

Food Fraud Risk Reduction Steps

This session will show practical applications to take in the supply chain – from the field to your facility – to reduce food fraud risk.

Greg Sommerville
Global Supplier Verification
on behalf of Frontier Co-op

FRONTIER CO-OP

ONE CO-OP. THREE BRANDS.



OUR PRINCIPLES

Values

In all that we do, at all times and with all people, we will conduct our affairs and the affairs of the company with unwavering integrity

Mission

Nourish people and planet. Always be fair.

Purpose

To inspire wellness in the communities we serve



OUR #1 RISK

**A serious supply chain failure that affects our brands
reputation**



Agenda

- Setting the scene
- Industry Challenges
- What you should be doing
- What Frontier Co-op does differently
- What could the future look like

Setting the Scene

- **WE ARE NOT ALONE**
- Counterfeiting is now the largest criminal enterprise in the world. The trade in counterfeit and pirated goods is currently a **\$1.7 trillion per year** industry—that's **more than drugs and human trafficking**—and is **expected to grow to \$2.8 trillion and cost 5.4 million jobs by 2022.**
- <https://www.forbes.com/sites/wadeshepard/2018/03/29/meet-the-man-fighting-americas-trade-war-against-chinese-counterfeits/#f8a0fc71c0d6>

Who Flew Here?

- Aerospace Manufacturing and Design
- <http://www.aerospacemanufacturinganddesign.com/article/an-unnerving-reality/>
- According to an FAA estimate, about **520,000 counterfeit or unapproved parts** are currently making it into planes annually, which is about **2% of the overall 26 million active parts**. While 2% may seem like a small number, consider that a typical passenger aircraft contains up to 6 million parts, and consider the extreme tolerances for failure to which each part must adhere.
- **120 000 counterfeit or unapproved parts / plane**

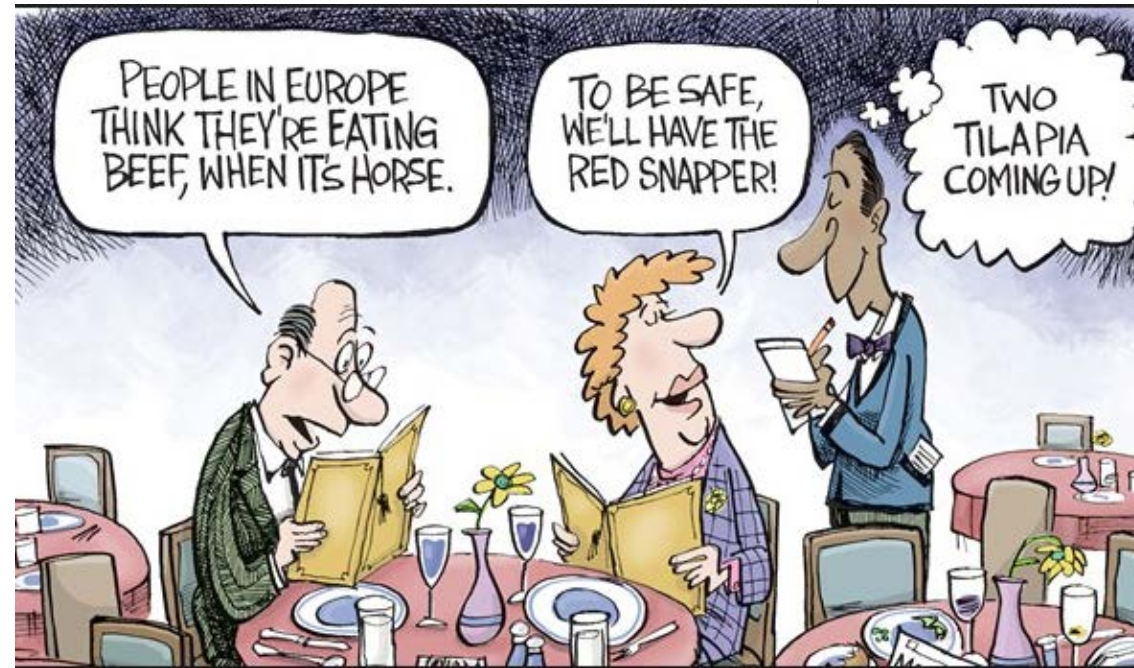
Everyone involved in the spice industry has a stake in ensuring that adulterated spice is not being traded.

