

Soy & Health

JUNE 2009

ISSUE NUMBER 25

Register now for 2nd International symposium on soy and strategic marketing

Following the success of the first symposium in Gent, Belgium in June 2008, the 2nd International Symposium on Soy and Strategic Marketing will be held at the Hotel Rey Juan Carlos I, Barcelona, Spain from 5 to 6 November 2009. This event is a 'must' for all those in marketing & sales in the soyfood and soy ingredient industry and for those entering the market. The symposium offers excellent networking opportunities and delegates will learn from experts how best to strengthen their market positions and further develop the market. The outline programme is as follows:

Thursday 5 November 2009 - Symposium reception & networking followed by Gala Dinner.

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Friday 6 November 2009

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For full programme details and to register visit: <http://www.soyconference.com>.

Soy & Strategic Marketing can be combined with Marketing Nutrition training session of 5 November 2009 (see page 7). Combined registration is available at a reduced rate.



2nd International Symposium

Soy & Strategic Marketing

Hotel Rey Juan Carlos 1, Barcelona, Spain

5 – 6 November 2009

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Profile: Solae



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Solae's protein solution: environmental, economic and nutritional sustainability

According to the Food and Agriculture Organisation of the United Nations, global food demand will grow 50% within the next 20 years and there will be significant need for more protein. At current production levels this would require an additional 2.5 billion hectares of land and further strain our scarce water and petroleum resources.

Due to inherent advantages of resource usage compared to animal derived proteins, soy protein is a far more cost effective and environmentally conservative protein resource. With main ingredients of seeds, water and sunlight, soybeans have a fundamental and systemic advantage over other protein types that will almost certainly allow them to remain the most cost-effective solution in the short- and long-term.

Water Efficiency in Production (measured in tons)¹



Water Consumption

Soy uses far less water than other forms of "quality" or "complete" proteins. This has the effect of saving over 4 million gallons of water for each ton of soybean produced.

Energy Efficiency in Production (measured in kcal)²



Energy Efficiency

A fundamental way to examine the environmental cost of these different methods of food production is to examine total energy use involved in production. Soy protein is a highly efficient source of protein based on return of energy use versus other proteins.

At Solae, environmental stewardship is a core value, and we continually improve key manufacturing processes to reduce impacts on the environment.

As we continually seek to minimise our environmental footprint, Solae also supports the protection of natural resources such as the Amazonian Rainforests. To do so, Solae requires contractual agreements prohibiting raw material vendors from purchasing soy from land in the Amazon biome.

For more information about Solae Sustainability Policy, please email: iardevol@solae.com

¹ Virtual water trade to Japan and in the world, T. Oki, M. Sato, A. Kawamura, M. Miyake, S. Kanae, and K. Musiaka,
² "Diet, Energy and Global Warming"; Gidon Eshel and Pamela A. Martin; Department of Geophysical Sciences, University of Chicago, Chicago, Illinois (December 2005)



Solae, the world leader in developing soy ingredients for food, meat and nutritional products. We take one of nature's best resources, the soybean, and create nutritious and great-tasting ingredients.



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International symposium discusses safety and efficacy of soy

A symposium organised in Milan on 13 to 14 May 2009 by the Council for Responsible Nutrition has concluded that "Based on today's knowledge, preparations containing isoflavones must be regarded as safe and efficacious". Leading experts and international speakers, including a representative from the European Food Safety Authority (EFSA), met to discuss questions of bioavailability, safety and efficacy of soy. Topics were focused on the available data for isoflavones in relation to their effects on menopausal symptoms, cancer and thyroid function. The main conclusions from the symposium were:

1. Extrapolation of observations from 'simple' animal models has limitations and human clinical data must have priority over animal models when it comes to risk assessment.
2. Menopausal symptoms - based on meta analyses, soy appears to have a positive effect on hot flushes.
3. Cancer - soy isoflavones do not favour the growth of hormone sensitive cancers and may have a protective effect.
4. Thyroid function - soy does not have a negative effect on thyroid function.

Visit: http://www.crnusa.org/CRNPR09International_Researchers_Convene_Meeting_on_Isoflavones.html.

