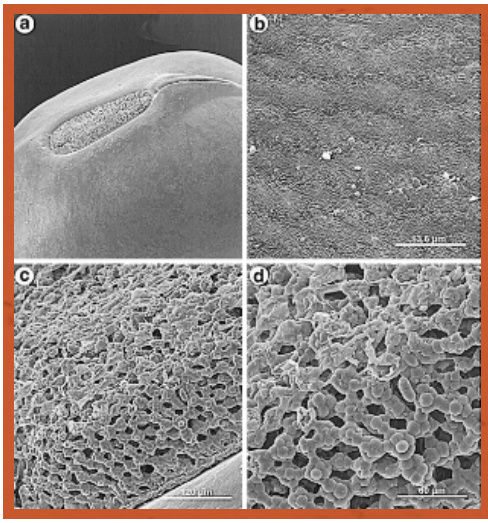
ISGA NEWSLETTER

VOL. XI, I

GOOD SPROUT NEWS

"Sprouting Solutions"

February, 2011



Do you know what this is a picture of?

Please email the ISGA office with your thoughts.

And you can turn to page 5 for the name of the winner of the last contest.

ISGA Convention Date Changed

The 21st Annual Convention of the ISGA is being moved from the original May date to the Fall. This will make room for the US Safety Day which is scheduled by the NCFST for April 27th in Chicago. It will be held subsequent to the NCFST mid year meeting April 25-26. Please contact the ISGA office with any questions regarding arrangements for attendance. An invitation and agenda will be sent out as soon as possible.

The Fall Convention will be held at the Paris Las Vegas hotel and specific dates will be announced shortly.

PLEASE NOTE THESE IMPORTANT DATES:

NCFST Mid Year Meeting Chicago, IL April 25-26

ISGA Safety Meeting: Chicago, IL

April 27th

Upcoming Events

March-April 2011

Mar 10:
BOD Conf Call

April 27:
ISGA Safety Meeting, Chicago, IL

Annual Membership Renewal Campaign

Contact the office for information on how you can earn some money off your 2011 membership! We also have a new webpage for membership renewals! ISGA is now using PayPal to aid in registration. Visit that site here.

Please "Friend" ISGA on Facebook

Fall 2011

2011 ISGA Convention - Las Vegas

If you have a great idea for a speaker or event, or if you are interested in joining the Convention Committee, please e-mail Carlos Gonzalez, chairperson of the Convention Committee.

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 by March 15, 2011.

A Letter from the President...

The ISGA is very fortunate to have received a donation in the amount of $10,000 from Marler Clark L.L.P., P.S. for the purpose of improving sprout safety.

This generous investment in food safety research is being forwarded by the ISGA to the National Center for Food Safety and Technology (NCFST), a research consortium among FDA CFSAN, Illinois Institute of Technology (IIT) and the food industry

The NCFST has done considerable research with sprouts in the past, particularly in developing the sampling and testing methods that are a part of FDA's recommended procedures for safe sprout production.

The following priorities were provided to the NCFST for the use of the Marler contribution:

1. Clarify the best current practices for lab test methods and producer sampling and testing, and develop a way to get labs on- board, particularly to provide clear guidelines for using alternative testing methods that may have been introduced since the FDA Guidance was issued in 1999.

2. Develop the sprout audit check- list ASAP to the point where it can be launched, perhaps on a trial basis with volunteer companies and one or more experienced auditors, to work the bugs out. This audit is being designed to address the specifics of best sprout production practices in a more focused way than is possible with the broader GMP audits that are increasingly being required of food producers and processors. A special Task Force of FDA and industry members has been working on this audit since August 2009 and are nearing completion. This is a tough audit, with many automatic failure points for key safety practices; but it is also directly related to the safety of sprouts without excess documentation. It is geared to be accessible to the many owner-operated sprout companies in the industry. The Marler Clark donation will help speed up the process of getting this audit into circulation and use within the sprout industry.

3. Develop a standard protocol for seed sanitization research, that can also be used for evaluating as accurately as possible, the real- world efficacy of existing and proposed sanitization methods.

4. Review pre-production seed sampling as part of a risk- management approach to sprout safety, and set specific basic recommendations, with protocols.

The ISGA wishes to thank Marler Clark for this vote of confidence in a future where the nutritional properties of fresh sprouts can be enjoyed by all, with full confidence in the highest level of food safety.

Bob Sanderson
President, ISGA

Congratulations!

Jonathan's Sprouts
35th Anniversary
March 17, 2011

Draft Sprout Specific Audit Checklist Submitted to Expert Panel

On Tuesday, February 8, 2011, the Draft Audit Checklist was submitted to the Expert Panel for Sprout Safety Audit Checklist for their review.