Identification and Prevention of Adulteration
Guidance Document
ASTA

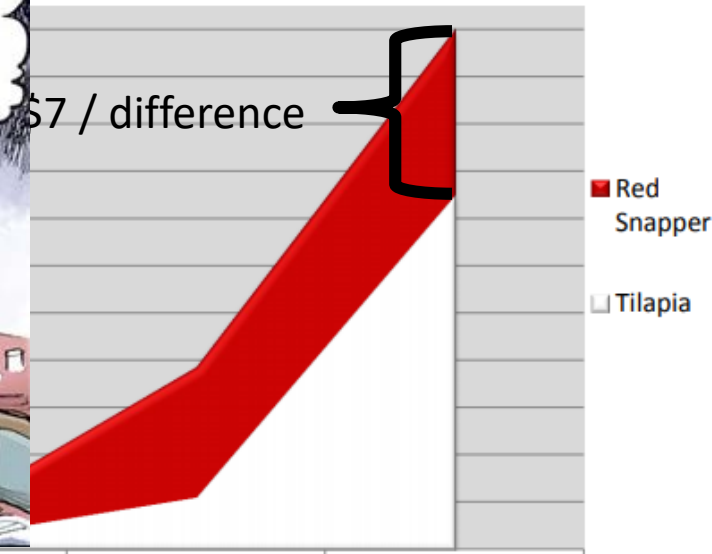
Challenges

- Bad Industry Players
 - Purposely
 - Unbeknown
- Fraudster becoming more technical
- Media
- Investment funds
- Regulation
 - Country specific, FSMA, FSVP
 - State specific, prop 65
- Testing
 - Limits of detection
 - Ability to detect
 - Retailers, food brands
 - Consumer Associations
- Changing consumer tastes
- Moving origin workforce away from farming

It's lucrative



ounce fillet of Tilapia and "Red Snapper" Moving Up the Supply Chain



The typical example is Asian catfish, which is mislabeled and sold as eighteen different – and more expensive – types of fish. (http://usa.oceana.org/sites/default/files/global_fraud_report_final_low-res.pdf)

http://oceana.org/sites/default/files/reports/Oceana_Price_Report.pdf

Industry Challenges

Food Fraud

From John Spink in 2014 for GFSI Direction on Food Fraud and Vulnerability Assessment (VACCP)

- Substitution
 - Labeled as a herb but actually another type of leaf
- Dilution
 - A herb mixed with something else
- Counterfeiting
 - Labeled as X brand but actually not
- Unapproved enhancements
 - Melamine added to increase protein levels
- Grey market production / theft / diversion
 - Excess production from actual runs
- Mislabelling
 - Altering slaughter dates on meat (UK)
- Concealment
 - Harmful food coloring added
 - Sudan red, lead chromate

<http://foodfraud.msu.edu/2014/05/08/gfsi-direction-on-food-fraud-and-vulnerability-assessment-vaccp/>

