

A Guide to CHORIZO

by E. R. Lambert

or: **In Search of the Perfect Chorizo**

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CHORIZO – Introduction

Most Hispanic countries have their own version of chorizo, a marvelous-tasting fermented sausage which is, to the Spanish, like salami is to the Italians. Many inhabitants of former Spanish colonies have tried to make similar sausages, using local ingredients and methods. In most cases, they taste quite good but have a unique local flavor that doesn't quite match that of real Spanish chorizo. ...whatever that is. You see, even Spain has a number of versions.

For several years, now, I've researched chorizo versions from various countries, and have discovered only one common factor- - they all taste good. Ingredients vary widely. Chile peppers, which furnish color as well as flavor and piquancy, begin with relatively mild paprika in Spain, get slightly hotter with the many and varied chiles of Mexico as we move south, and move upward to aji peppers as we reach South America. There are a few other colorants used such as annatto and turmeric, but the major difference is in the type and amount of chile peppers.

So let's look at a variety of recipes. We'll start where I did, with recipes from South Texas and Mexico. Then we'll look at the Spanish version which started it all, then at versions from El Salvador, Chile, Uruguay, and Argentina. Along the way, there'll be couple of side diversions, because the food of northern Mexico differs from food of Yucatan, which differs from the food of El Salvador, Peru, Uruguay, and the like. We'll only briefly touch on Tex-Mex, mentioning the more traditional food of "the wild horse valley," as the land between the Nueces and Rio Bravo (Rio Grande, to you gringos) rivers is known locally. We'll do it in a

series of postings, each with a couple of recipes, so our beloved ringmaster, uh, moderator, doesn't get too riled up. ...and with one exception, we'll keep it pork-based, so our beloved sponsors, the Marianskis, are assured that we haven't wandered too far afield. After all, this IS a sausage-related website, right?

Chorizo Defined:

We turn to Wikipedia for a definition of chorizo, which references a book by Jerry Predika (1983), titled "The Sausage-Making Cookbook," Stackpole Books.

"Chorizo is a term encompassing several types of pork sausages originating from the Iberian Peninsula.

"Chorizo can be a fresh sausage, in which case it must be cooked before eating. In Europe, it is more frequently a fermented, cured, smoked sausage, in which case it is usually sliced and eaten without cooking. Spanish chorizo and Portuguese chouriço get their distinctive smokiness and deep red color from dried smoked red peppers (pimentón/pimentão or colorau). Due to culinary tradition, and the expense of imported Spanish smoked paprika, Mexican chorizo (but not throughout Latin America) is usually made with chili peppers, which are used abundantly in Mexican cuisine. In Latin America, vinegar also tends to be used instead of the white wine usually used in Spain. Traditionally, chorizo is encased in natural casings made from intestines, a method used since the Roman times.

"Chorizo can be eaten as is (sliced or in a sandwich), grilled, fried, or simmered in apple cider or other strong alcoholic beverage such as aguardiente [a 40-proof crude rum]. It also can be used as a partial replacement for ground (minced) beef or pork."

Many of the New World's chorizos are attempts to if not duplicate, at least come close to the flavor of the original chorizo, a fermented sausage from several regions of Spain. Those original chorizo recipes are for fermented sausages, and require very special conditions of bacteria, temperature, and humidity for their production. Try duplicating one of them with anything different and you will obviously not produce a duplicate. So, for example, we find vinegar included in nearly all of the New World recipes, even though acid inhibits development of protein structure and makes the sausage contents fall apart, rather than adhere and hold together. There is a certain tang that fermented sausages have. People like it.

Some say that vinegar is a substitute for wine. That may be right, too. It's a fine point. Either way, the contribution to taste is indisputable. It's good, or the practice wouldn't have been retained.

In Spain, Chorizo differs from longaniza in that they substitute black pepper for paprika and may have different spices like nutmeg. In Argentina and Uruguay, according to Wikipedia, longaniza is a very long, cured and dried pork sausage that gets its particular flavor from ground anise seeds. This results in a very particular aroma, and a mildly sweet flavor. It is a fermented sausage, rarely cooked. In Chile, longaniza is often substituted for chorizo in the popular choripán sandwich, grilled and served on a bun with chimichurri and other condiments. (We'll cover both of these in the Argentina and Chile sections, below.) Unlike Spanish chorizo, longaniza can also be made of chicken, beef, or even (in the Philippines) tuna.

Spanish regional ingredients were not usually available in the New World unless imported from Spain. Locals incorporated available ingredients. Thus, there are many variations of chiles used in the chorizos of the New World, substituted for the paprika, the dried red peppers (pimento) available in Spain. Even Spain incorporated ingredients from elsewhere - a good example being smoked paprika from Aleppo in what is now northern Syria, close to the Turkish border.

Chapter 1 - CHORIZO – Texas/Northern Mexico

In this section:

- Modern Texas production methods.
- Recipe from “Wild Horse desert” to show a more typical meat-based food offering, noting how unlike the usual Tex-Mex it is.
- Masrianski version of Mexican style.
- A home sausage recipe for a typical-tasting but healthier chorizo.
- Yucatecan chorizo recipe based on annatto.

To show how the food influences the sausage, a Yucatecan Cochinita Pibil recipe and pickled onion accompaniment recipe

Current Tex-Mex chorizo production in the USA has largely abandoned traditional Spanish techniques in favor of a product that is cheap to produce, captures the flavor of Spanish chorizo somewhat, and uses vinegar to impart the sour taste indicative of fermented foods without actually having to ferment. The result contains pork and beef “byproducts” (salivary glands and worse), and far too much fat. When fried, this crumbly mixture (a result of the vinegar) practically melts, except that it is partially liquid from the start. Any attempt to soak up the grease with a paper towel results in loss of much of the flavor, which is oil soluble. You can, of course, scramble eggs in it and then blot the result. Try it once, just to taste it. Then, clean up the mess and move on.

Starting Place: A “Dish From the Wild Horse Desert”

Surely we can do better than the commercial stuff with a homemade recipe. A good place to start into Texas/Mexican fare, across the menu board, is a delightful book called “Dishes from the Wild Horse Desert: Norteño Cooking of South Texas” by Melissa Guerra. This book-cum-memoir describes the author’s memories of growing up in South Texas, describing in detail the cooking in a region bounded by the Rio Grande and the Nueces Rivers, which is to say, from Brownsville to Corpus Christi, west to Laredo. There wasn’t much here, other than cattle ranches, until the 1920’s. An article from the Corpus Christi Caller-Times newspaper, a short history about the wild mustangs that lived in the region in the early years, furnishes a bit of early history. <http://www.caller.com/news/2011/nov/23/chasing-mustangs-in-the-wild-horse-desert/> With the discovery of oil and gas in the area, the economy developed enough to build some infrastructure.

That enabled the leisure industry to grow, featuring beautiful, uncrowded beaches. Nowadays, “Winter Texans” flock to South Padre Island, although not in the droves once there. No thanks to the collapse of the Mexican peso (several times), the collapse of domestic oil drilling in the ‘70s and ‘80s, and the drug cartel violence along the border which began after the system of bribes and kickbacks was disrupted by voting the PRI out of office, poor little Corpus Christi, often called the “Sparkling City by the Sea,” remains not quite a destination, not quite on the road to anywhere, needing a bath and a new coat of paint.

But we digress. Back to things edible. In South Texas, the favored breakfast item is the breakfast burrito. These tacos, best made with corn tortillas but usually with the flour version (which holds together better), feature scrambled eggs with a variety of additives. Unless you ask specifically for corn tortillas, flour tortillas are the delivery vehicle. Refried pinto beans, cheese, potatoes (home fries), bacon... just a few of the choices. ...and, of course, my favorite, “taquitos de chorizo con huevo,” breakfast tacos of scrambled egg with chorizo.

To do this delicacy justice, several items should be noted.

- Traditionally, salsa and fresh cilantro are added.
- Never eat one in a moving car. Just like texting while driving, a taquito can cause the driver to lose focus, in this case swerving as the contents fall into his or her lap.

Once, on the way to the airport in brand new coat-and-tie, I managed to drop greasy chorizo con huevo onto a spot best not described. I cleaned it up as best I could, sighed, and boarded the morning flight to DFW. By the time I arrived at the offices in Fort Worth, all that was left was a greasy stain right where it shouldn't be.

Unfortunately, I did get the job. It turned out to be a lateral move full of headaches, and nearly destroyed my career. I learned two things that morning:

Never eat a breakfast taco in the car, and

Never take a job with the word "Coordinator" in the title.

...but it did get me into a new hobby, homemade sausage, so it wasn't all bad.

Years later and several jobs since, I have overcome the greasy chorizo problem. You can too. Make your own. Melissa Guerra's book furnished a good starting place. (see pages 188-189) Melissa's easy, simple-to-make recipe is as follows. Note that this version is not nearly as fatty as the commercially available chorizos of today. It comes in at about 23%, well inside the 20% to 30% recommended by many sausage makers.

Original Recipe	Ingredient	1 Kg (Total) Recipe	1 Kg (Meat Basis) Recipe
6 (about 4 ounces)	ancho chiles	8.2 gm (equals 0.8%)	10.6 gm
2 or 3 cloves	Garlic, fresh	7.1 gm	9.3 gm
1 cup	white vinegar	81 gm/ml	105 gm/ml
1 Tbsp	salt	5.1 gm	6.6 gm
1 Tbsp	ground black pepper	5.8 gm	7.5 gm
½ tsp	ground cumin	1.0 gm	1.3 gm
5 lbs	ground pork	771 gm (equals 77.1%)	1.0 kg
1 ½ cups	water	121 gm or ml	157 gm or ml

Puree the ancho chiles and garlic in the water. Place the puree into a large bowl. Add everything else except the pork, and mix well. Then add the pork and mix by hand until well blended. Cover and refrigerate for at least 24 hours.

A note about the recipes to follow: Where possible, I have given

- the original recipe,
- a translation (if applicable),
- a list of ingredients,
- a conversion to a recipe which weighs one kilogram total, and
- a conversion to a recipe which has one kilogram of meat total.

The "1 Kg (Total) Recipe" gives percentages or fractions, so that for example you have 8.2/1000 or 0.8% ancho chiles and 5.1/1000 or 0.5% salt in the recipe.

As will be discussed later, the Marianskis' book, "Home Production of Quality Meats and Sausages," p195, gives guidelines on how many grams of herbs and spices are used per kilogram of meat. The "1 Kg Meat Basis Recipe" column is useful for comparing this recipe with the guideline, plus it makes it easy to prepare

ground meats ahead of time, freeze them in 1-kilogram bags, and thaw to make sausage. Stan Marianski relates a story in the book (p.186) about giving some sausage to a well-known Polish sausagemaker, who commented “Great sausage, by why all those perfumes?” I find that many recipes exceed the book’s guidelines, and to be honest, I prefer the recipes’ quantities over the book guidelines. Remember- - it’s only a recipe, so do what pleases you. Use the guidelines, however, to identify whether or not a potential recipe is WAY off base.

Extract from Appendix D – Abbreviated Ingredient Percentage Recommendations

Item	Gm/1 Kg Meat (Marianski)	Chorizo Recipe Max (gm/kilo)
ground black pepper	– 3.0	7.5
chile- ancho		24
Chile-chipotle (dried)		10
chile-pasillo		13
cloves (ground)	1.0 – 2.0	0.2
coriander (ground)	1.0 – 2.0	0.6
cumin (ground)	1.0	1.3
Garlic, fresh	3.0 – 5.5	18
oregano (marjoram)	3.0	2
paprika (sweet)	2.0	20.0

While we’re on the subject of the Marianskis’ book, please note the inclusion of Cure #1 in the above recipe. Cure #1, also called Prague Powder #1, is 6.25% sodium nitrite and 93.75% salt. There is good advice in several places in the book about curing. In particular, there are several items of note:

U.S. FDA guidelines call for 156 ppm of nitrite, 1 ounce per 25 lbs of meat. That is, for Cure #1 (Prague Powder #1):

- $(1 \text{ oz} / 16 \text{ oz per lb}) / (25 \text{ lbs meat}) * (0.0625 \text{ fraction nitrite in cure}) = 156 \text{ ppm}$
- Nitrite cure helps retain red meat color and gives a subtle flavor enhancement.
- Nitrates (Cure #2) have their place too, in dried and fermented sausages. We will not cover Cure #2 here because, with the exception of the fermented Spanish chorizo recipe, all recipes are for “fresh” or “cooked/smoked” sausage.
- Best color is developed when meat is cooked at 140 to 160 deg.F.

I urge you to buy the book and read up on nitrites, nitrates, and curing. Few internet or book recipes include curing salts. It appears that those who do not include nitrites in their sausage mixtures take a great risk.

Our own Tex/Mex Blend

Let’s reduce the amount of fat by making our own blend. Here’s mine, developed from several recipes found in cookbooks and on-line, then honed by trial and (mostly) error. ...hope you like it. Here are some places to “comparison shop” for recipes:

- <http://www.premiersystems.com/recipes/mexican/chorizo.html>
- <http://www.cooks.com/rec/view/0,1649,149160-233202,00.html>
- <http://www.cooks.com/rec/view/0,1927,158181-240202,00.html>
- <http://www.mexican-barbecue-recipes.com/chorizo-recipe.html>
- http://www.clubplaneta.com.mx/cocina/receta_de_cocina_para_preparar_chorizo_de_toluca.htm

...and here’s my recipe, which can be found at

<http://www.wedlindydomowe.pl/en/viewtopic.php?t=5580&highlight=chorizo+ducko>

Original Recipe	Ingredient	1 Kg (Total)	1 Kg (Meat
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		Recipe	Basis) Recipe
2 lbs.	pork (fat trimmings removed)	689 gm	800 gm
1/2 lb.	pork trimmings	172 gm	200 gm
12 gm	non-iodized salt (reduce if using cure)	9.1 gm	10.6 gm
3.1 gm	cure #1 (optional, mandatory if sausage is to be smoked)	3.0 gm (142 ppm nitrite)	2.7 gm
0.75 gm	pepper (black)	0.6 gm (0.06%)	0.7 gm
20 gm	garlic (6 medium cloves - fresh)	15.2 gm (1.5%)	17.6 gm
24 gm	chile- ancho (remove stems & seeds, grind)	18.2 gm (1.8%)	21.2 gm
13 gm	chile-pasillo (remove stems & seeds, grind)	9.9 gm (1.0%)	11.5 gm
0.2 gm	cloves (ground)	0.15 gm (0.02%)	0.2 gm
0.7 gm	coriander (ground)	0.53 gm (0.05%)	0.6 gm
0.4 gm	cumin (ground)	0.3 gm (0.03%)	0.4 gm
0.4 gm	oregano	0.3 gm (0.03%)	0.4 gm
7.8 gm	paprika (sweet)	5.9 gm (0.59%)	6.9 gm
100 ml	vinegar	76 gm/ml	88 gm/ml

This sausage weighs in at 22% fat and 1.1% salt. The salt is increased slightly by the addition of cure #1. Best range for salt is less than 3%. My preference is for about 1%. Yours may vary. Cure standard is 156 ppm nitrite, which conforms to American as well as European standards.

For the chiles, shop in the Hispanic section of your local food market. Some equivalents:

---(Use about 3) 5 chiles anchos mulatos = 53 gm whole, 37 gm seeded

---(Use a large one) 2 chiles passillas = 29 gm whole, 23 gm seeded

Notes:

- Dissolve salt and cure in water/vinegar before mixing them and the spices into the meat, for better distribution.
- Season for a day or two in the refrigerator, then stuff. I use this sausage in crumbled for, so I usually put it into plastic sandwich bags rolled to look like stuffed sausage. These fit nicely, side by side, into one-gallon plastic freezer bags.
- Fresh sausage is good for three days, so freeze what you don't need immediately and pull it out, a link at a time, as you need it.
- Use cure, whether you smoke the sausage or not. Do not smoke unless cure is added.

Marianski Blend: "Chorizo - Mexican"

The book, "Home Production of Quality Meats and Sausages," BookMagic LLC, by Stanley and Adam Marianski, contains a wealth of information on sausage making. Their recipe(p.216) is included here, for comparison.

Original Recipe		Ingredient	1 Kg (Total) Recipe	1 Kg (Meat Basis) Recipe
1.0 kg	2.20 lbs	Pork butt	882 gm	1000 gm

18 gm	3 tsp	Salt	15.9 gm	18 gm
4 gm	2 tsp	Pepper, black	3.5	4.0 gm
4 gm	2 tsp	Pepper, cayenne	3.5	4.0 gm
1 gm	1 tsp	Oregano	0.9 gm	1.0 gm
7 gm	2 cloves	Garlic	6.2 gm	7.0 gm
50 ml	1/5 cup	White vinegar	44 ml	50 gm/ml
50 ml	1/5 cup	water	44 ml	50 gm/ml

Note there is considerably less chile and garlic in their recipe. This one has about 18% fat and 1.6% salt. Sausage making is all about taste, and everyone has their own preferences. It would be unreasonable to expect a Polish immigrant to Florida to have the same tastes as a South Texan, especially in the chiles category. Make the one that YOU like best.

Food Handling: Chiles

While we're at it, let's add an admonition about chiles and their handling (from my web post cited above):

Hazard prevention. (The following is ripped off from <http://missvickie.com/how...s/heatscale.htm> which you should refer to for additional information on pepper types and such.)

How to Stop the Heat Its a good idea to *use gloves* or put plastic baggies over your hands to avoid getting the hot oils on your skin. Alternatively, if nothing else is available, you can try to protect your hands by coating them lightly with vegetable oil as a barrier. ***Never touch your eyes or mouth, or any part of your body when handling hot peppers.***

Putting Out The Fire

On your skin: Water only spreads the fire so don't wash your hand until you neutralize the heat. Capsaicin — the compound that gives peppers their heat isn't soluble in water, but chlorine or ammonia turns it into a salt, which IS soluble in water. In a little bowl add 1 part bleach to 5 parts water and just dip your hands quickly, but don't soak your hands in this solution or it may irritate your skin.

In your mouth: Many people recommend drinking tomato juice or eating a fresh lemon or lime, the theory being that the acid counteracts the alkalinity of the capsaicin.

Dairy products are a good antidote to overheating. Capsaicin dissolves easily in the fats found in dairy products. So when you put a dab of sour cream in your mouth along with (or after) a bite of hot stuff, you're adding pretty effective dilution. The capsaicin and dairy fats mix together, keeping some of the capsaicin molecules from finding the pain receptors on your tongue. ***Remember, though, it's the fat that provides the relief,*** so don't expect the same results from low-fat sour cream or nonfat yogurts. This antidote tones down many spicy cuisines, from the use of sour cream with Mexican food to the yogurt condiments eaten with Indian meals. In Thai cuisine, rich coconut milk serves much the same purpose,

And finally, this advice: Wear rubber gloves when making sausage, and wash frequently. It's not only more sanitary, it guards against pepper problems.

Chapter 2 - CHORIZO – Spanish

Traditional techniques, two recipes with citations, several Spanish regions' product descriptions.

The Spanish versions of chorizo are what started it all, so let's explore Spanish chorizo a bit. I'll start by again borrowing from Wikipedia, and note that they do a great job by accepting contributions from many readers, edited by many readers, providing a valuable asset for us all. (Please consider contributing both knowledge and money.)

“Chorizo can be a fresh sausage, in which case it must be cooked, but in Europe it is more frequently a fermented cured smoked sausage, in which case it is usually sliced and eaten without cooking. Spanish chorizo and Portuguese chouriço get their distinctive smokiness and deep red color from dried smoked red peppers (pimentón/pimentão or colorau).”

