

INTRODUCTION

I HAVE WRITTEN ABOUT good food as a sensory journey and a form of activism, one that pleases and awakens the whole being. I believe that food can move us, physically, mentally and even spiritually, provided it is experiential and not severed from its genuine roots. In the world as I know it today, this makes food and media like it more valuable than ever.

As a girl, growing up poor in the city, I was constantly overwhelmed and alarmed with the charade of social performance and the dilution of art in mass entertainment. I was confused. How come the way I felt couldn't be touched in the world around me? Did that mean that it wasn't real? Books, dead writers and poets became a place for me. I dove into a more comfortable subsurface world with art, with writers who must have felt some of the ancient depth and longing that I had felt, with the courage to speak about it, even if only in metaphor. I wanted to create like that, but the academia around literature and poetry was intimidating. I believed there were so many things I needed to know to make art. So I studied, and in studying the art became more lost, in a machine of technique I only sometimes understood. Around that same moment I started growing food, and that became the grandest embodiment of real art that I had ever encountered. It still is.

I gave up writing, then, for a very long time. Instead I lived within organic farming and nature: the soil, the sting of the okra plant, the skins of the fruits and the sticky songs of the bugs. It seemed to me, in this realm, that two and two made ninety. How was such resonant experience, such emotional palpability, possible, just from the raw tools of nature? It was too much. It was everything. As the grandeur of growing food expanded in my life, the fact that it was (and is) so political, so connected and so fundamental added ever more allure. This. This would be my art.

About five years ago, I embraced my writing again. From poetry of loss and beauty to technical tomes on grinding meat, here I am. A writer. Everything is art, suddenly. I can touch what is real through writing. I can touch what is real through farming and food. But now, how can these arts marry into one? How can it then be of service? I write this at a time of deep transition in our culture. A book about curing meat, of all things! How can I convey worthwhile material of this nature to a troubled world? Who can possibly understand the bearing of a cured sausage on a hurried, frightened culture? Would a poem help you understand the importance of seeds? How can I show what is real? Pull your head up from your phone and touch this plant. Cut here. Smell this. Be gentler. Have a taste.

Meat preservation arose from necessity. It is trending now as art. I hope this book can successfully argue that there is no difference between these two things. We need the collusion of art and necessity in our collective mindset, now more than ever. We need to understand that what is real and important is also what is moving and beautiful. It also very often ends up being what is most functional. That is why we are drawn to it. That is why you want to know, and you want to do. To create. That is just it! That you and your people have a history of thrift, rather than the waste you see on a daily basis. That the ones who came before you made trusting marriages with the land, and that you need not only inherit irreverence. That we came from industrious souls, unafraid of mystery and committed to beauty and flavor. In the midst of pop culture and the confusion of our times,

you want to see, hear, feel, taste and smell the victory of a genuine craft. You want to become vulnerable to what is softly real, not weakened, and not afraid of what is so distant and out of control. You are, after all, just an imperfect, innocent piece of nature.

I believe that in the search for what is genuine, the answer is to create. Cured meats are works of art that will open you to the land that feeds the animal, the mindful slaughter and butchery of the meat that so affects quality, and the creative possibility within yourself that curates these efforts into flavorful food. Cured meats are growing in popularity, and that is a very good thing. However, the representation of charcuterie as gourmet, over time, has created cultural and culinary blockades against the *best* representation of cured meat, and the accessibility of its creation. In trying to marry art and necessity, this book aims to ensure that we do not engage in the dangerous misconception that the everyday cook will not be able to cure meats. I challenge my students to consider that America is one of the only places on Earth where the rich can steal traditions and even ideas from the poor, *and* convince the poor that they don't want them back.

The cultural attitude du jour is that cured meats are refined, and they are, but not by money or by class as we perceive. While their right preparation is a labor of time, talent and skill, the way we monetize time, talent and skill should receive ample skepticism. Quality cured meats are created by extremely industrious people from meager circumstances the world over. Preserved meat products arose from need and ingenuity, simple resources and pure ingredients. Art, born of necessity. Let us not forget this, and let us also celebrate it, by ensuring that we have twelve-year-olds hanging hams in their closets, and urban homesteaders cold smoking bacon on the stoop.