Background

In August 2009 the NCFST issued an invitation to the sprout growers and allied stakeholders to come together and form a Sprout Safety Task Force to focus on food safety guidance and critical research needs required for the safe production of sprouts. NCFST members in the task force included Jonathan Sprouts, Caudill Seed, Brassica Protection Products, International Sprout Growers Association, IIT and FDA scientists (appendix i). A sub-team was created which developed a sprout safety audit checklist The checklist is intended to serve as a tool for sprout growers in reviewing their operations. The sub-team is now submitting this work to an independent review panel. The panel comprises reviewers from academic, USDA, FDA, retail grocery, produce associations, and allied sprout industry services.

Reviewers are instructed to comment and provide suggestions on the checklist especially with respect to the clarity and completeness of questions listed, consideration in both the procedures/records review and facility inspection aspects, attention to key control points and whether the grading points are appropriately assigned. Below is a list of suggested points they have been asked to address.

1. Are all aspects of a comprehensive sprout food safety program covered in the checklist? Are key recommendations provided by international food safety guidelines being considered?
2. Does the checklist cover all aspects of sprouting facilities and sprouting activities?
3. Does the checklist clearly point out the critical control points important in minimizing the risk of microbial contamination of sprouts?
4. Are key elements of Good Manufacturing Practices covered?
5. Are the questions for document review clear and easy to understand?
6. Are questions related to record review complete and easy to understand
7. Are questions related to facility inspection clear and easy to understand?
8. Are the points assigned appropriate? Any suggestion for different points?
9. Is the audit fair to small and large sprout growers alike

Time frame for submitting your comments

The Expert Panel has been asked to return comments by February 25, 2011. The Sprout Safety Task force audit sub-team will schedule a teleconference with the expert panel to discuss the compiled responses by March 11, 2011.

The submission letter was signed by:

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Editorial comments on the implications of this event. By Barbara Sanderson.

The Sprout Specific Audit Checklist will be published under the NCFST logo, which will give it credibility. It is the best attempt by industry to create an audit that really inspects the sprout company in such a way as to have the best opportunity to catch and correct behavior by growers that might lead to contamination of their product with human pathogens, or to not catching and eliminating contamination that comes into their operation on the seeds.

The NCFST will publish the audit when it is complete. They will then publicize the published document through industry associations such as the PMA, United Fresh, the NRA and other national organizations that have members in the retail and foodservice industries. The implication is that after that publicity, our customers will begin to demand that all of their sprout suppliers be audited using this audit. For this reason, it is important that all growers and sprout industry stake-holders have an opportunity to comment on the audit checklist.

An email will soon be sent by the ISGA to all of its current sprout grower email addresses. The email will invite growers to request a copy of the draft audit from the NCFST to review and make their comments.

Neogen Develops a More Accurate Test for Sprouts...

Neogen has developed a single enrichment testing system that reliably detects Salmonella in sprout irrigation water in just 24 hours. The accuracy of the test, Reveal 2.0 for Salmonella, was verified and approved by the Association of Official Analytical Chemists International (AOAC) in December 2010. AOAC is the globally recognized, independent, non-profit association of government agencies and business that serves as the endorsement agency for diagnostic tests.

Salmonella bacteria is the most frequently reported cause of foodborne illness in sprouted products; more than all other human pathogens combined. According to Neogen's Vice President for Food Safety, Ed Bradley, "Reveal 2.0 for *Salmonella* was developed to be an easy method of detecting *Salmonella* while maintaining and even improving upon the accuracy, specificity and sensitivity of Neogen's *Salmonella* testing systems. Neogen is a proven leader in developing food safety solutions. ISS provided support for Neogen Laboratories in the development of this new diagnostic kit and is a strategic partner in the distribution and support of the company's product line." "Our new *Salmonella* test's single enrichment protocol eliminates the hands-on time and effort of multiple enrichments, while maintaining same-day results," said Neogen's Michael Wendorf. "The AOAC approval for Reveal 2.0 for *Salmonella* further validates this rapid test system as an invaluable tool for sprout producers." According to Bradley, Reveal 2.0 for *Salmonella* provides the sprout industry with a quick, accurate and easy method of detecting *Salmonella* in spent irrigation water from sprouts.

In the AOAC study of Reveal 2.0 for *Salmonella*, the test was shown to have 100 percent specificity and sensitivity rates, with no false positives or false negatives when testing sprout irrigation water. The system was tested by inoculating sprout irrigation water from a variety of sprout types with *Salmonella Saintpaul*, a strain that the CDC has linked to foodborne outbreaks in sprout products.

Features of Reveal 2.0 for *Salmonella* include:

- Results in just 24 hours, with only 15 minutes of test development time following enrichments
- Less hands-on time than tests that require multiple sample enrichment
- Unitized and bulk-irradiated media components

The data from the study was reviewed by three independent referees who scrutinize the system performance and capabilities, and the study is expected to be published in the Journal of AOAC International in early 2011. The system's accuracy was also validated for testing a comprehensive list of food and environmental sample types.