Food Fraud - Coconut

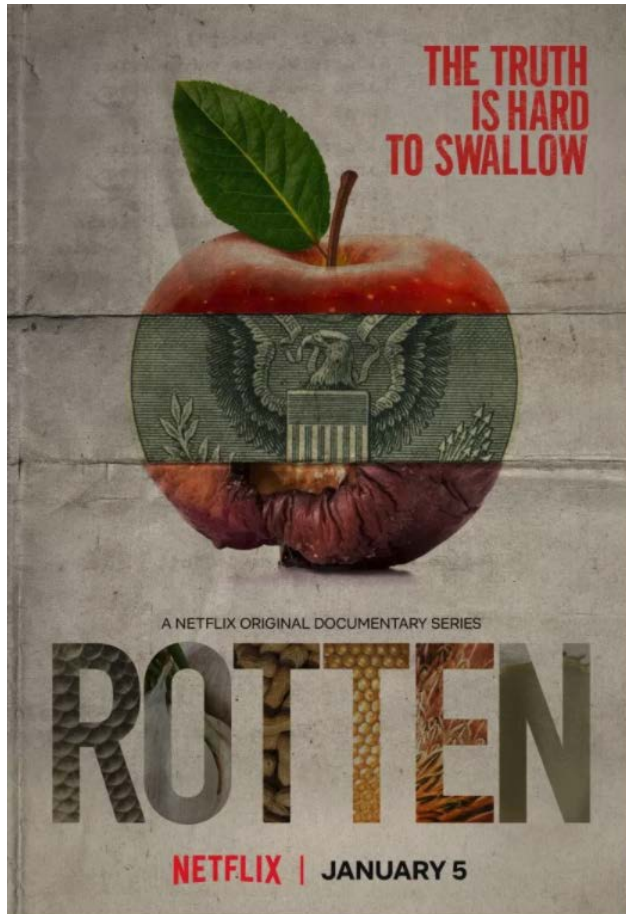
There is increasing demand for coconut products in developed countries, with coconut water, milk, snacks, oil and ingredients for cosmetics all registering large increases in sales volumes.

- A well-known brand of **dairy-free coconut 'yoghurt'** has been recalled in the United Kingdom due to the presence of undeclared milk. The brand owner claims to have been **defrauded by a supplier**. 22/02/2018
- The following frauds are likely:
 - **dilution** of coconut water, milk and oil with cheaper liquids such as water, dairy products and vegetable oils,
 - **addition** of undeclared sweeteners such as cane sugar
 - **misrepresentation** of organic and virgin (oil) status,
 - **misrepresentation** of ethical sourcing or country of origin,
 - **boosting of appearance, mouthfeel or colour** with dairy ingredients (warning: allergen risk!)
 - <https://trello.com/c/4GqfF6Oh/381-coconut>

Managing the Supply Chain - Australia

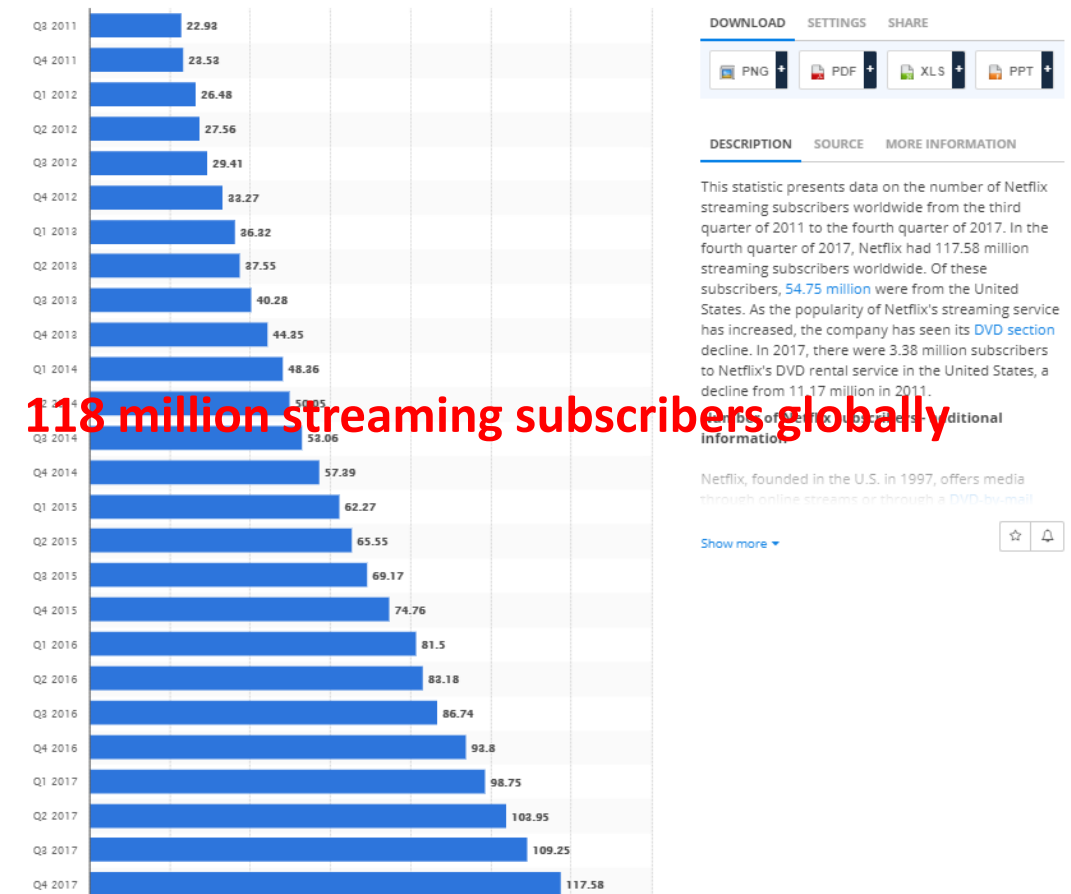
- <https://www.choice.com.au/oregano>
- *The feedback from those that responded suggests the adulteration may be occurring further back down the supply chain, **and it's not just consumers who are the victims of fraud.***
- ***"To find that we have been supplied a product that is not as per provided paperwork nor our own product specification is extremely shocking and disappointing,"** XXXXXX told us. On learning of the situation it immediately notified its retailers and advised it would hold and not re-supply its product "until such time that we have absolute assurance of the integrity of the oregano". It told us its supplier was undertaking further tests on this product and would conduct additional "authenticity/botanical" testing in future.*