Think of chorizo as the Spanish version of salami. It can be eaten as such, but is probably more often used as a seasoning for other dishes. My personal preference is chopping it up, frying it a little in the pan before adding eggs, then adding and scrambling a couple of eggs in the pan. Readers who know Spanish food will recognize this as similar to a Spanish “tortilla,” a round, flat egg dish similar to an omelet. All sorts of additives can be included. Onion and bell pepper are family favorites. Those of us who live in Texas and northern Mexico, however, refer to this as “huevos revueltos con chorizo,” scrambled eggs with chorizo. (...or in my family, “revolting eggs with chorizo.” Hey! What can I say? We enjoy our breakfasts together, often trampling several languages at a sitting.)

The last few years have seen the availability of Spanish imports as well as a few local attempts. Please try them. This will establish a benchmark for comparison. Our local grocers, the “HEB” chain, carry one or two different Spanish-style chorizos at a time, fermented and dried and vacuum packed. These differ from the local Tex-Mex variety, which is a fresh sausage with far too much fat and with parts of the hog that are not normally mentioned individually in the ingredient list printed on consumer packaging. Like legislation, some sausage components should not be discussed in polite company. If you are into “parts and byproducts” as well as sausages with 50% or more fat, try ‘em. ...once, for comparison. Then, try one or more of the recipes that follow.

The Spanish language side of Wikipedia gives a good discussion of chorizo in general. Parts of <http://es.wikipedia.org/wiki/Chorizo> are translated below, for your enjoyment and edification.

<p>Chorizo en España</p> <p>En España es un embutido curado (bien al aire, bien ahumado), elaborado principalmente a base de carne de cerdo picada y adobada con especias, siendo la más característica el pimentón, que es el elemento más distintivo del chorizo frente a otras salchichas, y también el que le da su color característico rojo. La piel de este tipo de salchicha suele ser intestino delgado de cerdo, aunque también se utiliza el intestino grueso del mismo para la variedad de chorizo cular. En España, para que un embutido sea llamado <i>chorizo</i>, ha de llevar necesariamente pimentón y ajo; esto lo diferencia del chorizo de otros países.³ Es popular la tortilla de chorizo.</p>	<p>Chorizo in Spain</p> <p>In Spain, Chorizo is a cured sausage (either air, or smoked), made mainly of minced pork and seasoned with spices, the most characteristic of which is paprika, the most distinctive element of chorizo when compared with other (salchichas) sausages, and which also gives it its characteristic red color. The skin of this type of sausage usually is pig small intestine, although the large intestine is used. In Spain, for a sausage to be called a chorizo, it must primarily feature paprika and garlic in lead roles. This differentiates it from other countries' chorizos, which often do not. The chorizo omelet is popular.</p>
<p>Entre las variedades de chorizo es famosa la riojana, así como la de Pamplona, que se caracteriza por usar carne muy finamente picada. Otros chorizos afamados se pueden encontrar en la provincia de Salamanca, así como en Segovia (destacan los de Cantimpalos, IGP), Potes (Cantabria), León, Asturias (generalmente ahumados) y Navarra, donde son populares sus chistorras.</p>	<p>Among the varieties of sausage are famous Rioja, as well as that of Pamplona, which is characterized by using very finely chopped meat. Other famous chorizos can be found in the provinces of Salamanca and Segovia (Cantimpalos, PGI region), Potes (Cantabria), Leon, Asturias (usually smoked) and Navarre, where their chistorras (chorizo production places) are popular.</p>

Fermented Chorizo Recipe

For a fermented example, our good friends the Marianskis at <http://www.wedlinydomowe.com/sausage-recipes/chorizo> provide the following commentary and recipe, plus a list of variations.

“Spanish Chorizo is a dry sausage made from cured pork and is air dried until ready for consumption. Pork is coarsely chopped and seasoned with pepper, paprika and garlic. Spanish smoked paprika (sweet, bittersweet or hot) known as Pimentón gives it its deep red color.

Original Recipe		Ingredient	1 Kg Standard Recipe
1000 g	2.20 lb.	lean pork, ham or butt (<20% fat)	937 gm
28 g	5 tsp.	salt	26.2 gm
5.0 g	1 tsp.	Cure #2	4.7 gm
2.0 g	1/3 tsp.	dextrose (glucose), 0.2%	1.9 gm
2.0 g	1/3 tsp.	sugar, 0.2%	1.9 gm
6.0 g	3 tsp.	pepper	5.6 gm
20 g	10 tsp	Spanish smoked paprika (pimentón)	18.7 gm
2.0 g	1 tsp.	oregano	1.9 gm
2.0 g (or 2 cloves [7 g] fresh)	1 tsp.	garlic powder	1.9 gm
0.12 g	use scale	T-SPX culture	0.11 gm

Instructions

Grind pork through 1/8" plate (3 mm).

Mix all ingredients with meat.

Stuff firmly into 32-36 mm hog casings, form 6" long links.

Ferment at 20° C (68° F) for 72 hours, 90-85% humidity.

Dry for 2 months at 16-12° C (60-54° F), 85-80% humidity.

Store sausages at 10-15° C (50-59° F), <75% humidity.

Notes

Spanish Chorizo Types:

Chorizo Riojano - pork, salt, hot pimentón, sweet pimentón, garlic.

Chorizo Castellano - pork, salt, hot pimentón, sweet pimentón, garlic, oregano.

Chorizo Cantipalos - pork, salt, pimentón, garlic, oregano.

Chorizo Navarro - pork, salt, sweet pimentón, garlic.

Chorizo Salmantino - lean meat, salt, pimentón, garlic, oregano.

Chorizo Andaluz - pork, salt, black pepper, pimentón, cloves, garlic, white dry wine.

Chorizo Calendario - pork, beef, salt, pepper, garlic, oregano.

If, like me, you don't have the equipment to properly control temperature and humidity while your sausage luxuriates in its fermentation, try a homemade Spanish chorizo done as a fresh sausage. Here's one from <http://www.sausagemania.com/recipes2.html>. Quoting again, chorizo...

"...can really be made only in Spain, where entire villages are devoted to its manufacture, The product is air-cured for up to four months in special high-ceilinged rooms. Some chorizo is smoked; some is not. This recipe does not call for smoking, but because the dominant flavoring is smoked paprika, the sausage has a refined smoky flavor that does not overpower.

"The Aleppo pepper adds a rich red pepper overtone as well as a mild (and delayed) piquancy that slowly fills the mouth with warmth rather than assaulting the tongue and palate in the more forthright manner of jalapeños or hot chili peppers.

"Grind the pork coarsely (3/8" or larger plate). You may have difficulty finding Aleppo pepper, also known as Near East pepper, ground from a sweet, sharp chile grown in the Aleppo region of Syria. One source we know is World Spice Merchants, in Seattle, Washington. Smoked paprika, from Spain, comes in three varieties: sweet, bittersweet and hot. We use the sweet (dulce) variety.

"Mix all the ingredients together and refrigerate for 24 hours. Stuff into medium hog casings. "

Original Recipe		Ingredient	1 kg Standard Recipe	
2.5 lb	1.13 kg	Ground pork	820 gm	
4 tsp	20 gm	Coarse salt	16.4 gm	
4 cloves	20 gm	Garlic, crushed or finely chopped	16.4 gm	
1 tsp	2.2 gm	Ground nutmeg	1.8 gm	
2 T	30 gm	Brown sugar	24.6 gm	
2 T	6.3 gm	Smoked paprika	5.2 gm	
2 T	6.3 gm	Aleppo pepper	5.2 gm	

I would advise adding the appropriate amount of cure #1 here (150 ppm of sodium nitrite, which is 6.25% of cure #1, so about 2.7 grams for the 2.5 pound batch), whether or not you plan to smoke the sausage. (Back down on the salt as appropriate.) For an alternate source of herbs and spices, try Penzey's, which has a sizeable mail order operation as well as retail stores in many cities across the USA.

A Spanish Dish - Paella:

Chorizo is wonderful as a seasoning. Here, for example, is a recipe given to me a number of years ago by a homesick Spanish friend named Jose M. Padillo, who lived in Dallas at the time. This is his family's take on the classic dish, Paella, with a few of my own notes. He could get advice from his relatives, whereas I couldn't, so where information is left out of his version, I occasionally learned some of them the hard way. Alongside his recipe and my translation is a version from "Frugal Gourmet" Jeff Smith ("The Frugal Gourmet on Our Immigrant Ancestors," pp 456-7). His recipe serves to highlight what can be substituted, but also points out how Americanization can creep into a recipe.

Is the recipe authentic? Well, to make a long story short, we once asked a stewardess on a flight to Madrid where to eat, especially paella. ...bad idea. She rolled her eyes and made an off-color remark about "they eat 'things with eyes' .there." Like most Americans, she thought in terms of American fast food, something which should have tasted like it was from a familiar Tex/Mex fast food chain that she knew from home. Spanish food is a much more refined, European style of dish. Spanish is to Tex/Mex fast food as French food is to French toast fast food. What a pity that she, like many tourists, was unwilling to step outside the familiarity of the aircraft cabin or away from the guided tour in English when traveling.

Madrid is more European than Spanish, yet has its own unique Spanish soul. Sevilla has that special quality, even more so. The pueblos blancos, little old fortress towns perched on the top of rocks in bends of the rivers, have a medieval atmosphere and are a rare delight. Cadiz is unique, especially in historical perspective-- centuries from now, one could stand on its shores and think about shipping out for the New World, be it 15th century America or the orient or maybe, by then, new worlds in space. ...and the food, unique with its European and North African roots, was fabulous along the entire route.

But, back to reality. Enjoy the following recipe, which compares my friend's family preferences with an American cooking author's. Note that Smith uses everything in sight, whereas the Padillo recipe is rather spare in its detail. This is where family upbringing and advice come in.

One major item of note: in cooking paella, heat transfer is a serious problem. The typical paella pan is shallow and open, whereas rice is usually cooked in a deep, covered container. Why the difference? Well, it was explained to me that the various components of the paella offer their juices and flavors to the rice, and that those flavors would become unidentifiable if mixed. The problem, though, is that rice is not steamed very well in an open container, nor are the ingredients on top cooked very well.

The secret, which usually isn't written down, is to pre-cook any ingredients which require thorough cooking before they are added. There will be some further cooking of everything as the dish progresses, so delicate items such as clams, mussels, squid, and shrimp should be added as the rice cooks, and the chorizo and vegetables should be sliced thin so as to cook or render more rapidly. Bulky items such as chicken and whole fish should be cooked earlier (pan fried is good) or they'll NEVER be done, or if they are, only they will be and everything else will be overcooked. As each pre-cooked item is prepared, keep it and its juices in a separate container. Add by placing each item randomly about the pan, then go back and pour a little of the juice onto each. This localizes the flavors just a bit, producing pockets of flavor, and in my opinion

increases the enjoyment of eating. (Those who mound food will miss out, but you and I, knowing better than to mix everything...)

To begin, though, let's be practical and make a trial run or two. For own edification (and to avoid embarrassment if you wait until guests have arrived and your dish doesn't turn out okay), make a test run in your paella pan, using only rice and water. Put the pan on the biggest, meanest, highest heat burner you have, add the rice and water, and cook this trial batch at high heat to both clean the pan and to check heat input. Gas stoves, propane burners, even turkey fryer burners (throttled) are appropriate. Electric stoves sometimes don't deliver enough heat.

Next, when you are satisfied that you can successfully input enough heat, make a second test run to refine your settings, making sure you have the heat input right, meaning both sufficient and evenly distributed. Sauté the onions, sauté the rice, then add boiling water, then the rice. Adjust heat to "bubbling uniformly," and hold for 20 minutes. Spanish Arborio rice is typically used. Oriental or Basmati types are not appropriate. Some people find that tenting the pan with foil helps. If it works, great, but be aware that having to do this means you don't have enough heat flux.

There are as many variations on paella as there are Spaniards, times ten. Consider adding other ingredients, such as artichoke hearts and Spanish olives. ...anything typically Spanish or Mediterranean will do. Make a list of ingredients, then rearrange the ingredients in order of how long it takes to cook. Include rice in the list. Anything that takes longer than rice, such as chicken or whole fish, needs to be cooked first. Anything that takes a shorter time should be added as the rice cooking starts, such as seafood. Rice is the key ingredient. When the rice is done, the dish is done.

Now lay out the ingredients in cooking order. Frozen ingredients should be thawed carefully. Frozen sea creature mixtures are best thawed in running cold water with ice, then placed in ice water or refrigerated until needed.

When ready to start, everything on the list above rice should be cooked sufficiently that it will steam or remain warm when the rice is cooked. Everything below rice should be added as the paella pan begins to heat, or part way through the cooking.

Original	Translation	Frugal Gourmet	
1 Kg. Mejillone frescos	2 lbs. fresh mussels	1 lb mussels	
1/2 Kg. Gambas frescas	1 lb. fresh shrimp	½ lb. Shrimp	
1/2 Kg. calamares cortados en ruedas	1 lb. squid cut in circles		
1 Kg de almejas frescas	2 lb. fresh clams	1 lb. clams	
1-2 Kg. de Pescado fresco (con cabeza)	2 – 4 lb. fresh fish (with heads)		
		2 lbs. Chicken thighs	
		½ lb. Pork (cut in cubes)	
		1 cup cubed ham	
100 g chorizo en rodajas	4 oz chorizo sliced in rings	½ cup sliced chorizo	
trozo de pepino	one cucumber (cut into sticks)		
2 Cebollas bien picada	2 onions chopped well	2 yellow onions	
3 Tomates pelados	3 peeled tomatoes		
1/2 Pimiento	½ red bell pepper, cut up	1 red bell pepper, sliced	
		1 cup peas	
1 Cabeza de Ajo lavada (y un majado de 4 dientes pelados)	1 head of garlic (plus 4 cloves peeled and crushed)	2 cloves garlic (crushed)	
Laurel	Bay leaf		
Colorante	coloring	1 tsp paprika	
		2 Tbsp annatto oil	
Aceite de Oliva	olive oil		
Azafran	saffron	1/8 tsp crushed saffron	
Sal	salt	salt	
		1 cup dry white wine	
Avecrén de Pescado	2 Fish bouillon cubes		
	(see below)	3 cups chicken stock	
Arroz	rice	2 cups rice	

For the broth, for the home-style recipe, do as follows. (To be honest, ignore Smith's advice and use this method. using either chicken broth or preparing the seafood broth. It seems a bit counter-intuitive, but it works well.)

Original	Translation
<p>Caldo: En un caldero poner agua limpia (contar las tazas de agua que se ponen) a hervir. Añadir 1 cebolla partida, un tomate, trozo de pepino, cabezas de Pezcado. Añadir sal y 2 pastillas de Avecrén Pescado y un majado de ajo.</p>	<p>Broth: In a soup pot, put clean water (count the cups of water that you add) and heat. Add one chopped onion, one tomato, a cucumber, the fish heads. Add salt and two tablets of fish broth and the crushed garlic.</p>
<p>Fritura y Cocinado: En la Paellera se pone un poco de aceite que cubra todo el fondo. Se frien los calamares hasta que esten dorados. Se retiran a un plato. En el mismo aceite se añade la cebolla picada, los tomates picados, el pimiento troceado y el ajo. Se deja a fuego medio hasta que esta todo bien frito. Se incorporan los calamares a la fritura. Se le añade el Caldo colado (contar las tazas de caldo gue se añaden, 2 tazas de Caldo por 1 taza de arroz). No usar todo el caldo. Cuando el caldo hierva se le añade el azafran, un poco de sal, 1 pastillas de Avecrén Pescado, el arroz (mitad de tazas de arroz gue de caldo). Y finalmente poner los mariscos y trozos de pescado.</p>	<p>Frying and Cooking In a paella pan, put olive oil to cover the bottom. Fry the calamari until golden. Remove to a plate. In the same oil, add the chopped onion, chopped tomato, bell pepper pieces, and the garlic. Place over a medium flame until all is medium fried. Add the calamari back into the fried mixture. Add the strained broth (count the cups added, two cups of broth per one cup of rice). Don't use all the broth. When the broth boils, add the saffron, a little salt, one cube of fish bouillon, the rice (half as much rice as broth). And finally put the seafood and fish. (The Frug uses Uncle Ben's rice and cooks the dish covered. Bleah.)</p>
<p>TIP: Añadir mas caldo que lo que pide la formula 2/1. Poner una taza de caldo adicional por cada 2 de arroz. (Ex: 3 tazas de arroz = 6 tazas +1.5 tazas de caldo)</p>	<p>Tip: Add more broth than you should for the formula 2:1. Put an additional cup of broth for each 2 cups of rice. (Example: 3 cups of rice = 6 cups + 1.5 cups of broth.)</p>

{UPLOADED 8/11/2012 through here}

Chapter 3 - Interior Mexico

Turning once again to the Spanish version of Wikipedia for our introduction:

<http://es.wikipedia.org/wiki/Chorizo>

Chorizo en México

El chorizo es un elemento importante en la cocina mexicana, aunque la longaniza llega a ser más conocida en ciertas partes del país debido a su facilidad de producción pero sin quitarle el lugar al chorizo, pues llega a ser incluido en cualquiera de las comidas diarias. En su mayoría están elaborados con las entrañas de cerdo, pero también los hay de res, de pollo y de pavo. Casi siempre la [tortilla](#) está presente cuando el chorizo es consumido, por lo general en tacos a los que se les agrega cebolla frita, cilantro, papa y jugo de limón.

La ciudad de [Toluca](#) se ha afamado por la elaboración y por las variedades que ofrece de este embutido. Una de las especialidades en Toluca y singular en la [gastronomía de México](#), es el *chorizo "verde"* nombrado por el colorante que ciertas plantas locales le dan. A ese tipo de chorizos se les suele agregar cacahuates y otros condimentos prehispánicos. De acuerdo con la variante de la receta, estos pueden ser picantes o no, este es uno de los más sabrosos y delicados.

Por otra parte, el "chorizo norteño" que se fabrica en los estados de la frontera norte suelen ser más pungentes y también más picantes que los del centro o del sur. Para este tipo de chorizo se utilizan variedades de chile como el chilpitin, cortez o de árbol, así como el vinagre blanco o el de manzana. Tanto en los estados de [Guerrero](#) como en el de [Yucatán](#), al chorizo se le añade más color con [achiote](#) y más sabor con zumo o jugo de naranja o con vinagres derivados de plantas locales.

Por todo el país hay una variedad de presentaciones del **chorizo rojo**, aunque en ocasiones su color sea más cercano al tono naranja. En el centro del país, el término *chorizo*, informalmente tiende a intercambiarse con el término *longaniza*, aunque la [longaniza](#) sea considerada más frecuentemente como un embutido más largo, mientras que el chorizo es un embutido que en su apariencia comercial es más segmentado; la longaniza se consume casi exclusivamente en el centro del país, mientras que en los demás estados se consume el chorizo.

Chorizo in Mexico

The chorizo is an important element in Mexican cooking, but the longaniza sausage is more widely known in some parts of the country where, due to its ease of production, rather than replace chorizo, it has become included in many daily meals. Most are made with pork entrails, but there are also beef, chicken and turkey. Almost always the tortilla is present when the sausage is eaten, usually in tacos to which are added fried onions, cilantro, potatoes and lime juice.

Toluca is famous for developing and offering varieties of this sausage. One of the specialties in Toluca and unique in the cuisine of Mexico is the "green" sausage, named for the coloring given by certain local plants. To that kind of sausages are often add peanuts and other prehispanic condiments. According to recipe variants, they can be spicy or not. This is one of the most delicious and delicate.

In contrast, the "northern sausage" that is manufactured in the northern border states are generally more pungent and spicier than the center or south. For this type of chorizo, chile varieties are used such as the chilpitin, Cortez or chile del arbol, along with white or cider vinegar. Both in the states of Guerrero and in the Yucatan, the chorizo is given more color with achiote and more flavor with local orange juice or vinegar derived from local plants.