Dean Foods to acquire Alpro

Dean Foods Company, a leading food and beverage company in the US, has announced its agreement to acquire the Alpro division of Vandemoortele NV for approximately EUR325 million. Alpro is the European leader in branded soy beverages and products with net sales of approximately EUR260 million in 2008. It has 5 manufacturing sites in Belgium, UK, France and the Netherlands and employs around 750 people. With over \$1 billion in annual retail sales, Dean foods is a major processor and distributor of milk and other dairy products. Under the WhiteWave-Morningstar brand it also sells a variety of branded and private label soy (e.g. Silk® soymilk) and dairy products. The Vandemoortele Group has recently decided to focus on its two business to business activities, Bakery and Lipids and predicts a 2009 turnover of EUR1.1 billion.

Visit: <http://www.deanfoods.com/our-company/news/press-release.aspx?StoryID=1298882>

ESCO Group on isoflavones to be formed

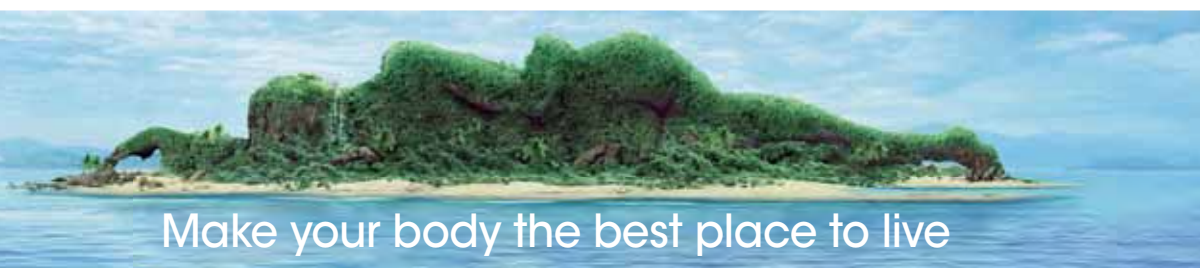
The German Federal Institute for Risk Assessment (BfR) has made a formal request to the European Food Safety Authority (EFSA) to deliver a scientific opinion on the use of isolated isoflavones in food supplements. At the April 2009 plenary meeting of the EFSA Scientific Committee it was decided that preparatory work was needed before this task was assigned to the competent EFSA Panel. It was agreed that an EFSA Scientific Cooperation (ESCO) working group on isoflavones will be created to collect all the relevant scientific information. It will undertake a review of the literature and of the data through a structured search strategy and will report by the end of 2009.

Visit: <http://www.efsa.europa.eu>.

Hain Celestial UK scoops 'green' award

Hain Celestial UK is a recipient of "The Sunday Times Best Green Companies Award 2009" with the rank of No 1 in the food and drink sector. In overall rankings the Company jumped 31 places into the top 10 this year due to various initiatives to limit its impact on the environment. According to the second annual "Sunday Times Green List" published on 24 May 2009, in overall rankings Hain Celestial UK scored top in its field among 60 companies recognised for their efforts to reduce waste and educate employees on the best and most efficient recycling methods.

Visit: <http://www.hain-celestial.co.uk/news/article/27/hain-celestial-is-the-greenest-food-company-in-the-uk.aspx>.



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Seaweed, soy foods and breast cancer risk

Recent research suggests that seaweed and soy foods may have a favourable effect on breast cancer risk in postmenopausal women. Fifteen healthy postmenopausal women participated in a double-blind trial of seaweed supplementation with soy challenge. Participants were randomised to 7 weeks with either 5 g/d seaweed (Alaria) or placebo (maltodextrin). During week 7, participants also consumed a daily soy protein isolate (2mg isoflavones/kg body weight). After a 3-week washout period, participants were crossed over to the alternate supplement schedule. There was an inverse correlation between seaweed dose (mg/kg body weight) and serum estradiol which was linear across the range of weights. Soy supplementation increased urinary daidzein, glycitein, genistein, and O-desmethylangolensin and decreased matairesinol and enterolactone. Soy and seaweed plus soy (SeaSoy) increased urinary excretion of 2-hydroxyestrogen (2-OHE) and the ratio of 2-OHE: 16 alpha-hydroxyestrone (16 alpha OHE1). For the 5 equol excretors, soy increased urinary equol excretion; the combination of SeaSoy further increased equol excretion by 58%. Equol producers also had a 315% increase in 2:16 ratio with SeaSoy. The research concluded that seaweed favourably alters estrogen and phytoestrogen metabolism and these changes likely include modulation of colonic bacteria.

