Welcome to the International Sprout Growers Association overview of US industry

September 25, 2018

Carmen Wakeling and family





OUR MISSION

Eatmore Sprouts & Greens Ltd. provides fresh, locally grown, certified organic sprouts and greens year round in the Comox Valley, and beyond for a happier healthier planet.





To promote global collaboration among professional sprout growers and suppliers, in order to promote the health benefits of sprouts, and to work with researchers and government agencies to assure the safe production of sprouted foods.

Why do we work so hard for Sprouts?

- Sprouts are a really great source of nutrition and are a food that can be grown close to home and year round.
 Sprouts can take a small seed and increase both the volume and nutritional value of that seed and could be an important part of feeding communities internationally during uncertain food availability.
- Edible sprouts such as alfalfa, broccoli, mung bean, and radish sprouts, are excellent sources of antioxidants, essential amino acids, and a handful of nourishing vitamins and minerals. As such, sprouts have been championed by foodies as a veritable "superfood" in recent years and have gained significant popularity in the natural food world and beyond.¹

The History of Sprouts in the USA



Consumption

Although sprouts have been a diet staple in India and other parts of Asia since ancient times, it remained relatively unpopular in the United States until WWII.⁵

Growing concerns of wartime food shortages brought Dr. Clive McCay's work with soybean sprouts into the forefront.²⁶

Dr. McCay recognized the great benefits of soybean sprout cultivation and consumption, highlighting their nutritious properties, rapid growth period, easy preparation, and ability to be grown all year round.²⁶



Collaboration is essential. By working together we can achieve things no one of us could do alone

• Here and now:



Alfalfa sprouts in growth



At this point I would like to bring forward the good the bad and the ugly about sprout production and the first year with the new FSMA regulations.

FEEDBACK: Batch size and testing

- Batch size and testing has been a challenge. US Board members have expressed concerns about the impact that the changes have made to industry.
- As laid out in Standards for the Growing, Harvesting, Packing, and Holding of Produce for Human Consumption for Sprout Operations: Guidance for Industry¹

"Production batch of sprouts means all sprouts that are started at the same time in a single growing unit (e.g., a single drum or bin, or a single rack of trays that are connected to each other), whether or not the sprouts are grown from a single lot of seed (including, for example, when multiple types of seeds are grown in a single growing unit)."

Feedback continued

- Large size growing batches have forced producers to change strategies to save money. Some of these changes may potentially reduce the capacity for the testing programs to capture problems.
- Due to the increase in cost and the way the standard is accepting large batches, producers have shifted their testing strategies away from small batch composites to single large batch starts.
- Less overall volumes are being pulled. This seems detrimental to all stakeholders involved

More feedback

- We would like to recommend that hold for release testing is appropriate but that smaller growing vessels should be allowed to be drawn and composited. This composite could be done either at the lab or in house.
- We agree with testing but from a practical and risk reduction point of view we would advocate for re-evaluation of test strategy making sure that a cost evaluation including labour and increase to transport costs be considered.

"Lets work together to evaluate the testing strategies as currently laid out and see what we can do better!"



FDA Summary Report: Sprouts

U.S. FOOD & DRUG ADMINISTRATION FY 2014 – 2016 Microbiological Sampling Assignment Summary Report: Sprouts Office of Compliance Center for Food Safety and Applied Nutrition August, 2017

Industry has many questions about testing strategy and the outcomes of this report

Study Findings

Sample Type	Number of Samples Collected	Percentage of Samples Collected
Seed	170	20.6%
Finished Product	469	56.8%
Spent Irrigation Water	186	22.5%
Total	825	100%

Sample Type	Samples Collected	Number of Positive Samples	Percentage of Positive Samples (by Sample Type)
Seed	170	4	2.35%
Finished Product	469	1	0.21%
Spent Irrigation Water	186	1	0.54%

Sample Type	Samples Collected	Number of Positive Samples	Percentage of Positive Samples (by Sample Type)
Seed	170	1	0.59%
Finished Product	469	6	1.28%
Spent Irrigation Water	186	1	0.54%

Will the testing program continue?

- It appears that test results in this report do not reflect accurately the outcomes that industry sees.
- As an industry we will be working to compile data from industry over the thousands of tests that have been completed to develop a comparative document.
- There is some in the industry that consider this report does not reflect the reality of the industry from a results based place.

Seed Treatment

- Our industry feels that it continues to be important to work for alternatives in seed treatment.
- Look at work done elsewhere and work to find ways to support approval.
- We Like the fact that we can use validation documents to prove seed sanitation.
- We would like to make sure that treatments are evaluated for environmental impact and organic acceptance.
- Look at conditional use permits for chemicals as needed.
- FDA Recognition That Lower Levels of Calcium Hypochlorite Can be Just as Effective in Reducing Pathogens
 - 2,000 ppm just as effective as 20,000 ppm

More recommendations.....

- We recommend that the FDA Reinforce the Fact That Sprout Growers are in the Best Position to Ensure That Seeds Are Appropriately Treated. We would like to see more seed treatment methods allowed.
- Some members would like to ask that the FDA reevaluate the Coverage of Mung Beans Under the Produce Safety Rule and Draft Sprout Guidance.

Seed Industry Issues with FDA's Draft Guidance

• A Single Positive Test Result Does Not Always Mean That a Seed Supplier's Lot is at Fault

RESEARCH NEEDS



Growing food on Mars is really cool and it is exciting to research.....but will that help the sprout growers on earth? ⁽²⁾ Maybe.....

What do we need to know?

<u>Temperature issues</u>

- Rejection of our sprout products due to temperature issues keep arising.
- There are many reasons for this.
- Sprouts are a living product and continue to produce heat when transferred to refrigeration.
- Some products such as dense sprouted bean mixes can continue to heat up upon entry to cooler.
- We would like explore if the temperature of sprouts is key to food safety.
- We feel that because they grow in warm conditions for 2-6 days (approximately) there may be little effect of moderate temperatures on sprouts.
- I have heard it argued over the years that cooling them too fast may have a detrimental effect.

What else?

• Continuing to work on the microbiome:

 Both looking to see if there are nutritional benefits to the biome and to explore the possibility of competitive exclusion of pathogens in sprouted products.

And even more.....

- We are interested to connect with the Nutrition arm of IFSH to explore more deeply how sprouts are a key component of human health and nutrition now and in the future.
- We are as well interested in continuing to pursue concepts for growing sprouts in new ways that may increase food safety, nutritional benefits and human health.

Last but not least

- It is essential to human health to continue to explore impact of eating a diet dense in foods such as sprouts.
- Our industry has been very proactive over the years to continuously improve its practices and engage with all stakeholders to make sprouts an important part of the foods of the future. We feel that by staying focused on this we could play an essential role in the years to come with uncertain climates and extreme weather.
- Thank you for all your support with this work.

Thank you so much for taking the time to let me share this information with you.



ISGA Convention attendees 2016, Old San Juan, Peurto Rico





ISGA BOD Meetings: Cape Cod, USA, 2018