Across the country there are a variety of recipe types of **red chorizo**, but sometimes the color is closer to orange. In the center of the country, the term chorizo tends to be interchangeable with the term longaniza but the longaniza is most often considered as a longer sausage, while the chorizo is a sausage that is sold in more segmented form. The longaniza is used almost exclusively in the center of the country, while in other states chorizo is eaten.

The city of Toluca, west of Mexico City, has specialized in the manufacture of chorizo. However, most Mexican chorizo is still made by small family-owned businesses. Here is a recipe purported to be representative of Toluca style. Note the use of cinnamon and clove in the mixture, This spicing is typical of cuisine from the interior of Mexico. What stands out here, and in other recipes for Toluca's style of chorizo, is the high amount of ancho chiles and vinegar in the recipe. In this particular recipe, unlike the others, there's a large amount of fresh onion too. The mixture does not develop any stickiness, due to the high level of acid.

The English version of Wikipedia says Toluca is the center of its production, and that it includes tomatillo and cilantro in place of the red colorants such as other chiles or paprika. If you are interested, Rick Bayliss lists a recipe which maybe we'll try in a future posting. Bayliss' recipe features Serrano peppers and cilantro, as well as spinach powder.

Chorizo de Toluca Recipe

Here's a recipe that I find interesting. However, see my opinion below.

http://www.clubplaneta.com.mx/cocina/receta_de_cocina_para_preparar_chorizo_de_toluca.htm

Original Recipe...	.Ingredient.....1 Kg (Total) Recipe.	.1 Kg (Meat Basis)	
1/2 Kg	pulpa de puerco	Lean ground pork	510 gm	750 gm
50 gr	chile ancho.	Ancho chile (dried	51.0 gm	75.0 gm
175 gr	lardo.	Pork fat	179 gm	260 gm
15 gr	chile pasilla.	Pasilla chile	15.3 gm	22.5 gm
1/2	cebolla chica.	Small onion	102 gm	150 gm
1/2 taza (cup)	vinagre.	Vinegar	121 ml	179 ml
1 diente (clove)	ajo.	Garlic	5.1 gm	7.5 gm
1 pizca (pinch)	comino	Ground cumin	0.5 gm	0.8 gm
1 pizca (pinch)	olor	Clove	0.5 gm	0.8 gm
1 gr	pimienta .	pepper	1.0 gm	1.5 gm
1 gr	canela.	Cinnamon	1.0 gm	1.5 gm
1 gr	semillas de cilantro.	Cilantro seed	1.0 gm	1.5 gm
1 gr	orégano.	Oregano	1.0 gm	1.5 gm
3 gr	pimentón.	Paprika	3.1 gm	4.5 gm
	tripas cerdo mediano.	Medium hog casings		
	Sal	salt	8.16 gm	12.0 gm

Procedimiento/Procedure:

<p>Picar finamente el lardo y la carne. Tostar, desvenar y moler el chile con todos los ingredientes, vinagre y sal. Luego, mezclarlo bien con la carne y el lardo picados.</p> <p>Con esa mezcla rellenar las tripas bien lavadas, y amarrarlas aproximadamente a 10 cms. una de otra.</p>	<p>Finely grind the pork fat and meat. Roast the chiles, remove stems and seeds, grind, and mix with all the seasonings, vinegar and salt. Then mix well with meat and fat.</p> <p>With this mixture fill the washed casings, and tie into about 10 cm lengths.</p>
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This recipe is notable in that the amount of chiles, vinegar, and fresh onion are quite a bit higher than in most recipes. When fried, the onion and the vinegar cook down a bit, and the result is a slightly sweet chorizo similar in flavor to many mole dishes. This recipe, scaled to 1 kilogram total, contains 51 grams ancho plus 15 grams pasilla (total 6.6%) and 12.1% vinegar for the recipe above.

Is this typical? Well, I looked at several others. The recipe at <http://nokrisscecco.wordpress.com/2010/02/01/como-hacer-chorizo-en-casa-chorizo-casero-receta/> has 8 chiles guajillos, 6 chiles anchos, and 2 cups of white vinegar for a one kilo recipe. At 7 grams (seeded) per ancho chile and 11 grams per pasilla, that's 56 grams (5.6%) ancho and 88 grams (8.8%) guajillos, total 14.4% chiles. This later recipe contains half the vinegar.

The recipe at <http://www.arecetas.com/receta/CHORIZO DE TOLUCA /16211/> appears to be a copy of our one listed above.

The following recipe at <http://foro.univision.com/t5/Recetas-y-Cocina-de-Mexico/Receta-de-chorizo/td-p/279836740#axzz23KqoFBhA> has 5 anchos, 2 pasillas, and 2/3 cup vinegar for about a 1.3-kilo batch. This is more in line with chorizos from farther north. Note the addition of "tequilero con vodka" in the recipe. This is vodka which was stored in a barrel formerly used to age tequila. From this ingredient and from the elaborate detail in the recipe, plus the source (UniVision, probably a cooking show), I suspect that this is not a traditional rendition, so I have not tried it. The tequilero con vodka isn't available in my part of the world, but could be faked with vodka to which a little tequila was added. ...interesting recipe, though.

Chorizo de Toluca (UniVision)

Original Recipe	Ingredient	1 Kg (Total) Recipe	1 Kg (Meat Basis) Recipe
1 kg...	pulpa de cerdo sin grasa, pellejos o tendons		
	ground Pork w/o fat/skin/tendons	600 gm	800 gm
250 gm	grasa o unto de la papada del cerdo		
	Pork fat (trimmings or jowls)	150 gm	200 gm
5 (35 gm	chiles anchos	20.9 gm	27.9 gm
2 (22 gm	chiles pasilla	13.1 gm	17.5 gm
1/2 cucharadita (tsp)....	semillas de cilantro (ground seed)	0.6 gm0.8 gm
3 clavos (nails)	olor (clove)	0.1 gm	0.2 gm
1/2 cucharadita (tsp)	pimientas negras (black pepper)	0.7 gm	1.0 gm
1/2 cucharadita (tsp)	Oregano	0.6 gm	0.8 gm
1/8 de cucharadita (tsp)...	semillas de comino (ground cumin)	0.2	2 gm
4 dientes(cloves)	ajo, pelados(garlic, peeled)		11.9 gm15.9 gm
2 cucharadas (Tbsp)	paprika	10.2 gm	13.5 gm
2 1/2 cucharadas (tsp)	Sal(salt)	9.0 gm	11.9 gm
2/3 taza (cup)	vinagre de manzana (apple cider vinegar)		94 ml 126 ml
1 vaso chico(small glass)	tequilero con vodka (see text)	90 ml	120 ml
2 gr	sal de nitro (see text)		
	Cure #1	2.4 gm.....3.2 gm
Tripas de intestino delgado de cerdo (hog casing)			

Please refer to their website for instructions. Although elaborate, they “boil down to” a standard sausage recipe. Disregard the sal de nitro, saltpeter, and calculate the proper amount of cure #1 for your batch. For the above recipe, it works out to 4.0 grams of cure #1.

For this recipe, there are 20.9 gm ancho chiles and 13.1 grams of pasilla chiles, plus another 10 grams of paprika, or a total of 4.4% chiles, in a 1 kilo batch. This is less than the amount of chiles in the other Toluca recipes, even with the paprika added in. Vinegar is 0.9% of the recipe, a bit less than the others.

So, in summary, what’s typical of Toluca style? For what I sampled, it’s somewhere within:

- 1st recipe: 51 grams ancho and 15 grams pasilla (total 6.6%) chiles and 12.1% vinegar (possibly most typical).
- 2nd recipe: 56 grams ancho and 88 grams guajillo (total 14.4%)chiles. Half the vinegar of the 1st recipe (reasonably typical).
- 3rd recipe: 20.9 gm ancho chiles and 13.1 grams of pasilla chiles, plus another 10 grams of paprika, or a total of 4.4% chiles. Vinegar is 9.4%. (Not typical)

Having judged them, I admit that this style isn’t my favorite, but that all are probably pretty good, and are evocative of some of the mole mixtures found in Mexico.

Mole

Nope, we’re not referring to a small, furry animal here. Most people in the USA have never had any of a wide variety of sauces known as mole. (Guacamole is entirely different, so don’t protest!) Therefore, they may not fully appreciate the comment above that led to this tangent. Please read on. Admittedly, mole is an acquired taste, so let’s start gently. Here’s a quick summary, followed by a couple of personal favorites. Look for the defining features: ground chiles and nuts.

Again, we borrow from Wikipedia http://en.wikipedia.org/wiki/Mole_%28sauce%29 for a whirlwind summary which describes mole as:

(...from Nahuatl *mōlli*, "sauce") is the generic name for a number of sauces used in Mexican cuisine, as well as for dishes based on these sauces. Outside of Mexico, it often refers to a specific sauce which is known in Spanish by the more specific name *mole poblano*. In contemporary Mexico, the term is used for a number of sauces, some quite dissimilar to one another, including black, red, yellow, colorado, green, almendrado, and pipián. The sauce is most popular in the central and southern regions of the country with those from Puebla and Oaxaca the best known, but 60% of the mole eaten in the country comes from San Pedro Atocpan near Mexico City...

...Moles come in various flavors and ingredients, with chili peppers as the common factor.

However, the classic mole version is the variety called mole poblano, which is a dark red or brown sauce served over meat.

I intended to extract a bit more of the Wikipedia article, but wound up with about three pages. That’s way too much. Go have a look at this fascinating article yourself. If you’re not discouraged by the amount of labor involved, take a dive into Mexican cuisine by making a few mole dishes for yourself and your family. I recommend three books from among thousands:

- Elizabeth Lambert Ortiz, “The Book of Latin American Cooking,” 1969, Robert Hale Ltd.
- Rick Bayless, “Rick Bayless’s Mexican Kitchen,” 1996, Scribner
- Rick Bayless, “Mexico, One Plate at a Time,” 2000, Scribner

There's an adventurous recipe, famously known in my family as "that mole stuff containing chocolate." It's not for the casual diner, but if you are serious about trying it, read up on it. Good mole is a real treat. Mediocre mole is nasty.

I had intended to extract that particular mole recipe for this document, but decided against it after researching a bit farther. If you are serious enough to pursue this farther, I suggest you get a copy of "Mexico, One Plate at a Time," flip through it (and maybe drool on a few of the pages), then read in depth "Classic Red Mole with Turkey" beginning on page 206. Note the "Working Ahead" topic on page 209. Pick an evening to have friends over for dinner. Then arrange for the family to be out of the house for the day, lay in all the supplies (plus your favorite beverage), and 'go for it.' You'll be glad you did. Yes, it has chocolate in it!

And when you discover that you have survived the arduous cooking process and it really wasn't THAT bad, go for my favorite, Pollo en Pipian, which begins on page 216. In fact, if you are the least bit jittery about undertaking a mole recipe, start with Pollo en Pipian, then return for 'the good stuff.'

Chapter 4 - Onward to Yucatan

We now go further south, where the spicing changes gradually from the Mexican reliance on chiles but the flavor of Spain is still imitated. In Yucatan and in Central America, some of the dried peppers used farther north are replaced with a much-favored local spice called annatto (achiote in Spanish). The ground spice has a subtle flavor described as... well, no one seems to be able to describe its flavor. Surprisingly, annatto is used by the English to give cheddar cheese its characteristic yellow-red color. That color is probably one of the reasons why it's used here, but I still suspect that there's a taste. I just can't quite put my finger (or tongue) on it.

The following recipe was developed from a number of Spanish-language recipes, including:

<http://www.recetas-mexicanas.ethno-botanik.org/tag/achiote/>
<http://www.recetas-mexicanas.org/recetas/chorizo-de-campeche/>

My own recipe is as follows. If achiote paste is not available in your local market, please use the recipe which follows. To be honest, there were few recipes available on line or on my bookshelf. Here's my best shot.

Chorizo Estilo Yucatecano:

Original Recipe.....Ingredient.....		1 Kg (Total)	Recipe.....1 Kg (Meat Basis) Recipe
2 lbs. (or 1 kilo)	pork butt (20% fat)	874 gm	(same
2.5 gm	non-iodized salt (dissolve in the juice+vinegar)	2.2 gm	as
2.5 gm	cure #1 (dissolve in the juice+vinegar)	2.2 gm	original)
1.0 gm	pepper (black)	0.9 gm	
20 gm	garlic (6 medium cloves - fresh)	17.5 gm	
9.0 gm	chile- ancho (remove stems & seeds, grind)	7.9 gm	
4.4 gm	chile-pasillo (remove stems & seeds, grind)	3.8 gm	
10.0 gm	chile- chipotle (remove stems & seeds, grind)	8.7 gm	
25 gm	Recado de achiote (annatto paste)	21.8 gm	
40 gm	Seville (bitter) orange juice	35.0 gm	
30 gm	Cider vinegar	26.2 gm	

All chiles listed are dried chiles. Remove the stems and seeds and, if you wish, toast them to develop the flavor, then grind. If you can't find dried chipotle peppers, canned can be used if washed thoroughly, then dried off with a paper towel. They taste slightly different because of the pickling process. Either way, they taste good. ...smoky. Vary the chiles as you wish. Color and flavor will change slightly (part of the fun).

The achiote paste is commonly available in 100 gram packages in the Hispanic sections of grocery stores. ...or use the recipe above. The paste sometimes comes in cubes, like bouillon does. This recipe is scaled to use a single 25 gram (approximately) cube.

For a reasonable approximation of Seville orange juice, mix 30 grams of orange juice with 10 grams of lime juice. Use a good quality Texas or California orange juice and Mexican (Key) limes. Florida oranges, in my opinion, are too sweet and watery, and don't quite have enough of the citrus flavor required here.

Yucatecan Classic Recipe: Cochinita Pibil (Introduction)

To give a feel for what the local cooking in Yucatan is like, I decided to include a recipe for the well-known baked pork dish, Cochinita Pibil. We first had this dish at the popular Houston restaurant, Merida, back in the '70s. The dish's popularity has grown widely, fostered by such cooking shows as Rick Bayless' "Mexico, One Dish at a Time." There are quite a few variations, but all are based on annatto. Have a look at some of the more readable ones:

...selection from E. QUIN – "De Mi Colección de Recetas"

<http://foodhoe.blogspot.com/2008/03/slow-cooked-achiote-pork-cochinita.html>

<http://www.dianaskitchen.com/page/pork/pibil.htm> "The Cuisines of Mexico" by Diana Kennedy

<http://www.vinagrebarrilito.com.mx/m6comexicana.html>

<http://mx.answers.yahoo.com/question/index?qid=20080428121951AAmWfU>

<http://www.recetas.net/receta.asp?id=2557YT>

<http://whatscooking.us/2008/06/10/cochinita-pibil/>

<http://www.cookingindex.com/recipes/18633/cochinita-pibil.htm>

...and then try mine, which is an average of many of the above. The definitive recipe for cochinita pibil does not exist. This effort started as a search for THE recipe, and ended with a simple, reasonable version.

...hopefully. I like it, anyway. What else can I say?

My search encompassed internet and cookbook recipes in Spanish and English. It ended with a recipe for achiote paste that beats the commercial version because there's no MSG, masa filler, or preservatives. Interestingly, it's still an easy recipe.

Here's some background, then the generic recipe for achiote paste, followed by the generic recipe for cochinita pibil and marinated onions, plus a serving suggestion. Enjoy. I am indebted to the website, <http://foodhoe.blogspot.com> for the paraphrased background information. They, in turn, credit Rick Bayless for it. Whatever you think of him, Bayless does a wonderful job of awakening the English-speaking world to Mexican dishes and tastes.

Traditional dishes are that way- - no set recipe. Through the ages, mothers and grandmothers have interpreted traditional recipes according to food availability and their families' own tastes. Here's my effort. Viva tradición!

Achiote Paste Background

Achiote paste consists of ground annatto seeds mixed with spices, salt, garlic, and lime or Seville orange juice to form a paste. It originates in the Yucatan region of Mexico. The red color comes from annatto seeds, which have been in use since well before Colombian times, not only in food but also as a dye for fabrics and body paint. Commercial packages are available and are widely used in Latin America. However, like many processed foods, they contain non-traditional additives such as MSG, filler, and food coloring. Thus, we need a recipe for achiote paste.

The word *Cochinita* refers to baby pig, and the Mayan word *pibil* means buried oven. This dish typically would be a pig, marinated in achiote seasoning, wrapped in banana leaves and pit-cooked, served in yellow corn tortillas with pickled red onions and salsa. It is, of course, possible to cook this dish in a modern oven. The pit-roasted flavor is missing, but the result is still good.

Achiote Paste (Recado Rojo) Recipe

This recipe is derived from eight recipes, some in Spanish and others in English. Typical values are listed, as well as the range, so you can see how forgiving the recipe is (and how widely its practice varies). A number

of other recipes that called for obviously non-authentic ingredients such as lemons or tequila were tossed out as suspect.

The recipe has, of course, been adapted to Yucatan from the original recipes used in Spain. The main variation is substituting Seville orange juice (or a mix of three quarters orange juice to one quarter lime juice) for straight lime juice. For lime juice, the small Mexican limes are recommended, rather than the larger ones grown in Florida which are called Persian limes. ...your choice.

recommended	Range	Ingredient
2 Tbsp	(basis)	Annatto seeds (buy pre-ground powder if available)
5 cloves	4 – 24	Garlic, fresh, minced
1-1/2 tsp	0 – 1-1/2	Coriander seeds, ground
1 tsp	0 – 1	Salt
1 tsp	½ - 1	Cumin seeds, ground
1 tsp	¾ - 1-1/2	Black Peppercorns, ground
4	0 – 6	Allspice berries (grind)
2	0 – 3	Cloves (grind)
1 tsp	0 – 2	Oregano
Up to 4 Tbsp	varies	Seville Orange Juice (or ¾ orange, ¼ lime) (Optional: lime only)

If you have to, crush the annatto seeds in a mortar and pestle, or in a spice grinder. Do this once and you'll always buy achiote molido (ground annatto). Grind the other spices. Crush the garlic into a paste. Mix all. Add just enough lime or Seville orange juice to form a paste. As you can see from the table, amounts aren't critical.

Cochinita Pibil Recipe

Once the achiote paste recipe is nailed down, the pork portion easily falls into place. All of the recipes that I examined had essentially the same amount of paste. There were minor variants in other ingredients, as listed below.

Various Recipes:

Ingredient	Recommended	Range
Pork, kg (lbs)	(1 kg) - 2-¼ lbs	(basis)
Achiote mix (gm)(Tbsp)	(100 gm) – 4T	All the same
Black pepper (tsp)	½	0 – 1
Oregano (tsp)	½	0 – 1
Cinnamon (tsp)	¼	0 – ¼
Lime Juice (cups)	½ [alternate 1-½]	...same
Orange Juice (cups)	1 [alternate 0]	...same

(Achiote as paste, rough conversion estimates: 2 tablespoons = 30 ml = 50 gm)

The recipe is simple, and intentionally vague. Place everything but the pork in a sealable bag, then squish it to mix. Place the pork roast in the bag, seal, and squish until the pork is well-coated with marinade. Crack the seal, squeeze out the air, and reseal. Leave the bag in the refrigerator for 24 hours.

To cook, dump the contents of the bag into a dutch oven, crock pot, or other oven-proof pot. Place a sheet of foil over the top, then the lid, to seal the pot. Place in a pre-heated 300 degree oven for 4 hours, until the pork is falling-apart tender. This dish can also be cooked in a slow cooker (crock pot, to us ex-hippies). At the end of the cooking time, when the meat is very tender, pour off the juices into a pot and reduce rapidly to ½ or 1/3 the volume, then add back.

