



Local Proteins

Procurement, Food Safety, Crediting and More!



minnesota farm to school
leadership team



Farm to Food Safety Webinar Series

April 17, 2:00 -3:30pm - Local Animal Proteins

May 1, 2:00 -3:30pm - Wildish Foods



minnesota farm to school
leadership team





Introductions



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Agenda

Topic Areas:

Procurement

Food Safety + Inspection Standards

Meal Pattern Crediting

Recipe + Menu Ideas

Protein Categories:

Domestic Proteins

Eggs

Beans + Lentils

Non-Amenable Proteins

Fish

Tofu + Tempeh



Domestic Proteins

(beef, pork, lamb, goat, chicken, turkey,
duck, goose)



**Historically Wild Game or
Exotic Proteins:**

“Non-Amenable”

“Voluntary” (not really)



Meat & Poultry for sale to schools & other food businesses

Food safety for meat and poultry is protected by inspection at the processing plant of:

- The live animals
- Organs and carcasses
- Processing facilities
- Facilities' written food safety plans.



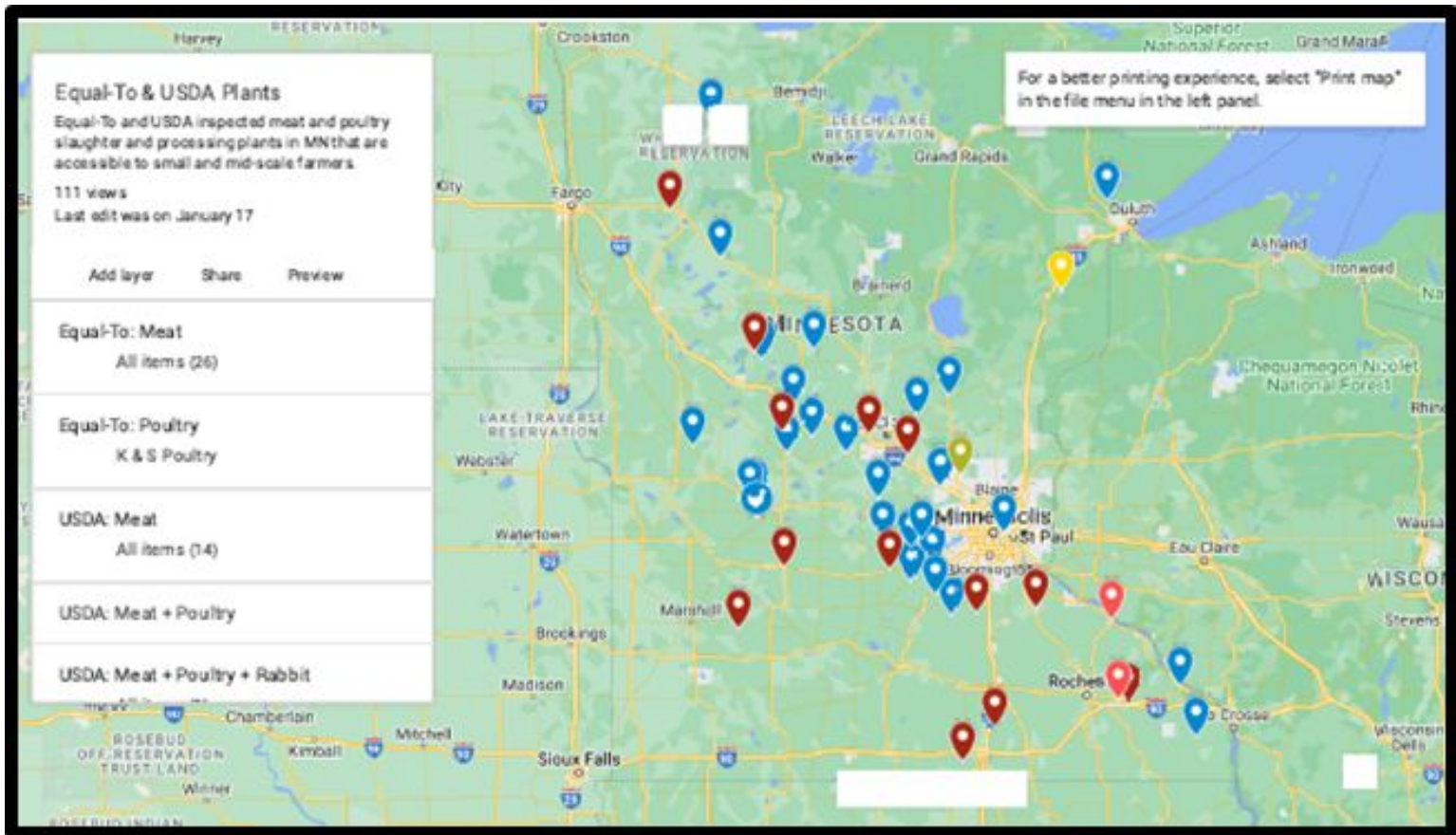
Meat & Poultry for sale to schools & other food businesses

- USDA and Minnesota Equal-To plants have an inspector there every day to conduct these food safety inspections.
- Having an inspector there every day is called “continuous inspection.”