The new Reveal 2.0 line of pathogen detection tests also includes tests for *Listeria* spp. and *E. coli* O157:H7. AOAC International validated the accuracy of Reveal 2.0 for *Salmonella* when testing food, rinse water and environmental samples.

The Reveal 2.0 for *Salmonella* system cuts the wait time for results in half. According to ISS lab director Al Sullivan,

"The extreme accuracy and ease of use of Reveal 2.0 is likely to be a game changer. It takes just 20 hours, plus 5 to 10 minutes per sample set up time. If you do your test around lunch time the results are ready when you arrive in the morning. Sprout growers can have results for spent irrigation water tests prior to harvest, reducing the likelihood that product will get out the door prior to receiving the test results."

In addition to spent irrigation water, the AOAC's process validated the accuracy of the Reveal 2.0 for *Salmonella* system in certain other meats, cantaloupe, spinach, rinse water and environmental samples, Bradley said.

Neogen certifies sprout lab personnel on the use of their testing procedures and ISS has partnered to distribute Neogen products to the sprouting industry and can assist lab personnel with most questions related to the nuances of testing spent irrigation water in sprouts. Neogen has been working with the sprouting industry for several years. Neogen's Reveal *E. coli O157:H7* is one of only two rapid tests for *E. coli O157:H7* listed in the FDA/CFSAN Guidance for Industry - Sampling And Microbial Testing Of Spent Irrigation Water During Sprout Production.

The Guidance states that other kits can be used if they are "validated either by formal collaborative studies or by comparative studies with standard methods using the specific commodity in question, spent irrigation water or sprouts." Reveal 2 has met these requirements and is now available for testing spent irrigation water from sprout production.

New Food Safety Act

The S510 Food Safety Act passed January 04, 2011. There will be more emphasis on prevention of food borne illness caused by tainted food products. As applied to sprout growers, this new legislation will mandate the following:

• Plans and Records Retention- HACCP (Hazard Analysis and Critical Control Points) plans will be mandatory. Companies will be required to create and maintain records that can be inspected using modern information systems and best practices.

• Traceability – Information Systems will track the origin, movement and reporting of all raw ingredients and food in the supply chain. The recall of tainted or mislabeled articles becomes mandatory. The technology used must meet the FDA's approval.

• Inspection of Facilities – All facilities will be required to register with the FDA. Facilities will be inspected by the FDA and will require compliance with mandated documentation within specific timeframes. If the facility fails the audit you could be held responsible for all additional fees for subsequent audits and could face fines and or imprisonment if the cGMP's (current Good Manufacturing Practices) have been intentionally ignored.

• Recall Authority - The FDA would have the authority to mandate recalls of tainted food, and you would be responsible for the FDA's costs. Businesses that aren't complaint or have major gaps in their safety plans could face very stiff penalties and face being shut down by the FDA.

CONGRATULATIONS!!!
The Winner of the Photo Contest from the last issue was Bengt Schumacher. His guess was a stoma, or a cell which enhances gas exchange. In the vernacular, this is often referred to as the "mouth" and in this case it was an Alfalfa mouth.

From the Sprout Cookbook:

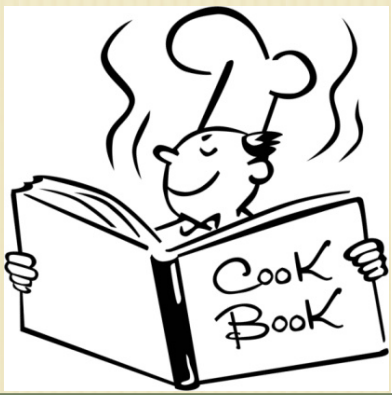
Munchy Crunchy Sprout Stuffing

½ cup mushrooms, coarsely chopped
2 onions, finely chopped
4 ounces Munchy, Crunchy Sprouts (such as Beans, peas, lentils, etc.)
6 tablespoons butter or olive oil
2 cups broth
8 ounce stuffing mix
½ teaspoon salt
¼ teaspoon black pepper
2 tablespoons fresh chopped parsley
1 teaspoon fresh chopped rosemary

Simmer mushrooms, onion and Crunchy Sprouts in butter or oil in a frying pan for 2 to 3 minutes, until onions are translucent. Remove from heat, add the remaining ingredients and mix thoroughly. Bake stuffing inside poultry, rolled fish, sweet peppers, or whatever you are serving that requires stuffing.

Recipe stuffs a large chicken or small (10 – 12 pound) turkey

This recipe was submitted by Barbara Sanderson. If you have a recipe that you would like to add to the cookbook, please submit it to the ISGA Office.



Dear Dr. Sprout,

Would you please give me some advice regarding seed screening protocols? Also, who should I call if I get a presumptive positive and if another grower using the same seed lot that I purchased receives a confirmed positive, will I be notified and what should I do with that seed?

