



JERKY MAKING BASICS

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PART OF THE
AHEIA "O.W.L. SERIES"

OUTDOOR WILDLIFE LEARNING

MODULE #8





Jerky Making



If you have always wanted to learn a new skill, have a new use for your wild game or just really enjoy jerky but don't want to pay the high prices that the stores are asking for a quick snack then this workbook is for you. Whichever reason brings you to the point of wanting to make your own jerky you are not alone. It can seem intimidating and a challenge to get into and each person you talk to will have their own recipe and methods that are in their opinion the best. It is about experimenting to find what you really like and enjoy. You can start your own meat preservation snack making adventure with supplies you already have in your own kitchen. This workbook will explain the process, equipment needed, techniques as well as some recipes to try to get you started out making jerky. With just some basic kitchen utensils and some meat you can get started in your own home, if you enjoy the final products then there are many different ways to



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expand your skills, abilities and equipment to make it easier, faster and have a better quality product in the end.

Drying meat is the oldest method of preserving meat, canning has only been around about 210 years and freezing meat was never practical until electricity and more efficient freezers became common not that long ago. It has been around for such a long time, yet has never stopped being one of our favourite snacks. From jerky to sausage to smoked fish there are many different types of dried and preserved meats that make great snacks or meals.

Types of Jerky



Ground Jerky (top) and Sliced Jerky (bottom)

Before you start trying to figure out what equipment to buy, seasonings, cuts of meat or any of the above; you must first determine what type of jerky you're going to make. There are two types of jerky that people make from whole cuts of meat: Sliced Jerky and Ground Jerky. Jerky can be made from a number of different types of meat from beef, pork or turkey to wild game such as deer, elk, moose, bear and even waterfowl. Some types of meat may lend themselves to one type of jerky or another but with experimentation you can try anything. The cut of meat can be one factor that determines the optimal type of jerky to make, but it is mostly based on personal preference. Large continuous cuts of meat work great for sliced jerky where as ground jerky can utilize any cuts and is a good use of the less desirable cuts of meat from an animal. In both methods of jerky

making the first step is to trim all fat, sinew and silver skin from the meat as it does not render down when cooking it or drying it at lower temperatures.

Jerky seasonings can vary widely from a wide variety of commercial premade seasoning mixes to homemade concoctions or a mixture of the two. Most of the commercial seasonings will include a cure, jerky without a cure will not have the shelf life of a cured jerky but with refrigeration it will still have an acceptably long shelf life. Cure used in commercial seasonings is typically sodium nitrate and helps cure the meat and prevent harmful food poisoning and will help the jerky last longer once it is cooked. Jerky with a cure may last one to two weeks at room temperature, while jerky without cure may last one to two weeks in the refrigerator.



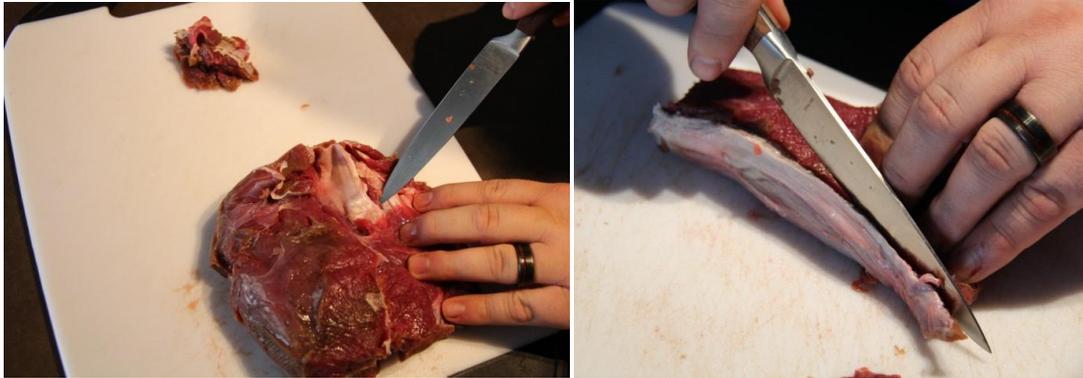
Homemade Seasoning mix (left) Commercial Mix with Cure (Right)

Sliced Jerky



Sliced Jerky before cooking (left) and after (right)

Sliced jerky is the most basic type of jerky out there; simply it is a piece of meat that has been sliced, seasoned and dried. The best cut of meat for sliced jerky is any whole muscle cut without sinew, fat or silver skin mixed in the meat. Large roasts that are a single muscle group work well as it can be sliced easily, if there are smaller muscle groups in the roast then it is best to cut them apart and remove the connective tissue between them.