Marinated Onions Recipe

This little gem is so simple that no exploration was necessary. Cut one red onion in half, then thinly slice it (don't chop). In a small bowl, sprinkle the onion with 1/2 teaspoon salt to draw moisture. After half an hour, give 'em a quick rinse to wash off the salt and excess water. This moderates the onion's pungency, too. Pat dry. Add 1/4 cup lime juice or vinegar, toss, cover, and set aside to marinate while the meat is cooking, stirring from time to time. If you wish, you can add a pinch of ground cumin and a pinch of ground black pepper.

To Serve:

Heat yellow corn tortillas. (White corn tortillas are not authentic, and in my opinion have little or no flavor. Flour tortillas have no place in the traditional diet, and should not be used.) Assemble as tacos, making them as you go. Place a tortilla on a plate, add some shredded meat, add some marinated red onion, add salsa to your preference, put in some chopped fresh cilantro, and fold. This dish is traditionally served with a side of black beans.

Chapter 5 - CHORIZO - Salvadorian, Colombian, Peruvian

I blundered into this one on the internet. It's a mild but interesting sausage, good when grilled and eaten on a bun. Note that annatto is still there, but that emphasis is beginning to shift to other spices, notably thyme and parsley. Note, too, the inclusion of beef and bacon, and the fact that the type of red chile is not specified.

<http://www.recetasgratis.net/Receta-de-%22-CHORIZOS-SALVADOREnOS%22--receta-35941.html>

Chorizo Recipe - El Salvador

Original Recipe.....	Ingredient.....	1 Kg (Total) Recipe.....	1 Kg (Meat Basis) Recipe
2 ½ lb. Carne de res, molida	2 ½ lbs ground beef	0.39 kg	0.46 kg
2 lb. Posta de puerco, con bastante gordura, molida	2 lbs pork butt w/adequate fat, ground	0.31 kg	0.36 kg
1 lb. de tocino, molido	1 lb bacon, ground	0.16	0.18 kg
2 cucharadas de orégano, en polvo	2 Tbsp dried oregano	7.9 gm	9.1 gm
2 cucharadas de tomillo, en polvo	2 Tbsp dried thyme	3.2 gm	3.6 gm
1 cucharada de Comino en polvo	1 Tbsp ground cumin	5.2 gm	6.0 gm
½ cucharada de Pimienta negra, en polvo	½ Tbsp ground black pepper	2.6 gm	3.0 gm
½ taza de Vinagre de Manzana o blanco	½ cup vinegar (cider or white)	40 ml	46 ml
1 cucharada de Achiote	1 Tbsp annatto (ground)	5.5 gm	6.4 gm
1 chile rojo, finamente picado	1 red chile, finely chopped	1.7 gm	2.0 gm
½ Cebolla mediana, finamente picada	½ medium onion, minced	52. gm	60. gm
2 dientes de ajo, finamente picado	2 cloves garlic, minced	3.5 gm	4.0 gm
½ manojo de Perejil italiano, finamente picado	1 bunch Italian parsley, finely chopped	5.2 gm	6.0 gm
sal al gusto.	Salt to taste	10.0 gm	8.7 gm

Procedure (literal translation): "Combine all ingredients into a mass in a large bowl, cover with plastic wrap and let stand for 24 hours in the refrigerator. The synthetic gut which is stuffed dough [collagen?], available in any butcher Italian, German or you can order in the Super Markets. For the sausage. If you have a special machine for sausages, you can use a large funnel or cut the "mouth" [off] of a plastic bottle. Make a long sausage, which is then separated into pieces of 2 inches, which tie with strips of dried corn husks (wet). You can save the sausages for two days in the refrigerator. As they have no preservatives, should eat of fresh." (The two-inch length is popular in Catalan, so perhaps this is done as an imitation.)

This recipe is refreshing in its simplicity, and in the method of tying the casing with moistened strips corn shuck. There is no indication as to what red chili is preferred. Perhaps any reasonable type might be used, although you should be careful with the habaero chile from adjacent Caribbean cultures. The habaero contributes "heat," but not much color, so there are few if any references to its use in making chorizo. In fact, most Cuban coking specifies Spanish chorizo. There are wonderful Cuban dishes featuring chorizo, but they appear to use Spanish chorizo. I speculate that this is because there is no local source of intensely red colored ingredients.

Peppers of the Caribbean

While a bit out of order, this is probably a good place to comment on the aji chile. I was searching for a source for the aji, which is difficult to find in North America. <http://www.worldcrops.org/crops/Aji-dulce.cfm> says, in part, "Ají dulce (*Capsicum chinense*) is a small, light green pepper that turns red if left long enough on the plant. In Puerto Rico, it is known as *ají dulce* or *ajicito* (sweet pepper and small pepper, respectively, in Spanish). In the Dominican Republic, it is also known as *ají gustoso* or *ají cachucha* (tasty pepper, and cap-shaped pepper, respectively, in Spanish). It has the shape and size of a habanero pepper without the intense heat. Unlike many other countries in Latin America, hot peppers are not commonly used in the cuisine of Puerto Rico, Dominican Republic, or Cuba." It goes on to recommend the soil of New England for growing aji dulce.

At the time, I was looking for aji Amarillo, which I thought might be the proper variation of aji for use in chorizo. (I was wrong.) This variety is popular in Peruvian and Bolivian food, and has a high Scoville rating. However, it's the wrong color, so I concluded that it was the wrong type. More about that, later.

CHORIZO – Dominican Republic, Colombia & Venezuela

Over and over, the dish "Arepas con Chorizo" surfaced as I was looking for Colombian chorizo recipes. Arepas are corn meal cakes. One Venezuelan recipe calls for sautéing chopped onions, garlic, and crumbled chorizo, spreading the mixture plus black beans and white cheese onto the cornmeal cakes. <http://mykitchenmovement.squarespace.com/recipes/2010/3/31/an-ode-to-linoleum-and-the-best-venezuelan-sandwich-ever.html>

Another recipe from Dominica by Rosario M. Rodríguez Perdomo <http://rosiperdomo.blogspot.com/2010/09/arepas-de-chorizo.html> calls for the following:

For the arepas:

2 y 1/2 tazas (cups)	agua,	water
1/2 cucharadita (tsp)	sal	salt
2 tazas (cups)	harina de maíz precocida,	Masa harina (finely ground corn meal) (pre-cooked)
	aceite para freír.	Oil for frying

In the Mid-Atlantic states of the USA, you can probably find "masarepa," more finely ground than masa harina. These days, much is made with white corn, and often is diluted with up to 50% wheat flour. My family much prefer the traditional yellow corn style, which does not include wheat. In Colombia, this traditional style is called "arepa de choclo."

As for the stuffing, here's a nice one:

2	tomates cortados en cubitos (sin piel , ni semillas)	Chopped tomatoes (skinned, seeds removed)
1	cebolla finamente picada	Onion, minced
1 trozo ("piece," link)	chorizo cortado en cuadritos pequeños	Chorizo cut into small pieces
4	huevos	eggs
2 cucharadas (Tbsp)	aceite de oliva,	
un toque (pinch)	colorante alimentario en polvo (Carmencita)	Food coloring
	sal y pimienta al gusto.	Salt and pepper to taste

As you will see in the recipe below, chorizo from the Caribbean and northern South America doesn't use the chiles or annatto that chorizo makers farther north use, nor does it use the aji peppers from farther south.

Colombian Chorizo Recipe

From <http://recetas-fercho.blogspot.com/2007/11/chorizos-antioqueos.html> comes this recipe for Colombian "chorizos antioqueños," antique or tradition style chorizo. You'll very likely want to scale this one down!

Para 20 kilos de embutido (20 kg = about 44 lbs of sausage)

Original Recipe	Ingredient		1 Kg (total) Recipe	1 Kg (meat basis) Recipe
14 kilos (30 lbs 14 oz)	carne pulpa de res o de cerdo.	Ground Beef or Pork	0.709 kg	0.824 kg
3 kilos (6 lbs 10 oz)	tocino	Bacon	0.152 kg	0.177 kg
1 cucharada y media (1-1/2 Tbsp)	Ajo in polvo	Garlic powder	6.8 gm	8.0 gm
1 cucharada y media (1-1/2 Tbsp)	Comino en polvo	Ground cumin	7.6 gm	8.8 gm
1 libra y media (1-1/2 lbs)	cebolla de rama.	Green onion	20 gm	24 gm
1 manojo (bunch)	cilantro.	Cilantro	7.6 gm	8.8 gm
1 cucharada y media (1-1/2 Tbsp)	orégano.	Oregano	7.6 gm	8.8 gm
1 y medio litros (1-1/2 liters)	agua.	Water	76 ml	88 ml
15 cucharadas (Tbsp)	sal.	salt	13.7 gm	15.9 gm

The usual stuffing and refrigerating process should be used. Note the lack of red coloring. Note even more the lack of peppers on any kind! I confess- - I skipped this one. Any recipe with bacon in it has to be good, though!

CHORIZO - Peru

My wife and I visited several cities in Peru, back in the early nineties. This was just after the Sendero Luminoso (Shining Path) guerillas were being controlled again by the Fujimori government. The food was great, the people were delightful, the scenery and artifacts were spectacular. I gave my first speech in Spanish, at a school dedication near the city of Arequipa. My wife took photographs. Later, when I saw the photos, I noticed why the low angle- - there were Uzi-armed Federal Police on the roofs surrounding the plaza.

Proud of my budding linguistic abilities, I sent copies of the photos to my brothers. One shot back, "Are your speeches so bad that they have to hold machine guns on the crowd to make them stay?"

I haven't given a speech in public since. As for my writing, you'll have to be the judge. But my cooking- - definitely making progress. In Peru, we sampled local cuisine. I don't recall the use of chorizo to any extent, although I'm sure that it was there. However, I might theorize that there was not as strong a Spanish influence in the food in Peru, because the Spanish conquerors were only males and, for wives, they all intermarried with the Incas. The Incas far outnumbered them and their descendants, and still do today. I'll continue to search. An excellent cookbook by Elizabeth Lambert Ortiz, titled "The Book of Latin American Cooking" will help. But then, maybe not to the level that we need. For example, it doesn't have a recipe for cuy (guinea pig), a Peruvian national dish. ...gotta show you a cuy recipe. (It, of course, tastes like chicken.)

In Peru, the areas west of the Andes mountains to the coast are very dry, with the exception of narrow irrigated river valleys where, among other crops, rice is grown. The high plains, "altiplano," are little better,

although there is enough moisture in limited areas to grow potatoes. East of the mountains, there is more rainfall and the jungle, “la selva,” takes over.

CHORIZO DE LA SELVA (Peru)

<http://recetasricasdelaselvaucayalina.blogspot.com/2007/11/chorizo-de-la-selva.html>

INGREDIENTES:

Original Recipe	Ingredient		1 Kg (total) Recipe	1 Kg (meat basis)
	tripa o intestino delgado del cerdo	Pig gut or small intestine		
3/4 Kilo	carne de cerdo picada	Ground pork meat		
100 g.	Grasa de cerdo picado	Ground pork fat		
2	Cebollas rojas picada	Chopped red onions		
1/4	Limón	Lime		
1 Cucharadita (tsp)	Guisador (see below)	tumeric		
al gusto (to taste)	Comino	cumin		
al gusto (to taste)	sal	salt		

The reference to “guisador” stumped me, but our trusty internet search engines turned up a reference to a recipe commemorating St. John the Baptist: <http://www.nutricionyrecetas.com/andino/lacurcuma.htm>

“...of all ingredients stands one called ‘guisador’ and any unsuspecting cook does not locate in any gastronomic dictionary, this is what they call turmeric. The juane is the representation of the beheading of John the Baptist in the Biblical legend. Several types of Juane, The Juane Rice (the best known), the rumu Juane, whose ingredient is peruanísima cassava and there is also the Nina Juane (Juane gold or valuable), is prepared with about 25 eggs.”

Translation of translation:- - the tumeric gives a golden color.

Another note, here: it was mentioned earlier that Seville orange juice or bitter orange juice is best substituted by a mixture of three quarters orange juice and one quarter lime juice. Here’s another gem: in Latin America, references to “limón” should be translated as “lime.”

PREPARACION:

Lavar las tripas por ambos lados, y dejar reposar en agua con sal y limón por 30 minutos.	Wash the tripe on both sides, and let stand in salted water + lime juice for 30 minutes.
En un envase colocar la carne de cerdo, la grasa, cebolla, guisador, comino y sal al gusto y remover bien.	In a mixing bowl place the pork fat, onion, tumeric, cumin and salt, and stir well.
Las tripas se deben de enjuagar bien y cortarlas de 20 a 30 cm, llenarlas con el preparado y amarrarlos por ambos lados.	The intestines should be filled well and measure 20 to 30 cm, filled with the preparation and tied on both sides.
Cocinar el chorizo relleno por espacio de 30 minutos.	Cook the stuffed sausages for 30 minutes.
Para servir esta entrada se corta el chorizo en círculos de 3 cm, y se puede frie en poco aceite o asar a la parrilla, se acompaña con tacacho o solo con plátano frito y su ensalada	To serve this entree, cut the sausage in circles of 3 cm diameter, and fry in a little oil or grill, accompanied with tacacho (Boiled plantains mashed in a mortar, plus salt, small pieces of

de cocona.	pork rind, and lard.) or just with fried plantains and salad cocona.
	(Cocona is a fruit native to Colombia and Peru, which is not widely available.)
COMENTARIO DEL AUTOR:	
El chorizo tiene un sabor agradable y puede servirse como entrada con plátano frito o como segundo acompañado con tacacho.	The sausage has a pleasant taste and can be served with fried plantains as an entrée, or as a second course accompanied tacacho.

Interestingly, there are no peppers specified, and the turmeric is used to obtain a golden, rather than red, color. ...so I skipped this one. It looks good, though a bit plain.

And as for the cuy recipe....

There's a video on YouTube at <http://www.youtube.com/watch?v=EEFOt79IXaU> done by Bryson Adams which shows the preparation of Cuy Chactado, a traditional method of boiling a skinned, flattened guinea pig in broth beneath a rock, then frying it with potatoes. (The restaurant is called "Picanteria El Pato," interestingly. ...the Duck. ...not the Guinea Pig.) According to the write-up,

"Cuy Chactado is a traditional Peruvian dish that has been passed down through the centuries from the time of the Incas. According to local lore, cuy was even considered an Inca delicacy and consumed primarily by the empire's nobility. Today, cuy can be found in many restaurants, but is best prepared by a picanteria or in the foothills of the Andes by country locals. The cuy I [Adams] tried at a local picanteria in the city of Arequipa was particularly delicious!"

Interested people may care to watch the video, but be warned that this video is not for the casual reader. It's in Spanish, but the video portion is easy to follow.

Adams says, during the dining scene, that "it tastes like chicken, more or less." With that in mind, let's have a look at a few recipes which, since you probably don't have a supplier of cuy nearby, can be made with chicken. I suggest substituting two boneless chicken thighs for each whole cuy, using a pair of bamboo skewers to secure them together and keep them flat during the cooking process. With a little imagination and bamboo, you too can feast on the meal of Incan nobility.

[Picante de Cuy Cajamarquino](http://www.cocinarica.com/2009/05/picante-de-cuy-cajamarquino.html)

<http://www.cocinarica.com/2009/05/picante-de-cuy-cajamarquino.html>

This recipe uses toasted peanuts and green chile peppers. Toast skinless, unsalted peanuts in a heated pan. You'll have to substitute green chiles poblanos or Anaheim, or New Mexico chiles (Hatch chiles are quite flavorful), toasted directly on the flame of a gas stove or grill, then peeled.

*Cuatro cuyes	4 cuy (substitute 8 boneless chicken thighs)
*Dos kilos de papa amarilla	2 Kg yellow potatoes
*Cien gramos de maní tostado	100 gm toasted peanuts
*Cinco ajíes verdes	5 green peppers
*Ocho dientes de ajo para el aderezo	8 garlic cloves for garnish
*Cuatro dientes de ajo para la salsa	4 garlic cloves for the sauce
*Sal, comino y pimienta al gusto	salt, cumin, black pepper to taste

Preparación

<p>Pelamos los cuyes con agua caliente, luego preparamos un aderezo con los dientes de ajo, pimienta, sal y comino al gusto, con este aderezo bañamos los cuyes.</p>
<p>Luego, colocamos al cuy en el fuego, se puede preparar a la brasa o en el horno. Aparte, sancochamos la papa amarilla en agua con un poco de sal luego las pelamos y cortamos en rodajas.</p>
<p>Colocamos las papas en un plato o en una fuente con los trozos de cuy. Aparte en una sartén con un poco de aceite, preparamos una salsa caliente con ajíes verdes molidos, los dientes de ajo molidos y el maní tostado previamente licuado o molido. Cuando todo esté bien frito, adelgazamos el preparado con un poco de caldo de pollo o agua y vertemos la salsa sobre la carne y las papas.</p>

<p>Skin the guinea pigs with hot water, then prepare a seasoning with the garlic, pepper, salt and cumin to taste. With this dressing, marinate the guinea pigs [for two hours].</p>
<p>Then put the guinea pig on grill (can be prepared on the grill or in the oven). Separately, boil yellow potatoes in water with a little salt, then peel and cut into slices.</p>
<p>Put the potatoes on a plate or in a dish with pieces of guinea pig. In a separate pan put some oil, prepare a hot sauce with green peppers, ground, ground garlic cloves and roasted peanuts, finely ground. When everything is fried, dilute the preparation with a little chicken broth or water and pour the sauce over the meat and potatoes..</p>

¡Buen provecho!

Chapter 6 - Chorizo de Chile

Searching for Aji: Differences in peppers (aji versus Mexican offerings).

In my search for South American peppers, I finally ran across two good descriptions of aji while looking for a conger eel recipe. They, and the recipe, follow.

A food blogger from San Diego, <http://rickcooks.com/ingredients/capsicum.htm>, gives a series of notes, one of which claims that

“Thanks to the Spanish traders, today chiles are grown all over the world (the best in the hotter climates). Half of the over 200 varieties of chile are indigenous to México. The most common species of *Capsicum* consumed in the U.S. and México is *Capsicum annuum*, and is relatively unknown in the Americas south of the equator. Ají (*Capsicum baccatum*), not chile, is the species of *Capsicum* consumed in most of South America. (*Capsicum baccatum* is believed to be the ancestor of *Capsicum annuum*.)

“Ají is well known in Chile, while chile is not. The cultivar *ají verde* (green ají) is the distinct Chilean species of ají, also called *ají merquén* by the native Mapuches. It is most often eaten when fresh and green, when it is mildest and most flavorful, in salads such as the Ensalada Chilena, or *pebres*, or as a condiment for soups or other hot dishes. In cooking, the more ripened yellow merquén may be used, while the fully ripened red merquén, also called *cacho de cabra* (kid's horn) is almost too pungent to eat, except when used judiciously as a seasoning in *criollo* (Creole) dishes or Spanish *pilpil*. Some imported chile spices are known in Chile, such as cayenne pepper and paprika, but they are misnamed *ají de cayenne* and *ají de color*. In Chile, paprika is made from the sweet ají *pimiento porron*, and has a distinct flavor from Hungarian paprika.”

I was looking for two types of peppers, as it turns out. Chilean practice seems to involve one pepper type for color and a different one for piquancy. The colorant pepper that I was looking for, I believe, is aji de color, here called aji pimiento porron. (See the “Eating Chilean” blog at <http://eatingchile.blogspot.com/2009/11/chili-in-chile-is-aji.html>) I ran into problems finding a supply, and decided to substitute Spanish sweet paprika even though it warns that the flavors are different. (As it turned out, they were completely different.) I hope you have better luck. Perhaps you can find it under one of a number of similar names: aji poro, porro, or puerro.