Thanks,
Peter Pod

Dear Mr. Pod,

Sprout production is a food business and there is no food business that is immune to the risk of food borne illness. In the sprout business contamination has been found to come from the seed, well water, de-hulling tanks, floors, and even employees. However, there is one major problem that sprout growers share. That is of course - seed.

Commercial sprout growers are aware that a percentage of the pathogens found in sprouts are introduced into the sprouting processes by contaminated seed. So making sure that the seed is not contaminated is a major risk reduction step in the production of sprouts.

Seed screening by the seed supplier is a major step forward in preventing contaminated seed from being used for sprout production. Yet like everything else, it is not perfect. It is just one of many risk reduction steps needed to keep the industry safe.

The probability of capturing a pathogen in seed screening can range from very low to over 99.9% depending on the amount of contamination and the seed screening protocol. Find out from your supplier the amount of seed being sampled from the seed you are receiving. In any case, in order to have 100% reliability in seed screening, a seed supplier would need to use up all of the seed.

However, there is someone who does seed screening better that this. That someone tests every single seed. Are they altruistic, a philanthropist, or a nut?

Actually, I am talking about YOU! The grower. You are the hero in this story.

You, as a commercial sprout grower, test the spent irrigation water that passes through each and every seed you produce. That is 100% seed screening.

As a community, sprout growers can prevent outbreaks by talking to their seed supplier when they have seed issues. Have a presumptive positive? Talk to your seed supplier. Have a confirmed positive? Talk to your seed supplier. Find mouse droppings or dead insects in your seed? Talk to your seed supplier. Find a hole in a bag that looks like a rodent could have been present? Talk to your seed supplier. Are there bird or rodent droppings on/in a bag? Talk your seed supplier. Talk to your seed supplier anytime you suspect anything that could possibly help them in their job to insure that the seed they sell is safe.

We are talking about Sprout Growers helping Seed Suppliers helping Sprout Growers. Talking substantially improves seed screening.

But what can you do when your seed supplier calls to say "a sprout grower just called and said that she has a confirmed positive on lot xyz that we shipped you three weeks ago?" The first thing you do is switch seed lots.

Hmmm, what if you don't have another seed lot? Do you stop growing sprouts until another lot arrives, or do you cross your fingers, continue growing, and not sleep at night?

Don't let this ever happen!

It is a good practice for all sprout growers to have two seed lots on hand. When that call comes, you can switch instantly. But there are other valuable reasons to have another lot. Whenever a sprout grower has rot problems or their shelf life is suddenly shortened, first thing to do is to go back to a lot that you know works. If the problem goes away, you may have a seed issue. If it doesn't, you can eliminate seed as a possibility.

Having a spare lot is actually simple and, contrary to what one might think, doesn't take any more inventory. It is just a manner of lot management. When you receive a new lot stop using the old lot immediately. Save it back.

You may be glad you did. Suppose you use up the old lot and then find the new lot does not work for you? If you kept back your old lot, no problem, switch back to it. You have plenty of time to get a different new lot from your seed supplier. Crisis averted.

The third time you get a new seed lot you will have a few bags of your first lot and what remains of your second lot. Test the new lot, then use up the first lot, and hold back the second lot until the fourth lot arrives.

This does not cost you any more in seed. It is just a good way to insure you always have a seed that you know works whenever you need it – such as when your seed supplier calls and gives you a heads up that a lot you are using may be contaminated.

Respectfully Submitted,

Dr. Sprout

How to Manage a Raw Foods Diet

by Steve Meyerowitz, Sproutman

The following is an interview with Steve Meyerowitz in the Italian magazine "Salute Oggi" (Health Today) about the benefits and also the drawbacks of a raw foods diet and how to how to incorporate this diet into the modern lifestyle of the average person.

What are the main principles of the "raw food" Philosophy?

Sproutman: First and foremost it is indeed a philosophy and you are correct in calling it so. It is a diet based on a belief system. Raw foodists believe in the principles of their diet just like religious followers believe in the tenets of their religion. Raw followers believe their's is the original diet. As the Bible in Genesis says: "I have given you every seed-bearing plant that is upon all the earth, and every tree that has seed bearing fruit. They shall be for yours for food." So it is at its core, an animal-free non-violent, spiritual diet that co-exists in peace with all other living creatures.

Just as with religion, there are degrees of differences in how the community practices and variations on how they interpret the basic tenants. There are raw foodists who are strict and those who are less so. Those who are Vegan, and those who take raw milk. Those who follow the diet 100% of the time and those that eat 80% raw.

But for me, the top three guiding principles behind this diet are those of healing, detoxification, and energy. In my opinion, this is the best diet for healing when there is "dis-ease;" the best diet for maximizing the amount of daily energy you have available for mind and body; and the best diet for maintaining a clean body including organs, glands, and all the way down to the cellular level.

What are the Benefits of Raw Food?

