



Outsider Stock tips...

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[View online at \[KillerNoms.com/brownstock\]\(http://KillerNoms.com/brownstock\)](#)

Once you've tagged it, slipped it into your game vest or clipped it to your stringer, you've got the key to making something special: stock. Rich flavorful stock that is missing from most American kitchens. Of all the wonderful things you can do with game you rarely hear about stock. This is a literal waste given that the main ingredient is normally discarded: bones and gristle.

You could also call this "bone broth" - a term that has become popular lately. Seems like everyone with a man-bun and a food truck is hawking bone broth. The difference between the definitions of broth, stock and bone broth are not consistent. Consider them interchangeable unless an individual recipe gives more detail.

Stock is a versatile culinary wonder. It is the perfect base for sauces and soups, for braising, and a flavorful replacement for water when cooking rice or soaking beans. Julia Child referred to stock when she said "Never cook with plain water if you can help it".

Though grocery store shelves are now full of various stocks, they are a bit expensive. And though much better than water, they are not nearly as good as homemade. Really.

Of course you can buy bones from the butcher or grocery store, but they won't be as good. Commercial meat comes from a critter that was fed a uniform diet, got little exercise, and was slaughtered quite young — all factors that work against good stock.

Wild game is the opposite. It spends every moment of its life on nature's dime — the ultimate free range animal. Game stock has depth and richness you can't get from store-bought bones.

If you must use storebought bones, though more expensive, grassfed cattle or pastured hogs or chickens yield better stock. And heirloom breeds are best because they tend to mature more slowly — thus are older when processed.

Stock is very simple. It is nothing more than the liquid produced by slowly simmering bones in water along with aromatic vegetables and some herbs and spices. At that temperature the connective tissues slowly break down into gelatin. This provides great body and texture, what the foodies call "mouth feel". The resulting stock can be further processed into fancy stuff like glace de viande (a.k.a. meat glaze), demiglace, consommé, and aspic — impressing the socks off of any culinary snob friends you may have. More on all that later.

[\(click for a video of how a good, gelatinous stock should look\)](#)

Quality stock needs quality bones. Marrow spoils quickly (and rather spectacularly) so care for the bones at least as well as you would fresh meat. They should go straight from the cutting room into the stock pot or into the freezer. They keep well frozen if vacuum-sealed or carefully wrapped.

If buying beef or pork bones, ask for stock or broth bones, not soup bones. The former will have little meat, and will be much cheaper. The latter will normally be oxtail or sawed cross-sections of shank — which are great but will have more meat than you need and will cost much more. To get a good deal on broth bones you may need to shop around. Unless you have your own meat bandsaw, ask that larger bones be cut into 2" pieces. If they charge extra, do it anyway.

Most stock recipes call for added meat. All meat contributes flavor, but the parts with lots of connective tissue bring texture too. Best are the gnarly looking bits you normally discard while butchering because they are too gristly to bother with trimming for grind. These are perfect for the stock pot — so long as they are clean and wholesome. I package and freeze such scraps in packs labeled "stock meat". If you're in the habit of discarding venison flank, rib or brisket because it's too fussy to process and less desirable than other cuts — stop. They're perfect for stock.

But when it comes to stock meat, shanks are the star of the show. The heel, also known as the upper shank (the muscle attached to the top of the achilles tendon) is great too. No need to trim, just slice it into chunks. Even toss in the achilles tendon itself if it is clean — various hanging or dragging duties can make it grimy.

Never use any bruised or bloodshot meat or anything in any way questionable. But the venison that got lost in the back of your freezer for a couple of years? Trim away freezer burned bits and toss it in!

With caveats, it's also excellent to supplement with bones rescued from a cooked roast. If making poultry stock, a leftover carcass is great. Save 'em up in the freezer and have a stock making party some dreary Winter weekend. The heavenly smell really takes the sting out of cabin fever.

The caveats for using a cooked carcass are that the spices used could affect the flavor of your stock. That may be good or bad depending on how you use it. And cooked bones have already given up much of their collagen - so without raw bones your stock could turn out a bit "thin". We can fix that later.