Teas et al, J. Nutr. 2009; 139(5): 939-944, <http://jn.nutrition.org/cgi/content/abstract/139/5/939>.

High soy intake in adolescence may reduce breast cancer risk

According to new data using 73,223 Chinese women participating in the Shanghai Women's Health Study, high intakes of soy during adolescence may reduce the risk of breast cancer before the menopause by about 40%. The risk of pre-menopausal breast cancer was also reduced by 59% for adults with the highest soy protein intake, and by 56% for adults with the highest average isoflavone intakes. In this study researchers investigated whether intakes of soy food, measured using a validated food-frequency questionnaire, during adolescence and adulthood were associated with breast cancer risk. Over almost seven and a half years, the researchers documented 592 cases of breast cancer. Adolescent intakes of soy foods were associated with a 43% reduction in pre-menopausal breast cancer risk, while high intakes of soy protein and isoflavones were associated with 59% and 56% reductions in the risk of breast cancer before the menopause. The researchers concluded that women who consumed a high amount of soy foods consistently during adolescence and adulthood had a substantially reduced risk of breast cancer but no significant association with soy food consumption was found for postmenopausal breast cancer.

S-A Lee et al, American Journal of Clinical Nutrition, June 2009; 89 (6): 1920-1926, <http://www.ajcn.org/cgi/content/abstract/89/6/1920>.

Effects of thermal processing on soymilk

The objectives of this study were to assess antioxidant activities and phenolic compounds of soy milk as affected by traditional and ultrahigh-temperature (UHT) processing. Three soybean varieties were processed into raw soy milk and then cooked soy milk by indirect and direct UHT methods (both at 143 °C for 60 s) and traditional cooking (stove cooking and steam injection) methods (both at 100 °C for 20 min). Total phenolic content (TPC), total flavonoid content (TFC), phenolic acids, isoflavones, flavan-3-ols, and anthocyanins were quantified. DPPH free radical scavenging activity, ferric reducing antioxidant power (FRAP), and oxygen radical absorbance capacity (ORAC) were analysed. Compared with raw soy milk, all thermal processing significantly reduced TPC values and significantly increased TFC values for all soybean varieties. All processing methods significantly increased DPPH and FRAP values in soy milk processed from yellow soybean varieties. UHT processing increased their ORAC values, but traditional and steam processing reduced ORAC values. In soy milk from black soybean, all processing reduced ORAC values compared to raw soy milk. None of processing affected total phenolic acids, chlorogenic, and trans-cinnamic acid or (+)-catechin but all processing significantly affected contents of total isoflavones and individual isoflavones. Thermal processing caused significant increases in 7-O-, -glucosides and acetylglucosides, but caused significant decreases in malonylglucosides and aglycones. Indirect UHT processing transformed more isoflavones from malonylglucosides into 7-O-, -glucosides than the direct UHT.

B Xu et al, Journal Agricultural and Food Chemistry 2009; 57 (11): 4706-4717, <http://pubs.acs.org/doi/abs/10.1021/jf900687j?prevSearch=Baojun+Xu+and+Sam+K+C+Chang&searchHistoryKey=>>



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Increased soy consumption may reduce risk of bowel cancer in postmenopausal women

New research suggests that women, especially over-50s who consume a lot of soy can significantly cut their risk of developing bowel cancer. Researchers studied the diet and health of 68,412 women aged 40-70 in Shanghai. After adjustment for age, birth calendar year and total energy intake, consumption of soy foods was significantly associated with a decreased risk of colorectal cancer and the risk of colorectal cancer decreased with increasing soy food intake, primarily among postmenopausal women. According to the authors, the risk decreased more than 30% among women who were in the top third of soy food intake compared with women in the bottom third.

