

GOOD SPROUT NEWS*"Sprouting Solutions"*

February, 2012



Building a Global
Sprout Growers
Community

Upcoming Events

Calendar:



March 2012

March 8: BOD Conference Call

Annual Membership Campaign [Contact the office](#) for information on how you can save money on your 2012 membership! We also have a new PayPal webpage for membership renewals. [Visit that site here.](#)

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Suggestion box.....

If you have an event or article that you would like considered for the next newsletter, please e-mail it to secretary@isga-sprouts.org.

ISGA CONVENTION 2012



The 22nd Annual Convention of the ISGA is being held at the University of British Columbia in Vancouver on August 21 - 24.

You will be able to register for the convention on our website and there will be links to reserve rooms directly with UBC.

Update on the Sprout Safety Audit

Notice has gone to the Expert

Science Review Panel (16 experts in the area of seed sanitation research) that they will be reviewing/evaluating the weed sanitation papers listed below for expanding the accepted options for sanitizing seeds for sprouting. The panel has been asked to comment on the protocol for evaluation which was developed by Dr. TJ Fu and Dr. Kathleen Rajkowski. Comments were to be submitted by January 13th and then a conference call scheduled to finalize the instructions and discuss the timing of the submission review.

Continued on page 7 ----->

What is a Sustainable Water Future?

A talk by Dr. Jay Garland at the ISGA 2011 convention in Las Vegas

Jay Garland returned to the ISGA, no longer a scientist for NASA studying competitive exclusion as a method of keeping sprouts safe from pathogenic bacteria, but a scientist for the EPA, studying the state of the global water supply. To view his PowerPoint presentation, follow this link:

[Jay Garland - Sustainable Water Future](#)

Sustainability "...an economic state where the demands placed upon the environment by people and commerce can be met without reducing the capacity of the environment to provide for future generations" - Paul Hawken

Do we have a problem with our water? Dr. Garland says an unequivocal "Yes". To start: 1.4 billion people already lack access to clean water, and waterborne disease kills a child every 8 seconds. If this does not concern us directly, he let us know that in the next 13 years 20% more water will be needed for agriculture.

Although we are in a phase today of concern for water conservation, partly fueled by the increasing cost of municipal water and waste water treatment, Jay spoke of a future shift to eliminating the concept of waste. The intelligence of natural systems should inform human design. In nature, waste equals food. One organism's waste is food for another and nutrients flow indefinitely in cradle-to-cradle cycles of birth, decay and rebirth

Dr. Garland knocks myths such as that our problem is over-population of humans on the planet. For instance, he quotes us "There is more biomass of ants or microbes on the planet, yet their activities (which should have a larger impact given their higher turnover rates) have positive effects on the biosphere". So the real problem is how we live, not how many of us there are. Waste as energy and nutrients is an inherent component of natural systems. Check out page 11 illustration on his PowerPoint (link above).

So, after telling us that up to 12% of our total energy use is involved in treating spent water, Dr. Garland comes up with some interesting ways to rethink our water treatment. Check out the illustration on page 15 to see how we can separate our wastewater flows to maximize recovery: Domestic from industrial from storm water

In the domestic area:

Hygiene water – showers, laundry, dish washing – mostly water, can be readily treated and recycled

Urine, which has most of the nutrients – separated by urinals and urine separating toilets

Feces, which have most of the organic matter, i.e., energy – separated by vacuum assisted collection

The obvious next step, as Dr. Garland goes on to explain, is to capture and use the nutrients and organic matter from the separated flows.

Which leads Dr. Garland to connecting his new job with EPA to our challenges with growing food for

human consumption. On page 21, he tells us about "Growing Power, Inc."

Inspiring communities to build sustainable food systems that are equitable and ecologically sound.

They list a wonderful array of back to the earth options for producing our own food, locally, integrated into our lives and businesses. Some of these ideas may actually inspire some of us in one way or another. But here is his clincher quote, source unknown:

"While many of my acquaintances tend to point the finger at the big agro-chemical conglomerates as villains, the fault really is with all of us who casually, willingly, even happily surrendered our rights to safe, wholesome, affordable and plentiful food in exchange for over-processed and pre-packaged convenience.