Couple of rules with stock — never stir it, and never let it spend much time at a full boil. That ensures the fat will stay on top where it won't interfere with the process or emulsify. Thermal energy does all the work for you. Stock "likes" to be kept still.

Furnace weather is the perfect time for making stock. Simmering a pot on the stove all day takes a lot

of energy which is essentially free when it is taking a load off your furnace. But if it's fighting your air conditioner it's a wasteful double whammy of energy cost. A stock pot on a hot-plate, a crock pot or a portable electric roaster oven in your garage or on a covered porch is the way to go in AC weather.

Fresh stock is volatile stuff with a short shelf life -- especially if unsalted. Freeze or use it right away. Bacteria love it, so give it 4 days max in the fridge. Any more than that, take it out and boil it hard for a couple of minutes, quick chill in an ice bath, and return to the fridge.

A word about veggies...

Nearly all stock recipes call for "mirepoix" (the holy trinity of onion, celery and carrot) at a 2/1/1 ratio by volume. Yellow onions are normally preferred in a brown stock, because the papery yellow skins add color. White onions, shallots and even leeks are fine too, especially with a white stock (same as brown stock except the roasting step is skipped). Some even substitute fennel bulb for onion, but that is a more specific flavor that may pop in some recipes, but might not fit well in others.

Generally, the veggies can be rough-chopped. For a really short cook (e.g. seafood stock) more finely diced may be better. The roasting step is more convenient with larger pieces.

Here is a link to a basic brown meat stock recipe: KillerNoms.com/brownstock.

If your stock turns out thin, meaning it doesn't develop sufficient texture when chilled, the solution is to add powdered unflavored gelatin you can find online or at the grocery store. Heat the stock up and add about 1.5 tsp per cup of finished stock. Or if you know ahead of time your ingredients don't have enough collagen, add calves feet or chicken feet, or even wild turkey feet at the beginning of the cook. They all work equally well. Chicken feet at the market (try ethnic markets) are typically already "peeled", with the external skin and toenails removed. If using wild bird feet you'll need to blanch and peel, and remove the nails and any spurs yourself. It's not hard. Youtube is your friend.

Fish stock is also great. Save those fish heads, bones and skins (non-oily fish only), shrimp, crab, lobster and crawfish shells. Countless stock recipes can be found on the web and in many cookbooks.

To adjust the size of any stock recipe the limiting factor is either the amount of bones you have on hand, or the size of the pot. Start with that and work backwards, sticking near the following ratios:

- *3/2 water/bones & meat, by weight. (Water: 1 qt = 2 lbs)*
- *6/1 water/mirepoix, by volume. e.g. 6 quarts water, 1 quart (4 cups) mirepoix.*
- *Mirepoix: 2/1/1 Onion/Carrot/Celery (by volume)*

You need a pot with at least twice the capacity of your water by volume, a bit bigger is even better.

Stock is volatile. For best shelf life and quality these next steps should be performed without delay. Start as soon as you turn off the heat. Plan/Schedule this for when you have enough time to finish. Leaving the stock cooking longer is fine if you are not ready. Do NOT just remove it from heat and postpone the filtering/chilling steps for a more convenient time.

You are dealing with something very hot and very heavy. Be extra careful moving it.

Processing:

- Move large items to a colander over a bowl to catch drippings. Filter out remaining solids using cheesecloth, muslin, a chinois, etc., whatever you have handy. Ladle through the filter into another pot. How well you filter it is a matter of taste but be sure to catch any bone bits.
- Add salt to taste?
 - Pro: tastes good, adds shelf life.
 - Con: may interfere with recipes that expect unsalted stock (most do). Do not add salt if you plan to reduce the stock to a demi-glace or meat glaze.
- Quickly chill to under 70°F to discourage bacteria. Putting the pot in an ice/water bath in the sink works well. Try not to let the surface of the water/ice get higher than the surface of the stock or the pot will start to float and might tip, leading to language that may be unusual in your kitchen.
- Move the pot to the fridge to finish chilling overnight.
- In the morning the fat will be solidified on top. Remove and discard.
- Optional: clarify, using egg whites and instructions available in many cookbooks and on the web. Google "egg raft". It removes the microscopic bits that naturally cloud stock, leaving a clear liquid - desirable if you are making consommé, aspic or any soup which you prefer to be very clear. Another benefit is it leaves you with egg yolks you'll need to [find a use](#) for. Om nom nom nom!