So therefore, in solemn worship of salt, dedicated to the unfathomable variation in soil, and powerfully dependent on the pig, the duck, the tin-tinged organs, we forge ahead. We want back in there. Let us into the space we can feel all over. We want more of what is real, and we want to savor it, slowly. We want things that are beautiful, meaningful. We want things that last.

ON INTENTION

*What good does it do
to lie all day in the sun
loving what is easy?*

MARY OLIVER *Starfish* (1986)

THE UNDERPINNINGS OF this book are slightly grandiose. I have been so inspired and so informed by nature and food, that I presume to somehow encapsulate the connectivity of art and sustenance into sausage. At first consideration, this seems ludicrous, even to me. But when the *poof* of spores from a beneficial mold explodes softly in my kitchen, or I can smell in the soil the inkling of a spring supper, I feel like this intention is not ludicrous at all. And not optional.

My simplest of charges in the pages that follow is to situate the reader comfortably in the world of curing meats. Technique and process and principle will rule the day, in that regard. But I refuse to ignore the social, intellectual and spiritual enlightenment that guides that process properly. In other words, there is an attitude and a mindset that I wish to impart, in hopes that it lends to your success, and to a general activism that craft food must address.

SYNERGY

There isn't the space in this book to provide butchery instruction, or thorough discussion of the life, death and processing of the animal as it pertains to the quality and uniqueness of the charcuterie product. That's the stuff of my first book, *The Ethical Meat Handbook*. However, it is the synergy of all these important factors, in addition to the proper knowledge and appropriate creativity of the cook, that make cured meats so delightful.

Taking even a brief moment to consider the incredible interplay of factors that leads to the experience of charcuterie is already mind-blowing. Ponder for a moment, for example, the myriad effects of an animal's life on the composition of its muscle and fat. Here are a few:

- What the animal ate
- How much the animal moved
- How healthy the animal was
- What non-feed inputs were used in raising the animal
- What breed the animal was
- The composition of the animal's parents, and older generations
- The age of the animal at slaughter
- The stress level endured in life
- The quality of the animal's death
- The amount of fat on the body

The list goes on. Add to that some of the factors to consider in processing:

- Whether the carcass was aged
- Whether the carcass was kept at proper temperatures
- Whether the meat was injected with water or other additives
- How well or with what aim the carcass was butchered
- How long the meat or fat has been kept in storage before sale

Again, we could go on. The point of this exercise is to respect the inherent complexity we work with, and to recognize that it is a

combination of these factors that lead to the result that is every single animal we eat. It's nearly mind-boggling, isn't it? Just a quick jaunt over the list above sets one's mind afire with the nearly infinite combinations of factors that come into play. This is one of the primary motivations behind the case of Ethical Meat, the subject of my first book. The assertion that Ethical Meat exists, and that it requires input and buy-in from players all across the supply chain, is based on the recognition of synergy.

Synergy is the secret sauce in all systems. It refers to the potential created by many diverse factors combining. It is the fireworks of collaboration. When one thing touches another thing, they create energy and products together that neither single thing can create on its own.

You surely recognize that this is the foundation of cuisine. Pesto is pesto because when basil, garlic, parmesan, olive oil, pine nuts and salt come together, they create a magical goo that wouldn't be possible without all of these components. It would change if you changed any one of them. Its overall impression depends on the distinctness or relative goodness of each of its components, and on and on and on. Dedication to the idea of synergy not only creates a beautiful space in the mind of any cook, but it leverages that space to continue expanding, remaining strong in what we know and can control, and humble in the face of what we don't know and cannot conquer. This combination of kinship with nature and its products and anonymity in the face of creation is the mindset of good learning. Good learning is the chief requirement of sound artistry.

SOURCING

Good charcuterie starts with good meat and good fat. Good meat and fat come from an animal that had a good life, a good death, a good butcher and a good cook. The surest way to find such meat and fat is through direct relationships with farming and farmers.