"To many people, this might sound a bit hysterical. There is still food in the suburban supermarket aisles, yes. The shelves are not empty; there are no bread lines. We haven't read of any number of Americans actually starving to death. No, we are not suddenly starving to death; we are slowly but surely malnourishing ourselves to death. And this fate is falling ever more heavily on those who were already stressed: the poor."

Scan Dr. Garland's PowerPoint for inspiring detail. Link: [Jay Garland - Sustainable Water Future](#)

Reviewed by Barbara Sanderson





Bob Sanderson
President, ISGA

Dear Sprouting Community,

The recall in Texas is another very difficult challenge for the sprout industry. It has expanded from a relatively small recall, following a Salmonella positive, to a larger one, to a huge recall in reaction to detection of *Listeria monocytogenes* "in random samples".

There has not been a specific statement about the particulars of either the Salmonella positive, or the *Listeria* positives. It may be the case that the Salmonella positive was detected in USDA MDP (Microbiological Data Program) sampling and testing. Information about this program is available at: <http://www.ams.usda.gov/AMSv1.o/mdp>

The *Listeria* positives may have occurred in samples taken at the sprouting facility as part of an FDA (or other?) inspection of the plant following the (MDP?) positive. It isn't clear whether the "random samples" were product samples, or environmental samples. All this is assumption.

As of this writing, there have been no illnesses attributed to either of the positive test results. This fact has caused considerable concern in

the sprouting community, as well as in other commodity groups that have had recalls without identified illnesses, to the point where some question the value of the MDP program itself.

Although sprouts have taken some big hits as a result of MDP positives with no apparent illnesses, I would not favor the ISGA taking a position in opposition to this program unless it can be shown that there has never been an illness related to product implicated in the MDP program. The huge outbreak in Germany this spring flows together in the public consciousness with a recall where no one is known to have gotten sick. This speaks to the times we live in, and if anyone knows how to put things in proportion, we can only hope they'll find a way to do it.

Once a commodity is on the MDP sampling list, it seems almost a matter of time before there will be a positive, and once there is a positive, this will reinforce the perceived need to keep the commodity on the list, if not increase the surveillance. Somehow the goal needs to be, to get off the list.

At this moment, this seems like very wishful thinking. The situation seems much more discouraging because according to the website of the implicated company, they are not only following FDA recommendations to the letter, but going well beyond these recommendations. What can we make of this?

Continued on the following page.....

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Jonathan Sprouts
megadome@meganet.net

Carlos Gonzalez, Vice President

The Perfect Sprout
theperfectsprout@gmail.com

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ISGA
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Bob Rust, Secretary

International Specialty Supply
bob@sproutnet.com

Directors

Carmen Wakeling

Eatmore Sprouts
eatmorecarmen@gmail.com

Tao Liming

Ningbo Wulongtan Vegetable Foodstuff Co.
& China Agricultural University
taoliming@nbwlt.com

Jay Louie

Louie Foods International
louiefoods@aol.com

Steve Meyerowitz

Sproutman Publications
sproutman@sproutman.com

Yasuhiro Sahara

Daisey Machinery Co., Ltd.
sahara@daisey.co.jp

Carlos Stolzenbach

Caudiill Seed Co., Inc.
salessprout@caudillsprouting.com

Yufan Kang

China Agricultural University
yfkang@cau.edu.cn

Paul Battaglia

pbattaglia1@gmail.com

I don't know of any reason why the claims of the producer can't be taken as accurate. So this would seem to lead to one of two conclusions: either sprouts are simply inherently very risky, or the methods currently being used to minimize risk are not adequate.

Obviously no one in the sprout industry wants to believe that the product can't be made acceptably safe. So it would seem to make sense to take another look at the ways that have become best practice in minimizing risk.