Glace de Viande (meat glaze) and Demiglace

I'd never heard of meat glaze until a buddy said "It's what bouillon would be if it could convince the devil to buy its soul." After my first batch I was hooked.

Even though you rarely see meat glaze or "glace de viande" in a recipe, they fit well in everyday cooking. A chunk or two in any gravy, sauce or soup works magic. I'm always looking for an excuse to toss some into whatever I am cooking. Go easy though, you don't want it to take over - it is intense stuff!

I promise you will never again use bouillon if you have meat glaze handy. I'll always have some of this handy in my freezer.

Demiglace is stock reduced by half to three-quarters. Glace de viande (meat glaze) is stock reduced by a factor of about 10, which will be syrupy when hot, but chill to a solid consistency - like a really sticky superball. Start with any quantity of stock, but remember you are reducing it a lot so be sure you have enough. Start with stock has already been filtered, chilled, and the fat cap removed.

Simmer in a heavy vessel with no lid - though a splatter screen (to keep stuff out) is ok. For reducing, wide is good — surface area is your friend. If using a straight-sided pot you can mark a depth gauge (like a disposable chopstick or wooden skewer) to help track your progress accurately.

If using a slope-sided vessel you could mark your gauge using a measured volume of water before you put stock in the pot. For example, if you were reducing 20 cups of stock to a meat glaze, you would first put 2 cups of water in the pot and mark where that hits your gauge. Then dump the water, add the stock, and get reducing! Your gauge will show you when it's done.

Stir periodically -- always working anything that sticks to the side of the pot back down into the liquid. Lots of flavor there.

For demiglace, stop when the liquid is half to three-quarters gone. Store it the same as you would stock but be aware it will be prone to gel to a very stiff consistency as it cools. Use it as called for in recipes, or add water and heat it up to make "instant" stock.

For meat glaze just keep going until it coats the spoon well and starts to get an almost syrupy consistency. This means you are starting to run out of water and most of the remaining liquid is molten gelatin. If it gets too shallow before it's done, transfer to a narrower pot (don't leave anything behind!) and continue.

If you start with a large pot of stock first thing in the morning the whole process should be finished by evening - a great wintry day project. It takes a long time but only needs occasional brief attention -- once every half hour or so. I set an alarm to remind me.

To speed things up you can raise it from a simmer to a boil, but you'll need to tend it much more often — like every 5 minutes. If you do this, slow back down to a low simmer as you near the end.

Once you first notice it start to develop texture, or your measurements tell you it is approaching 1/10th of your starting volume, **start paying close attention and tend it more often until finished**. If all the water boils off the gelatin will scorch and be ruined. You'll have wasted all your effort and all that stock!

When done, remove from heat and process for storage before it cools significantly. An ice cube tray works well. Wipe it with vegetable oil or spray with non-stick spray first.

A couple of tablespoons per cube makes a convenient chunk. They are very sticky -- so after the cubes are completely frozen, dump some cornstarch into a bag, empty your chunks into the bag and toss to coat. Do this as soon as you remove them from the freezer — don't let them start to thaw. Then shake off the excess, package for long term storage, and return to the freezer.

I vacuum seal them, but a freezer bag with most of the air expelled is fine. It lasts forever frozen.

Long Term Storage for Stock:

Like most foods, stock [lasts longer in a very cold chest freezer](#) than in the freezer compartment of your fridge.