The authors believe that the findings may help explain why fewer people in countries such as China and Japan, where soy is a staple part of the diet, develop bowel cancer compared with western countries, where soy consumption is low. They suggest that the study should be repeated in non-Asian women with different genetic backgrounds and lifestyles from those in this study before public health advice based on the new research can be given.

G Yang et al, Am J Clin Nutr 2009; 89(2): 577-583, <http://www.ajcn.org/cgi/content/abstract/89/2/577>.



Longer fermentation time increases antioxidants in tempeh

This study was designed to evaluate the effect of fermentation time on the antioxidant activity of tempeh, a fermented product from soybean. *Rhizopus oligosporus* was used to ferment soybeans for 0, 1, 2, 5 and 10 days and lyophilised tempeh powder was extracted with hexane followed by petroleum ether, ether, 95% ethanol and water. Antioxidant activities of the extracts were evaluated with various models including alpha, alpha-diphenyl-beta-picryl-hydrazyl (DPPH) and superoxide-scavenging activities, reducing power and inhibitory activity towards lipid peroxidation.

The results revealed that tempeh showed greater antioxidant activities than unfermented soybean. The researchers concluded that tempeh fermented with *R. oligosporus* for 10 days showed the highest antioxidant activities compared with the other extracts.

C-T Chang et al, International Journal of Food Science and Technology 2009; 44(4):799-806
<http://www3.interscience.wiley.com/journal/122261124/abstract>.

Soyfoods consumption and prostate cancer: new meta analysis

The purpose of this study was to conduct a meta analysis on the association between soy consumption and prostate cancer risk in men. US researchers systematically reviewed studies obtained through a Medline literature search and identified 15 epidemiologic publications on soy consumption and 9 on isoflavones in association with prostate cancer risk. An additional aim of the study was to investigate whether there was a difference between fermented and non fermented soy foods in relation to cancer.

Inclusion criteria were that soy be considered a food and/or the isoflavone intake from soy foods was measured, a risk estimate and 95% CI given and only the most recent of any published study was used. The studies that were used included 2 quintile comparisons, 4 quartile comparisons, 4 tertile comparisons and 4 comparisons between soy and non soy consuming populations.

They found a 26% reduction in risk of prostate cancer for men with the highest soy food intake, compared to those with the lowest soy food intake. This was increased to a 30% reduction when the reported intake was of non fermented soy products (e.g. tofu, soymilk). However, fermented soy products (e.g. natto) were not associated with reduced risk. The authors concluded that consumption of soy foods is associated with a reduction in prostate cancer risk in men. This protection may be associated with the type and quantity of soy foods consumed.

L Yan and EL Spitznagel, Am J Clin Nutr 2009; 89:1155-63, <http://www.ajcn.org/cgi/content/abstract/89/4/1155>.



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Soy-based alternative to peanut butter

Hilton Soy Foods are a family-owned business using all natural ingredients, including non-GMO soybeans, from its own farm. Based in Stratford, Ontario, Canada, they have recently launched an alternative to peanut butter which is based on soy. After 4 years of development in response to the growing prevalence of nut allergies, Soybutter is made from non GMO toasted soy, soy oil, granulated cane sugar, monoglyceride (from vegetable oil to prevent oil separation) and sea salt. It is also a natural source of omega 3 essential fatty acids and contains better quality protein than peanut butter as soy has significant amounts of all essential amino acids. There are no added colours or flavours and it is available in smooth and chunky varieties.

<http://www.soybutter.com/index.html>



Cargill's Prolia™ for use in dairy products

Prolia™ is Cargill's series of toasted, defatted soy protein flours, which can be used instead of milk or recombined milk to make dairy products which are healthy but also satisfyingly creamy. Produced from high-quality beans, Cargill's Prolia™ has a neutral taste making it suitable for a wide variety of applications, creating many functional and health-enhancing attributes. In desserts, yogurts, imitation cheese and dairy cream-based praline fillings, it can help manufacturers cut the calories in their products by substituting for a proportion of the dairy fat without compromising taste or mouthfeel.

