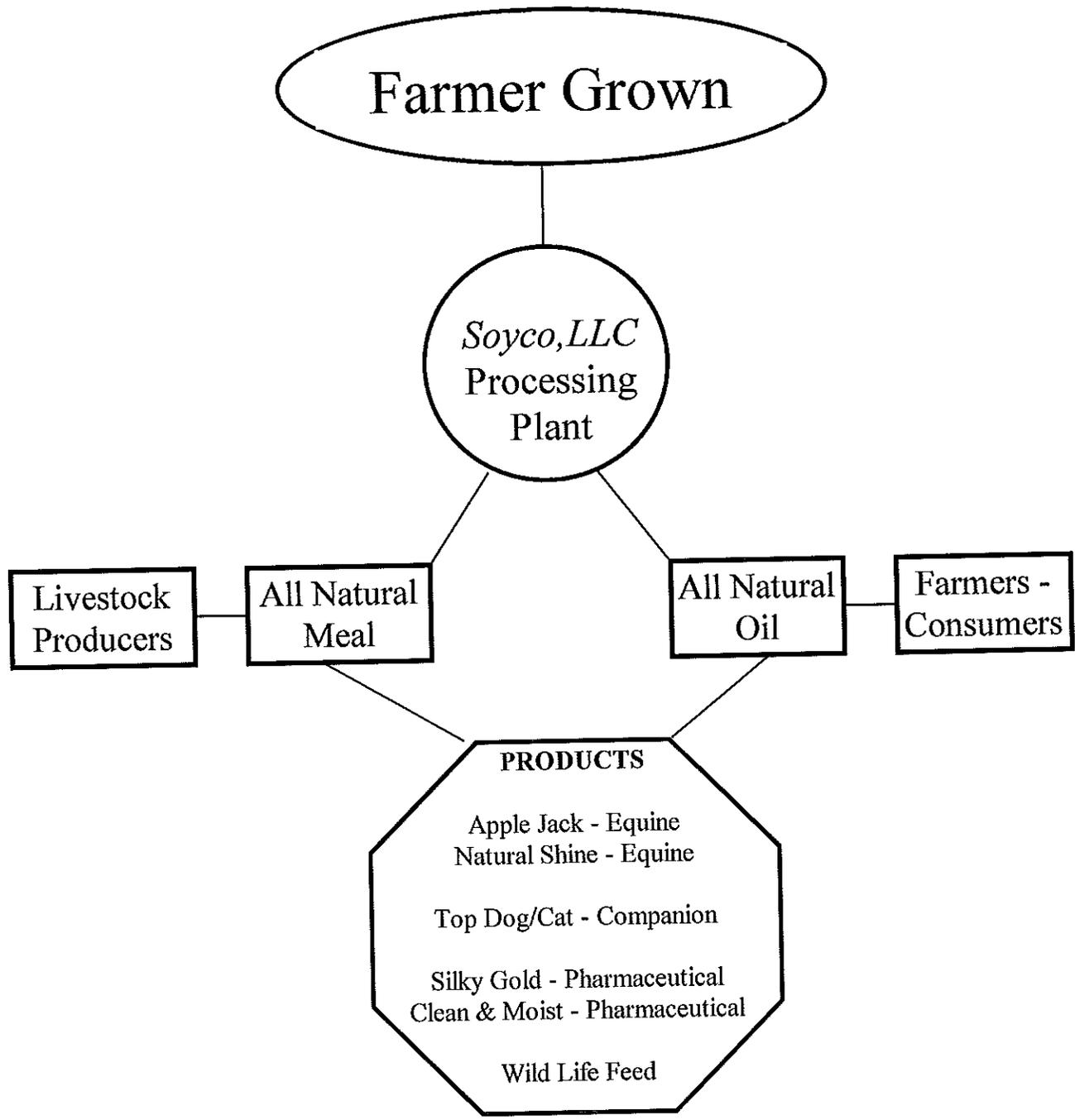
Natural Shine added to your equines diet is a safe and proven method of providing energy without causing digestibility problems.

Natural Shine is rich in lecithin which improves:

1. Performance and condition
2. Digestibility of nutrients
3. Coat, glossier and thicker
4. Protection against infection
5. Fertility
6. Energy reserves and feed conversion

Natural Shine is a natural soybean oil in liquid form, and is to be top-dressed on the feed.

"SOYBEAN"



HAPPY PEOPLE

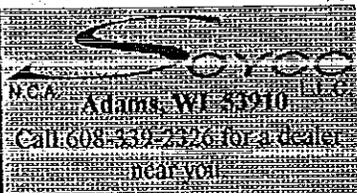
Apple Jack and Natural Shine

Supplementary Feed Products For Horses

- Provides Isoflavins, Vitamin E, and Lecithin
- Reduces Recovery Time For Active Muscles
- Truly Effective For Boosting Energy
- Increases Digestion Ability
- Chemical Free Processing
- Improves Feed Efficiency
- Decreases Feed Costs

Send For a Free Sample Kit of
Apple Jack and Natural Shine!
(\$4.00 For Shipping and Handling)

Satisfaction Guaranteed



You WILL notice the difference!

One satisfied customer states:

"I am sold on your product as I have tried many different supplements without great success. I like natural products which are usually very expensive to use. Your products are reasonably priced and I have proof they work"

Marlys Haugen & her horses

The August, issue of *The Horse Magazine* (pg. 77) states:

"Vegetable oils such as soy oil are converted to free fatty acids in the horse's system." "A high-fat diet provides several benefits for athletic performance."

- *"fats deliver more dietary energy without an increase in feed intake which reduces grain costs"*
- *"During aerobic activity, there is evidence of muscle glycogen sparing an affect which helps delay the onset of fatigue."*

Dear Ken,

I wanted to take a moment to let you know how happy we are with your product Top Dog/Top Cat.

I own a 3yr old AKC Chocolate Lab , Babe. Every summer her coat gets bleached in the sun turning her a dusty brown. We have tried sunscreens, special shampoos, nothing worked.

We were given a sample of Top Dog and decided it couldn't hurt her to try it.

We were amazed at the difference it made, in only one week her new growth hair was turning darker, now a month later, she is shiny and a deep rich brown.

Babe also loves the taste of it, she has always been a chow hound, but now after we put her feed in her kennel she waits to eat, untill we pour her Top Dog on .

If anyone wants to see her, give us a call.

Sincerely

Eric Daniels