

# Backyard cutting

## Choosing a sword for Backyard Tameshigiri

I've been doing so called backyard tameshigiri or freestyle cutting for a couple of years now, but only relatively recently have I really kicked it into overdrive and actually started practising with any regularity. It all started with my first sword. Nothing fancy, just a 1065 differentially hardened katana in a geometry that flirted with shinogi zukuri, and I loved it. I was hooked from that moment, but in hindsight it probably wasn't the best sword I could of bought.

In the end I reworked it and managed to shift its balance slightly, fix the handle wrap the best I could and so on, but had I known at that point that I wasn't going to be just hanging it on the wall and looking at it, I probably would of bought something different or more more fit for purpose.

Like I said, I started cutting a while back and I've moved from milk jugs, to rolled up soaked newspaper, hanging newspaper sheets to coke bottles and having handled a few swords since then I've come to realise that although it's hard to say one sword is better than another, it's relatively easy to say one sword is better at one particular thing than another.

The question 'what is the *best* sword?' therefore is an odd one because with such a variety of cutting practices the idea of the "best sword" really pivots around what purpose you're intending to put that sword to. Aesthetically, everyone has their own preference on what makes an attractive sword, but for the purpose of this discussion we're going to be looking at what makes the best functional beater sword for FSC or Freestyle Cutting.

The term "beater" probably doesn't fill you with images of the grace and fluidity that have come to be associated with the katana, but it simply refers to the way that the sword has been made to put function over form at a reasonable price.

The aesthetics on a beater sword are secondary to its purpose and although it's possible of course to find or assemble one that has very acceptable fittings, the money spent in its production has been put into making sure it cuts. There are no stone polishes or other such things. A successful beater will cut well and take a certain amount of abuse without ending up damaged or looking scarred and horrible. (or if it does, you won't care too much)

The other thing I will mention briefly here is that I won't be talking about iaito. If you're serious about learning then at some point you will want one, but I won't be going into them here. I also wont be suggesting actual products or companies here. That's something for you to think about and decide for yourself, there are plenty of reviews and forums out there, go nuts. :) And finally, how much you decide to spend on a sword is up to you. We all have different circumstances but whatever you decide, a sword shouldn't break the bank.

So, with that out of the way, lets go over the four main factors to consider when choosing a sword for FSC;

- *Geometry*
- *Steel*
- *Tsuka*
- *Balance.*

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## Geometry

The geometry of the sword refers to the shape and curvature of the blade. There are many different geometries, all well suited to different purposes which I suppose is my point here. It's my personal opinion that there are two geometries to consider when picking a sword for starting out with FSC. There is Shinogi Zukuri and Hira Zukuri. There are of course others and this isn't to say picking another style is a mistake, simply that I think the best gains can be had from choosing one of these two.

Shinogi zukuri is the style that everyone who has ever seen a samurai film will remember. It's the iconic long curved blade with a ridge line called the "shinogi", that runs all the way up the sword to the end where there is another delineating line that separates the main length of the blade from the very tip. Traditionally, these blades had a fair amount of what was called "niku", or the meat of the blade. If you were to take a cross section of the blade and draw it out of paper, the cutting surface that runs from the shinogi right to the edge, has a clamshell or convex shape to it. This means that there is more supporting metal behind your cuts. It also means that the margin of error that you have with your cutting angle as you swing the sword toward your target, is that much larger. I found that Shinogi zukuri with niku (as modern swords may or may not exhibit any niku at all) is a forgiving geometry, the one downside is that it's that much harder to get it to slice like a scalpel as you can with blades with no niku. It's not impossible, it just requires more practice.

Hira Zukuri is very different from the shinogi style in that it has no ridge line, no yokote, very little niku, if any. It's got literally two very flat surfaces coming directly to a sharp edge. The blade is also thinner and is supported not by its thickness but by its extra width. Both of these facets make these blades very capable of taking on an exceptionally sharp edge. Lacking the niku of the shinogi, and therefore some structural support, these blades usually have a spring heat treatment to make sure they can flex adequately in use but not get bent, or 'take a set'. In some ways, this geometry is almost the opposite of the shinogi because where the shinogi might not cut as easily but won't force you to have to make perfect cuts all the time, hira has a very low tolerance for inexact edge alignment. If you get your angles wrong when cutting, you will feel it much more, but get them right and this will cut like a laser.