Netflix gets into the game



- Honey
- Allergies
- Garlic
- Chicken
- Milk
- Cod

Number of Netflix streaming subscribers worldwide from 3rd quarter 2011 to 4th quarter 2017 (in millions)



<https://www.statista.com/statistics/250934/quarterly-number-of-netflix-streaming-subscribers-worldwide/>

Glaucus Research - 2012

We founded Glaucus Research Group California, LLC in 2011 to help investors navigate treacherous financial waters in search of great investment opportunities.

- Pesticides Abound. **100% of the tea samples contained pesticides, many of which are classified by the EPA as Possible Human Carcinogens.** One of Teavana's most popular and expensive teas, Monkey Picked Oolong, was the most **contaminated with 23 pesticides.**
- Teas Violate US Law. 100% of the tea samples violate U.S. food pesticide standards (CFR Title 40 sect 180), meaning they are 'adulterated' under the FDCA and subject to federal seizure. **We believe Teavana will recall** its adulterated teas rather than risk the civil and criminal liability it may incur by knowingly selling adulterated products over Black Friday weekend.
- Broad Failure of EU Pesticide Tests. Contrary to Teavana's representations in its [SEC](#) filings, 77% of the tea samples failed the European Union pesticide import standards (EC 396/2005) for dry teas, meaning that **such teas would be banned from sale to consumers in the European Union.**
- Banned Pesticides. 62% of teas tested showed traces of the pesticide Endosulfan, which has been banned by the US, China, the EU and 144 other countries because its use **may impair fertility, cause harm to unborn children and other damage to agricultural workers.**