There are a number of treatment approaches, and sampling and testing approaches, that have been proposed as being as good as, if not better, than what is specified in the 1999 FDA Guidance. These approaches need further review, but a crucial underlying factor is that the means of evaluating treatment and testing efficacy needs to be based on a standard protocol. In research using 20M

chlorine as a comparison, all that can accurately be said is that a given treatment gave certain results under the specific experimental conditions used, and so general claims about "log reduction." may be misleading. In the sprout audit, a treatment showing favorable results compared with 20,000 ppm chlorine would potentially meet the criteria given for acceptable treatment: "Does the firm have written procedures for at least one effective antimicrobial treatment applied, according to directions for its use, to seeds immediately before sprouting? This treatment must be

from a list of treatments suggested by industry, published in the scientific literature, peer reviewed and accepted by a review panel made up of scientists expert in the field. See Appendix C"

It is also necessary to have a clearly stated procedure by which safety interventions that have been shown to be comparable to, or better than existing allowed methods can be introduced into production, and accepted by the retail community as being "approved". This is especially tricky since the 20,000 ppm chlorine treatment mentioned in the 1999 FDA Guidance is widely believed to be "FDA-approved", in spite of the FDA's insistence that it is only a recommendation.

The obvious problem with this last need is that although the retail community knows that FDA has "approved" what is in the Guidance, the FDA claims to only recommend.

Is there any way out of this Catch-22?



Themes for the 2012 Convention

The convention committee has been discussing possible topics to help both direct the selection of speakers and the focus of the presentations. Please find the categories below and contact us if you have someone to recommend as a speaker.

Community: Developing a cohesive group of industry members willing to share ideas and information while supporting the communities that we feed and care for with healthy products.

Collaboration: Working together to better the industry as a whole through improvements to systems, scientific development, and advancements in equipment and processes.

Education: This includes outreach to both our industry and consumers about the unique strengths and challenges of our type of food production.

Marketing: A communication plan about the nutrition and health benefits of our sprouts and our industry's commitment to safe production.

IFSH Announces FDA-funded Sprout Safety Alliance

Alliance will aim to help food companies access food safety information and education to enhance best practices.

Illinois Institute of Technology's Institute for Food Safety and Health (IIT IFSH) has announced that it will coordinate the Sprout Safety Alliance (SSA) designed to assist sprout growers and producers in identifying and implementing best practices in the safe production of sprouts.

The Sprout Safety Alliance is a one-year, \$100,000 partnership grant funded by the U.S. Food and Drug Administration (FDA) Office of Foods through the IIT IFSH-FDA collaborative agreement. The alliance will be housed at IIT IFSH, which introduced in 2011 a groundbreaking audit checklist to improve sprout safety along with on-site beta test results validating its effectiveness in a real-world setting via the institute's Sprout Safety Task Force.

The new public-private organization will develop core curriculum, training and outreach programs for stakeholders in the sprout production community to enhance the industry's understanding and implementation of pending sprout safety regulatory requirements.

"Sprouts present a unique food safety challenge due to the warm, moist and nutrient-rich conditions required for their production," [said IIT Vice President and IFSH Director Robert E. Brackett, Ph.D.](#) "For example, certain food safety practices used by sprout growers and sprout seed and bean producers, such as testing spent irrigation water and pre-sprouting seed disinfection procedures, are unique to this commodity."

The education and outreach efforts of the Sprout Safety Alliance will be directed toward assisting producers in this specific category within the produce sector to enhance safety now and comply with upcoming regulations, when final. The SSA's objectives, according to Brackett, are to:

Develop training materials that assist sprouters in adopting best practices for the safe production of sprouts based on available FDA guidance documents and other information

Provide tools to assist growers in conducting self-audits of their sprouting facilities and production practices to minimize microbial hazards associated with sprouts

Develop training materials that facilitate industry understanding of risks associated with sprouts, current mitigation practices, and

implementation of the sprout-related requirements in the upcoming produce safety regulation, when final

Serve as a network hub and resource for the sprout industry, buyers, retailers, and federal and state regulatory agencies

Develop a technical assistance network for the sprout industry

Collaborate with USDA, states, trade associations and land-grant university extension services to provide classroom and distance training and workshops for stakeholders across the U.S.

Stephen Grove, Ph.D., IIT IFSH Manager, Industry Projects, and Joy Johanson, MPH, Consumer Safety Officer, FDA's Center for Food Safety and Nutrition are coordinators of the alliance, which will also consist of representatives from IIT IFSH, federal and state government agencies, academia, and trade associations as part of its Steering Committee.



