



NRTE, RTE & Dry Cured Meats

The Common Thread

**Be it on the Federal,
Provincial or Municipal
level of Food Inspection,
food safety and food
lethality is a common
concern.**



The Common Thread

Ultimately Owners and Operators are responsible for determining whether their meat products are NRTE or RTE



The Common Thread

**In the same vein,
Consumers are responsible
for their treatment of any
NRTE, RTE, or Dry Cured
meats.**



Common Concerns

**Education is the key
ingredient in any Food Safety
recipe**



Common Concerns

Food Safety begins with each of us and at each stage of the food chain: from gate to plate.



DEFINITIONS

CFIA definition of Non-Ready-To-Eat (NRTE) Meat Products:

- Products that have been heat treated to improve their appearance or flavor.**



DEFINITIONS

Expanding the CFIA definition of NRTE Meat Products:

- Products that have been heat treated **or smoked** to improve their appearance or flavor.

(Mennonite or Farmer Sausages)



DEFINITIONS

NRTE Meat Products:

- This category also includes **Raw Fermented** products (like Teewurst etc.) that have not been heat treated or smoked to enhance their flavor.



DEFINITIONS

NRTE Meat Products:

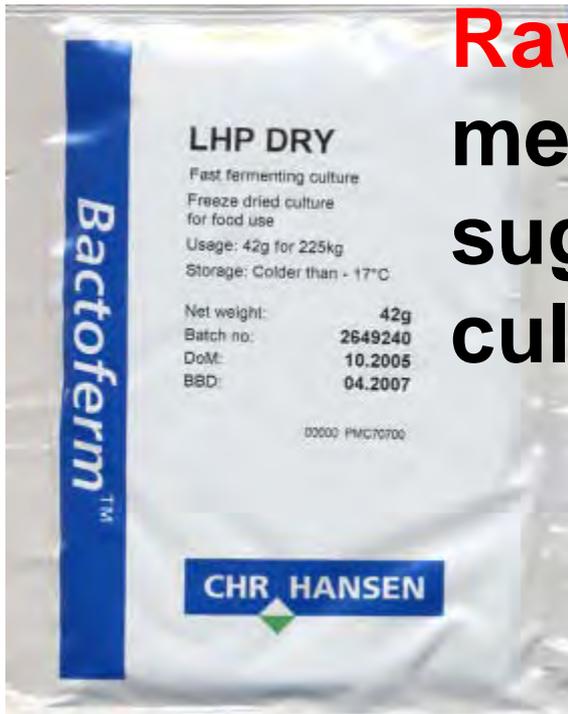
- Raw Fermented** products (like Teewurst, Mettwurst) are processed in a traditional manner through a biological process (salt, sugar, culture & cure).



DEFINITIONS

NRTE Meat Products:

- **The main ingredients used in Raw Fermented** products are meat, salt, nitrite or nitrates, sugar, acidulants, starter cultures and spices.



DEFINITIONS

NRTE Meat Products:

- **By way of the obvious, fresh sausages that are **not** ready to eat, smoked or heat treated can also fall into this category.**



Non-READY-TO-EAT MEAT PRODUCTS

When we think of Non-Ready to Eat meats we think of Fresh Sausages, types and varieties such as Breakfast Sausage, Beef or Pork Sausages.



DEFINITIONS

RTE Definition:

- By way of our title you'd think a definition for Ready to Eat would be self-explanatory! However,**



DEFINITIONS

RTE Definition:

- Ready to Eat meat products are those products that have been heat treated at a temperature and/or duration to sufficiently destroy pathogens and toxins.**



DEFINITIONS

RTE Definition:

- Examples of Ready to Eat meat products are luncheon meats: ham, bologna, bavarian meat loaf, etc.**



DEFINITIONS

Dry Cured Meats Definition:

- Dry Curing is a meat preservation process by the addition of salts, nitrates, nitrites, and or sugar in combination with various flavorings (seasonings).**



DEFINITIONS

Dry Cured Meats Definition:

- Dry Curing includes a set treatment process for preserving meat properties, taste, texture and color.**



DRY CURED

Dry Cured Meat Examples:

- Dry cured bacon**
- Country cured hams**
- Prosciutto**
- Capicola**
- Pancetta**
- Lonza**



DRY CURED

Dry Cured Meat Examples:

- Dry cured bacon



DRY CURED

Dry Cured Meat Examples: – Country Ham



DRY CURED

Dry Cured Meat Examples:

– Prosciutto



DRY CURED

Dry Cured Meat Examples: – Capicola



DRY CURED

Dry Cured Meat Examples: – Pancetta



DRY CURED

Dry Cured Meat Examples:

- Lonza



DRY CURED

Dry Curing:

- Hams should be rubbed three separate times at 3 to 5 day intervals**
- Bacon should have one thorough rubbing with a light sprinkling over the flesh side after rubbing**
- Capicola/Lonza should have two rubbings at 3 to 5 day intervals.**



DRY CURED

Dry Curing:

- Length of curing 1 week per inch of thickness**
- Ham weighing 5 – 12 kg (approx. 5 inches thick) should be cured 5 weeks (35 days)**
- Fresh belly (2 inches) about 14 days**



DRY CURED

Dry Curing:

- Keep in refrigeration**
- Avoid surface dehydration**
- Maintain humidity of 50-60%**
- Must have good air circulation**
- Reduce weight by 20-25%**
- Reduces A_w**
- Darkens Color**



DRY CURED

Dry Curing:

– If Sold Smoking

- Length of time depends on product
- Hams can take anywhere from 12 hours to 7 days
- Temperature not to exceed 32 C or 90F (average 25 – 30C)
- Used to inhibit unwanted bacterial growth
- Adds flavor dimension



DRY CURED

Dry Cured Meats:

Meat products packed in salt (5-10% of weight) or cured by salt rub.



DEFINITIONS

**Not just an Olympic Sport,
HURDLES is the act of overcoming
(jumping) Food Safety obstacles
before, during, and after processing.**



Hurdles

Strategically placed, each Hurdle speaks the language of a Food Safety measure.

It is a method of ensuring that pathogens in food products can be eliminated or controlled.



Hurdles

Example of Hurdles:

- Heat Treatment
- Refrigeration
- Freezing
- Drying
- Aw
- pH
- Starter Cultures
- Sugar
- Salt
- MAP
- Acidity
- Fermentation
- Smoking



Food Safety

**The more HURDLES we put
in place the more likely the
safer our food will be.**



Food Safety

As Inspectors, when it comes to the Food Safety of NRTE, RTE, and Dry Cured Meats, where do we start, what do we look for?



Food Safety

**You have heard it said,
“You never get a second
chance to make a first
impression,”**



Food Safety

**And that's where we start from.
Our first impression of the
premises.**



Food Safety

The obvious:

- **The design, construction, equipment, and maintenance of the premises.**



Food Safety

The obvious:

- **The design, construction, and equipment permits the operations within the facility to be performed under sanitary conditions.**



Food Safety

The obvious:

- **The design, construction, and equipment permits the effective cleaning and sanitation of all surfaces.**



Food Safety

The obvious:

- **The design, construction, and equipment prevents the contamination of meat and meat products.**



Food Safety

The obvious:

- **That the appearance of all personnel at the facility is appropriate to safe food handling practices: cleanliness and hygiene.**



Food Safety

The obvious:

- **Sanitation and Pest Control:**
 - Proper cleaning stations
 - Good cleaning practices
 - Types of cleaners and sanitizing (equipment & chemicals)
 - Effective & safe Pest Control



Food Safety

The obvious:

- **Processing controls:**
 - **Proper storage of equipment (portable stuffers, grinders, knives and utensils)**
 - **Proper storage of ingredients (meats, casings, starter cultures, salts, nitrite/nitrates, and spices)**



Food Safety

Processing:

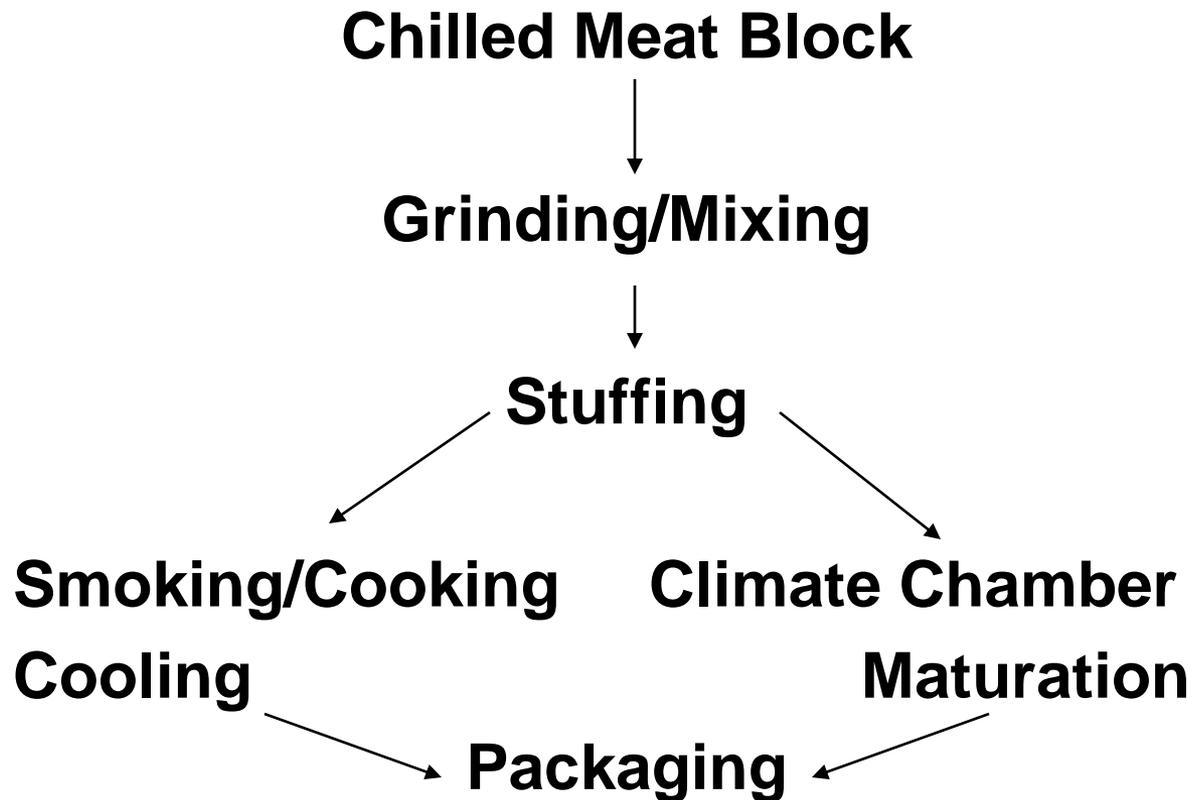
– Documentation

- Proprietor should at least be able to explain and/or demonstrate handling and processing procedures
- Types of controls and monitoring used (aging/drying, cooking/cooling, storage)
- Verification of effectiveness (pH Aw and/or sample testing etc.)



Food Safety

Processing:



Food Safety

Processing:

- **Beef as an ingredient**
 - In RTE products must be subjected to a heat treatment to control E.coli 0157:H7
- **Pork as an ingredient**
 - In NRTE, RTE, and Dry cured products must undergo trichinosis control measures



Food Safety

Processing:

– RTE Cooked Sausage

- Nitrite/Nitrate content of 100 – 200 ppm
- Fully cooked to an internal temp of 71 for 15 seconds
- Rapid cooling: reaching 27C in 2 hours; 4C in 7hours

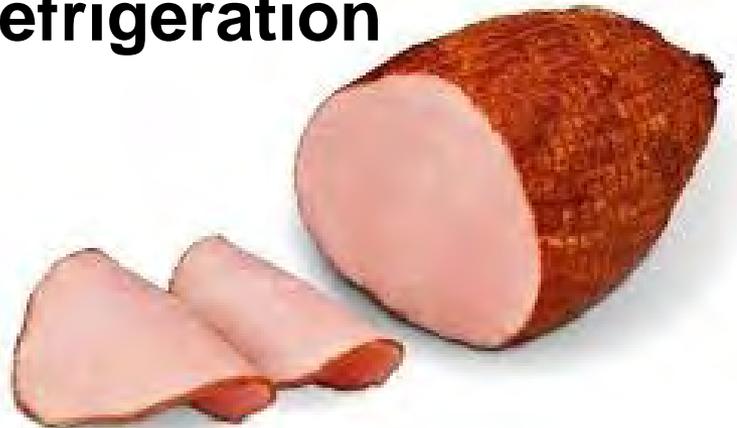


Food Safety

Processing:

– Ham

- Nitrite/Nitrate content of 100 – 200 ppm
- Can be NRTE or RTE
- Requires refrigeration



Food Safety

Processing:

– Bacon

- Nitrite/Nitrate content of 100 – 120 ppm
- Typically not fully cooked
- Classified as NRTE
- Requires refrigeration



Food Safety

Processing:

– Packaging

- Should have point of sale information indicating NRTE or RTE
- Requires refrigeration