So, Shinogi will provide you with a sword that will be harder to get perfect cuts but easier to get a cut of some sorts, and hira will make it easy to get exceptional cuts.. as long as your hasuji or edge alignment is on form. if in any doubt, start with shinogi.

## Steel

In my opinion, steel is largely overrated as a factor. From the myth of folded steel blades being sharper, to the expensive super steels like L6, they have I think been a marketeers wet dream. Why get a simple steel like 1060 when you could get differentially hardened, folded T-10 tool steel katana that 'can cut bamboo one strike'. It's true that a poor steel will definitely impact the performance of the blade but I hate even lining these steels up next to each other in any order because it tends to make people think that one is better than the other. The heat treatment of any steel is really what makes the blade shine (no play on words) and if you've got a crappy heat treat then you've got a crappy and disappointing at best and at worst potentially dangerous weapon. I've learnt this through personal experience, having one sword almost impossible to

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keep sharp for any length of time and easily taking a set.

But we know what we want the blade for and this again is what's going to help us. We want a blade that's forgiving and can take a beating. We don't really care if its differentially hardened, we just want to be able to not worry about hitting the screw thread on a plastic bottle top and chipping the blade. We want to be able to try new cuts with the knowledge that if we mess it up, we don't have to worry about the blade too much. It saves tears and also, I find that it improves practice. All the motions and cuts flow much more easily if we're not worrying about damaging anything. We still make mistakes, but not as often and we learn quicker and can try again and again until we get it right.

There are several different choices of steel that will make a good cutter and I'll go through the two groups that I feel are the best choices for the purpose and the cash.

1) 1060-1095 1060, 1075, 1065, or basically any 10xx steel is probably the simplest carbon steel you'll see used for a sword. The number after the 10 refers to the percentage of carbon in the blade. The higher the number, the more carbon and the harder the steel. Higher carbon steels are more brittle but keep an edge longer, lower steels are more resilient but may need touching up every now and then to keep them cutting smoothly. I would avoid 1045 as without a very good heat treat, they tend to bend easily which isnt good. There are a few other materials in the steel but the iron and the carbon is what makes it what it is. The difference in hardness of an equally well tempered 1060 and 1095 blade is huge by the way and those two types, are the most common in the economical beater range. This is a good choice I think for a starter sword. It's worth noting that the T-10 tool steel you see advertised is metallurgically very similar, or practically the bloody same as, 1095.

2) 5160 or 9260. These are the two most common spring steels used in katana production. The spring in a spring steel I personally believe is more to do with the heat treatment than anything else but these are known to be especially resilient. They have a small amount of silicon in the mix which I've been told does the magic involved. I've found the edge retention on 5160 to be pretty damn good and there is absolutely no way these steels will take a set. They put up with the most abuse without chipping and they definitely wont take a set, but tend to be slightly more expensive than the 10xx ranges. Blades in hira zukuri are almost exclusively made of a spring steel as the blades are thinner and need to be able to flex well.

Both of these steel types can be differentially hardened of course, but you're less likely to find it on spring steels as they're normally chosen for their flexibility, a trait that you lose when you use this kind of heat treatment.

The advantage of course is that the cutting surface of the blade can be much harder than the spine. This means that you've got all the resilience of the softer and more supple steel at the back doing the job of soaking up the percussive forces that the sword undergoes whilst cutting, but keeping the edge hard enough to retain its sharpness without rolling or flattening. This from a technological point of view was fantastic years ago and aesthetically it's a real treat. For beauty, it far surpasses through hardened blades that is, blades of a consistent hardness all the way through. It's arguable however whether or not it actually improves the performance of a sword in comparison to one made of modern steel, in fact I'm led to believe that a decent 'mono

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temper' is going to be a lot more durable than a cheap DH treatment.

## Tsuka

The handle or grip of the sword is called the tsuka. To this day I have no real idea whether its pronounced 'soo-ka' or 'sk-ar'. I suppose its a good thing I type a lot more than I talk. I've adopted a much more practical approach to these sorts of things and if you want to pronounce it one way, I certainly will be the last to attempt to correct you on it.