FROM THE SPROUT COOKBOOK:

Tomorrow's Layered Salad

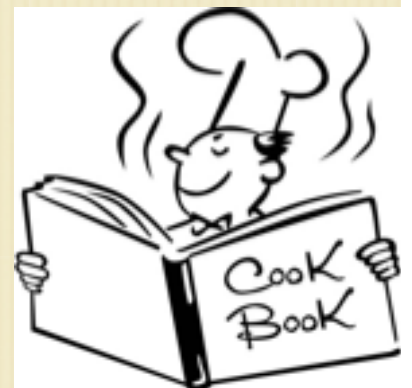
- | | |
|-----------------------------------|-------|
| 10oz spinach, cleaned, pieced | 300g |
| 4oz Alfalfa Sprouts | 125g |
| 4 Eggs, hard boiled, chopped | |
| 1 Bunch Scallions, chopped w/tops | |
| 1 lb. Bacon, cooked and crumbled | 500g |
| 10oz Tiny Frozen Peas, cooked | 300g |
| 2 tsp Sugar | 10ml |
| 1 cup Swiss Cheese, grated | 250ml |
| Salt and Pepper to taste | |

- Dressing:
- | | |
|-----------------------|-------|
| 1 1/2 Cups Sour Cream | 375ml |
| 1 1/2 Cups Mayonnaise | 375ml |

In a 10" x 13" glass pan, using half the ingredients, layer spinach, sprouts, eggs,



scallions, bacon and peas. Sprinkle with sugar, salt and pepper. Frost with half the dressing. Repeat. Garnish with cheese. Cover with plastic wrap and refrigerate overnight. Recipe serves 8.



This is a recipe from the ISGA cookbook. If you have a recipe that you would like to add to the cookbook, please submit it to the ISGA Office.

Update on the Sprout Safety Audit

(Continued)

Nine alternative seed sanitation methods to be reviewed and evaluated:

- Hot water treatment (Bari et al. 2008, JFP, 71, p830-834); pilot scale validation (Bari et al. 2010, JFP, 73, p752-757)
- 2000 - 20,000 ppm calcium hypochlorite treatment (Montville and Schaffner, 2004, JFP, 67, p758-765); commercial scale evaluation (Brassica/IEH report to be published)
- Peroxyacetic acid or Tsunami 100 (10,000 – 30,000 ppm); commercial scale evaluation (Buchholz and Matthews, 2010, Lett Appl Micro, p462-468) **Has this been approved by EPA for use at 10,000ppm?**
- Levulinic acid and SDS; commercial scale evaluation - Inactivation of Escherichia coli O157:H7 and Salmonella Typhimurium DT 104 on Alfalfa Seeds by Levulinic Acid and Sodium Dodecyl Sulfate, TONG ZHAO, PING ZHAO, AND MICHAEL P. DOYLE, Journal of Food Protection, Vol. 73, No. 11, 2010, Pages 2010–2017***Does this have regulatory approval, is the mixture commercially available, and is it able to be used on organic seeds?**
- Acidified sodium chlorite (Liao, 2010, JFS, 74, p M159-M164) **EPA approved up to 1500ppm (use at 800ppm)**
- Germin-8-or = (Keeper by BioCide) Chlorine Dioxide – Inactivation of Escherichia coli O157:H7 and Salmonella on Mung Beans, Alfalfa, and Other Seed Types Destined for

Sprout Production by Using an Oxychloro-Based Sanitizer, M. KUMAR,1 R. HORA,1 M. KOSTRZYNSKA,2 W. M. WAITES,3 AND K. WARRINER1, Journal of Food Protection, Vol. 69, No. 7, 2006, Pages 1571–1578
EPA approved up to 1500ppm (use at 200ppm) – NOP approved (<http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELPRDC5091703>)

- Fit (Beuchat et al., 2001, JFP, 64, p152-158) **GRAS (A product that is GRAS for certain uses can be used as GRAS for other processes by self-determination.)**
- Gaseous Acetic Acid, (Delaquis et al JFP, Vol. 62, No. 8, 1999, Pages 953–957)
- Fumigation with Ammonia (Himathongkham, JFP Vol. 64, No. 11, 2001, PPs 1817-1819)

The goal of this review will be to have an appendix to the Sprout Safety Audit that will offer a range of acceptable sanitization treatments for sprout growers. If you have other sanitization research that has shown results with the 20,000 ppm calcium Hypochlorite as a control, which shows comparable results, that has been peer reviewed and published in a respected science journal, and you would like to see it published in the appendix for use by sprout growers, please notify Barbara Sanderson at: barbara@jonathansorganic.com.