Meat & Poultry for sale to schools & other food businesses

- Find a plant: misa.umn.edu/meat-poultry-and-rabbits



[Map of USDA and MN Equal-To Plants](#)



Meat & Poultry for sale to schools & other food businesses

- Some plants get their facility inspected a few times per year, but don't have an inspector present every day.
- These plants are NOT under "continuous inspection."
- Meat packages from those plants will not have a mark of inspection.



Meat & Poultry for sale to schools & other food businesses

- All meat packages for sale to schools and other food businesses must bear a mark of inspection from a USDA or MN Equal-To processing plant.
- The mark is proof that an inspector was present to verify the health of the animal, safe operating procedures, and that the plant was clean and in good repair.



Marks of inspection on meat & poultry packages:

	Most Meat	Poultry	Non-Amenable
USDA			



Marks of inspection on meat & poultry packages:




Examples of “Non-Amenable” farm-raised species:

- Historically wild game in North America
 - Bison
 - Cervidae (elk, deer)
 - Rabbit
 - Pheasant
- Exotics
 - Camel
 - Cavy (Guinea pig)





Marks of inspection on meat & poultry packages:

	Meat	Poultry	Bison, Elk
MN Equal-To			



Meat & Poultry: License Needed?

- If no ingredients are added, it's 100% product of the farm: no license required.
- If off-farm ingredients are added (Example: plain, raw bratwurst with added salt and spices) ...
Then the farmer needs a food handler license from Minnesota Department of Agriculture.

www.mda.state.mn.us/food-feed/food-licenses



Meat & Poultry: Safe Handling

- Typically a USDA or Equal-To plant will return farmers' meat and poultry products to them frozen.
- Keep frozen products frozen!
- Store in a freezer that maintains 0°F or below.



Meat & Poultry: Safe Handling

- Transporting in a temperature-controlled vehicle or freezer at 0°F or below is ideal.
- Transporting in a cooler is acceptable.
 - Ensure product temperature of 10°F or below is maintained during transport.
 - Limit the time out of mechanical refrigeration to less than 4 hours (the less, the better)



Meat & Poultry: Safe Handling

- Store and transport in clean, sanitary conditions
 - Exclude insects, rodents, birds, other animals
 - Storage areas & transport vehicles free of debris, toxic substances, soil, or filth



Meat & Poultry

Much more information:

“Selling Minnesota” fact sheet series & fact sheets from
Minnesota Department of Agriculture and Minnesota
Department of Health

www.misa.umn.edu/publications/local-food-fact-sheet-series

Domestic + Wild/ Exotic Game Proteins

Crediting

- 1 ounce cooked meat = 1 ounce equivalent M/MA
 - [Food Buying Guide](#)
 - Consistent with domestic and wild game
- If added ingredients, must make sure to obtain CN label or PFS from manufacturer
- Homemade products (sausage, meatballs, etc.)
 - Food Buying Guide
 - Recipe Analysis Workbook
- **Not** creditable proteins:
 - Pig's feet, ham hocks, pork bacon, pork belly and imitation bacon products
 - Must factor into menu nutrient analysis

	(various weight)				
GAME, fresh or frozen					
Game, Buffalo²⁷ <i>Ground, (Similar to Bison)</i>	Pound	11.50	1 oz cooked lean meat	8.70	1 lb AP = 0.72 lb cooked, drained lean buffalo
	Pound	7.68	1-1/2 oz cooked lean meat	13.10	1 lb AP = 0.72 lb cooked, drained lean buffalo
Game, Goat²⁷ <i>Roast</i>	Pound	8.00	1 oz cooked lean meat	12.50	1 lb AP = 0.50 lb cooked, trimmed, sliced lean goat
	Pound	5.33	1-1/2 oz cooked lean meat	18.80	1 lb AP = 0.50 lb cooked, trimmed, sliced lean goat
Game, Ostrich²⁷ <i>Medallions</i>	Pound	11.20	1 oz cooked lean meat	9.00	1 lb AP = 0.70 lb cooked lean ostrich
	Pound	7.46	1-1/2 oz cooked lean meat	13.50	1 lb AP = 0.70 lb cooked lean ostrich
Game, Venison (Deer)²⁷ <i>Ground, (Like IMPS #996), (Similar to Sitka, Elk)</i>	Pound	11.50	1 oz cooked lean meat	8.70	1 lb AP = 0.72 lb cooked, drained lean venison
	Pound	7.68	1-1/2 oz cooked lean meat	13.10	1 lb AP = 0.72 lb cooked, drained lean venison