Always ensure fat, sinew, silver skin and connective tissue is removed.

Sliced Jerky Supplies

Sharp Knife – The longer the blade on the knife, the more consistent the cut will be. If using a knife with a shorter blade it may make small cuts or edges that may dry faster and become crispy when cooked.

Cutting Board – Always use a plastic cutting board for cutting raw meat on as it can be sanitized easier than wood.



Cutting board and sharp knife if slicing the jerky by hand

Meat Slicer – If you have access to or have a meat slicer then making sliced jerky will be much easier. You can wait to purchase a meat slicer until after you have decided that sliced jerky is something you want to make in the future. It is not a required piece of equipment, just makes the job faster and easier.



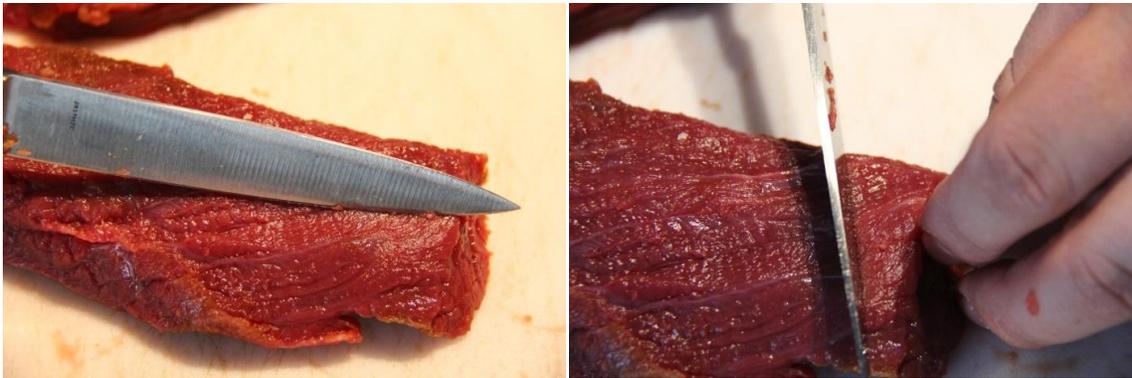
Seasonings – This can be anything from a commercial jerky spice blend to salt and pepper, experiment with what you like and go from there. Home-made spice blends will not typically have the same shelf life as commercial blends due to the lack of a cure and will keep best in a refrigerator. Commercial blends can be found in most hunting, sporting goods and some department stores.



Plastic Container for Marinating – A large plastic tub with a lid that seals, or a large bag that seals to leave the jerky marinating in the refrigerator. A plastic bag also works well as you can manipulate the jerky and turn it over every few hours to get all the surfaces of the meat exposed to the marinade.

Slicing and Seasoning

Seasoning can be added as a marinade and left to soak, or as a dry rub placed directly onto the meat before or during the cooking process on sliced jerky. With sliced jerky the texture will be determined by both the type and quality of meat but also the direction of the slicing. If you like a tender piece of jerky that can be easily bitten and torn off then slicing the meat across the grain will result in flat steak like pieces. By cutting with the grain of meat you end up with longer almost stringy bites of jerky. This texture can be adjusted to personal preference by changing the angle at which you slice the meat.



Slicing with the grain (left) and against the grain (right)

If you place the desired cut of meat into the freezer before cutting until it become firm but not solid (about 30-45 mins) it will be much easier to cut uniformly. After slicing the meat you can place them in a single layer on a flat surface and roll them with a rolling pin to get the piece a uniform thickness, alternatively if you have or have access to an electric meat slicer the thickness will be more consistent.



Slice the meat to uniform thickness of 6mm or ¼"

After the meat is a uniform thickness you will then be adding spices, if using a dry rub then you may add your seasonings and proceed to the cooking directions. For a liquid marinade you will add the meat and your desired marinade to a plastic container with a lid or large zippered bag, typically sliced jerky is left to marinate in the refrigerator for 24-48 hours. While the meat is marinating every few hours stir the meat around so that all surfaces of the meat are exposed to the marinade. Once the meat is done marinating then place it on paper towels to dry out, it saves time in the drying process.



Jerky Marinating (Left) Jerking after marinating draining excess marinade onto paper towel (right)

Ground Jerky



Ground Jerky is a favourite for many people due to the tender texture and the amount of flavour that can be infused into every bite. While it requires a few

extra steps and pieces of equipment it can still be done on a lower budget. Ground jerky is named because you will grind the meat or use extra lean ground meat from the store. The advantages to ground jerky over sliced jerky is that all the meat is ground so you will not have to worry about the quality of the cut of meat going in, also it opens up meat availability to different types of animals. Waterfowl jerky or goose jerky is a favourite among some hunters as it can be an easy way to use multiple birds from a single hunting trip.