Teavana Response

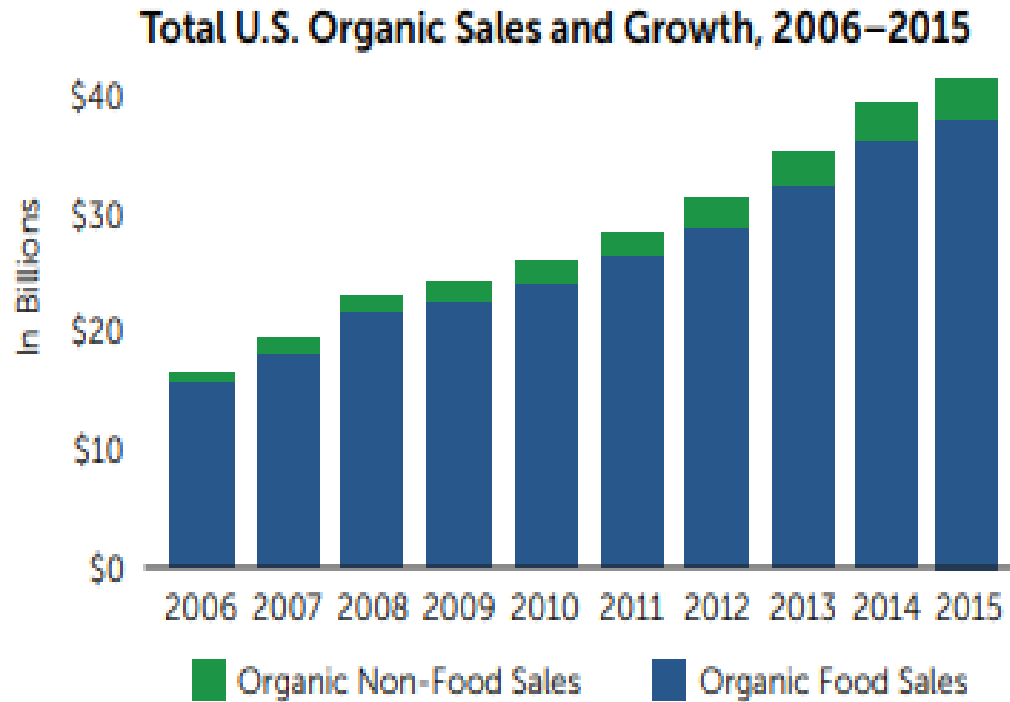
- Teavana's teas undergo **rigorous third-party testing** on each batch of teas based on international food safety standards including European Union regulations, which are widely considered to be the most stringent in the world.
- Consistent with that, the Company has established internal procedures and **comprehensive third party testing** to ensure all tea is safe and within those guidelines.
- Teavana **refutes the report's conclusions**. The group that published the report is a short-seller and may benefit financially from the allegations in the report.
- Teavana's **teas are safe and of the highest quality**.

The Reason

- **“We are short Teavana and therefore stand to realize significant gains** in the event that the price of stock declines,” notes the Glaucus report. “We do not express any opinion as to whether any of the food products discussed herein are safe for human consumption.”

<http://www.businessinsider.com/teavana-pesticides-2012-11>

OTA Figures



- Organic sales have increased from \$3.6 billion in 1997 to \$43.3 billion in 2015.
- Growing so fast people are cutting corners
- Financial rewards far outweigh criminal prosecution
- Is demand outstripping supply?

Professor Elliott

Director of the Institute for Global Food Security at Queen's University Belfast

The **most vulnerable sector at present is organic food production**, where fraudulent activity was “**very difficult to detect scientifically**”.

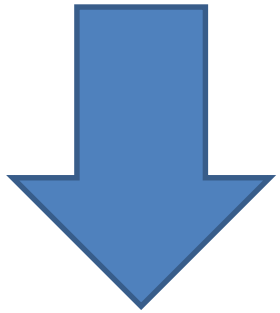
New Food's Food Fraud Conference in London

https://www.newfoodmagazine.com/news/65161/food-fraud-opening-elliott/?utm_content=bufferc800c&utm_medium=social&utm_source=linkedin.com&utm_campaign=buffer

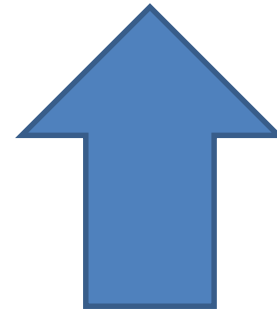
Science has **yet to deliver reliable ways of detecting fraud in organic foods** (though we are working hard on this).....believe the level and frequency of checks, inspections and audits are **not geared to pick up fraud in organic supply chains**.....these two facts together and you get the word ‘**opportunity**’However, may I suggest that if you are involved in producing, buying or selling organic, you gather your teams together to think about how to protect yourself - and your sector - better from criminals who will exploit any and every small chink in your armour....**The opportunity is there. Someone will take it.**