Sproutman: First of all, this diet forces a higher level of education about food and an increased awareness about what you eat and when you eat it. That's a good thing no matter what diet you are on. Secondly, this is a spiritual diet. It increases your awareness about your lifestyle, the earth as the source of your food, the sanctity of the environment including soil, air, and water, and a respect for other living creatures—a reverence for life. So it is going to influence or more likely change your lifestyle. And for the better—less stress, better quality of life, better health. Thirdly, it is a diet that focuses on the purity of the biophysical body. It treats the body as your inner temple. Thus, raw foodists choose only the highest quality foods. In today's high speed, fast food world of pesticides, preservatives, and micro-wave ovens....raw foodists will eschew all things poisonous.

Why and How did you start with this kind of diet?

Sproutman: I am simply a health seeker. I am where I am today primarily based on need. It's human nature isn't it? If you are suffering with a problem, you search for a solution. I endured asthma, allergies to foods, fabrics, flowers, etc., skin rashes, and constipation for the first 25 years of my life. I started visiting doctors regularly at age five. Was it all caused by my low quality American diet? By my lifestyle? By my genetic makeup? Probably some of them all. But the doctors were no help. I concluded that after 20 years, if they had not fixed me, they were never going to. Actually, my health was getting worse. I started interviewing other patients in the waiting room, whom I had gotten to know from my weekly visits. They were getting worse, too. That was the beginning of the end of my faith in the American system of drug treatment of disease. I set out on my own doing the only thing that is in our power as patients—I took control of my diet and lifestyle.

I did not immediately embrace raw foods as such. I started eliminating offending foods—dairy, wheat, sugar, commercial salt, and animal derived foods. All foods that could contribute to my allergies were eliminated. I even purified my drinking water. My goal was to eliminate anything that was not natural to the body. So, my first principle was purity, and that is one of the tenets of raw food.

I was lucky; I succeeded with my change of diet and my health problems retreated dramatically. I was so shocked by the transformation in such a short time, that I shared my success with everyone I knew. The raw part of the diet is a natural sequence. If you strip out most of the offending foods, you are left with natural foods—fruits, vegetables, nuts, seeds, grains, beans, sea vegetables. This does not require all raw, but if you are trying to clear your body of poisons—detoxification—then going all raw speeds up the process.

How can the Raw Food diet be integrated in a daily regimen without going fully 100% raw?

Sproutman: Start with just one meal per day. How about a smoothie (blended drink) for breakfast or lunch? In my book I Succhi della Salute, I have many recipes for such drinks that are both satisfying and highly nutritious. In general they blend your favorite fruits such as banana, apples, or berries with some nutritional powders such as yeast, wheat germ, or seeds like sesame or sunflower.

Or perhaps you could start your day with a fresh squeezed vegetable juice. One glass is the nutritional equivalent of eating three or more vegetable meals. And it all gets into your bloodstream instantly. Or you could just focus on increasing the quality of your food. Shop for organic foods. Eat only foods that are in season. Buy only those that are locally grown. This will automatically increase your intake of raw foods.

And when you do cook, do it judiciously. If you are going to eat a

How to Manage a Raw Foods Diet

grain for dinner. Pre-soak the rice or millet in the morning. By evening, all you will need to do is warm it up. You will preserve nutrition in these wonderful grains and avoid all the destruction that results from high temperatures.

Cooking food reduces the risk of contamination from viruses and bacteria. Doesn't this mean that raw foods are dangerous?

Sproutman: Sure, there is a risk of food contamination when anyone eats raw foods. But this is true whether you eat them 100% of the time or just 10% of the time. No diet is immune to food contamination. There is a long list of foods—meat, poultry, eggs, peanut butter, spinach, peppers, milk, melons and more, that have carried pathogens such as E-coli and salmonella.

I mentioned before that a raw foods diet requires a higher level of education. Raw foodists need to take more care in selecting their food, examining its quality and purity, and knowing its source. They must wash it, store it properly, and compost or dispose of it before it gets old. Raw foodists also protect themselves by taking probiotic supplements and foods. Since salmonella and e-coli are intestinal illnesses, paving the intestines with friendly bacteria such as acidophilus and bifidus creates a natural defense. Eating foods such as sauerkraut, kimchi, pickles, yoghurt, miso and other cultured or sour foods keeps high counts of these naturally protective bacteria in your gut. This strengthens your immune system and reduces the effects of food contamination. This is good advice for all of us.

Cooking food also helps its digestibility. But that's not possible with raw. How can you improve digestion on a raw diet?