For piquant chiles used in cooking, the red (fully-ripened) aji “cacho de cabra” (“goat’s horn”) can be processed into “aji chileno,” a spice blend of dried, smoked *cabra de cacho* chilies, ground toasted coriander seeds and salt, and occasionally oregano or cumin, referred to as aji merquén, as practiced by the Mapuche indians. That’s what I need. For tuately, I bought a bottle of the sauce, brand name “JB Aji Chileno,” in a grocery store in Santiago. Readers can no doubt find the brand available through mail order on the internet. After an extensive search, I finally bought my aji merquén via Amazon.com.

Chorizo de Chile

In contrast with Peru, the Mapuche Indians of Chile were never conquered or assimilated, so that even today, European societal influences are strong. Most immigrants to Chile came much later, and brought their families, possessions, and customs with them. Even today, Santiago is very European in character, and much of the country shows not only Spanish but German, Czech, British, Italian, and other European nationalities’ influences.

The national dish, this being a coastal nation, is a seafood dish, conger eel soup, "Congrio." The eel is really an eel-looking fish with some of the wickedest looking teeth that I've ever seen. One evening, a couple of waiters brought out two six-foot specimens for our edification. ...amazing. ...as delicious tasting as they were vicious looking.

Back to the subject of Chile and chiles. Our friends at Wikipedia remind us that: "The name of the plant bears no relation to Chile, the country, which is named after the Quechua *chin* ("cold"), *tchili* ("snow"), or *chilli* ("where the land ends"). Chile, Panama, Peru and Puerto Rico are some of the Spanish-speaking countries where chilis are known as *ají*, a word of Taíno origin."

...and what is ají? Back to <http://es.wikipedia.org/wiki/Capsicum> which, translated, says:

"Often one variety receives different names in different countries or different regions within a country.

"It is called ají, chile, guindilla, morrón, ñora or pimiento, and is a fruit, either piquant or not, native to Mexico, Central and South America, of which there are many varieties of sizes, shapes and colors. The growing herbaceous or shrubby plants called *Capsicum annuum* (annual), and perennial shrubs, *Capsicum frutescens*.

"It is called in different countries chile, chili, pepper, chilli, pepper, peperoncino being well known in Italy as peperoncino ie "pimientillo." In Mexico, the word "chile" originated from Nahuatl chilli or xilli. The term chili, though it may seem a derivative of garlic, is a word of Taino language, spoken in the Greater Antilles, particularly Cuba, where the name Ají is most commonly used pepper in the Caribbean and South America. In Argentina, Colombia, Uruguay, Peru and Chile the term ají is reserved for spicy varieties, such as Catalan or putaparió. In the USA, green pepper, red or yellow, not spicy, are known in American countries as "pepper bell, "" sweet pepper ", " sweet chile "(Costa Rica) or" pepper ".

We'd like to use the correct ají. This could be difficult, because the chorizo recipe below calls for a large amount of ají, presumably not the one with the 50,000 Scoville units. One possibility is a spice blend called merquen or merken, which I mentioned above. It is a traditional spice mixture prepared by the Mapuche indians of the Araucanía Region. It consists of about 75% dried and smoked red chile (ají cacho de cabra or goat s horn, *Capsicum annuum*), toasted coriander seeds, sometimes cumin, and salt. One commercial sausage company advertises their product at 1.05% merquen, according to an advertisement listing ingredients.

Ají cacho de cabra would seem to fit with a blog written in English, <http://eatingchile.blogspot.com/2009/11/chili-in-chile-is-aji.html>, which discusses the history of the words chile and ají, and has some nice pictures of various types. The writer, a former anthropology professor by the name of Jim, says that Chileans don't go for very spicy food, and by process of elimination suggests that the goat's horn chile is most likely what we're looking for.

I purchased my merquén from Amazon.com. Other companies may carry it, but I was unable to find one which sold it for a reasonable price or in a reasonable quantity. I could not find a supplier of chile cacho de cabra, so I used the following information from a book by Daniel Joelson, titled "Tasting Chile, A Celebration of Authentic Chilean Foods and Wines" (Hippocrene Books, New York, 2004, 3rd printing 2010). On page 9, and again on page 27, he suggests "Though it [merquén] is unavailable in the U.S. (and even

throughout Chile), hot red pepper flakes are a fine replacement. These can be found in Turkish and Middle Eastern or Asian food stores under such names as kirmizi biber.”

At last, I have an easy substitution.

As to Chilean chorizo, one source (http://www.bedri.es/Comer_y_beber/Conservas_caseras/Alimentos_procesados/Chorizo.htm) says that

“In Chile, chorizo is popularly called longaniza, although it is a variant of that type. The city of Chillán is known for the production of sausage and chorizo, due to heavy immigration from Spain during the late nineteenth and early twentieth centuries.”

While in Chile, I did find one fermented version of chorizo for sale commercially, one done in the Spanish style but with local pepper (called aji), in a supermarket. I brought it home with me, sealed in its vacuum-packed commercial packaging, declared as a “commercially packaged food product” under the line where meat products were specified. The Department of Agriculture officials never even looked at it. I am told that commercially-produced food items are not a problem if they meet USDA sanitary specifications. ...but good luck. Always declare them. That way, you’ll never get fined.

Chilean Chorizo

Here's a recipe for a Chilean version of chorizo, from <http://www.hifichile.cl/index.php?topic/1546-receta-chorizo-parrillero/> which looks good. Note the presence of aji chile, and the absence of other types of peppers. Two heaping tablespoons of merquén would be expensive, so substitute...

As it turns out, what the Turks call kirmizi biber is red Aleppo pepper, and can usually be found in Middle Eastern markets. Aleppo pepper can be ordered via the internet at various spice merchants. I bought mine at one of the Penzey's chain of retail stores. Try ordering via <http://www.penzeys.com/> if more convenient.

{Author's note: I have since discovered that the following recipe is circulating on the internet, purporting to be from both Chile and Argentina. Such is life in the new electronic age. Chile is always squabbling with neighboring Argentina and Peru over lots of things, which means that they have many things in common. ...like corizo recipes, perhaps.

At any rate, the recipe tastes fresh with the high level of oregano. Boost the aji amount if you substitute Aleppo pepper, because although the flavor is similar, Aleppo is milder than the cacho de cabra chile in merquén.

INGREDIENTES:

Original Recipe	Ingredient		1 Kg (total) Recipe	1 Kg (meat basis)
2 kg.	Carne de cerdo sin grasa ni pellejos.	Pork without fat/skin	0.37 kg	0.40 kg
2 kg.	carne de vaca sin grasa ni pellejos.	Beef without fat/skin	0.37 kg	0.37 kg
1 kg.	grasa de cerdo (tocino y papada son las mejores).	Pork fat (belly and jowls are best)	0.185 kg	0.20 kg.
100 gr	sal.	Salt	18.5 gm	20.0 gm
4 cucharadas colmadas (heaping Tbsp)	oregano.	Oregano	3.9 gm	4.2 gm
2 cucharadas colmadas (heaping Tbsp)	aji molido.	Ground aji pepper (substitute Aleppo pepper)	2.2 gm	2.4 gm
1 cucharada colmada (heaping Tbsp)	tomillo.	Thyme	1.1 gm	1.2 gm
1/2 cucharada al ras (level Tbsp)	Pimienta negra.	Ground Black pepper	1.1 gm	1.2 gm
1/2 cucharada al ras (level Tbsp)	nuez moscada.	Ground nutmeg	1.1 gm	1.2 gm
1 cucharada al ras (level Tbsp)	Ajo en polvo, o fresco pero molido.	Garlic, powder or fresh minced	1.9 gm	2.0 gm
1 vaso (cup)	vino tinto.	Red wine	44 ml	47.2
	Hilo para atar.	Tying string		
	Tripa de cerdo para embutir.	Hog casing for stuffing		

Habitualmente se la consigue seca y salada, de modo que antes de ser utilizada se debe lavar e hidratar dejandola un rato en Agua con un poco de vinagre. Tambien hay que dilatarla, para lo cual se coloca un extremo en el pico de una canilla y se hace circular agua fria por su interior como si fuera una manguera.	Usually the casing gets dry and salty, so before use, wash and leave it for a while in water with some vinegar. Also you have to dilate- - one end is placed at a faucet and cold water is passed through it like a hose.
Si no fuera posible conseguir tripa, se pueden hacer utilizando papel film, colocando un poco de masa sobre el, enrollando, y tomandolo por los extremos retorcer como si se estuviera envolviendo un caramelo alargado. Llevarlos al freezer y quitarles el film antes de asarlos.	If you can not get casing, use plastic wrap, placing a little sausage mixture on it, winding, and twisting the ends as if wrapping a caramel. Freeze them. Remove the film before grilling.
Si la masa fue bien trabajada durante el amasado, no se desintegraran y mantendran su forma durante la coccion.	If the mixture was well worked during kneading, it should not disintegrate and will maintain its shape during cooking.

MODO DE PREPARACIÓN:

Pasar las carnes y la grasa de cerdo por una maquina de picar con disco grueso. Picar una sola vez. Guardar en heladera para que adquiera un buen grado de frio.	Pass the meat and fat through a coarse grinder once. Store in refrigerator to keep cold.
Poner en un recipiente la sal y todas las especias y agregarle el vino, mezclar bien y luego verter todo sobre la carne picada.	Put salt and all spices into a bowl, add the wine, mix well, then pour over the ground meat.
Mezclar y amasar de manera vigorosa de modo que todo quede bien integrado. La masa debe adquirir una consistencia pastosa. Esto se logra con uno o dos minutos de amasado, y es importante que las carnes esten bien frias.	Mix and knead vigorously such that all is well mixed. The mixture should acquire a pasty consistency. This is accomplished with one or two minutes of kneading, and it is important that the meat is kept cold
EMBUTIDO: a la maquina de picar, se le retira la cuchilla y el disco. En su lugar se coloca una boquilla para embutir y en ella se inserta la tripa de cerdo. Se va llenando la maquina con la masa y esta ira rellenando la tripa. Una vez hecho esto, se ataran los chorizos del tamaño que se desee.	Remove the grinding mechanism and install a stuffing nozzle in its place. Insert the hog casing. Once stuffed, tie the chorizos in desired length.
Pincharlos con una aguja de modo de eliminar aire si lo hubiera.	Pierce with a needle to remove air, if needed.
Guardar en heladera si se consumieran en dos o tres dias. En freezer a -18° C se pueden conservar por seis meses.	Keep in refrigerator if consumed in two or three days. Can be stored In freezer at -18 ° C for six months.
Se asan en parrilla sobre brasas, a fuego suave para que no se arrebaten, girandolos para que tengan una coccion pareja.	Roast on grill over hot coals, over low heat so they do not ... (snatch, rolling them to have a cooking partner.)(??)
Deben quedar cocidos de aspecto dorado pero no secos por dentro.	They should cook until they turn golden, but dry inside.
Se debe tener en cuenta que hay sales que salan mas que otras. Por tal motivo, antes de proceder al embutido, es bueno tomar una pequeña cantidad de	It should be noted that there are salts that salt more than others. For this reason, before the sausage is stuffed, it is advisable to take a

masa y cocinarla en un sarten o plancha para degustarla y corregir el sabor si fuera necesario.	small amount of mixture and cook in a skillet or griddle to taste it and correct the taste if necessary.
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Conger Eel Chowder (Two Recipes)

The recipe for congrio, or eel chowder, although it does not use chorizo, includes two types of peppers. It's delicious. I couldn't resist including this, a recipe that some claim to be the national dish of Chile.

The first recipe was dedicated to Nobel literature prize laureate Pablo Neruda, said to be one of his favorite dishes. I hope you get to visit his fascinating house in Valparaiso, some day, then retire to a seafood restaurant atop the city or in nearby Viña del Mar for the chowder. (My apologies for the flowery introduction, but it was written by Neruda himself and, yes, the dish is quite good.)

<http://cocinatipicachilena.blogspot.com/2007/11/caldillo-de-congriocon-su-oda-de-neruda.html>

CALDILLO DE CONGRIO por PABLO NERUDA: Conger Eel Soup in Tribute to Pablo Neruda

Introduction	Introduction
<p>En el mar tormentoso de Chile vive el rosado congrio, gigante anguila de nevada carne. Y en las ollas chilenas, en la costa, nació el caldillo grávido y succulento, provechoso. Lleven a la cocina el congrio desollado, su piel manchada cede como un guante y al descubierto queda entonces el racimo del mar, el congrio tierno reluce ya desnudo, preparado para nuestro apetito. Ahora recoges ajos, acaricia primero ese marfil precioso, huele su fragancia iracunda, entonces deja el ajo picado caer con la cebolla y el tomate hasta que la cebolla tenga color de oro. Mientras tanto se cuecen con el vapor los regios camarones marinos y cuando ya llegaron a su punto, cuando cuajó el sabor en una salsa formada por el jugo del océano y por el agua clara que desprendió la luz de la cebolla, entonces que entre el congrio y se sumerja en gloria, que en la olla se aceite, se contraiga y se impregne. Ya sólo es necesario dejar en el manjar caer la crema como una rosa espesa, y al fuego lentamente entregar el tesoro hasta que en el caldillo se calienten las esencias de Chile, y a la mesa lleguen recién casados los sabores del mar y de la tierra para que en ese plato tú conozcas el cielo.</p>	<p>In the stormy sea of Chile lives the rosy conger, giant eel of snowy flesh. And in Chilean pots along the coast was born the chowder, thick and succulent, a blessing. Bring to the kitchen a skinned Conger eel, its mottled skin slipped off like a glove and bare leaving the grape of the sea, naked tender eel glistening, prepared for our appetite. Now take garlic, first caress that precious ivory, smell its irate fragrance, then blend the minced garlic with the onion and tomato until the onion is golden. Meanwhile, steam cook with the royal marine shrimp and when the peak of flavor is reached in a sauce made from the ocean water and the clear juice of the onion, then introduce the conger and immerse it in the pot, for the broth to be reduced be concentrated. It is only necessary to reduce the liquid in the dish to thick cream like a rose petal, and the fire slowly delivers the treasure until the chowder is warmed the essences of Chile come to the table, newly wed, the flavors of the sea and land so that in this dish you may know heaven.</p>

Ingredients:

1 congrio colorado de 4 kilos o más	1 conger eel (4 kilos or more)
3 cebollas	3 onions
1 pimentón mediano verde o rojo	1 medium red or green pepper
3 tomates	3 tomatoes
2 cucharadas de mantequilla	2 Tbsp butter
2 cucharadas de aceite	2 Tbsp oil
2 cucharadas de ají de color	2 Tbsp Aji pepper
4 cucharadas de crema	4 Tbsp cream
3 dientes de ajo	3 cloves garlic
3 hojas de laurel	3 bay leaves
1 ramo de perejil	1 sprig parsley
2 ramos de cilantro, 1 para el caldo y otro cortado fino (para espolvorear al final)	2 sprigs cilantro, one for the broth and one minced (to dust at the end)
2 ramitos de apio cortados en trozos	2 sprigs of chopped celery
1 zanahoria (para el caldo)	1 carrot (for the broth)
Jugo de 1 limón	juice of one lime
1 cucharadita de oregano	1 tsp oregano
1 pizca de salsa de ají	1 dash of salsa de aji
sal y pimienta	salt & pepper
2 tazas de vino blanco	2 cups of white wine

Optional:

1 zanahoria grande cortadas en ruedas	1 large carrot cut into rounds
2 papas cortadas al gusto	2 potatoes cut as desired
250 gramos de camarones	250 gm shrimp
250 gramos de machas	250 gm razor clams
250 gramos de choritos	250 grams mussels
250 gramos de almejas	250 grams clams

Preparation:

<p>Hay que hervir por dos horas las aletas del congrio en media taza de agua por persona, la piel, el espinazo y la cabeza del pescado, agregando como aliño dos hojas de laurel, una cebolla partida en dos, un par de hojas de apio, un ramo de perejil, uno de cilantro, sal y pimienta y dos dientes de ajo. Cuele este caldo base y póngalo en otra olla. Agregue los trozos de carne que se obtengan de la cabeza. Las presas de pescado se dejan marinando un rato, aliñadas con sal, pimienta, jugo de limón, un diente de ajo molido, orégano y una pizca de salsa de ají.</p> <p>Al caldo se le incorpora cebolla cortada en pluma y frita en mantequilla, apenas doradas, 2 tomates fritos, 2 dientes de ajo picados y fritos, ½ pimentón</p>	<p>Broth base (stock) should be boiled for two hours: eel fins in half a cup of water per person, skin, spine and head of the fish, adding as dressing two bay leaves, halved onion, a few celery leaves, a bunch of parsley, one of cilantro, salt and pepper and two cloves of garlic. Strain the broth base and put it in another pot. Add the meat obtained from the head. Fish pieces are left to marinate for a while, seasoned with salt, pepper, lemon juice, a clove of crushed garlic, oregano and a dash of chili sauce.</p> <p>To the broth, add sliced onion sauteed in butter, just golden, 2 sauteed diced tomatoes, 2 sauteed cloves garlic, half a diced sauteed green or red bell</p>
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verde o rojo cortado en cuadritos , 2 cucharaditas de ají de color y 2 tazas de vino blanco. Se pone a hervir este caldo, queriendo puede agregarle papas y zanahorias cortadas en rueditas y, 20 minutos antes de pasar a la mesa se agregan las presas de congrio y se deja cocinar a fuego muy lento sin dejarlo hervir.

Si se van a utilizar los mariscos opcionales, entonces hièrvalos en agua con poquita sal y se los agrega al caldillo al final, chorreàndolo con la crema, o ponerla en un recipiente en la mesa para que cada uno se sirva al gusto, que es lo que yo normalmente hago, puès algunas personas son alèrgicas a los productos lacteos. Mejor si servido en platos de greda y bien caliente.

Puede servir con arroz blanco y ensaladas, de aguacate, verde, de apio...etc.

pepper, 2 teaspoons paprika and 2 cups white wine . Boil the stock (you can add potatoes and carrots cut into wheels, 20 minutes before time to serve. At that time, add conger, dams and shrimp, and cook over very low heat without letting it boil.

If you use the optional seafood, then boil them briefly in water with a little salt and add them to the broth at the end, stirring in the cream just before serving, or put in a container on the table so everyone can enjoy their taste preference, which is what I normally do, because some people are allergic to dairy products. Best if served in clay plates and well heated.

Serve with white rice and salad, avocado, green, celery ... etc.

Chapter 7 – Chorizos of Uruguay and Argentina

CHORIZO – Uruguay

One of many interesting items concerning Uruguay is that is so isolated. No! Wait! That's Paraguay. We geographically-impaired foreigners mix the two up, frequently. According again to Wikipedia, Uruguay is a country in the southeastern part of South America, home to 3.3 million people, of whom 1.8 million live in the capital Montevideo and surroundings. An estimated 88% of the population are of European descent.

Asado is the national dish, according to Wikipedia again, roast beef. "The meat for an asado is not marinated, the only preparation being the application of salt before and/or during the cooking period. Also, the heat and distance from the coals are controlled to provide a slow cooking; it usually takes around two hours to cook asado. Further, grease from the meat is not encouraged to fall on the coals and create smoke which would adversely flavor the meat."

Consequently, the settlers don't quite "fit the mold." Again from Wikipedia, "most Uruguayans of European ancestry are descendants of 19th and 20th century immigrants from Spain and Italy (about one-quarter of the population is of Italian origin) ... Few direct descendants of Uruguay's indigenous peoples remain..." The following recipe is pretty casual. That may reflect an Italian influence. "Quien sabe?".