Firstly lets talk about the aspect you will almost certainly have no control over, the shape. The tsuka can come in a variety of subtly different shapes and sizes and traditionally these things would change from period to period. The main shapes are Ryugo, Haichi, Imogata and Morozori.

Of these, Haichi and Ryugo dominate in popularity. If you're buying a production sword then you have to take what you're given, and the majority will be Haichi. Don't fret though, this is positive because it's a good shape and encourages you to hold the sword correctly.

The aspects you will get choice over are the koshirae or fittings, maki or wrap and of course the length of the tsuka. The first two are a matter of preference. I've been told and believed for a while that the style of maki affects your grip and some wraps are better for some things than others. Maybe this is true, I really don't know. However I know that after trying a number of different wraps, I've noticed no real improvement in performance of one over another. It's just a matter of personal taste along with koshirae. If you like the way it looks then go for it, it's going to be your sword after all.

Length of tsuka on the other hand, that is important. When I first decided to customise one of my swords, I was dead set on having a rather long tsuka. I wanted it to offset the look of the sword which itself was rather slim and elegant and so I settled on a 12" tsuka. Problem was when I came to use it, it was too long. It was constantly in the way. I loved the point of balance of the sword which was brought back closer to my hands, but it was unwieldy. The other thing of course is that if your hands are too far apart when you're cutting, you can actually pull muscles in your forearms through over extension. I won't explain how because I want to stay on topic here, but take it from me when I say its painful, its not fun and it takes months out of your practice regime.

The ideal tsuka length for you depends on how large your hands are. Without explaining correct grip, which I'm sure you can google for anyway, you need a length that is two hand widths and four finger widths long. Remember though that this is what works for me, maybe you'll find you need slightly more or less. The main point here is don't be tempted to get a fashionably long tsuka. It's just not practical for the serious cutter.

## Balance

Something I mentioned in the last section was the point of balance. The point of balance can affect the way you feel the weight of the blade. By changing the point of balance of a sword, you can change the way it feels and handles. By having the POB closer to the hands, the blade can

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feel livelier and easier to control. It will feel easy to change directions and quickly shift the blade through the air. Stopping the blade suddenly wont be so much of a strain on your wrists and arms and the movements for trick cutting will be easier to perform.

If you shift the balance away from the hands instead, you will find the blade feels heavier but it will also require less effort to cut heavier targets. You can rely on the momentum of the blade more to cleave through mats or heavier bottles. Changing direction will be harder but depending on what you're attempting to cut, the extra force that the blade imparts by being more 'top heavy' can be invaluable.

Once the blade has been forged, there is only one real way that you can affect the point of balance and that is by changing the fittings. The tsuba, fuchi, kashira can all be changed. The tsuka can be changed for one of longer or shorter length and to a small degree, even the type of wood can make a difference. Most production swords come with the cheapest tsuka they can safely produce for the sword and there's really not much to them. When buying a sword however, you get what you get. Some sites will tell you the POB for each of their swords and some wont. As a general rule, everything else being equal, anything with a POB of under around 3" will feel super responsive and anything over 8" will feel super heavy. Something in the middle is probably what you'll want for starting out.

## *In conclusion*

To some, this whole article probably looks like its skirted around a lot of the detail and made a handful of generalisations, the thing is of course you'd be right. The method in my madness is that even though there is a lot more, and I mean a lot more in even this tiny corner on the simple subject of choosing a sword, the likelihood of any of that being of any real use to you at this stage is slim. If I'd known back then what I know now, I would have made a very simple choice or two and had a sword lined up and in the post in under an hour, but I was massively daunted by the plethora of choice available to me and instead it took weeks. I want to make getting yourself started as simple as possible and I believe I've shown not only the most popular choices here but also the best to get you going quickly and confidently.

I'm a firm believer that a great deal of the fun in anything is had in finding out and doing things yourself however. At the end of the day, you're the one who's going to have to be comfortable with the sword you choose and therefore you're the one whose final opinion matters..

I wanted to give you enough detail to help you understand the main points you need to pay attention to when choosing a sword and not just any sword rather a sword specifically geared towards helping you to become a good cutter.

This is my humble opinion and remember, I've only been cutting for a couple of years. You may agree on some things and disagree on others but you wont know until you've got yourself a sword and started learning to cut.

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