Domestic + Wild/ Exotic Game Proteins

Crediting

- Dried Meats
 - Shelf-stable, dried, semi-dried meat, poultry or seafood
 - Jerky, Summer Sausage
- Must have a CN label or PFS in order to serve; not included in the FBG due to varying industry production standards
- [Crediting documentation](#)

Domestic + Wild/ Exotic Game Proteins

Recipes

- Smoked Beef Brisket Sandwich (Morris Area)
- Heron Lake-Okabena (Bison Burger)
- Bison Tacos (Minneapolis)
- Shredded Chicken Sandwich (Hutchinson)





Eggs



Shell Eggs

Farmers selling to schools and other food facilities must sell eggs that are:

- Cleaned
- Canded
- Graded
- Packaged
- Labeled



Shell Eggs: Safe Cleaning

- **No immersion in water.** Eggshells are porous!
- Dry cleaning can be done with sandpaper.
- Commercial egg washers are available for larger farms
- Wet cleaning of small batches can be done according to protocol in “Selling Minnesota Shell Eggs.”

www.misa.umn.edu/publications/local-food-fact-sheet-series



Shell Eggs: Candling & Grading

- Candling detects cracks and UFOs (unidentified floating objects) within eggs
- Grading is a way to measure egg freshness.

Search for candling and grading resources online



Shell Eggs: Storage & Transport

- Store in mechanical refrigeration that maintains 45°F or below - this temp inhibits growth of *Salmonella*.
- Exclude insects, rodents, birds, other animals
- Keep storage area and transport vehicle free of debris, toxic substances, soil, filth.



Shell Eggs: Safe transport

- Transport eggs in closed, clean coolers
- Use leak-proof ice packs to maintain temperature of 45°F or below during transport in coolers.
- Limit time eggs are out of mechanical refrigeration; no more than 4 hours



Shell Eggs

Schools must use pasteurized eggs when feeding preschool-age children in many situations:

- Unpasteurized shell eggs in bakery items mixed and immediately baked = okay. Example: muffins.
- Unpasteurized shell eggs in items mixed and held, not baked immediately = not okay. Example: pancakes, mix for multiple servings of omelettes.



Shell Eggs: License Needed?

- Eggs from a farmer's own flock are product of the farm. The farmer does not need a license.
- If the farmer has $> 3,000$ hens, they must register with USDA.
- If the farmer has $< 3,000$ hens, there is a voluntary registration with Minnesota Department of Agriculture.

www.mda.state.mn.us/food-feed/sale-eggs-minnesota

Dairy and Meat Inspection Division 651-201-6300

REGISTRATION FOR SELLING SHELL EGGS IN MINNESOTA

The Egg Products Inspection Act (7 CFR § 57) exempts shell egg producers with fewer than 3,000 laying fowl from the USDA Shell Egg Surveillance Program. The Minnesota Department of Agriculture (MDA) registers producers with fewer than 3,000 laying fowl who sell shell eggs to consumers away from their premises (e.g., at farmers' markets) or to food facilities in Minnesota. These producers do not need a food handler's license to sell eggs produced on their farm but must still follow state regulations for handling, labeling, and storage to provide wholesome, safe products to consumers. Completing this registration form is voluntary and not required by law. ([Minnesota Statutes Chapter 29](#) and [Minnesota Rules Chapter 1520](#))

Privacy Notice: Please be aware that information submitted with this form is presumptively public under Minnesota law. The MDA is required by law to provide public information in response to any data request made for that information.