Sproutman: First let us look at food in terms of its water. Water is the easiest thing to digest. Fruit and vegetable juices allow for the best digestion of anything you can eat. Similarly, foods rich in water are easiest to digest. You already know this because fruits are easy to digest and they are full of water. Leafy green vegetables are all better than 90% water. Even broccoli is 87% water. So raw can be an easy diet to digest because the foods are so juicy. However, if you eat dried fruit all day, you will be eating foods that are concentrated and difficult to digest. Fruits and vegetables pass through the stomach in about an hour. Denser foods—those with less water such as grains and beans—should be eaten after salads, for example, so they do not slow down its passage. So knowing what to eat and when to eat it is part of the art of making a good diet.

As for grains and beans, they must be germinated in order to be used on a raw diet. Sprouting is the only way to make these foods edible for raw foodists. It breaks down the proteins into amino acids and fats into fatty acids, softens them, and increases the water content. If you are a raw foodist who excludes grains or beans, you are eliminating an important category of foods. Either way, you cannot consume the same volume of beans raw as you would cooked. Raw foodists need to limit their portions of these sprouted foods. But keep in mind that the raw food diet can include 20% of foods as cooked. So 80/20 is officially considered a raw diet. I am in this category. As an alternative to sprouting, grains and beans could be lightly cooked. As mentioned before, judicious cooking is ideal. Boil water in an empty pot. Turn off the flame. Pour in the rice (or your favorite grain), put the lid on and come back 4 hours later. Many grains will be entirely softened at this point. Or you can warm them up and soften them some more. This approach minimizes the destruction of nutrients and increases the digestibility.

Don't you think that a raw diet, tightly vegetarian, is not well balanced?

Sproutman: I think that a raw diet and also a vegan diet both require more nutrition education, kitchen time, and effort in order to achieve a balanced diet. Let's face it, this diet is counter-cultural. There is very little support for it in our society. So anyone with dreams of a raw diet has an uphill climb. Of course, if you were to drop out of society, move to a tropical island, and hang in a hammock surrounded by fruit trees, you might think this diet is not so hard. But if you wish to live and work in modern society, you must be prepared for the extra time and effort it takes as also the questions, doubts, and teases from friends and family.

I am sure you realize that balanced health is not only a function of diet. Exercise, sleep, meditation, stress are all part of health. But as far as diet goes, all that is necessary for complete nutrition can be found growing on trees, bushes, on and below the soil, and in the lakes. A diet of nuts, seeds, grains, beans, vegetables, sea vegetables, and fruits provides our richest source of nutrients. Animals have been surviving on these foods in raw, uncooked form for thousands of years. Only man cooks his food. Raw foodists need to sprout their grains and beans, but that makes them even more nutritious. So whether or not you create a successfully balanced raw diet is not that different from the hard work required to achieve a balanced vegan, vegetarian, macrobiotic, low-carb, or religious diet. All the nutrition you need is available in the raw world. Whether or not you are successful in putting it together in a balanced way is up to you.

How can you satisfy your daily need of

How to Manage a Raw Foods Diet

protein on a raw foods diet?
Sproutman: First, I need to tell you that I believe a low protein diet is healthier than a high protein one and that protein has been over promoted in our society.

Why? Perhaps it serves the meat and poultry industry to promote themselves as high protein. But even so, these foods are not our best protein sources, neither in quantity nor in quality.

Actually, if you subscribe to the more-protein-is-better philosophy, then you would be eating more raw foods.

Raw sunflower seeds are 23% protein, almonds are 21%, raw green soybeans 13%, and spirulina (a dried seaweed-algae) is nearly 48% protein. Compare this to eggs 13%, meat 16%, and chicken 18% protein. Know that every natural food, every plant, and vegetable provides protein. So we are always acquiring protein in a healthy plant based diet. The reason peoples of developing countries experience protein deficiency is because they are not getting enough total food. Protein deficiency in the developed world, on the other hand, is extremely rare. In fact, I have more concern about us consuming too much protein. Excess protein needs to be broken down by the liver into ammonia and then to urea that is excreted by the kidneys. Protein broken down by animals is organized into amino acid combinations that are ideal for those animals. I believe humans are better off sourcing their own proteins from plant foods rather than second hand from other animals. Eating lower on the food chain provides better quality, purity, and is less work for our digestion system.

Can pregnant women and children practice a raw foods diet?

Sproutman: There is nothing inherently dangerous about raw foods. But as with any diet, we need to choose what we eat according to our bodies needs. The success of any diet is largely up to the individual and that goes for any state of health or stage of life. Pregnant women and infants have very specific needs that should to be addressed no matter which diet is practiced. Nutrition deficiencies are sadly much too common for this group when they eat a conventional diet. Raw foods, on the other hand, are the most nutritious foods we have. A well balanced raw food diet can be ideal for pregnant women and infants.