Defatted soy flours have a 50+% protein content and are low in fat (less than 2%), giving a protein boost to recipes. Cargill's high quality soy flours also offer proven advantages over animal proteins, including lower cost, increased functionality and longer shelf life, which all contribute to enhancing the cost-optimisation of the final product.

<http://www.cargilltexturizing.com>

Vivera meat alternative products

To meet the growing demand of healthy and tasty alternatives for meat, Vivera introduced meat alternative products to the Dutch market in 1990. Now one of the biggest producers of vegetarian products, Vivera's range includes cured meats, meal components, meal ingredients and snacks. Vivera's products are made of natural and mostly vegetable raw materials which are GMO free, based on soy and are source of Vitamin B12 and iron. (<http://www.vivera.com>)

Marketing Nutrition

Interactive Training Session with the Food and Brand Lab



How ads, packaging, and personality traits influence the usage frequency and usage volume of healthy foods.

*Lessons for **Marketing Nutrition***

Thursday, 5 November 2009 9.00am till 2.30pm
Hotel Rey Juan Carlos 1, Barcelona, Spain

Exclusive training session with Dr Ron Guymon of the Cornell University Food and Brand Lab

The training is a 4-hour engaging workshop with lectures interspersed with small team participation, using group communication and sampling system.

Download the programme brochure at

<http://www.marketingnutrition.eu>



Marketing Nutrition is organised the day before the 2nd International Symposium Soy & Strategic Marketing, due on the evening of November 5 and full day of 6 November 2009. Combination registration is available at reduced rate.

To receive Soy & Health please e-mail your contact details (including name and company address) to info@soyconference.com



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Free downloads from the Soyinfo Center

The Soyinfo Center, formerly the Soyfoods Center of Lafayette, California, USA, has launched a new website which is particularly rich in historical content. The Center publishes 5-6 books every year, free of charge, in PDF format, on its website. The latest publication, called "History of Soybeans and Soyfoods in Mexico and Central America (1877-2009)" was published on 22 March 2009 and contains 1,252 records/entries of four different types: (1) Publications; (2) Commercial soy products; (3) Original interviews (never before published); and (4) Unpublished archival documents. The book is produced from SoyaScan, Soyinfo Center's computerised database, which contains more than 81,000 records/entries on soybeans and soyfoods from 1100 BC to the present. Compiled one record at a time over many years, each is based on a long history of research into the history of soybeans and a large research library.

The records are arranged in chronological sequence and contain a comprehensive subject and geographical index at the end.

Founded in October 1972 by William Shurtleff and Akiko Aoyagi, The Soyinfo Center contains the world's most complete collection of information on soyfoods and soybeans from a historical perspective.

Visit: <http://www.soyinfocenter.com> or to download your free copy of "History of Soybeans and Soyfoods in Mexico and Central America (1877 -2009)" go to <http://www.soyinfocenter.com/bibliographies.php?bookd=128>.

US soyfoods sales reach all time high

According to "Soyfoods: The US Market 2009", a newly released report by Soyatech LLC and SPINS Inc, retail sales of soyfood products in the US have surpassed \$4 billion for the first time in history. The report, which examines soyfoods sales and industry trends during 2008, points out that the market for soyfoods in the US has continued to develop despite the overall economic downturn. The study notes that consumer awareness of the health benefits associated with soy and its expanded presence in multiple distribution channels are major factors in soyfoods' continued success. Categories driving this growth included soymilk, meat alternatives, tofu and snack bars. Refrigerated soy-based entrées and sushi also fared well and appeared for the first time in the top 25 largest soyfoods categories, with \$11.5 million in sales.

"Soyfoods: The US Market 2009" is the 8th report from Soyatech LLC and SPINS and provides information on the US market by category, sub-category, brand and distribution channel. It also covers opportunities for further growth in the sector, major players impacting the market-place and driving growth and future developments. For more information visit the Soyatech Resource Library section at: <http://www.soyatech.com>.