Uruguay – Haciendo Chorizos

<http://cocinadelmundo.com/receta-Haciendo-Chorizos>

Ingredientes

Carne molida de vaca 60%	60% ground beef
Carne molida de cerdo 40%	40% ground pork
Adobo	Adobo seasoning (see below)
Sal	Salt
Pimienta	Black pepper
ajo	Garlic
Tripa p/embutido	Hog casing for sausage

Preparación

Preparation is similarly vague, "Prepare it to your liking, so you can find the flavor that you like most. Then write it down..." Stuff as usual.

Owing to the lack of peppers other than black pepper (but a little paprika in the adobo), this might more properly be called longaniza.

Adobo, "seasoning," is a generic term referring to a mixture of paprika, oregano, salt, and garlic in dry form, often with vinegar added. Proportions vary widely. Popular brand Goya is widely available in the United States, as are several other brands. It is simple to make.

CHORIZO – Argentina

Note the influence of beef competing with pork.

In Argentina (see http://www.bedri.es/Comer_y_beber/Conservas_caseras/Alimentos_procesados/Chorizo.htm), some of the typical chorizo sausages are the "chorizo parrillero" ("grilled sausage," either a fresh sausage, or a dried, smoked, then roasted slowly sausage) and the "chorizo bombón" which is a not very widely available, often more spicy, grilled chorizo.

A sausage sandwich called "choripán," invented in Argentina, became popular in Paraguay and Uruguay, and later in Bolivia, Chile, and Peru. It consists of chorizo (the "chori" part) sandwiched between two halves of French bread (pan is Spanish for bread) or other round white bread bun (what we call a bolillo in Texas). Many seasonings are popular, chimichurri being the most popular in Argentina. Mushrooms, pickles, pepper, mayonnaise, picante salsa, etc. are often added. The sausage is often served "butterflied," that is, cut in a longitudinal manner without completely separating the two sides.

According to Wikipedia again, chimichurri is made from finely chopped parsley, minced garlic, olive oil, oregano, and white or red vinegar. Additional flavorings such as cilantro, paprika, cumin, thyme, lemon, and bay leaf may be included. In its red version, tomato and red bell pepper may also be added.

In Argentina there are varieties of sausages like those of Spain, among these the most common are the "chorizo colorado" and "chorizo candelario." A recipe for the fermented "chorizo colorado" may be found at <http://www.sindy.com.ar/recetas/como-hacer-chorizo-colorado-tipo-cantimpalo.html> The "chorizo candelario" (originating in the province of Salamanca, Spain) is described at <http://www.directodelcampo.com/noticias/elaboracion-chorizo-txt-777490nfa.html> as a dried, smoked sausage in a simple recipe as follows:

Para elaborar el chorizo son necesarios los siguientes ingredientes:

- Carne de cerdo magra y gorda picada (ground pork)
- Harina (flour)
- Ajos pelados (peeled garlic)
- Vino blanco (white wine)
- Sal (salt)

Amasar todos los ingredientes con el vino y dejarlo durante un día bien cubierto. Al día siguiente hay que rellenar las tripas de vaca o cerdo y una vez hecha la masa, hay que ponerla a secar al humo.

You mix everything, wait a day, stuff into beef or hog casings, then dry. We won't discuss chorizo candelario further, as it appears to be a Spanish sausage. (*Perhaps in a future publication...?*)

Here's a fresh sausage version of chorizo colorado from <http://www.utilisima.com/recetas/1030-chorizo-colorado-fresco.html>

Ingredientes		1 kg recipe	1 kg meat basis
Ají molido 1 cdita	1 tsp ground Aji	0.83 gm	0.91 gm
Ajo en polvo 1/2 cda	½ Tbsp garlic powder	1.04 gm	1.14 gm
Carne de vaca magra	1 kg ground beef	0.42 kg	0.45 Kg
Carne de cerdo magra	500 g ground pork	0.21 kg	0.23 kg
Orégano 1 cdita	1 tsp oregano	0.62 gm	0.68 gm
Panceta 700 g	700 gm bacon	0.29 kg	0.32 kg
Pimentón dulce 6 cdas	6 Tbsp sweet paprika	15.6 gm	17.0 gm
Pimienta negra 1/2 cda	½ Tbsp black pepper	1.25 gm	1.36 gm
Sal fina 3 cdas	3 Tbsp salt	22.5 gm	24.5 gm
Tripa chinesca calibre 40 5 m	hog casing, 40mm, 5 meters		
Vino blanco 100 cc	100 ml white wine	42 ml	45 ml

Picar las carnes junto con la *panceta* alternando en la picadora con un disco de 8 mm. Colocar en un bol y agregar el vino, las especias y la sal. Mezclar para distribuir los ingredientes con guantes de latex.

Importante: las carnes y la *panceta* deben entrar a la picadora lo mas fríos posibles.

Lavar la tripa y hacer circular el agua dentro de la misma. Dejar en remojo en agua tibia de 10 a 15 minutos. Escurrir y colocar en la maquina para proceder a embutir el chorizo. Importante: embutir sin dejar aire y no muy apretado para que no se rompa la tripa.

Atar los chorizos cada 10 cm de largo, con hilo choricero. Conservación 7 días en la heladera o 6 meses en el freezer.

Grind the meats together with the bacon alternating in the grinder with an 8MM plate. Put all into a bowl and add the wine, the spices, and the salt. Mix to distribute the ingredients by hand with latex gloves.

Important: the meats and bacon ought to be fed to the grinder as cold as possible.

Wash the casing and flush with water. Soak in water for 10 or 15 minutes. Remove and load onto the stuffer to stuff the chorizo. Important: Fill without introducing air and not packed very tight so it won't blow out the casing.

Tie the chorizos each 10 cm, with butchers' twine. Store 7 days in the refrigerator or 6 months in the freezer.

And here's a grilling chorizo, "chorizo parrillero," from the same website, <http://www.utilisima.com/recetas/11249-chorizo-parrillero.html>

Vino <i>tinto</i> 300 cc	red wine
<i>Laurel</i> 1 hoja	1 bay leaf
Ajo 4 dientes	4 cloves garlic
Sal 4 cdas	4 Tbsp salt
Azúcar 2 cdas	2 Tbsp sugar
<i>Ají</i> molido 2 cdas	2 Tbsp Aji chile
<i>Coriandro</i> 2 cdas	2 Tbsp coriander
Orégano 8 cdas	8 Tbsp oregano
Comino 1 cda	1 Tbsp cumin
<i>Fécula de maíz</i> 2 cdas	2 Tbsp corn starch
Carne de <i>cerdo</i> 1,4 k	1.4 kg ground pork
Carne de <i>vaca</i> 1,4 k	1.4 kg ground beef
Papada de <i>cerdo</i> 1,2 k	1.2 kg pork jowl
Tripa chinesca calibre 32 6 metros	

Hervir el vino con el <i>laurel</i> y el ajo por 2 minutos, hasta que se evapore el alcohol. Dejar enfriar, retirar el <i>laurel</i> y agregar la sal.
Combinar todos los condimentos en un tazón. Agregar la fécula. Picar las carnes, intercalando la papada de <i>cerdo</i> , en una máquina para picar equipada con un disco de 8 mm.
Añadir el vino y mezclar ligeramente. Incorporar los condimentos e integrar bien.
Lavar la tripa bajo el grifo, haciendo circular el agua por su interior. Remojar en agua tibia durante 10 minutos. Escurrir y colocar en la máquina para embutir.
Rellenar la tripa, sin dejar aire. Atar formando unidades de 10 cm de largo, con nudos equidistantes.
Nota: Conservar en la heladera hasta 7 días o en freezer por 6 meses como máximo.

Heat the wine, with the bay leaf and garlic for 2 minutes, until the alcohol is evaporated. After cooling, remove the bay leaves and add the salt.
Combine all the spices in a bowl. Add the starch. Chop the meats in a grinder equipped with an 8 mm disk.
Add the wine and stir slightly. Add the seasonings and mix thoroughly.
Rinse the casing, running water through the interior. Soak in warm water for 10 minutes. Put into the stuffing machine.
Stuff the casing, without including air. Form into equal 10 cm long links
Note: Store in the refrigerator for up to 7 days or in a freezer for 6 months maximum.

Here are two recipes from <http://www.taringa.net/posts/recetas-y-cocina/2729884/Chorizo-Criollo-y-de-Cerdo-Casero-receta-y-preparacion.html> which claim to be old, traditional Argentine recipes. The “criollo” style generally means that, rather than being fermented or dried, they are “fresh” sausages which must be cooked before eating. Although both recipes are purported to be traditional, the same exact recipes are all over the internet, leading me to suspect that they’re both good but not quite historically accurate. ...interesting, though. Let’s look at them, then try a different, more recent one below them.

Note the use of aji peppers. The first, chorizo criollo y de cerdo (Creole chorizo of pork), as well as the second (Creole beef & pork chorizo) are said to have first been written down by Robert Joseph Herrlein, a descendant of the Volga Germans who settled in Argentina two centuries ago. Translating these old recipes is a delightful lesson in how writing formality has changed, not necessarily for the better.

Recipe: Chorizo Criollo y de Cerdo (Creole chorizo of pork)

Ingredientes para 10 kilos de chorizos.

Original Recipe	Ingredient		1 Kg (total) Recipe	1 Kg (meat basis)
8 kilos	carne de cerdo.	Pork meat		
2 kilos	tocino de cerdo.	Pork fat		
220 gr	sal.	Salt		
50 gr	ají molido.	Ground aji pepper		
20 gr	pimienta negra molida.	Ground black pepper		
10 gr	nuez moscada molida.	Ground nutmeg		
30 gr	orégano (opcional).	Oregano (optional)		

Una cabeza chica (small head)	ajo	Garlic		
1 vaso (cup)	vino blanco o tinto.	White or red wine		
Semillas (seeds)	hinojo salvaje (Importantísimo para el sabor y el aroma)	Wild fennel (most important for flavor and aroma)		
15/17 metros	tripa salada para embutir.	Salted hog casing for stuffing		
5 gr	nitrate de sodio.	Sodium nitrate		

NOTE that this is an old recipe, and the sodium nitrate cure must be converted to modern sodium nitrite standards.

Preparación:

Con una máquina tritura carne y disco grueso, pique la carne hecha trozos, luego el tocino. Vierta todo en un fuentón y agregue todos los condimentos. Mezcle y amase.	Coarsely grind the meat and fat. Pour into a bowl. Add all the seasonings. Mix and knead.
Caliente el vino y agréguele los dientes de ajo bien picados y sin hervir cocine tres minutos. Cuele, deseche el líquido e incorpórelos a la preparación volviendo a amasar. Conserve en la heladera no tan fría hasta el día siguiente. (*)	Heat the wine, add the minced garlic and cook three minutes without boiling. Strain, discard the liquid, and incorporate them (garlic cloves) into the preparation. Knead again. Store in the refrigerator overnight. (Written before the modern refrigerator was invented.) (*)
La preparación de la tripa se hace desalándola con abundante agua corriente, luego se sumerge en agua con el nitrito disuelto para evitar una indeseada putrefacción. Previo el relleno cuélguela para que se escurra bien.	The intestine is de-salted with running water, then dipped in water with nitrite dissolved in it to prevent unwanted putrefaction. Before filling, hang to drain well. (Written before salted casing was widely available.)
El relleno puede hacerlo con un simple embudo, bastante grande, juntando la tripa en el pico del mismo, haciendo que se desfile durante el llenado que no debe ser muy apretado.	The filling can be done with a simple funnel, large enough, gathering the gut at the peak of it. In allowing it to extend during filling, it should not be too tight.
La distancia de la atadura de cada chorizo es a gusto del consumidor, generalmente de 13 a 15 centímetros para que no se diga que se está sirviendo una miseria... Hágalos descansar un día al gancho y en la heladera.	The distance of the binding of each sausage is a taste of the consumer, usually from 13 to 15 centimeters so it does not say who is serving a pittance (i.e. don't let the server look stingy!) ... Allow them to rest a day on hooks in the refrigerator.
Es preferible asarlos a la parrilla con brasas de madera dura, generalmente durante 15 minutos de cada lado, sin pincharlos, para que se cocinen con sus propio jugo.	It is preferable to grill these over hardwood coals, usually for 15 minutes on each side, not pierced, to cook their own juice.

The asterisk is as follows:

<p>(*) Una buena alternativa es la del señor Raúl Marozzi que pone el ajo triturado en el vino y luego lo cuele, tira el ajo y pone el vino con sabor a ajo en la preparación. porque me dice que el ajo se oxida y no conviene ponerlo en la mezcla.</p>	<p>(*) A good alternative is to put crushed garlic in the wine and then strain it out, throw it away, and put the wine flavored with garlic into the mix (because garlic is oxidized and should not be put into the mixture).</p>
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The transcriber notes that he personally prefers to cut the pork fat into small pieces with a knife so it more resembles the large fat pieces in salami.

Our next recipe, another traditional old one from the same author, combines beef and pork. This would be expected in beef-happy Argentina.

Chorizo Criollo Mezcla

Chorizo Criollo y de Cerdo y Rez (Creole Mixed Chorizo of Pork and Beef)

Ingredientes para 10 kilos de chorizos.

<i>Original Recipe</i>	<i>Ingredient</i>		1 Kg (total) Recipe	1 Kg (meat basis)
4 kilos	carne de cerdo.	Pork meat		
2 kilos	tocino de cerdo.	Pork fat		
4 kilos	carne de vaca.	Beef		
220 gr	sal.	Salt		
50 gr	ají molido.	Ground aji pepper		
20 gr	pimienta negra molida.	Ground black pepper		
10 gr	nuez moscada molida.	Ground nutmeg		
Una cabeza chica	ajo	garlic		
1 vaso (cup)	vino blanco o tinto.	White or red wine		
Semillas (seeds)	hinojo salvaje. Se puede remplazar con kummel.	Wild fennel (substitute caraway)		
15/17 metros	tripa salada para embutir.	Salted hog casing for stuffing		
5 gr	nitrate de sodio.	Sodium nitrate		

NOTE that this is an old recipe, and the sodium nitrate cure must be converted to modern sodium nitrite standards.

Preparación:

Use the same instructions as the recipe immediately above.

The author notes the following:

Estos chorizos son preferidos aca en Argentina a los de puro cerdo para ser secados durante al menos 40 días, en un lugar seco, fresco y poco ventilado. En el día 41 pueden recibir el primer corte, oblicuamente, para comprobar la consistencia, el aroma, y el sabor.	These (pork/beef) sausages are preferred in Argentina to pure pork. They should be cured for at least 40 days in a dry, cool and poorly ventilated place. On day 41, they can receive the first cut, obliquely, to check the consistency, aroma, and flavor.
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Receta de Chorizos parrilleros (Grilled chorizo recipe)

Remember, from above, that most chorizos in Argentina are grilled? Well, here's one from <http://www.recetasgratis.net/Receta-de-Chorizos-parrilleros-elaboracion--receta-12194.html> which promised to be a bit more representative of popular culture. Unfortunately, it is circulating on the internet as being from Chile as well as Argentina, and has already been described in the chapter on Chile. Sorry about that oversight.

Instead, let's try these recipes (hopefully from Argentina):

Chorizo parrillero al morrón

• 400 g de carne de cerdo	pork
• 400 g de carne vacuna	beef
• 200 g de gordura de cerdo	pork fat
• 1 cda colmada de sal	salt
• 1 cda de azúcar	Sugar
• 1 cda colmada de almidón de maíz	Corn Starch
• 4 cdas de pimiento morrón picado,	red bell pepper
• 1 cda de ají molido	aji
• 1 cdta de coriandro,	coriander
• ½ cdta de pimiento,	bell pepper
• 125 cc de vino tinto	red wine
• 4 dientes de ajo	garlic
• 2 hojas de laurel	bay leaves

Llevar a hervir el vino con los dientes de ajo y el laurel hasta que evapore el alcohol. Mezclar todos los condimentos e incorporar las carnes y gordura trozada, seguimos mezclando hasta que no quede condimento en la base del recipiente, por último incorporar el vino hervido y frío. Pasamos esta preparación por maquina de picar carne, una vez picada mezclar ligeramente. Hidratamos la tripa con agua tibia y dejamos correr agua en su interior. Calzamos la tripa en la maquina de embutir y comenzamos a llenar los chorizos, formar chorizos del tamaño deseado. Pinchar se quedan chorizos con aire.

Boil the wine with the garlic and bay leaf until the alcohol evaporates. Mix all the ingredients and incorporate meat and fat, continue mixing until no liquid is left, Pass this preparation through the meat grinder once. Moisturize the gut with warm water and let water run inside. Fit the gut in the machine started to fill stuffing sausages, chorizos forming the desired size. Puncture any chorizos which contain air. Store in refrigerator up to 1 week, Freezer 2 months

Longaniza parrillera

1 kilo carne cerdo	pork
250 grs carne vaca	beef
300 grs gordura cerdo	pork fat
1 ½ cucharada sal	salt
1 cucharada azúcar	sugar
1 cda de almidón de maíz	corn starch
1 cucharada semillas hinojo	fennel seeds
½ cucharada ají molido	aji
½ pimienta negra	black pepper
½ cucharada nuez moscada	nutmeg
125 cc vino tinto	red wine
100 cc agua	water
4 dientes ajo	garlic
3 hojas laurel	bay leaves
2 metros tripa chinesca (varía según calibre)	hog casing (various sizes)
hilo choricero	butchers' twine

Para trabajar con productos frescos es de suma importancia que la temperatura de la carne no sea superior a los 2°C, en todo el proceso de elaboración. Ponemos a hervir el agua y el vino junto con los ajos machacados y el laurel. Dejamos enfriar y retiramos los ajos. Picamos las carnes y las gorduras del tamaño de una avellana, con máquina eléctrica o en forma manual. Comenzamos a mezclar las carnes y vamos incorporando incorporando el líquido obtenido y los condimentos hasta lograr una pasta homogénea. Dejamos reposar en la heladera 2 horas o de un día para otro.

Embutido: Hidratamos la tripa abriéndola de un extremo, dejando ingresar un chorro de agua de la canilla y, este chorro, lo hacemos correr a lo largo de toda la tripa. Colocamos la tripa en un recipiente con agua para que continúe dilatando. Luego ubicamos la tripa dilatada en el embutidor, comenzamos a poner la carne en la máquina y embutimos.

Atado: Realizamos con hilo un nudo en un extremo y con el mismo hilo vamos realizando lazadas equidistantes de 20 cm a lo largo de toda la tripa. Conservar en heladera no más de 7 días. O frisar hasta 6 meses.

To work with fresh sausage products, it is of highest importance that the temperature of the meat not be higher than 2 degrees C, in the whole manufacturing process. Boil the water and wine with crushed garlic and bay leaf. Let cool and remove the garlic. Chop meat and fats the size of a hazelnut, with electric machine or by hand. Start to mix meat and incorporate the liquid and dry seasonings. Mix until a smooth paste is obtained. Let stand in refrigerator 2 hours or overnight.

Note: moisturize the gut, opening it from one end, by leaving a stream of water entering one and running throughout the gut. Put the casing in a bowl of water to continue hydrating. Then place the gut on the stuffer, start putting meat into the machine, and stuff.

Tying knots: Tie butchers' twine at one end and with the same twine make loops equidistant of 20 cm along the entire gut. Store in refrigerator no longer than 7 days. Or freezer up to 6 months.

This should give you plenty of feel for the chorizos of Argentina. One interesting note: hog casing is called “tripa chinesca,” or literally “Chinese-style tripe,” in Argentina. What do you bet that there’s an interesting tale in how that expression came about?

Chapter 8 – CHORIZO – Various Topics

Grinding chiles versus other spices

Using vinegar without impeding sausage protein “development”

A fermented, semi-dry chorizo

Salt levels

Volume conversions

Pepper Types and Amounts

“News of the Bizarre:” An unusual Canary Islands chorizo

Grinding Spices and Chiles

If you process dried chiles, you will find that they often are leathery, rather than hard. They don't do well in a blender, like softer materials such as raw garlic or onion. Blenders, believe it or not, are too gentle!