A big issue for pregnant women and infants is food safety. Conventional diets have many hazardous ingredients that present serious risks to the health of the pregnant mother and the developing fetus. The worst offenders are pesticides and fungicides that affect the new nervous system and endocrine (hormone) development. Don't forget that the majority of these chemicals are also proven carcinogens. They are designed to kill living organisms—insects, fungi, and plants. Although low level amounts of these poisons may not produce immediate effects in adults, they are much more potent and dangerous to fetuses and infants. Such things as alcohol, smoking, caffeine, high fat foods, and fried foods can all negatively influence the biochemistry of a fetus, infant, and mother. A young immune system is less able to inactivate the toxic byproducts of these foods and cannot protect itself at such a critical time in its development. So, a diet rich in raw, natural, and organic foods is best in terms of safety and nutrition.

Many people say adopting a raw food diet for a short period can help them detoxify, but in the long run, this diet can lead to some deficiencies. What do you think?

Sproutman: Many have been inspired to practice raw foods and later left the diet. But this happens with all diets. Whether it is raw food, vegan, macrobiotic, Kosher, Islamic, blood type, Atkins, South Beach, or Zone diet, most people practice the diet for a limited period of time. As for deficiencies, as I mentioned earlier, the secret to a healthy, balanced diet is how you practice it. Any diet can be executed poorly. The most successful raw foodists spend more time in the kitchen, read books and attend classes, and generally adopt a low stress lifestyle. How much time and effort you apply to your diet will determine your success.

There is nothing wrong with adopting this diet or any other, for a period of time—no matter if that's one year, five years, or more. But the question is: Are you trying to cure something? A diet of raw, sprouted, and living foods is the most therapeutic diet I know. But once your health has improved, perhaps you will be inclined to expand your diet. Or maybe you will continue it because you are comfortable, feel great, and believe in the diet for such things as longevity and disease prevention. It all depends on how comfortable and confident you are.
Truly, as our bodies change our diets change. The diet you had in your twenties is not the same as you have in your fifties. Your body is not the same. Your health issues are not the same. We must adapt our diet to match our needs. Explore your motivation. Are you facing a health challenge? Examine your lifestyle. Can you successfully practice this diet? Do you have a support system amongst friends and family for such a diet? Stir all these ingredients in the big recipe of life and injest for as long as it remains delicious.

This Interview was originally made for the Italian magazine "Salute Oggi" (Health Today). Salute Oggi interviews Steve Meyerowitz, Sproutman.

Luminometer - A tool to help you verify sanitation effectiveness...

As a sprout grower, you know that a sanitary environment is essential for the production of safe, high quality sprouts. But, how do you make sure that your cleaning and sanitation programs are effective? How can you verify that all food residues have been removed and that invisible microorganisms that could cause illness or premature spoilage of your sprouts have been removed or at least reduced to acceptable levels?

Cleaning program effectiveness is commonly verified through "environmental monitoring", by looking at and testing the environment that food is near or contacts. It is a preventative approach to food safety. Environmental monitoring often consists of visual inspection and two types of testing. Testing includes ATP bioluminescence to test surfaces after cleaning plus microbial monitoring after sanitizer application. In different ways, both testing methods confirm that no viable bacteria remain. This article will primarily focus on ATP bioluminescence testing which uses a tool called a luminometer.

ATP (adenosine-5'-triphosphate) is an energy molecule found in all living cells, including food, bacteria, yeast and mould cells. ATP bioluminescence uses a tool called a luminometer to measure the amount of organic material (food residues and microbial populations) collected from a swabbed surface. The idea for this testing method is based on the way a fire fly intermittently lights up in the backyard in summer. The firefly combines the enzyme luciferase with luciferin and ATP to cause a light reaction. Similarly, ATP in the organic matter picked up from a swabbed surface reacts with an enzyme/chemical solution in the luminometer swab holder to produce light. The intensity of the light is proportional to the amount of ATP and is measured as relative light units (RLUs) by the luminometer. High RLU values indicate high levels of surface organic matter resulting from inadequate cleaning practices.

Initially, using a luminometer may seem complicated but, very quickly it becomes an easy tool to test the cleanliness of a food contact surface. The basic procedure is as follows:
- Remove the swab from the sampling tube (these devices often look like an oversized Q-tip);
- Swab the surface you wish to test (usually a 4" x 4" area);
- Reinsert the swab in the tube;
- Press the built-in plunger to release the enzyme and luciferin onto the swab tip;
- Insert the tube into the luminometer;
- Wait about 10 seconds and read the result.

Sampling a food contact surface with a luminometer swab

From a user point of view, one of the positive aspects of this test, is that you can have a result from start to finish in less than one minute. As indicated below, there are a number of luminometer manufacturers. Depending on features, they range in price from $1,000 to $3,000. Each swab costs about $2. Some swabs can be stored at room temperature, while others require refrigeration. Depending on the make of the luminometer, the swabs have a shelf-life ranging from 8 to 12 months when stored under the temperature conditions specified by the manufacturer.