Ground Jerky Supplies

Meat Grinder – To get the meat from solid chunks to ground meat you will need a meat grinder, these can vary from inexpensive hand cranked grinders to a variety of electric meat grinders in different sizes and price ranges.



Jerky Gun – While not required to make ground jerky it is a big time saver, you can form 5lbs of ground meat into strips in just a few minutes. These can be found most places that sell seasonings.



Seasonings – For ground jerky many will typically use commercial blend seasonings for their ease of mixing and proper ratios. Feel free to experiment with any seasonings you want to try and see how it goes. Commercial seasonings will have a cure in them that helps prevent spoiling of the meat



Scale – Often recipes and spice mixes are based on weights not volumes of jerky. If you have too much marinade it can always be drained off when dealing with sliced jerky, if making ground jerky measurements must be exact.



Plastic Wrap or Pan – If you decide to forgo the jerky gun then you will need either plastic wrap or a pan to form the jerky with.

Marinating and Shaping the Jerky

It is mixed with seasonings, marinated, then formed into sticks and cooked. Marinating times will vary depending on how strong the seasoning is as well as

how strong you like the flavour, this can be no marinating time just mix, shape and cook or marinate for up to 48 hours.



Seasoning with Cure (Left) Adding seasoning and mixing thoroughly (Center, Right)

Once marinating is finished you will now have to shape the ground meat into your desired shape; the easiest method to this is to use a “Jerky Gun” which is essentially a food safe caulking gun. If you do not have a Jerky Gun, you can place the ground meat between plastic wrap sheets and roll out to a desired thickness or press the meat into the bottom of a pan to get the desired thickness typically about 6mm or ¼”. Once the meat is the desired thickness simply cut it into strips with a knife. The alternative method is to use a jerky gun, pick the tip that will give you the desired shape of jerky, fill the tube and slowly squeeze the jerky out onto a tray or pan.



Plastic wrap shaping method (left) and jerky gun method (right)

Cooking the Jerky

Food Safety

There are a variety of methods for cooking or drying jerky, both types of jerky can be cooked in any of the methods. One major consideration is food safety and killing any pathogens that may have contaminated the meat. There are three methods to ensure that you make the safest jerky and kill those pathogens. The idea behind each method is to get the internal temperature of the jerky above 74°C (165F) which will kill any pathogen (E.Coli, Salmonella) or Trichinella (Typically found in Bear, Cougar or Feral Hog meat).

The first method to ensure food safety while cooking jerky is to cook it at a temperature at or higher than 74°C (165F). During the process the internal temperature of the meat will get to the required temperature and maintain that temperature for the duration of the cooking process.

The second and most recommended method to ensuring food safe jerky is to pre-heat the meat. Before the drying process put your marinade or brine into a pot and bring it to a boil. Once the marinade or brine is boiling dip the jerky in long enough for the internal temperature to get to 74°C (165F). This method will work for sliced jerky however the ground jerky will most likely fall apart. If you are doing this method with ground jerky you can use the oven and preheat the meat to an internal temperature of 74°C (165F) with the oven temperature at 150°C (~300F) until the internal temperature is reached, then continue the drying process in whichever method you prefer.

The third method for ensuring food safe jerky is post-dry heating the jerky; after the jerky is sufficiently dried using the drying methods below then the jerky is heated to a higher internal temperature to kill the pathogens. This can be done in the oven, set it to a higher temperature 150°C (~300F) and place the jerky on a pan and put it in the oven for 10 minutes. This will raise the internal temperature to at least 74°C (165F) to render the meat safe to consume.



Drying Methods

Oven

The oven is a great method for drying and cooking the jerky as it is readily available to most people. The ideal temperature to maintain in the oven is 62°C (145F)-74°C (165F). Preheat your oven to the desired temperature and as you dry the jerky in the oven the door should be open a bit to help the moisture evaporate out of the oven. The jerky should dry for a minimum of four hours; times will vary after that depending on the cut, thickness and moisture content of the meat. It is recommended to rotate the jerky and flip it every couple hours throughout the drying process. The oven tends to produce lower quality jerky because there is no airflow over and around the jerky.



Dehydrator

Commercial food dehydrators will vary in quality and efficiency, you want a dehydrator that will maintain the desired temperature 62°C (145F)-74°C (165F) throughout the cooking time. This can be checked with a thermometer while the unit is operating. It should also have enough space inside to accommodate all of the meat you are trying to cook. When placing the meat in the dehydrator ensure it is spaced out and not touching or overlapping, this will allow proper airflow through the dehydrator. Depending on the dehydrator you will want to rotate the racks once or twice through the cooking process, the top racks will have direct heat from the blower if it is mounted on the top. A minimum of 4 hours drying

time and finished times will vary depending on the meat, thickness and moisture content.