Finely grind the chiles, dry, in a coffee grinder. This fine grind allows them to disperse better, allowing for better color and flavor development. Tear pieces off and grind them in a spice (formerly coffee) grinder. I tried the technique of running them in a blender with some water, but it didn't grind the leathery things very well.

The blender technique works great for softer vegetables and the like, so by all means use it. You can always add the finely-divided spices to the blender solution. Just don't depend on the blender to do the grinding work on the chiles.

Using Vinegar Without Impeding Sausage Protein “Development”

In some recipes, notably the Mexican chorizos, you will be adding vinegar instead of water. An acid environment interferes with the development of the proteins, causing the sausage mince to separate and become grainy instead of bind together in what we usually associate with European sausage texture.

Grind spices and such separately. Dissolve the salt and cure in the vinegar (which is 94% water). Then, first work the spices in by hand until the actin and myosin develop (“stiff peaks”). Then, second, add the vinegar/salt/cure mixture and mix well enough to disperse the liquid. Some tackiness will remain, but the acid environment doesn't reduce it entirely. This is normal. ...better than the alternative, which is no binding at all.

A Fermented, Semi-Dry Chorizo:

This recipe was featured in an earlier sausage making forum as the next logical step from fresh and smoked/cooked chorizo toward traditional, fermented dry chorizo. The recipe noted in “Our Own Tex/Mex Blend, above was changed only slightly, leaving out the vinegar and adding Bactoferm™ LHP culture and a small amount of sugar. The result is a tangy taste without the vinegar, due instead to lactic acid. The LHP culture is fast-acting, unlike the slow fermentation of true chorizo. The recipe, in my opinion, could use some adjustment, but the result illustrates well what the transition between the two types of sausage is - relatively minor in ingredients, and extra (but not too much extra) effort. The recipe, and “Chuckwagon's” notes, follow.

El DuckO's “Azul Chorizo Chabacano” (Type 3 – “Semi-Dry Cured)

- 800 gm pork (fat trimmings removed)

- 200 gm pork trimmings
- 10.6 gm non-iodized salt (reduce if using cure) (see salt cautions below)
- 2.7 gm cure #1
- 0.24 gm Bactoferm™ LHP culture
- 9.0 gm sugar
- 0.7 gm pepper (black)
- 17.6 gm garlic (6 medium cloves - fresh)
- 21.2 gm chile- ancho (remove stems & seeds, grind)
- 11.5 gm chile-pasillo (remove stems & seeds, grind)
- 0.2 gm cloves (ground)
- 0.6 gm coriander (ground)
- 0.4 gm cumin (ground)
- 0.4 gm oregano
- 6.9 gm paprika (sweet)

Crush the garlic slightly and soak it in hot water while you grind the meat through a large (1/2") plate. Dissolve the salt and the cure #1 in the vinegar, mince the garlic and chiles, and then combine them with all the remaining ingredients, mixing them thoroughly throughout the meat.

If you choose to lighten up on the vinegar, (*looks like we do without vinegar entirely, because the tang is supplied by the ferment,*) mix the cure into a half-cup of ice water instead. Season the mixture a day or two in the refrigerator, then stuff it into 32 – 36 mm hog casings, making traditional 8" links.

Place one pound of regular table salt onto a cookie sheet with a lip around it. Spread the salt out evenly and add just enough water to barely cover the salt. Place the cookie sheet and salt in the bottom of an old fridge or your home kitchen oven. Keep the oven warm by using the pilot light in a gas model, or a hundred-watt light bulb covered with a large coffee can with several holes drilled in it. This will produce a warm area for a 2-day fermentation period at about 70% humidity.

When you are ready to smoke-cook the sausages, hang them at room temperature until they warm just a bit while you pre-heat your smokehouse to 130°F. Wipe any condensation from the sausages, being sure they are dry to the touch before they go into the smoker. Place the sausages into the smokehouse for an hour then introduce hickory smoke with the dampers ¼ open. Slowly, only a few degrees every twenty minutes, raise the smokehouse temperature until the internal meat temperature registers 148°F. At this point, I cannot stress enough, the importance of patience. Please do not try to rush the process by elevating the heat too much or too quickly. The success or failure of the product will be determined by how you prep-cook the meat at this point. Do not "break" the fat or you will have expensive sawdust. There may be a temperature "stall" somewhere during the mid-140's and as the meat-temperature finally nears 148 degrees, it may do so quickly, so keep your eye on the thermometer and do not allow the temperature to go above this mark. Cool the sausages in a little ice water and then dry them. Store them in the refrigerator at least 8 hours, until you are ready to grill them.

If you haven't started making this part of the recipe, do it now. It is important to remember that even though the sausage has been cured, it doesn't mean that it will remain edible outside the refrigerator. This remains a perishable product and must be refrigerated and used within a few days, or frozen until you are ready to grill in the near future. It's your job at this point to make a couple of

pounds of this delicious sausage with the proper amount of sodium nitrite in it. This will change the entire structure of the meat and quality of the sausage as you will see.

In his book, *“Home Production Of Quality Meats And Sausages”*, author Stan Marianski stated: “All sausages can be smoked or not. Semi-dry sausages are smoked with hot smoke. What was once an important preservation step has become a matter of personal preference. If you like the smoky flavor, smoke the sausage, it’s that simple.”

Some suggest that the “stall” is due to the moisture in the meat evaporating. The process is similar to water boiling, in that the temperature can’t physically rise any higher until all the water has been vaporized. In this case, though, the limiting step is not heat uptake, as occurs in boiling. Rather, it is diffusion. Water is diffusing through the mince toward the outside, migrating from the interior to the surface if you will, then evaporating. Evaporation is fast, whereas diffusion is slow. This is a natural process, potentially hindered by all sorts of slow rate steps. At this point in the process, it’s a diffusional limitation. *[...lots of unnecessary engineering verbiage deleted here. Go do your dissertation elsewhere!]* At any rate, pushing it only results in ruin, so don’t try. Be patient. Your goal is a leisurely approach to that final “internal meat temperature,” or IMT. Reaching it is important. Reaching it fast is NOT.

Salt Levels

Several people have suggested that my fresh sausage recipe salt levels are often too low. This is a matter of debate. Stan Marianski and Ryttek Kutas say that 3% is probably the maximum amount you should use for palatability, and suggest 1.5% non-iodized salt. Some people, my wife and family included, prefer a low sodium diet. When in doubt, you should probably shoot for 1.5%. Note, however, that my recipes will not always have the same amount as yours. Don’t forget to compensate for the salt content in cured sausages! Both Cure #1 and #2 contain a large amount of salt.

I once got into a heated discussion with a <http://wedlinydomowe.pl/en/> forum member who, as it turns out, is experienced in butchery and charcuterie. This turned out to be very beneficial, as it brought salt to light as one of the foundations of meat curing. As he correctly pointed out (let’s quote Marianskis here, “Home Preparation of Quality Meats and Sausages,” Chapter 11, page 143, “Sausage Making Process,” the following:

“The proper amount of salt in meat (tastes pleasant) is between 1.5 – 2% and 3.5% will be the upper limit of acceptability, anything more and the product will be too salty. There is less room for compromise in making fermented sausages where salt is used as a safety hurdle to prevent the growth of bacteria in the first stage of processing. Dry sausages require about 3% of salt and semi-dry around 2.5%. Usually, most home sausage makers omit the curing step. This can be attributed to the lack of information available on curing meats for sausages as many recipes on the internet are very amateurish at best.”

...and of course, nearly everything you have read so far has been from the internet. Therefore, I warn you: be sure to take seriously the guidelines about cleanliness, and be sure to either consume or freeze your fresh sausage recipe in four days or less.

...and as for that semi-dry recipe above: the salt level is relatively low, so consume it or freeze it it as you would a fresh sausage recipe, within four days.

Volume conversions:

I try. Honestly, I do. It's hard. When in doubt, use your own conversion factor for my recipes. Take a one tablespoon amount of any given herb, spice, or whatever and weigh it. Chances are that (1) you'll get a different density than I used, and (2) you'll get a different density than the original author used.

What to do? ...plow onward. If you like the way a recipe is headed, tinker. Boost or reduce the amount of various spices. It's optimum when you achieve what YOU prefer. If it tastes good, try again until it tastes great!

Pepper types and amounts:

My biggest problem is deciding how much of which peppers to use. I have ambitions of one day trying to see if Scoville scale can be correlated with anything else, including taste. The best way to do that is to make a series of sausage mixes, varying the amount of the various types of chiles, until you reach whatever taste level you prefer. Write it down. Maybe you can develop a cluster of data points for different peppers. But how do you quantify "I like this" in numbers? Well, if Scoville could do this for a numeric scale, surely someone else can for "tasty" chiles. Please hurry. The Nobel Prize awaits, possibly. (On the other hand, the Nobel money came from manufacturing dynamite.)

I've tried averaging Scoville numbers when substituting various chiles for each other, but with limited success. It seems to work with chiles that are roughly the same Scoville number (within, say, a factor of 10). It fails miserably for wider ranges. I thought I might try a logarithmic scale, but reality intruded. What are we REALLY trying to do? In all honesty, it's the flavor that we're after, not whether we can administer a fatal dose or not. (For you environmental exposure types, the LD-50 lethal dose is NOT what we're after.)

So, substitute based on flavor, rather than "heat." Average based on Scoville number if you are the type who must (spreadsheet addicts beware), but I would advocate staying close, substituting similar peppers where you can. If smoked peppers are called for (such as chipotle), substitute a different smoked pepper. Explore the various types of paprika. Don't forget to try fresh versus dried peppers, especially for the lower-heat varieties. Try toasting 'em versus not bothering. There's a whole new world out there, just waiting for you.

News of the Bizarre: Las Canarias (Canary Islands)

I had to put this in here, although you may wish that I didn't. When you rattle around on the internet enough, you run across all sorts of things that catch your attention. Here's one from a Spanish possession, the Canary Islands, "Las Canarias." Read the story, then judge.

El chorizo de perro o chorizo perrero http://gregorio-vayavdasaber.blogspot.com/2011/07/el-chorizo-de-perro-o-perrero.html	Dog Chorizo, or Dog Catcher Chorizo
Buscando en internet, no sé que cosa, encontré una receta que incluía dicho ingrediente y lo denominaba "chorizo de perro". Dicho sea de paso, en la romería de la Orotava de este año 2011, se hizo notar la crisis, pues no vi volar desde las carretas ni un mísero albaricoque y sin embargo, me "tupieron" a pan con "chorizo perrero" y "cotufas" (palomitas	Searching the internet, doing I know not what, I found a recipe that included the ingredient, and which was called, "chorizo of dog". Coincidentally, in the Orotava pilgrimage this year 2011, I noted a crisis because I saw neither carts or other vehicles clogging the road, offering me bread with "chorizo of dog" and popcorn ("little doves" or "threads on Gran Canaria").

<p>de maíz, pop corn, o “roscas en Gran Canaria”).</p>	
<p>El “chorizo de perro” es un nombre que se le ha dado en poner a la “sobrasada” o “chorizo perrero” por las generaciones de no superan los 40 y tantos años a día de hoy, ha trascendido a las siguientes generaciones por el simple hecho de desconocer su procedencia.</p>	<p>The “chorizo of dog” is a name that has been given to put the “sobrasada” or “chorizo dog catcher,” as it is called by generations younger than 40-something today, having transcended the generations who are by now simply unaware of the origin.</p>
<p>Dicha denominación se hace de forma peyorativa por la similitud que tienen al pene erecto de los perros.</p> <p>En Tenerife se le daba ese nombre, en Gran Canaria “chorizo de Teror” (“salvense” las diferencias y la tilde), y en otros sitios no lo sé.</p> <p>La razón de dicho nombre es muy simple, “chorizo perrero”, porque su precio era de 1 “perra” o “perra gorda”, el nombre que se le daba a los 10 céntimos de peseta de la época de Franco (y posiblemente de la anterior República),</p> <p>Eran de una aleación aluminosa y del tamaño aproximado de un Euro actual, tenían en el anverso un jinete lancero y en el reverso el escudo de España, de la cual existía una réplica más pequeña cuyo valor era 5 cm. Y se le llamaba “perra chica”.</p>	<p>Such designation becomes a pejorative by its similarity with the erect penis of dogs.</p> <p>In Tenerife it was given that name in Gran Canaria “chorizo de Teror” [Teror is the name of a town on Grand Cararia island] (“Save yourselves” the differences and the tilde), and elsewhere I do not know.</p> <p>The reason for this name “chorizo dog catcher” is very simple, because its price was 1 “bitch” or “fat bitch”, the name was given to the 10 cents of a peseta of the Franco era (and possibly the previous Republic).</p> <p>It was of an aluminum alloy and the size of a current Euro. Had a horse lancer on the obverse (front) and on the reverse (back) the arms of Spain, of which there was also a smaller replica whose value was 5 cents. And was called “perra chica” or “little bitch.”</p>
<p>Asimismo se le llamaban “guaguas perreras” a las que formaban parte del transporte urbano de Santa Cruz de Tenerife, de color azul las recuerdo yo y algo mas modernitas en su diseño que la que está en la foto, de madera y con un cordel de cuero que la atravesaba longitudinalmente para hacer sonar la campanilla que solicitaba la parada, además del conductor (“el chofer”) iba un cobrador con una tablilla llena de tickets con los precios de los diferentes trayectos y su cartera también de cuero marrón colgada al hombro con las</p>	<p>Likewise, in those days there were buses called “dog catcher buses” which were part of urban transportation in Santa Cruz de Tenerife, painted blue and something else as I remember, and more modern in design than the one in the photo [see link], wood and a string of leather that crossed longitudinally to ring the bell to call for a stop, and the conductor/driver (“chauffer”) was also a collector with a clipboard full of tickets of the prices of the various routes and also with a brown leather wallet over his shoulder with the “perras” (“bitches”) whose normal price was 2 “perras gordas” for the longest journey.</p>

<p>“perras”, cuyo precio habitual era de 2 “perras gordas”, el trayecto mas largo.</p>	
<p>Entonces, dicha similitud, semejanza o parecido con el animalito o parte de él, (Vaya Vd. A saber), que sugiera el “chorizo”, es puro “perro” (dícese de los logros conseguidos de forma azarosa, sin intención, sin mérito y cómicamente, como por ejemplo algunos goles del C.D. Tenerife la pasada temporada)</p>	<p>So that explains the similarity, likeness or resemblance between the phrase for the animal or animal part thereof, (which part, you now know), saying that the chorizo is pure “dog” (actual meaning: an achievement made in a random, purposeless manner without merit and comically. ...like some futbol goals made by CD Tenerife team last season).</p>

Whew! That one was a bear to translate. Interestingly, though, the phrase “chorizo de Perro” has taken on its own life not only in the popular vernacular, but also with actual recipes available. The actual chorizo is known as “chorizo de Teror,” a village on the island of Gran Canaria, and is a spreadable sausage.

Summary – Critique

A few recommendations to try, plus a few sources.

Conclusion: I think we can safely say that the word “chorizo” as originated in Spain means “colored sausage made with pork and other peppers besides black pepper” in Mexico and Central America, and “sausage made with pork and other peppers besides black pepper” in South America. Tradition is a powerful force. Perhaps the real connection is “sausage in a country with significant Spanish heritage.” (That would cover the tuna chorizo of the Phillipines.)

There are many similarities, but as geography changes, so do the content and style of the sausage. Whatever it is, though, chorizo continues to be enjoyed throughout the Western Hemisphere (those pesky Canadians excepted), no matter how it is adapted. Viva chorizo!

Salt: Several people have suggested that my salt levels are often too low. This is a matter of debate. Stan Marianski and Rytok Kutas say that 3% is probably the maximum amount you should use for palatability, and suggest 1.5% non-iodized salt. Some people, my wife and family included, prefer a low sodium diet. When in doubt, you should probably shoot for 1.5%. Note, however, that my recipes will not always have the same amount as yours. Don't forget to compensate for the salt content in cured sausages! Both Cure #1 and #2 contain a large amount of salt.

Volume conversions: I try. Honestly, I do. It's hard. When in doubt, use your own conversion factor for my recipes. Take a one tablespoon amount of any given herb, spice, or whatever and weigh it. Chances are that (1) you'll get a different density than I used, and (2) you'll get a different density than the original author used. What to do? ...plow onward. If you like the way a recipe is headed, tinker. Boost or reduce the amount of various spices. It's optimum when you achieve what YOU prefer. If it tastes good, try again until it tastes great!

Pepper types and amounts: My biggest problem is deciding how much of which peppers to use. I have ambitions of one day trying to see if Scoville scale can be correlated with anything else, including taste. The best way to do that is to make a series of sausage mixes, varying the amount of the various types of chiles, until you reach whatever taste level you prefer. Write it down. Maybe you can develop a cluster of data points for different peppers. But how do you quantify “I like this” in numbers? Well, if Scoville could do this for a numeric scale, surely someone else can for “tasty” chiles. Please hurry. The Nobel Prize awaits, possibly. (On the other hand, the Nobel money came from manufacturing dynamite.)

Appendix A – Chiles – Scoville Scale

Here is a listing of many peppers, from http://www.produceoasis.com/TipOTDay_folder/Tips_folder/Feb26tip.html

Bell	(0 – 100)
El Paso	(0 – 100)
Anaheim	(100 – 500)
Paprika	(250 – 1000)
Poblano	(500 – 1000)
Pasado (dried Anaheim)	(500 – 2500)
Ancho (dried Poblano)	(1000 – 3,000)
Passilla (Chilacas, dried Chile Negro)	(1000 – 1,500)
New Mexico Green Chile (Hatch)	(1,500 - 3,000)
Guajillo (dried Mirasol)	(2,500 --6,000)
Jalapeno	(3,000 – 6,000....25,000)
Serrano	(5,000 – 15,000)
Yellow Caribe	(5,000 – 15,000)
Aleppo	(10,000)
Cascabel	(11,000)
Chipotle (New Mexico red chile)	(15,000)
Chipotle (New Mexico Morita red chile)	(15,000)
Chile de Arbol	(15,000 – 35,000)
Asian Hots	(15,000 – 30,000)
Hidalgo	(15,000 – 30,000)
Serrano	(15,000 – 30,000)
Crushed Red Pepper (California)	(20,000)
Cayenne	(30,000 – 50,000)
Tabasco	(30,000 – 50,000)
Red Chile	(30,000 – 50,000)
Chiltecpin	(30,000 – 50,000)
Tabiche	(30,000 – 50,000)
Bahamian	(30,000 – 50,000)
Kumataka	(30,000 – 50,000)
Piquin	(30,000 – 70,000)
Thai (bird's eye)	(30,000 – 70,000)
Crushed Red Pepper (Indian)	(40,000)
Saanaam (Indian)	(40,000)
Aji	(50,000 – 100,000)
Dundicut (Pakistan)	(55,000 – 65,000)
Tien Tsin (Asian)	(60,000)
Habanero (Scotch Bonnet)	(300,000)
Naga Jolokia	(1,000,000+)

“THIS JUST IN”

http://www.chilipeppermadness.com/chili-pepper-types.html#.UlCY_Gdy34E

Our Chili Pepper List

Sweet bell pepper: 0 Scovilles. The typical green bell pepper, about the size of a large fist. Very mild.

Banana pepper: 0-500 Scovilles. Also known as the Yellow wax pepper, the Banana Pepper has a mild, sweet taste that is very popular on many types of foods.

Trinidad Perfume chili pepper: 0-500 Scovilles. The Trinidad Perfume chili pepper is a mild chili pepper with very little to no heat. It is a habanero type and produces pods similar to a typical orange habanero pepper, about 1 to 1.5 inches in length and 1.25 inches wide.