Pressure canning your finished stock is an alternative that saves freezer space. If you follow good canning procedures (pressure canning only, not water-bath), your stock will be good for 6 months to a year unrefrigerated in a dark pantry. Only folks who understand and follow established safe methods such as [those published by the USDA](#) should try pressure canning. You don't want to accidentally reduce the number of friends or family members available to enjoy your stock.

For most of us, [freezing](#) is the way to go. Your choices are freezer bags, canning jars or other freezer safe containers. 1.5 pint sized and smaller wide-mouth canning jars are widely available in a "freezer safe" version. If they don't have them at your local store, you can get them by mail order or on the internet.

No quart jars are rated freezer safe — though some people use them anyway. You might get away with using a non-freezer rated jar, but why risk it? You don't want the job of cleaning up a mess, including glass shards, in your freezer. If you insist on using quart size canning jars, at least use widemouth, which will be less prone to break as the freezing liquid expands. No matter what size you use, be sure to leave headroom for expansion.

My preferred method is to label quart size zip-top freezer bags, ladle in 2 cups of stock, expel the remaining air, seal and place in the freezer on a flat surface like a cutting board or a cooling rack. If the stock is nicely chilled you can also use a chamber-type vacuum sealer (will foam up if not chilled). Once frozen you have a convenient space-efficient shape for long-term freezer storage.

Beware though, freezers are rough-and-tumble environments and your freezer bags might take some hits over time. Thaw in a container that will catch any leakage.

Optional Oven-finish:

Once your stock has achieved a nice gentle simmer on the stove, about 185°F, you can move it (covered) to your oven. Obviously the oven must be large enough to accommodate the lidded pot — you may need to use the lowest rack position. There are big advantages to using the oven, and one big disadvantage.

Advantages:

- More efficient — makes less heat, which is nice if making stock when it's not furnace weather.
- Safer to leave unattended.
- Frees the stove for normal cooking duties
- Very gentle (stock "likes" this)
- The lid means you don't need to worry about adding more water.
- No need to fiddle with a frustrating stove that doesn't want to maintain a slow simmer.

The disadvantage is that ovens are finicky beasts - with their real temp often running well off of their indicated temp. Each has its own personality. You can't take instant readings from your oven to get an idea. Setting it to 190°F may mean, for example, that it cycles up and down from 175 to 205°F.

A full stock pot is quite dense and can take a long time to settle in with whatever your oven is doing. Check the temp of your stock every hour or so until you are positive it has stabilized at the desired temp range before you leave it unattended for hours. Once you figure it out for a given oven, make a note and you should always be able to use the same setting on that oven with less need to babysit it.

You want it to settle in around 180-190°F degrees. Lower and the magic starts to slow down. Higher and you are pushing the stock too hard. That's what I read anyway — though that conflicts with the great results reported by those who make stock in a pressure cooker to speed up the process.

IMPORTANT: Many ovens have an automatic 12 hour shutoff. So if you are running it longer you should turn it off and back on every few hours -- most importantly just before you go to bed if you plan to leave it running overnight. Me, I'd only do that with an electric oven.

Or go old-school:

Try an old-style analog electric roaster. They come [as large as 22 quarts](#) — which would be a big batch of stock! You can even use them to roast the bones & mirepoix. Plus they are still great at the thing Grandma used them for, a place to cook the Thanksgiving turkey while freeing up the oven for other duties.

Most have a simple analog control knob. Once their temp is stabilized you should make note of the setting, or just make a mark with a sharpie so you can easily repeat it next time. It can be a little fussy controlling the temperature of a manual roaster oven, but a [plug-and-play PID controller like this](#) can make it easy, and can also be used for precise temperature control of most any other analog controlled cooking tool — including some electric smokers and most crock pots and slow cookers. PID's work ONLY with analog cookers.

It's also a great tool for making stock in the garage or on a covered porch if you're cooking in AC weather and prefer not to heat up the house. Just don't use an extension cord.

Here's a great use for venison or beef stock: KillerNoms.com/mushroomsoup

View online at KillerNoms.com/brownstock

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