Respectfully submitted:
 Barbara Sanderson, Jonathan’s Sprouts Chair, Sprout Safety Audit Sub-committee of the Sprout Safety Task force, IFSH

Old Fashioned Chow Mein Recipe

- 1 lb Pork or chicken breast, cubed
- 4 Stalks celery, sliced
- 2 Medium onions, sliced
- 12 oz BEAN SPROUTS
- 5 oz Bamboo shoots, sliced
- 1 Tbls Soy sauce
- 1 Tbls Cornstarch
- 1 Cup beef or chicken broth
- Chow mein noodles
- Oil for Cooking

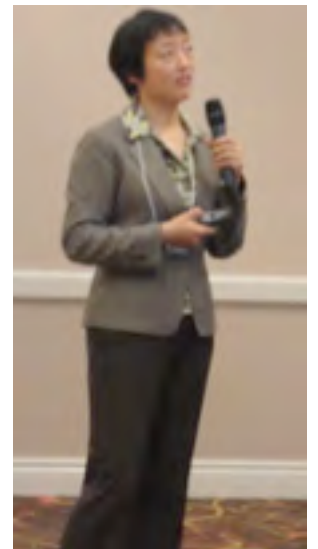
Brown cubed meet in hot oil in a large skillet or wok 5 minutes at high temperature. Add celery and Stir well and cook over medium heat until celery is tender. Add bean sprouts and bamboo shoots and cook for about 3 minutes.

Blend together soy sauce, cornstarch, and 1 tablespoon broth. Add with remaining broth to skillet. Cook, stirring gently but constantly, until thickened. Adjust seasoning with soy sauce and/or salt. Serve over noodles.

Recipe serves 4

Convention 2011 - Las Vegas

Photos courtesy of Karen Wilson and Kathryn Bliss



ISGA WANTS TO HEAR FROM YOU!

Calling all members! We want to hear what your company is doing these days. In the coming months we will be ramping up our yearly membership campaign and with that comes a new membership directory. This year, the office has thought to include a picture and brief description of what you are doing in the

world! So send us a quick blurb and a photo of yourself, your mascot, your logo, or your sprouting headquarters. Please e-mail your information to office@ISGA-Sprouts.org and include your company's website so we can link to it from the ISGA website!



We want to know what you're up to!

PRESENTATIONS FROM 2011 ISGA CONVENTION

Links to the presentations:

[Andy Bohannon - Past Present and Future of Neogen](#)

[Caudill Safety Seed Presentation](#)

[Jay Garland - Sustainable Water Future](#)

[Jason Wan - Sprout task force overview](#)

[JBSA Case Studies of Safe Beansprout Production in Japan](#)

[JBSA The Bean Sprout Market in Japan](#)

[Karan Khurana - Aqua Pulse Produce Sprout Biofilm](#)

[Steve Meyerowitz - Sprout Nutrition](#)

[Lisa Mumm - GMO and GAP](#)

[PALL - Genedisc Rapid PCR testing Presentation](#)

[Pleikas and Heilemann - Strata Marketing Partners](#)

[Rebecca McKnight - Regulation of Health Claims](#)

[Kang Yufan- Market for Mung Bean seeds in China](#)

[Ruojun Wang - Seed Trade in China](#)

[Michelle Smith -FDA Regulatory Perspective](#)

[Wil Sumner - Sprout Audit Summary](#)

*****If you have trouble opening any of the above links, please e-mail [Rich Wolfe](mailto:Rich.Wolfe@isga.org) for the member username and password.**



International Sprout Growers Association
733A Bald Hill Road
Warwick, RI 02886
www.isga-sprouts.org
508-657-ISGA (4742)