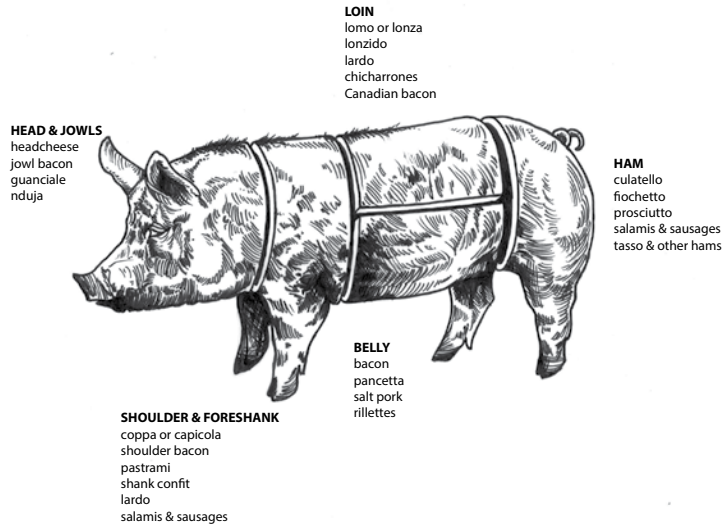
While many of the recipes in this book are designed around pork, the principles can be adjusted and applied for any species.

Homesteaders working with modest landholdings might consider animals that can be raised there, such as rabbits, ducks or, in some cases, small ruminants. When venturing toward larger animals for beef heart pastrami or confit pork shank, seek out specialty farmers or butcher shops when you can.

The system by which most meat comes our way in America is based on backward economy, poor resource management, coercion of farmers and mechanized suffering, to name a few of its many vices. On top of this, the product lacks flavor and nutrient density relative to meat and fat that can be sourced close to home, from purveyors without allegiance to corporate dominion over the food supply and the soil. That being said, not all local products are superior, and there are some very good people in the world who have no choice but to participate in the ghastly external system. There are very good farmers forced to model their systems as the industry dictates, and not as nature suggests. We, as consumers, or everyday “food citizens” as I like to call us, are indeed the biggest contributors to the backward food industry, and its biggest victims. I say this in an effort to honor the truth, which is simple and whole: Good food comes from good soil and diverse, synergistic systems. I speak this truth with full recognition of reality, which is less simple, and less than ideal: We eat and work within a food system that does not support good food for all. What are you to make of this? Do the best you can, considering the situation.

Look for healthy lean muscle, deep in color and firm but springy in texture. Fat should be creamy and white, and at least somewhat plentiful. This can apply to both intermuscular fat (fat located between muscles and muscle systems) and intramuscular fat (fat within muscles/marbling), however less intramuscular fat could be attributed to breed of animal or feed regimen. Again, the more you can talk to the producer, or the more the butcher can tell you, the more you can select your meat relative to your project, and in good faith toward the ethical meat ethos. As you develop your charcuterie practice, you will be able to recognize quality meat and fat almost instantly, via texture, scent and color.

► This image depicts the typical American method for pork butchery, and attributes traditional charcuterie preparations to their customary carcass primal.



Most recipes and many traditions dictate a specific cut for each charcuterie preparation. This is many times due to the way a cut lends itself to a process, but it can also be tweaked, based on knowledge of similar muscles within the animal, and based on availability. I am a firm believer in full reverence to tradition, but I also believe good practice and holism require us to evolve tradition to the extent that it best serves the whole. If you are not knowledgeable of butchery, follow the suggestion in the recipe until you gain more experience. As you learn about muscle science and have some sensory experience with butchery practice, you can allow yourself to become more flexible. I have tried to note in each recipe where you cannot afford to be cavalier, and processes or instructions with which you can allow yourself some creativity.

The same can be said for spices, salt and other ingredients. Seek the freshest and most responsible ingredients possible, as these will inform a better product and a better food system. Follow tradition where it serves you, and branch out where you wish to forge new and delicious ground.