Cubanelle chili pepper: 0 - 1,000 Scovilles. Capsicum Annum. The Cubanelle is considered a sweet pepper, although its heat can range from mild to moderate. Cubanelles are usually picked before they ripen, while they are a yellowish-green color, but when ripe, they turn bright red.

Pimento (or Pimiento) chili pepper: 100 - 500 Scovilles. Not just for stuffing olives. Pimiento is the Spanish word for "pepper".

Cherry pepper: 100 - 500 Scovilles. See "Pimento" chili pepper. Not just for stuffing olives. Pimiento is the Spanish word for "pepper".

Pepperoncini chili pepper: 100-500 Scovilles: Also known as Tuscan Peppers. These sweet, mild chili peppers are found in Italy and Greece.

NewMex R Naky chili pepper:250-750 Scovilles. The NuMex R Naky chile is an Anaheim-type hybrid created by Dr. Nakayama of New Mexico State University in 1985.

Pasilla chili pepper: 250 - 3,999 Scovilles: Pasilla or "little raisin" properly refers to the dried chilaca pepper. The chilaca, when fresh, is also known as pasilla bajo, or as the chile negro or "Mexican negro" because, while it starts off dark green, it ends up dark brown. It typically grows from 8 to 10 inches long.

Paprika chili pepper: 250 - 1000 Scovilles. A large, cone-shaped chili pepper. It is dried and ground to make the more familiar powdered spice.

Sonora chili pepper: 300–600 Scovilles. The Sonora is an Anaheim variety with a very mild flavor. It grows to about 10" in length and up to 1 ½" wide, and although it matures to red, it is commonly used in its less mature, green form.

Ají Panca: 500 Scovilles. The Panca chili (or Ají Panca as it's known in South America), is a deep red to burgundy pepper, measuring 3-5 inches.

Santa Fe Grande chili pepper: 500 - 700 Scovilles. Also known as the yellow hot chile and the guero chile. Approximately 5 inches long and ripen from greenish-yellow, to orange-yellow to red.

Anaheim chili pepper: 500 - 1,000 Scovilles. A mild, medium sized chili pepper that grows to 6-10 inches, often used when green, though it can be used when red.

Coronado chili pepper: 700-1,000 Scovilles. Originally from South America, the Coronado Pepper grows to 4” long and 2” wide with thin, waxy skin.

Poblano chili pepper: 1,000 - 2,000 Scovilles. The poblano is an extremely popular chili peppers. 4 inches long, very dark green in color, ripening to dark red or brown.

Ancho chili pepper: 1,000 - 2,000 Scovilles. An Ancho pepper is dried form of the poblano chili pepper.

Chilaca: 1,000-2,500 Scovilles. The Chilaca is a curved, long, thin pepper, that grows to about 6-9 inches, and 1 inch wide.

Hatch chili peppers: 1,000 - 2,500 Scovilles. Hatch chili peppers are grown and harvested in Hatch Valley, New Mexico. They are harvested in late July and early August and have a mild to medium flavor. The peppers are long and curved, much like the [Anaheim chili pepper](#), and are perfect for stuffing.

Cascabel chili peppers: 1,000-3,000 Scovilles. Capsicum Annuum. The Cascabel Chile is grown in several areas of Mexico. It is small and round, 2-3 cm in diameter, and matures to a deep red.

Picante/ Peppadew chili pepper: 1,177 Scovilles. Capsicum Baccatum. The Peppadew is grown in the Limpopo province of South Africa, and is actually the brand name of sweet piquanté peppers.

Aji chili pepper: 1,177 - 75,000 Scovilles. Also known generally as the Peruvian hot pepper, aji is the common name primarily in South America and areas of the Caribbean for chili peppers.

Espanola chili pepper: 1,500-2,000 Scovilles. The Espanola was developed in New Mexico in the 1980s by crossing a Sandia pepper with another New Mexico chile.

Rocotillo chili pepper: 1,500-2,500 Scovilles. There is some confusion about the rocotillo chili pepper, since some appear to be from Capsicum baccatum and some from Capsicum Chinense.

NewMex Joe E Parker chili pepper: 1,500-3,000 Scovilles. This New Mexico variety was named after Mr. Joe E. Parker, a graduate of NMSU’s College of Agriculture and Home Economics, who helped to evaluate this selection of chile.

Mulato chili pepper: 2,500-3,000 Scovilles. Capsicum Annuum. The Mulato is a mild to medium dried [Poblano](#), similar to the [Ancho](#), but with a slightly different flavor.

New Mex Big Jim chili pepper: 2,500-3,000 Scovilles. This giant chili pepper was introduced by New Mexico State University in the 1970s as a cross between a few different types of local chiles and a Peruvian chile.

Mirasol chili pepper: 2,500-5,000 Scovilles. The name Mirasol means "looking at the sun" in Spanish, which describes the way these peppers grow on the plant. They are known as [Guajillo](#) in their dried form, which are one of the main chiles used in traditional mole sauces. '

Guajillo chili pepper: 2,500-5,000 Scovilles. Capsicum Annum. The Guajillo is one of the most common and popular chiles grown and used in Mexico. It is mild to moderately hot, and has dark, reddish brown, leathery skin.

Jalapeno chili pepper: 2,500 - 8,000 Scovilles. The world's most popular chili pepper! Harvested when they are green or red if allowed to ripen, about 4-6 inches long. A chipotle is a smoked jalapeno chili pepper.

Purple Jalapeno chili pepper: 2,500 - 8,000 Scovilles. The Purple Jalapeno is an ornamental version of the typical [jalapeno pepper](#).

Chipotle chili pepper: 2,500 - 8,000 Scovilles. A chipotle is a smoked jalapeno chili pepper. You'll notice the distinctive smoky flavor of certain foods like salsas that have been prepared with chipotle peppers. Very delicious.

Morita chili pepper: 2,500 - 8,000 Scovilles. A smoked red jalapeno, similar to a chipotle pepper.

Fresno chili pepper: 2,500-10,000 Scovilles. Capsicum Annum. The Fresno pepper looks and tastes almost like a jalapeno, but they can be much hotter. Fresno peppers change from green to red as they grow, and increase in hotness, but they are often harvested and sold as green.

New Mexico 6-4 Heritage chili pepper: 3,000-5,000 Scovilles. The New Mexico 6-4 Heritage chile pepper was developed around 1998 from a seed bank of the original New Mexico 6-4.

Chimayo chili pepper: 4,000-6,000 Scovilles. The Chimayo is another New Mexico chile, but it is a unique one. It is not commercially mass produced, but is more commonly grown in individual homes and gardens, making them unpredictable and un-conforming, in a good way.

Sandia chili pepper: 5,000-7,000 Scovilles. Another chili from New Mexico, the Sandia grows to 6-7" and is similar to the Anaheim pepper. They start green and ripen to red, but are often used while green.

Puya chili pepper: 5,000-8,000 Scovilles. The Puya chile is similar to the [Guajillo](#), but smaller and hotter.

Hungarian Wax: 5,000-15,000 Scovilles. The Hungarian Wax Pepper, as its name suggests, originated in Hungary.

Serrano pepper: 5,000 - 23,000 Scovilles. A smaller version of the jalapeno, similar in color, but smaller, about 1 to 2 inches long, 1/2 inch wide. Dark green to redish in color. Getting spicier!

Bishop's Crown chili pepper: 5,000-30,000 Scovilles. Capsicum Baccatum. This chile is a member of the Capsicum Baccatum species, which includes the Ají pepper.

Peter Pepper: 5,000-30,000 Scovilles. This very interesting little chili makes a great conversation piece in the garden or in the kitchen due to its distinctively phallic shape, hence its name.

Shipkas chili pepper: 5,000-30,000 Scovilles. Also known as the "Bulgarian Carrot Pepper," this interesting little chili pepper looks remarkably like a carrot, with its bright orange color and long, narrow body.

Hidalgo chili pepper: 6,000-17,000 Scovilles. The Hidalgo is an heirloom pepper, similar in shape and hotness to the Serrano, originally from Mexico and Central America.

Aleppo: About 10,000 Scovilles. Capsicum Annum. The Aleppo pepper, also known as the Halaby pepper, is named after the city of Aleppo in Northern Syria. It is commonly grown in Syria and Turkey, and is usually dried and crushed.

Bolivian Rainbow chili pepper: 10,000-30,000 Scovilles. Grown for centuries in Bolivia (Central South America), the Bolivian Rainbow chile is a stunningly beautiful plant.

Baker's Hot chili pepper: 15,000-30,000 Scovilles. The Barker's Hot is an extra-hot chile, the hottest of the Anaheim/ New Mexico variety, and it has great flavor.

Jaloro: 20,000-25,000 Scovilles. The Jaloro is a hybrid version of the jalapeno, created by the Texas Agriculture Extension Service in 1992.

Jwala Finger Hot chili pepper: 20,000-30,000 Scovilles. The Jwala is the most popular chile in India, adding great flavor and spice to many Indian dishes.

Ají Limo: 30,000-50,000 Scovilles. The Limo chile (or Ají Limo) is another super-hot chili from Peru. (Ají is the term for chile pepper in South America.)

Ají Amarillo: 30,000-50,000 Scovilles. Since "Amarillo" is the Spanish word for *yellow*, and "Ají" is the term for *chile* in South America, this pepper is also appropriately known as the "yellow chile."

Chile de Árbol chili pepper: Sources rate this chile in 2 categories- 15,000-30,000 and 50,000-65,000 Scovilles. Capsicum Annum. Chiles de Árbol are small and thin Mexican peppers, growing to 2-3 inches long and less than a ½ inch wide.

Tabasco pepper: 30,000 - 50,000 Scovilles. Yep, this is the chili pepper used in Tabasco sauce. The fruit is tapered and under 2 inches long. The color is usually creamy yellow to red.

Cayenne pepper: 30,000 - 50,000 Scovilles. A thin chile pepper, green to red in color, about 2 to 3 inches long. The "cayenne pepper" spice you use is the dried, ground version of this pepper.

Chile Pequin chili pepper: 30,000-60,000 Scovilles. Capsicum Annum. Also spelled Piquin, this chile is also called Bird Pepper, because it is consumed and spread by wild birds.

Rocoto chili pepper: 30,000 - 100,000 Scovilles. AKA the Manzano pepper. This chili pepper is normally found in South America. It is among the oldest of domesticated chili peppers, and was grown up to as much as 5000 years ago. It is probably related to undomesticated chili peppers that still grow in South America.

Guntur Sannam chili pepper: 35,000-40,000 Scovilles. Capsicum Annum. The Guntur Sannam chilli is grown in and around Guntur and Warangal in the state of Andhra Pradesh in India.

Super Chili chili pepper: 40,000-50,000 Scovilles. These small peppers grow upright in clusters and mature from light green to red, often with shades of orange in between.

Santaka chili pepper: 40,000-50,000 Scovilles. From Japan, the Santaka chili pepper is a hot and flavorful Asian variety, perfect for Asian cooking, especially stir-fries.

Tien Tsin pepper: 50,000 - 75,000 Scovilles. The Tien Tsin is named after the province in China where its harvest originally took place.

Bird's Eye: 50,000-100,000 Scovilles. The tiny Bird's Eye Chili originated in Cambodia, Vietnam, Thailand, The Philippines, and surrounding countries, but they can now be found all over the world.

Chiltepin chili pepper: 50,000 to 100,000 Scovilles. Capsicum Annum. The Chiltepin, or Chiltepine, is a tiny, round or oval shaped, red to orange-red chile, measuring about .8cm in diameter.

Thai chili pepper: 50,000 - 100,000 Scovilles. Despite the common belief, there is no single "Thai chili pepper" though most candidates for the title are small in size and high in heat or pungency. There are at least 79 separate varieties of chili that have appeared from three species in Thailand.

Dundicut chili pepper: 55,000-65,000 Scovilles. Capsicum Annum. These small, round chili peppers from Pakistan grow to about ½ inch to 1 inch in diameter, and are dark red in color.

New Mex XX Hot chili pepper: 60,000-70,000 Scovilles. Another of the many New Mexico varieties, the New Mex XX Hot is just that- very hot.

Diablo Grande chili pepper: 60,000-100,000 Scovilles. The Diablo Grande comes from the same group that includes jalapenos, poblanos, cayenne, and Serrano peppers.

Malagueta chili pepper: 60,000-100,000 Scovilles. The Malagueta chili pepper is similar in appearance to the Bird's Eye chili or the Thai chili because of its bright red color and short, tapered body. It starts out green and matures to red, and grows to only about 2 inches.

Charleston Hot chili pepper: 70,000-100,000 Scovilles. Similar to the Carolina Cayenne, the Charleston Hot is a variety of Cayenne created by the U.S. Department of Agriculture in South Carolina.

Red Amazon chili pepper: 75,000 Scovilles. The Red Amazon is actually dried Tabasco chile, but since it is so commonly known in this form, we included it separately here.

Yatsufusa chili pepper: 75,000 Scovilles. Also known as Japanese chile. Originating in Japan, these chiles come from small plants (the name refers to a dwarf tree) and grow upward in clusters around yellow flowers.

Tabiche chili pepper: 85,000-115,000 Scovilles. Originally from India, the Tabiche pepper can now be found growing worldwide and often year-round, but it does best in hot, dry climates.

Bahamian chili pepper: 95,000-110,000 Scovilles. As its name suggests, the Bahamian pepper originates from the Bahamas, where it is still one of the major agricultural crops.

Carolina Cayenne chili pepper: 100,000-125,000 Scovilles. Similar in appearance to the original cayenne, this variety is twice as hot and appears slightly wider.

Jamaican Hot: 100,000-200,000 Scovilles. As the name suggests, these peppers are from Jamaica, but have become popular around the world.

Datil: 100,000 – 300,000 Scovilles. The Datil packs the intense heat of a Habanero or a Scotch Bonnet, but its flavor is sweeter, and more fruity.

Scotch bonnet: 100,000 - 350,000 Scovilles. This pepper is a cultivar of the habanero and is among the hottest peppers anywhere. Its name derives from its resemblance to the Scottish Tam o' Shanter hat, though it appears primarily in the Caribbean and in Guyana and the Maldives.

Habanero chili pepper: 100,000 - 350,000 Scovilles. Related to the Scotch Bonnet. This one is the granddaddy of all the hot peppers in terms of heat level. Grown mainly on the Yucatan Peninsula in Mexico, its coloring is yellow-orange, orange or bright red, depending upon when it's harvested. Average Size 1 to 2 1/2 inches long and 1 to 2 inches diameter and tam-shaped.

Fatalii: 125,000-325,000 Scovilles. The Fatalii comes from central and southern Africa, and is one of the hottest peppers in the world. With the heat level of a habanero, it has a more fruity, citrus flavor, and packs an instant, intense burn, unlike the habanero, whose heat “sneaks up on you.”

Devil's Tongue: 125,000-325,000 Scovilles. The Devil's Tongue is similar in color and shape to the Fatalii, but with smoother skin and smaller size.

Madame Jeanette: 225,000 Scovilles. Named after a famous Brazilian prostitute, the Madame Jeanette has the shape of a bell pepper, but the intense heat of a habanero.

Tiger Paw NR chili pepper: 265,000-328,000 Scovilles. Developed in Charleston, South Carolina, the Tiger Paw NR is an extra-hot bright orange habanero variety.

Trinidad Scorpion chili pepper: 300,000+ Scovilles. These red, wrinkled peppers resemble the scorpion, hence the name, and are known for their intense heat.

Chocolate Habanero chili pepper: 300,000-425,000 Scovilles. The Chocolate Habanero, also known as "Congo Black" or "Black Habanero," is one of the hottest peppers originating from the Caribbean.

Caribbean Red Habanero: 300,000 - 475,000 Scovilles. This extremely hot pepper, originally from the Yucatan peninsula in Mexico, is now also cultivated in the Caribbean and around North America.

Red Savina Habanero: 200,000 - 580,000 Scovilles. This pepper is a cultivar of the habanero. It once held the Guinness Record for the hottest chili pepper, but the Bhut Jolokia now claims that prize.

Bhut Jolokia: 1,001,304 Scovilles. Now, truly the hottest chili pepper around!

Naga Jolokia - It's just another name for the [Bhut Jolokia chili pepper](#).

Ghost Pepper or Ghost Chili - It's just another name for the [Bhut Jolokia chili pepper](#).

7-Pot Chili Pepper - Over 1 Million Scovilles. The heat of the 7-Pot pepper is similar to the Bhut Jolokia but with a more fruity and nutty flavor, like other Caribbean peppers. It is becoming more popular and well-known among chile-heads, but the seeds are very rare and hard to find.

Gibraltar/Spanish Naga Chili Pepper - 1,086,844 Scovilles. The Gibraltar Naga, or Spanish Naga, is of course grown in Spain, but was developed in the UK from Indian chili peppers.

Infinity Chili Pepper - 1,176,182 Scovilles. Created in England by Nick Woods of "Fire Foods," the Infinity Chili pepper held the World Record for the world's hottest chili pepper for two weeks in 2011, before it was ousted by the Naga Viper chili.

New Mexico Scorpion - 1,191,595 Scovilles. A New Mexico-based team has developed a super-hot chile known as the "New Mexico Scorpion" The New Mexico Scorpion has been rated at 1,191,595 Scoville Heat Units by an independent laboratory.

Naga Viper - 1,382,118 Scovilles. The Naga Viper (capsicum chinense) has been rated at 1,382,118 Scoville Heat Units (SHU), according to tests conducted by the Warwick HRI Mineral Analysis Laboratory, UK, in November 2010.

Trinidad Scorpion Butch T - 1,463,700 Scovilles. The Trinidad Scorpion Butch T has been rated at 1,463,700 Scoville Heat Units (SHU), according to recent tests. It was propagated by Butch Taylor of Zydeco Hot Sauce and grown by the Chilli Factory.

Dorset Naga Chili Pepper - 1 million- 1.5 million Scovilles. (Capsicum Chinense) Development of the Dorset Naga began near Dorset, England, around 2001 when Joy and Michael Michaud of "Peppers by Post" bought a Naga Morich plant from an Oriental foods store in southern England.

Chocolate 7-Pot Chili Pepper - Recently tested between 923,000 and 1.85 million Scovilles, with an average of 1,169,058. Only the Moruga Scorpion scored higher. It is suspected that it could reach 2 million in the future.

Trinidad Moruga Scorpion - 2,009,231 Scovilles. In February 2012, he 2012 New Mexico Chile Conference, in association with Jim Duffy of Refining Fire Chiles, announced that the Trinidad Moruga Scorpion is the hottest chili pepper in the world. Clocking in at 2,009,231 Scoville Units, this chili pepper is beyond blistering.

Appendix B – Density Conversions for Herbs and Spices

Appendix C – Scaled Recipe Ingredients

Appendix D – Abbreviated Ingredient Percentage Recommendations

(Take the Marianskis' table showing recommendations for ingredient concentrations, but just for ingredients listed. Add a column with Scoville units. See if there's a relationship between the two)

That table in the Marianskis' "Home Production of Quality Meats and Sausages" book on page 195 is an often-overlooked gold mine for recipe development. Running a recipe through a spreadsheet with those values for comparison should yield useful information. I have a feeling that a second comparison, using Scoville units for the peppers, should also be useful, but I have yet to check it.

Item	Gm/1 Kg Meat (Marianski)	Chorizo Recipe Max (gm/kilo)
ground black pepper	– 3.0	7.5
chile- ancho		24
Chile-chipotle (dried)		10
chile-pasillo		13
cloves (ground)	1.0 – 2.0	0.2
coriander (ground)	1.0 – 2.0	0.6
cumin (ground)	1.0	1.3
Garlic, fresh	3.0 – 5.5	18
oregano (marjoram)	3.0	2
paprika (sweet)	2.0	20

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