A homemade dehydrator can be made; you will need a heat source, air movement and an insulated box with racks for the jerky to cook on. It is imperative that you have tested your creation to maintain temperature throughout the process.



Smoker

As with the methods mentioned previously it is ideal to keep the temperature within the 62°C (145F)-74°C (165F) range for the cooking process. If the smoker you are using is not able to set the temperature that low use the lowest setting and monitor the cook process more often. For recommended wood smoke types it varies with personal preference; heavy rich smoke will impart the most flavour. Woods such as Hickory or Mesquite will impart the strongest smoke flavour, while

lighter and sweeter woods such as the fruit woods cherry, apple, maple, pecan or pear will impart a light sweet smoke flavour to the jerky.



Judging Dryness

To determine if the jerky is done cooking it will need to be tested. There are meat moisture meters that you can buy, however they can get pricey. The easiest method is to pull the jerky out of the heat from where it is cooking, let it cool for a few minutes and try to bend it. For sliced jerky, the proper moisture content it will bend and crack but will not break, for ground jerky it will typically break apart at that location but not snap or bend.

Jerky bend test showing incomplete cooking - jerky bending but the fibers are not separating



Finished jerky showing fibers separating at bend but not breaking or snapping



The next step is conditioning the jerky; as the jerky dries it does at different rates, there will be some pieces that have less moisture than others. When the jerky has cooled after the cooking process place it in a plastic container, glass container or a plastic bag and seal the container. Shake the container around once or twice daily to move the jerky around, after three or four days the moisture content will be as uniform as it will get throughout the pieces of jerky. If there is excess moisture on the lid or walls of the bag you should place the jerky back in the dehydrator or oven to dry it further. If you have over cooked the jerky or dried it for too long you can try to infuse some moisture back into the jerky by placing apple slices in with the jerky for conditioning.

Storing Jerky



While commercial jerky will typically have a shelf life of up to a year, homemade jerky will have a shorter shelf life. The dried and conditioned jerky can be stored at room temperature for 1-2 weeks, in the refrigerator 1-2 months and in a freezer up to a year. If the jerky had a cure in the seasonings it will typically last longer than an uncured jerky. It should be in a sealed container away from direct heat and light. Check the jerky often and if there is any sign of mould then you should stop eating the jerky and dispose of it.



Jerky Recipes

Honey Garlic Jerky Marinade

- 125mL or 1/2c Soy Sauce
- 125mL or 1/2c Ketchup
- 125mL or 1/2c Honey
- 5mL or 1tsp Dried Basil
- 3 Garlic Cloves crushed or 7mL or 1.5 tsp Minced Garlic

Heat the ingredients over low heat until the honey melts and all ingredients are mixed thoroughly. This amount will have enough marinade for 1 kg or 2.2 lbs of jerky.

Peppered Jerky Recipe

- 4 Garlic Cloves or 10mL/2tsp Minced Garlic
- 250mL or 1c Soy sauce
- 125mL or 1/2c Worcestershire Sauce
- 67.5mL or 1/4c Brown Sugar
- 10mL or 2 tsp Onion Powder
- 10mL or 2tsp Red Pepper Flakes more or less to taste
- 30mL or 2tbsp Black Pepper
- 250mL or 1c Beef Stock

Mix all ingredients together and add sliced meat or mix into ground meat. Makes enough marinade for 1kg or 2.2lbs of meat.



Sweet and Spicy Jerky

- 15mL or 1 tbsp Onion powder
- 15mL or 1 tbsp Garlic powder
- 67.5mL or 1/4c Worcestershire Sauce
- 67.5mL or 1/4c Teriyaki Sauce
- 83mL or 1/3c Balsamic Vinegar
- 125mL or 1/2c Pineapple Juice
- 125mL or 1/2c Brown Sugar
- 167mL or 2/3c Soy Sauce
- 5mL or 1 tsp Red Pepper Flakes
- 10mL or 2 tsp Black Pepper

This will make enough for 0.5-.75kg or 1-1.5lbs of jerky.

Chipotle Venison Jerky

- 250mL or 1c Soy Sauce
- 167mL or 2/3c Sugar
- 250mL or 1c Chopped Onion
- 1 Head of Garlic Rough Chopped
- 1 Can Chipotles in Adobo
- Juice of 2 Limes
- 30mL or 2 tbsp Salt
- 5mL or 1 tsp Commercial Cure

This will make enough for 2.25kg or 5 lbs of Jerky



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