<https://m.thegrocer.co.uk/564741.article?mobilesite=enabled>

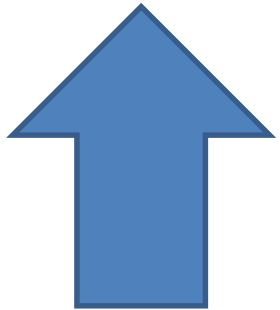
Why Fraud in Organics



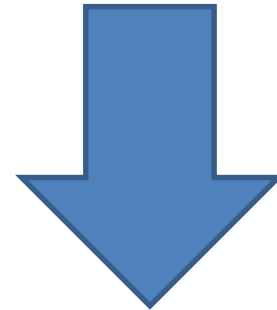
LOW DISCOVERABILITY



HIGH GROWTH



HIGH REWARDS



LOW PENALTIES

Organic Market

- 36 million pounds of soybeans traveled from the Ukraine to Turkey to California.
- Somewhere along the way, those beans were illicitly designated as “USDA Organic,” a move which added approximately **\$4 million in value to the shipment.**
- Needless to say, the stakes on this kind of fraud is extremely high – not just for those making a million dollar windfall, but for honest organic farmers in the US who are seeing their prices undercut.
- broker for the soybeans emailed a statement saying it may have been “**provided with false certification documents**” regarding some grain shipments from Eastern Europe. About 21 million pounds of the soybeans have already been distributed to customers.

https://www.washingtonpost.com/business/economy/the-labels-said-organic-but-these-massive-imports-of-corn-and-soybeans-werent/2017/05/12/6d165984-2b76-11e7-a616-d7c8a68c1a66_story.html?utm_term=.b72dea023b42

The Result

- The imported corn and soybean shipments examined by The Post were largely destined to become animal feed and enter the supply chain for some of the largest organic food industries. Organic eggs, organic milk, organic chicken and organic beef are supposed to come from animals that consume organic feed, an added expense for farmers that contributes to the higher consumer prices on those items.
- **Non organic end product!!**

What to do?

Follow ASTA Recommendations

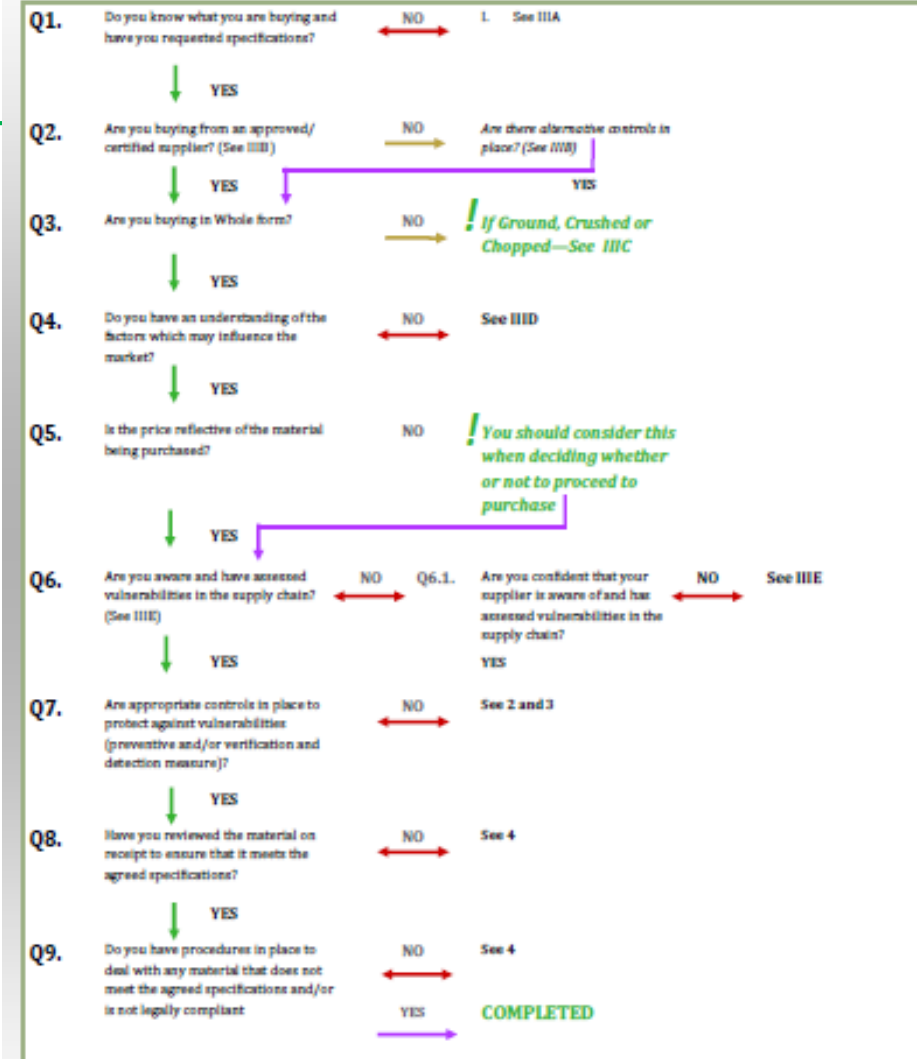
Identification and Prevention of Adulteration Guidance Document