Health claims



4th Interactive Workshop Nutrition & Health Claims Europe- Challenges Ahead

Tuesday 6 October 2009,
Hilton Hotel Brussels, Belgium

<http://www.healthclaims.eu>

After 3 successful workshops in 2006, 2007 and 2008, Health Claims Europe presents a new and exciting one day interactive workshop aimed at legal counsels, marketing and sales, production, and R&D staff of European food industry and staff of companies interested in importing food products into the EU. Topics include:

- Recent developments in the implementation of the Nutrition and Health Claims Regulation
- Learning from EFSA scientific opinions and guidelines
- Legal action against misleading communication and claims
- How to prepare a dossier for a new function health claim: what kind of proof is needed?
- Food labelling; industry & consumer point of view.

With the support of **EAS** **CANTOX** *Supplement claims*

REGISTER before 6 September and SAVE EUR150
Online registration: via the website <http://www.healthclaims.eu>
or via mail with the downloadable form on the website.



7–8 July

Food & Beverage Packaging Innovation Summit, Sofitel St James, London, UK.
Visit: <http://www.ficonferences.com/foodpackaging>

10–15 August

World Soybean Research Conference VIII, Beijing, China. Visit: <http://www.wsrc2009.cn/en/index.asp>.

23–28 August

11th Annual Practical Short Course on Texturized Vegetable Protein and Other Soy Products, Texas A&M University, USA. Visit: <http://www.tamu.edu/extrusion>.

24–25 August

4th Practical Short Course - Omega-3 Fatty Acids (USA): Market Trends, Nutrition & Health, Utilisation in Food Systems, Chicago, Illinois, USA. Visit: <http://www.smartshortcourses.com>.

1-3 September

6th Annual Midwest Specialty Grains Conference and Trade Show, Sioux Falls, South Dakota, USA.
Visit: <http://www.grainconference.com>.

17–18 September

3rd Practical Short Course: Novel Technologies in Oilseed Processing, Edible Oil Refining, Oil Processing and Biodiesel, in cooperation with Oils and Fats Trade Show, Munich, Germany. Visit: <http://www.smartshortcourses.com>.

27–30 September

World Congress on Oils and Fats & 28th ISF Congress 2009, Sydney, Australia. Visit: <http://www.isfsydney2009.com/>.

6 October

4th Interactive Workshop Nutrition & Health Claims Europe, Hilton Hotel Brussels, Belgium.
Visit: <http://www.healthclaims.eu/>.

10–14 October

ANUGA International Trade Fair, Cologne, Germany. Visit: <http://www.anuga.com>.

14–15 October

4th Practical Short Course - Snack Food Processing and Product Formulation, Gent, Belgium.
Visit: <http://www.smartshortcourses.com/>

17–18 October

5th Practical Short Course - Omega-3 Fatty Acids (Europe): Market Trends, Nutrition & Health, Utilisation in Food Systems, Graz, Austria. Visit: <http://www.smartshortcourses.com/>.

18–21 October

7th Euro Fed Lipid Congress, Lipids, Fats and Oils: From Knowledge to Application, Graz, Austria.
Visit: <http://www.eurofedlipid.org/meetings/graz/index.htm>.

2–5 November

4th Annual Soy and Oilseed Summit 2009/Global Soybean and Grain Transport 2009 Conference, New Orleans, Louisiana, USA.
Visit: <http://events.soyatech.com/conference.php?cid=10>.

5 November

Marketing Nutrition: 3rd Interactive Engaging Training Session, Hotel Rey Juan Carlos I, Barcelona, Spain.
Visit: <http://www.marketingnutrition.eu>.

5–6 November

2nd International Symposium Soy & Strategic Marketing, Hotel Rey Juan Carlos I, Barcelona, Spain.
Visit: <http://www.soyconference.com>.

17–19 November

Food Ingredients/Natural Ingredients Exhibition 2009, Frankfurt, Germany. Visit: <http://www.fi-events.com>.

18–19 November

Food Protein Innovation Conference, Chicago, Illinois, USA. Visit: <http://bridge2food.com/FPI2009.asp#programme>.

3 December

Supplement Claims: 2nd Interactive Workshop Nutrition and Food Supplements Series, Hilton Hotel Brussels, Belgium.
Visit: <http://www.supplementclaims.eu>.