For casings, I prefer natural over synthetic. For fresh sausages, I use natural hog casings, for salamis I use natural beef middles, and

for larger preparations or whole muscle cures, I use hog bungs and hog bladders. Sheep casings will come in handy if you want to make breakfast links or snack sticks, and beef bungs are used for curing coppa. You will see each of these items pictured with the recipes for which they are used.

The Resources section at the end of the book provides online purveyors for items that you might have trouble purchasing around the corner.

SAFETY / HOW IT WORKS

I am not a germ freak. On the contrary, I grow mold next to my desk on an ongoing basis. Let's be honest — some of our best foods in the world come from our understanding of, and openness to, microorganisms. Chocolate, coffee, tea, yogurt, cheese, alcohol and salami are just a few of the delicious possibilities we've come up with by not being total germ-a-phobes. That being said, we must also have a respect for the harmful microorganisms that can plague our cookery. Charcuterie is a practice in which you can become intimately unafraid of nature, and indeed delighted by its mystery. But you will also need respect for its power. In meat processing, there are a few notable foes of the process. The majority of them, including *Campylobacter*, *listeria*, *salmonella*, *E. coli* and staph can be prevented by cooking fully or preserving thoroughly, ensuring you start with clean product, and maintaining a clean and cold processing regimen. Botulism is in another category, as the deadliest potential pathogen in food preservation. It thrives in oxygen devoid, acidic environments, and can only be inhibited by thorough cooking or use of nitrite (more on that later). *Trichina* is a parasite of concern in wild game and some pastured animals. Freezing meat for at least 82 hours at less than -10 degrees Fahrenheit (a median temperature for most home freezers) will kill it.

The most important and most basic safety principles are to 1) keep work area, hands, equipment and everything as clean as possible, and 2) keep everything as cold as possible. As meat gets

smaller, it needs to be kept colder. This is because the more surface area meat gains (via cutting or grinding), the more breeding ground bacteria is given. You'll notice the particular attention given to temperature as we deal with preparations that include grinding and fine mincing of meat products. In many preparations, you will be encouraged to not only work with frozen meat, but also to freeze parts of your equipment (working parts of your grinder, mixing bowls). You may also want to take a break in the middle of processing, and let the meat chill in the fridge before continuing to ensure everything stays around 40°F, and no warmer. 3) Ensure your projects meet parameters for internal temperature when hot smoking or cooking, and for weight loss when air curing. For the latter, measures of pH and water activity are the most reliable markers of food safety.

An understanding of how charcuterie works, when it works, is essential to preventing safety issues, as well as producing great-tasting products. In addition to common sense sanitary practices and cold storage, we use specific tools to aid our cause. Understanding these tools and their role in the process of meat preservation is essential to grasping the essentials of how charcuterie is even possible.

Salt is a critical player in charcuterie practice. It provides flavor, but it also creates inhospitable environments for many harmful microorganisms. Additionally, salt does the important work of reducing *water activity*, which is a measure of the total water available for microbial activity in the meat. Via the processes of osmosis and diffusion, salt lowers water activity and aids in the dehydration of meat, which is ultimately what preserves it for safe consumption.

Smoke has antimicrobial properties, a low pH and other qualities that inhibit rancidity. In addition, the flavors smoke contributes to cured meats play a major role in charcuterie tradition. (More on smoke in Chapter 6.)

Fermentation reactions give us the ability to alter pH, exclude harmful microbes and welcome friendly ones. (More on the magic of fermentation in Chapter 5.)

Controlled **temperature** and **humidity** (Chapter 5) similarly allow us to tailor the environment to microbes that we want, and discourage those we don't want.