- Companies should ensure that suppliers undertake an appropriate risk assessment and ensure that all relevant systematic controls are in place to prevent adulterated materials from entering the food chain. Risk assessments and controls should be based upon known and foreseeable food safety issues. The following elements should be considered as part of any risk assessment.
 - Country of origin of the product
 - Nature of the material (e.g. whole, ground or crushed)
 - Type of spice
 - Supplier selection and approval:
 - Raw material control
 - History of supply
 - Capability of meeting U.S. requirements
 - Adherence to Good Manufacturing Practices (GMPs)
 - Adherence to HACCP principles
 - Traceability
 - Third party certification
 - Testing capabilities and accreditation

Starting Point

ASTA Recommended Decision Tree

Decision Tree to Protect Spices against Supply Chain Vulnerabilities



NB: Assessment of Supply Chain Vulnerabilities is an ongoing process which requires regular review.

First Steps

- Understanding where your products come from
 - Try and work at origin
- Strong, detailed, approved specifications
- Approved supplier program
 - Including food contact packing materials
 - Brokers, US based suppliers as well as overseas suppliers – it is our brand
 - Verify program – don't bet it all on third parties
 - Know your suppliers' supplier
- Working with suppliers who process whole material / as whole as possible
- Complete risk assessments on
 - Origins
 - Past product incidents
 - Similar products history

Cost chain

- Understand the factors influencing the raw material market
- Pay a fair price
- Removing the non value supply chain nodes
- Understanding the costs associated in the supply chain
- If the price is too cheap then it's not the product you want
- If the ground, treated product is cheaper than the raw material, red flags should go up!!

Focus on Quality

- Build lab capability at origin, share methods and watch outs
- Audit incoming product to ensure strict compliance, testing against known adulterants for various products
- Share knowledge of upcoming regulatory requirements and emerging trends with suppliers
- Survey the food supply chain for “what’s next”, vulnerabilities
- Ensure two way communication
- Performance evaluation

What Frontier Co-op does differently

Frontier Co-op have herbs, spices, teas

Approximately 80% organic

Supply Chain

- Look for strategic partners, build a strategic sourcing model
- Not reliant on just paperwork
 - Concerns re GFSI
 - Built our own additional addendum
 - Verify suppliers on a timely basis using purchasing, quality and supply integrity based on risk
 - Organic certificates
 - Organics used to be a process standard and now moving to a testing standard
 - Farmers double certified and selling product twice
 - Ensure material balances are completed
- Understand residue testing
 - Why choose certain molecules or a certain screen
- Approved COA
 - Verified
 - Approved, mainly, 3rd party labs
 - Sampling agreement
- Continue to audit products