Name of Applicant(s) <i>(Individuals from the same business may apply on the same registration form)</i>			
<input type="text"/>			
Mailing Address	City	State	Zip
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Physical Address <i>(if different from Mailing Address)</i>	City	State	Zip
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Business Phone	Email		
<input type="text"/>	<input type="text"/>		
Name of person(s) or business to be listed on certificate <i>(if different from Name of Applicants)</i>			
<input type="text"/>			

Acknowledgment of Expectations

The seller agrees to the following *(check each item to indicate you have read and agree to the statement)*

- I understand that this registration only applies to eggs produced on my own farm from my own flock of layers; I may **not** collect and sell eggs from multiple farms without obtaining a food handler's license
- I have reviewed and agree to conform to [Minnesota Statutes Chapter 29](#) and [Minnesota Rules Chapter 1520](#) regarding the candling, grading, labeling, and handling of shell eggs
- I have read the MDA guidance document "Safely Selling or Buying Locally Produced Eggs" available at www.mda.state.mn.us/food-feed/sale-eggs-minnesota *(To request a printed copy, contact the Dairy and Meat Inspection Division)*
- I am aware that the MDA has the authority to inspect my operation if deemed necessary

Applicant Signature and Date

(if more than one applicant: Select a primary applicant, such as the farm owner or head of household, to sign and date.)

Signature _____ Date _____

How would you like to receive your certificate of registration? Select one option

- Electronic copy, sent to the email address I provided on this form
- Hard copy, mailed to the business address I provided on this form

<https://www.mda.state.mn.us/food-feed/sale-eggs-minnesota>



More information about selling meat, poultry, and eggs:

www.misa.umn.edu/publications/local-food-fact-sheet-series

Crediting

- Only whole eggs (egg yolk + white) are able to be credited as a M/MA
- 1 large egg = 2 ounce equivalent M/MA
- Not creditable:
 - Egg yolks only
 - Egg white only
 - Liquid egg substitutes

Recipes

- Scrambled Eggs (Glacial Hills Elementary)
- Egg Bake (Glacial Hills Elementary)





Fish + Seafood



Fish & Seafood

Fish and seafood are under FDA jurisdiction, not USDA jurisdiction.

Except for catfish - those are USDA (also called siluriformes)

- Fish are not processed at meat or poultry processing facilities.
- Fish processing facilities are licensed by MDA as wholesale food processor/manufacturer*

(*unless product of the farm)



Fish & Seafood

Fish or seafood processed for sale to schools must comply with federal seafood HACCP

21 CFR 123

www.ecfr.gov/current/title-21/chapter-I/subchapter-B/part-123



Fish & Seafood: Farm-Raised

- Farm-raised fish or seafood are product of the farm.
- Farmers could do their own processing of fish or seafood for sale.
 - If no off-farm ingredients are added, it remains product of the farm.
 - Still have to comply with federal seafood HACCP.



Wild Harvested Fish: Non-Tribal

- Non-tribal harvesting of wild fish for sale must be done under a commercial fishery license from DNR.
- This wild harvest is not product of the farm.
- Processing of commercially wild-caught fish must be done under a license from MDA and in compliance with federal seafood HACCP.

Crediting

- 1 ounce cooked lean meat = 1 ounce equivalent M/MA
 - Food Buying Guide
- Not Creditable:
 - Ceviche or home pickled fish
 - Sushi (raw seafood and Sashimi)

Recipes

- Baked Walleye with Citrus Butter (Mesabi East)
- Walleye Tacos (Mesabi East)





Tribal Members & Schools serving primarily Native American students



Wild Harvesting

Tribal member:

Wild harvesting and sale of products does not require a license.

Native Americans retain rights to hunt, fish, and gather in ceded territory.



Wild Harvesting: Tribal

Ceded territory is land given up in treaty agreements and is not restricted to tribal trust land (“reservation” land.)



Wild Harvesting: Tribal

Native American sovereign nations vary in how they interpret and use the hunting, fishing, and gathering rights.

- Some require tribal members to register and receive a tribal identification card similar to a hunting or fishing license in order to exercise these rights.
- Some tribes restrict sales of certain products.



Wild Harvested Game and Fish: Tribal

- Tribal members who harvest wild fish according to the regulations of their tribal government can sell it commercially, including to schools, including to non-tribal schools.
- If selling to a non-tribal school, FDA facility registration and federal HACCP requirements apply.



Wild Harvested Game and Fish: Tribal

- Tribal members who harvest wild game or fish according to the regulations of their tribal government can donate it to a school that serves more than 50% Native American children.
- The school food service is responsible for ensuring the carcass is properly handled.