BioControl http://www.rapidmethods.com/products/mvp.html
Scigiene Corporation http://www.scigiene.com/product_details.php?prodId=5
Hygiena http://www.hygiena.net/all_products-hyg_mon.html
Charm Sciences Inc. http://www.charm.com/en/instruments/instruments-luminometers.html
3M http://solutions.3m.com/wps/portal/3M/en_US/Microbiology/FoodSafety/product-information/product-catalog/
Neogen http://www.neogen.com/FoodSafety/AP_Index.html

Luminometer - A tool to help you verify sanitation effectiveness...*(continued)*

Once you test a number of surfaces you will get a good sense of how clean surfaces are and which surfaces need further cleaning. Sometimes surfaces that look visually clean are not clean and have high luminometer readings. All surfaces with high luminometer readings should be cleaned and checked again. Sometimes the cleaning method used is not effective and will need to be modified. You may find that some surfaces are also very difficult to clean because of their design or construction.

Occasionally, you may find surfaces that don't look clean but have unexpectedly low luminometer readings. Sometimes dirty surfaces have almost no living material on them and so, there is no ATP. These surfaces should be cleaned again, as well, since the remaining residue while not living, may provide a food source for any bacteria that come in contact with this surface. Just like us, bacteria need food, water and a comfortable temperature to flourish. Taking away their food supply is an effective way to minimize their growth.

The most accurate assessment of cleaning effectiveness will be obtained if sampling locations are randomized with special attention paid to food contact surfaces that may be difficult to clean. While sampling at a large numbers of sites will provide a more accurate assessment, as few as 15 luminometer swabs taken in key locations (e.g. growing, harvesting, washing and packaging areas) can provide a good indication of the overall cleanliness of your sprout facility. Repeated swabbing will provide good overall information on cleanliness and on particular food contact surfaces. Keeping records of your luminometer testing is a good idea for your own information and to show that you have an active and effective cleaning and sanitation verification program in place.
It is helpful to record the sampling date, time, and sample location to pinpoint where and when high readings have occurred and where action is needed.

An effective verification program requires some microbial monitoring to complement the luminometer testing. While a clean surface is generally an indicator of low microbial levels, it is not a guarantee that the area is microbiologically clean. Microbial types and populations can be determined only by microbiological analysis of surface areas. This is commonly done by swabbing surfaces with some form of sponge swab then sending them to a lab for testing. A variety of sampling tools and approaches exist. The capabilities and limitations of each approach must be carefully considered to ensure the most appropriate is chosen.

An effective cleaning and sanitation program, verified by environmental monitoring, will help confirm that your facility is hygienic and has the ability to produce safe, high quality sprouts.

Bengt Schumacher
Risk Management Specialist,
Ontario Ministry of Agriculture, Food and Rural Affairs

The History of the NCFST

Two Decades of Scientific Excellence

For more than 20 years, NCFST has provided a neutral ground where industry, academia, and government scientists can pool their scientific expertise and institutional perspectives to address food safety and nutrition issues in a proactive manner. The NCFST is the only center where industry can work collaboratively on projects with FDA scientists on food safety, nutrition and technology research. Membership in the NCFST allows companies to gain an early insight into emerging food safety and public health issues from the CFSAN perspective to assess the safety of new technologies that may be important for innovation. This early collaboration with FDA may also facilitate speed to market through the regulatory process.

The scientists from IIT and FDA's Division of Food Processing Science and Technology working at NCFST are experienced in the disciplines that affect food safety and quality, including food science and technology, food process engineering, chemistry, chemical engineering, packaging, microbiology, and nutrition. By bringing together key players in food safety regulation and technology development, the NCFST provides a sound scientific basis for policy decisions affecting the nation's food supply. The food industry and consumers benefit from improved processing and packaging systems that assure food safety and quality.

National Center for Food Safety and Technology

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 decided 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!

LINK TO THE PRESENTATIONS FROM CONVENTION

Day 1 Talks

Food Safety Australia Slides - Amanda Hill

ISGA Sprout Task Force - Armand Paradis

ISGA Safety Seed - Benjamin

Sprouts and the Obesity Epidemic - James Galloway

Japan Safety Slides - Latiful Bari

Determination of Pesticides Residues in Food - Canping PAN

Sprout Audit Checklist (Second Draft)

Tangential Flow Filtration Paper - K. Warriner

Bacteriophage Research Paper - K. Warriner

Bacteriophage Sprouts - K. Warriner

Sanitizer Research Paper - K. Warriner

Pathogen Distribution in Mung Bean Beds Paper - K. Warriner

Risk Management - Richard Whiting

Day 2 Talks

Health Promoting Foods - Britt Burton-Freeman

Health Benefits of Sprouts ISGA Flyer

Roots of Health Enhancing Sprouts - Elizabeth Jeffery

Talk and Recipes - Sumiyo Kawakami

Branding Plan and Process - Paul Pliakas

Recipe Book - Sumiyo Kawakami

*****If you have trouble opening any of the above links, please e-mail Rich Wolfe for the member username and password.**

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