



Starting a Food Business

*Safety Considerations for farmers
and small operators*

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Motivation

- Make more money/profit
- Use unsold produce
- Already make in-home products
- Diversify farm operation



Your Food Business

- Selling food products to the public is a serious venture
- Making food products for the public requires knowledge of food safety
- You must prove products are safe



First Research Steps

- What are your capabilities?
- Will regulations limit or stop your business?
- Limits on where you can sell?
- Know the costs of starting the business
- Do you have sufficient expertise to make the products on the list?



First Research Steps

- Only certain items can be made in home
- Know what makes your products safe
- Know how to measure safety parameters



Regulatory

- Meat, fish, poultry, dairy, processed fruit/veg, maple, eggs, honey
- Federally registered plants sell out of province
- Provincial sell in province only
- Strictly regulated



Federal vs. Provincial

- Standards for facilities differ - \$\$\$\$
- Inspection standards differ
- Food Safety programs differ
- Hard Stop if you need to sell outside the province to hit market



Marketplaces

- Understand how to sell food
- Retailers: chains and independents
- Food Service: all types, shapes and sizes
- Brokers, distributors
- Where should your product be?
- Where can it be?



Marketplaces

- The farm
- Internet, mail order large component
- Focus on local market only
- Public Markets
 - NS has Public Market guidelines



The Product

- Understand all technical aspects of product
- pH, water activity, hurdles
- Food Science and Food Safety!!!!
- Define product specifications



Everything you need to know

- Regulations
- The process to make the product
- The quality parameters of the product
- The safety parameters of the process/product
- Suppliers – ingredients, packaging etc.
- Sanitation



Everything you need to know

- Equipment
- Good manufacturing practices
- Product testing – quality/safety
- Liability insurance
- Staff – training
- Documentation (time, temp)



Everything you need to know

- Shelf life
- Labeling
- Waste disposal
- Water quality
- Refrigeration, drying, freezing, cooking etc.
- Coding, traceability, recall



Recall

- Want to identify affected product only
- Remove from marketplace quickly
- Use product code linked to production log

Examples:

- A111=Jan 01/2011
- C0910-2 =March 09/2010 – batch#2



Traceability

- Ability to trace back ingredients to source
- Need to know if you used xyz chocolate in your product – being recalled
- Keep ingredient receipts etc.
- Record all ingredients in production log
- Maintain master ingredient list or log



Federal Regulations

- Food and Drug Act (Regulations)
- New nutritional labeling regulations
- Canadian Agricultural Products Act (Processed Products Regulations and more)
- Meat Inspection Act
- Fish Inspection Act
- Consumer Packaging and Labeling Act



Provincial Regulations

- Meat Inspection
- Fish Inspection
- Dairy Products
- Food Shop or Eating Establishments
- Public Market Guidelines/Policy
- Health Acts
- Commodity boards etc.



Starting

- Facility plan – construction, renovation
- Remember regulations
- Have construction plan reviewed/approved
- Equipment, power, plumbing
- Food approved materials – walls, floors etc.
- More space than you think you need



Alternate Facility

- Use of licensed facility
- How to schedule
- Sanitation
- May need on site storage, chilled/frozen
- Liability



In Home

- Ingredients under lock and key
- No kids or pets when processing
- Suitable for very small production
- Only few foods allowed for in-home
- Time to move when out of space or out of control



Pitfalls

- Thinking you know it all
- Not understanding food preservation
- Forgetting regulations, permits
- Poor packaging design
- Overbuilding, expanding too early



All Who Sell Food

You need to be able to answer:

“How do you know your product is safe?”



Defining Risk

- The opportunity for an incident is high because:
 - The food is not further treated
 - A mistake could be fatal



Examples – High Risk

- Ready to eat foods – cooked/raw
 - *Listeria, Salmonella, E. coli*
- Canned/jarred/vacuum packaging
 - *C. botulinum*



Managing High Risk Foods

- Proper processing, packaging, handling
- Knowledge of the risk
- Food Microbiology
- Use of proper technology



Ready to Eat

- Deli-meats, cheese,
- Plant sanitation, minimal handling
- Packaging and refrigeration
- Shelf life
- Anti-microbial ingredients
- High pressure (or other) processing



C. botulinum

- *C. botulinum* produces the deadliest toxin known
- Thrives in absence of oxygen
- Cooking temperatures don't destroy spores
- Organism is everywhere



C. botulinum

- Does not grow at:
 - pH < 4.5
 - Water activity < 0.92
- Destroyed by heating 121°C for 1 min.
 - Or equivalent process



C. botulinum

- Types A,B,E of most concern
- A and B don't grow < 10°C
- E grows at refrigeration temp.
- E is from marine environment
 - Vac-packed smoked fish kept frozen



Botulism

- 1985 White Spot Vancouver
 - Garlic in vegetable oil left on counter
 - 34 cases, no fatalities
- 1987 Pan Pacific Hotel Vancouver
 - Chef bottled mushrooms
 - 11 cases, no fatalities



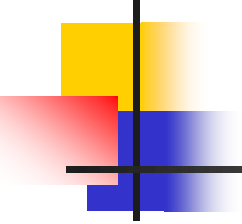
Botulism

- 2006 Bolthouse Carrot Juice
 - Labeled “keep refrigerated”
 - Numerous cases in US/Canada



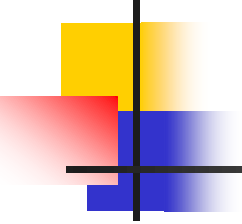
Legal

- Food and Drug Regs, Division 27
(foods packaged excluding air)
- Water activity < 0.85
- pH < 4.6
- Labeled “keep refrigerated”
- Commercially sterile
- Smoked fish kept frozen



Low acid = high pH

- Most vegetables
 - Beans, carrots, potatoes, asparagus, etc.
- Some fruit
 - Peaches, pears, apples
- All meat, fish, milk,
- Soups, chili, sauces,



High acid – Low pH

- Tomato products
- Apples, berries
- Citrus fruit



Processing low pH

- Mix ingredients
- Measure pH
- Heat to 85°C (or higher)
- Fill jars at >83°C
- Lids on – invert 1-3 minutes
- Cool



Processing High pH

- Code of Practice for Low Acid Foods in Hermetically Sealed Containers
- For shelf stable products
- This is found in Meat and Fish regs.
- No alternative for commercial products



Refrigerated High pH

- Pesto, vegetables in oil, some meat products
- Must be labeled “keep refrigerated”
- 5 day or less - shelf life
- Still very risky and not recommended
- Customer can still mess up and liability is with producer



Conclusion

- Lots to consider for food production
- Food Safety is primary
- Principles of food preservation
- Full commitment