Source: Procuring Local Meat, Poultry, Game and Eggs for Child Nutrition Programs

<https://www.fns.usda.gov/cn/procuring-local-meat-poultry-game-eggs>



Wild Harvested Game: Non-Tribal

- Non-tribal harvesting of wild game must be done legally under a DNR license.
- Wild game harvested by a non-tribal individual could be donated to a school that serves more than 50% Native American students.
- Again, the school food service is responsible for proper handling of the carcass.



www.fns.usda.gov/cn/serving-traditional-indigenous-foods

Wild Harvested Traditional Indigenous Foods

Crediting

- Consistent crediting with similar forms of meat items
 - 1 ounce cooked meat = 1 ounce equivalent M/MA
 - [Crediting Traditional Indigenous Foods](#)
- If added ingredients, must make sure to obtain CN label or PFS from manufacturer

Traditional Indigenous Foods that Credit the Same as Similar Foods in the FBG	
Traditional Indigenous Foods	Crediting in the Food Buying Guide ¹
Whole Cuts Bison/Buffalo	<ul style="list-style-type: none">• Credits the same as other whole cut meat items.• FBG contains yield information for whole cuts of beef, the same yield may be used to determine the credit.³
Whole Cuts Sheep	<ul style="list-style-type: none">• Credits the same as other whole cut meat items.• FBG contains yield information for whole cuts of lamb, the same yield may be used to determine the credit.³
Whole Cuts Venison (elk or deer)	<ul style="list-style-type: none">• Credits the same as other whole cut meat items.• FBG contains yield information for whole cuts of beef, the same yield may be used to determine the credit.³



Tofu, Tempeh + Miso



Tofu, Tempeh, Miso

- These products are potentially hazardous due to their high water activity and high pH.
- These are fermented products. If made by a school food service, a HACCP plan and advance approval from your inspector is likely required.



Tofu, Tempeh, Miso

- If made by a farmer, these products would likely need to be made under a license.
- Either HACCP plan (if retail license) or following 21 CFR 117 (if wholesale license).
- Wholesale food processor/manufacturer license from MN Department of Agriculture, \$169/year

Tofu + Tempeh

Tofu

- Soybean derived food, with basic ingredients- whole soybeans, coagulant (salt or acid), water
- Commercially prepared only; must be easily recognizable
- [Crediting](#)
 - 2.2 oz or ¼ cup volume (>5 grams protein) = 1 oz equivalent M/MA
 - 1 pound (37 g of protein) yields 7.28, ¼ cup servings/ pound = 7.25 oz equivalents of M/MA

Tempeh

- Fermented soybean cake made with whole soybeans
- Commercially prepared only; must be easily recognizable
- [Crediting](#)
 - 1 oz tempeh = 1 oz M/MA
 - Must be made from soybeans (or other legumes), water, tempeh culture; may contain vinegar, seasoning or other herbs
 - If contains additional ingredients (grains, seeds, vegetables) that contribute to the nutritional composition, must obtain CN Label or PFS



Tofu + Tempeh

Recipes

- Teriyaki Tofu (Roseville)
- Tofu Breakfast Taco (Chicago Public Schools)
- Thai Tofu Curry (The Lunch Box)





Beans, Peas + Lentils



Beans, Peas & Lentils

- In their dry state, these are raw agricultural commodities.
- If sold dry by the farmer who grew them, they are product of the farm. No license required.
- If sold dry by an entity other than the farmer, that entity needs a food handler license from MDA.



Beans, Peas & Lentils

Easy - Peasy!

Beans, Peas + Lentils

- **New name for the “Legumes” vegetable subgroup**
 - Dried edible seeds of legumes
- **Crediting for all Categories**
 - ¼ cup cooked = 1 oz equivalent M/MA
- **Bean Varieties**
 - Kidney, Pinto, White, Black, Lima, Fava Beans
- **Dried Peas**
 - Chickpeas, Black-Eyed Peas, Pigeon Peas, Split Peas,
- **Lentils (Pulses)**
 - Red, Yellow, Brown, Green, Black

Beans, Peas + Lentils

Recipes

- Cowboy Beans (Hutchinson)
- Moroccan Crispy Roasted Chickpeas (MN Harvest of the Month)



Crediting Guidelines

**1 ounce Equivalent
Meat/
Meat Alternate =**

Crediting **Meats/Meat Alternates** in the
Child Nutrition Programs
Tip Sheet



[Tip Sheet Link!](#)

Domestic Proteins	1 ounce cooked protein
Wild/ Exotic Game Proteins	1 ounce cooked protein
Eggs	½ whole egg
Fish	1 ounce cooked protein
Beans, Peas + Lentils	¼ cup cooked beans, peas or lentils
Tofu + Tempeh	2.2 oz or ¼ cup volume (tofu) 1 ounce cooked tempeh

When in Doubt, Calculate it Out!

[USDA Food Buying Guide](#)

- Search, navigate and compare food yields for foods served in child nutrition programs
 - Food Buying Guide Calculator
 - Exhibit A Grains Tool
 - Recipe Analysis Workbook
- [Training Modules Available](#)





Questions, Clarifications or Comments?

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*Food Safety Standards, Regulations,
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*Procurement, Meal Pattern Crediting,
Recipes*