Nitrite prevents toxicity of *Clostridium botulinum*, the bacteria that causes botulism. Most nitrite used in the kitchen is chemically derived, but it is a naturally occurring compound that can be found in the stems of leafy greens, particularly concentrated in the stalks of the celery plant. In addition to inhibiting botulism, nitrites also provide color to cured meat items. While nitrite has caused much controversy in the food world, it cannot be flatly condemned. Research has shown that a person would have to eat more than 14 pounds of cured meat in one sitting to become ill from nitrite poisoning, while a mere half microgram (or less) of botulism can kill them. As we explore methods for curing meat throughout this text, we will also explore situations in which nitrites can be excluded. I encourage skeptics to gain an understanding of nitrite in the environment and in our bodies, and to understand that having control over our own processing by making our own charcuterie allows us to avoid some of the pitfalls of this controversial ingredient.

For example, any time a product will be cooked to temperature (150°F for red meats, and 160°F for poultry) any botulism present in the product will be killed. This means that for warm or hot smoked charcuterie, or sausages poached to temperature, a nitrite is not necessary to ensure safety. People often include sodium nitrite in cooked charcuterie products anyway, because it is a color enhancer. However, when producing cured meats on the home scale, you have the freedom of making your own decision regarding the use of

nitrite in cooked applications. Additionally, cooking products that are cured with nitrate produces nitrosamine, a known carcinogen. If you omit the nitrite because you know you will be cooking the product to temperature, you can avoid this concern.

When it comes to fermented meats that are never cooked, nitrates are a requirement for food safety. Whether you obtain the nitrate component from naturally derived celery juice extract or from commercially uniform curing salts, the nitrate and nitrite in these additives interact with microorganisms to render botulism inactive and prevent its toxicity in the product. I find it useful to remind people that these are metabolic interactions, wherein nitrite (which is itself only 4% sodium nitrite and 96% table salt) has been added in small quantities (just 4 oz. per 100 lb. of meat) and has then been changed by microorganisms. Nitrite in cured meats is metabolized into nitric oxide, and the trace amounts of this are then metabolized and used by your own body and the microorganisms your body hosts. To attempt to understand the dynamism of these interactions, and to claim to know their exact scientific effects on our health, is laughable, if you ask me. I say you are part of the nitrogen cycle, as you are of nature. I say absolutism of any form is annoying and egoist. Cure on, friends.

Natural sources of sodium nitrite are available, if you are more comfortable with this approach. The most common source is celery juice powder. It is added to the recipe similarly to a curing salt. Simply follow the instructions of the provider in terms of quantity. Because this is a natural source, there can be inconsistencies in the amount of nitrite contained in a measurable amount of product. Even so, I have used it with success, and know many salumists both commercial and home-based who use it with satisfaction.

Time plays in our favor, both because the ultimate symbiosis with beneficial microorganisms only comes when we allow them the time they need to do their work, and because the slow dehydration of meat is the ultimate determinant of shelf stability.

EQUIPMENT AND SUPPLIES

There are many items you'll want in the kitchen to make your curing projects easier and faster. Remember that people used to do this with stone blades and bladders and rams' horns, so feel free to get as minimalist as you want. Below is a list of equipment to consider. I have listed some of the specific models I use throughout the text.

- Boning knife
- Meat grinder
- Sausage stuffer
- Stand mixer
- Smoker
- Food processor
- Steamer
- Freezer space and refrigerator space
- Various stainless steel pots for poaching and blanching
- Tamis or a fine-mesh sieve
- Various sized mixing bowls
- Digital kitchen scale
- Hooks — bacon hangers and various S-hooks mostly
- Loaf pans or terrine molds

Climate-controlled charcuterie cabinet basically any insulated box wherein you can control temperature and humidity. I have a few refrigerators I have adapted with an external thermometer and a cool mist humidifier. Details for this exact setup can be found in *The Ethical Meat Handbook*.

Casings I use natural casings. These are hog intestines (used for standard size sausage links), beef middles (for fermented salamis), beef bungs (for curing whole muscles), bladders (curing whole muscles) and sheep casings (snack sticks or breakfast sausages). I do use collagen casings and synthetic casings occasionally, mostly for mortadella, hot dogs and bolognas.

- Butcher's twine
- Nonreactive containers for storing spices, soaking casings and holding meats under refrigeration while they cure
- Cheese cloth
- Sheet pans/rimmed baking sheets
- Towels and aprons