Supplier Management

- Developing suppliers to meet Frontier Co-op requirements
- Providing a path way to success with internal resources
- Partnering with certification bodies to recommend and assist suppliers move up the value chain
- Improving supplier capabilities and understanding of requirements
- Share expectations through a supplier expectation manual
- On site CONSULTATION audits
- Vulnerability assessments

Strong Supplier Relationships, including Farm

- Understanding economics of origin
- Working with like minded suppliers
 - Co-ops
 - Sustainability not profit lead
 - Make suppliers feel like partners
 - Ensure farmers / farming groups are part of the conversation
- Having suppliers understand Frontier Co-op's way of doing business
- Future move to work more direct with farmer groups
- Building communities
- Strong two way communication

Working with farmer groups thru the WELL EARTH PROGRAM

- Frontier's sustainable and ethical sourcing program
- Dedicated Manager
- Focuses on 5 aspects of our suppliers' business practices
 - Worker Treatment
 - Long-Term Sustainable Production
 - Environmental Sustainability
 - Community Involvement and Investment
 - Food Safety & Quality.
- We are building an on-line, digital database of our suppliers development – providing assistance where we find gaps and building on strengths they already possess.

What Frontier Co-op do differently

- Understand that to become organic takes 3 years
 - Presently some suppliers are offering immediately
 - Assisting suppliers / farmers through the transition process
- Develop suppliers, work with suppliers that may not supply to us, help the industry rise overall
 - An issue that affects one of us, affects all of us
 - Remember the peanut in cumin or sudan red adulterations
- Build an environment of trust
- Transparent internally and externally
- Build solid chains of custody
- Understand organic is NEVER going to cost the same or be cheaper than conventional product

Future Look

What could the future look like

- Exchange fraud related cases – share, be transparent, partner, exchange
 - Food Industry Intelligence Network (fiin) - curating a database to collect anonymized (via legal host) industry data on food authenticity testing
 - <https://www.campdenbri.co.uk/news/fiin.php>
 - European Commission has launched a “Knowledge Centre”, operated by the Joint Research Centre for food fraud and quality – early warning and info sharing
- Have a whistleblower notification system
- Predict future issues from present events – map crop failure, trends
- Use technology to allow improved traceability and material management
- Origin / material pesticide screens based on risk assessments led by labs vs companies
- Educate origins on regulations and requirements – consistency
- Use expert 3rd party resources for auditing against US requirements

Increase Penalties

- Adulterators to face life imprisonment
- <http://www.thehindu.com/news/national/adulterators-to-face-life-imprisonment/article23367038.ece>
- Govt. to follow law commission mandate, hike fine from ₹1,000 to ₹10 lakh (\$15 380)
- The State government will impose exemplary punishment on food and milk adulterators, and plans to increase the penalty up to life imprisonment.

March 9 panel discussion at Natural Products Expo West in Anaheim

https://www.foodbusinessnews.net/articles/11496-dont-judge-an-ingredient-by-its-organic-label?id=11496-dont-judge-an-ingredient-by-its-organic-label&ajs_uid=2783D5355267A7V&ajs_trait_oebid=6678E9140356B0P

fraud prevention starts in your own business

Jake Lewin, president of CCOF Certification Services, L.L.C

know your supplier, and ultimately know your suppliers' suppliers

C.J. Eisler, director, Specialty Feeds at Pipeline Foods

Companies must not rely on regulators and suppliers to eliminate fraud...Every single person in the supply chain has to be accountable for this to work

Kim Dietz, senior manager of environmental, natural and organic policy at J.M. Smucker Co. and president of the O.T.A. board.

***A lot of people think if you
outsource your value chain, you
can outsource your responsibilities.
I don't think so.***

*Unilever CEO Paul Polman
at a panel at this year's World Economic Forum in Davos.*

<http://www.supplychaindigital.com/procurement/unilver-takes-radical-step-palm-oil-supply-chain-transparency?mod=djemlogistics>