



FINDING TOP ACCURACY

The best way to ensure top accuracy is to build your own arrows. JOHN DUDLEY takes you through the process step by step

Have you ever heard of a top-level rifle shooter using out-of-the-box ammunition? I haven't! These shooters spend a lot of their time making precise match-grade rounds, because that's the way to get top accuracy. As an archer, you must put the same amount of time into making your arrows precise, dead-accurate projectiles. When shooting indoors at 18m you can get away with some variable tolerances in arrows – but once you get outside, this variability will cost you valuable points. This month, I will show you how to make a pinpoint-accurate projectile step by step. This process can be broken into three categories: arrow shafts; cresting; and points.

Arrow shafts

Choosing the arrow shaft is the easiest of these three steps. Thanks to Easton's sorting systems

and tolerance measurements, you really don't have to worry about whether the shafts are within an accurate weight measurement. They will be! In the past, and with certain other brands of shaft – especially carbon shafts – the amount of variance in shaft weights was mind-boggling. I won't mention any names, but what I will say is make sure you use a good arrow scale when you're building your new arrows for this season, and also make sure that you check the weight of the raw shaft. I personally don't like to be out more than a full grain on the shaft. Two grains is tolerable, though, and you can usually make up for that by making your points extra-accurate.

When you've decided which arrow shaft to use, you need first to cut it to the length you want. If you are using a barrelled shaft, like an X10 or A/C/E, and need to cut any of it,

I recommend cutting from the back first. Then you will need to remove the bur that is on the fresh cut, either with a chamfer tool or a razor blade. Removing this bur will help to ensure proper nock fit. If your nocks seem excessively tight when you're putting them in, try putting a small amount of wax on them before you install them. This will help them slide right in, and also allow for friction-free adjustment after you have fletched them. Once you have put your nocks in, go back to the arrow saw and cut the front of your shaft to the desired length. Again, you will need to remove the bur in the front of the shaft to assure proper point adhesion. Failure to remove the bur from the front will usually result in having the bur scrape off too much of the glue when installing points, and will cause you to lose points when shooting.



From left: John's preferred brand of arrow wrap, EZE-Crest; right: completed arrows awaiting fletching

Preparing for crestring

Now that you have your shafts sorted, you will need to prepare them for crestring using acetone. Wipe the shaft down, working backwards from the Easton logo. Be careful not to get the cleaning agents on the Easton label itself, or on your nocks. Once cleaned, your shaft is now ready for crestring. Since it is now outdoor season, we'll focus here on outdoor arrows. I think it's important to use a vinyl wrap on your crestring. I like this for several reasons. For one, the vinyl helps the glue cure faster than on the direct shaft; this is especially useful when using flex fletch vanes, as these need a slower-curing glue. For example, Fletch Tite may take up to 15 minutes to cure when applying a vane. When you use vinyl, the same vanes can be made ready in about five minutes. I also like the way the vinyl protects the shaft when you need to refletch. Scraping the carbon away to remove old vanes and glue is not good. If you use vinyl, you can easily remove the fletch by heating it with a hair dryer or putting it in boiling water and pulling



A mouse pad provides an ideal flat surface for marking where to apply the vinyl

it off. Vinyl also makes arrows easier to identify, and gives your shafts some individuality. I have used EZE-Crest vinyl for many years (www.eze-eye.com). One pack of full-length wraps will actually make four dozen arrows! This is because on X10 and A/C/E arrows you don't need the full-length vinyl, so you can cut each full-length piece into quarters and get four pieces out of each one. Take a single strip and cut it in half along the length and width. This should give you four pieces, with the measurements being 8.9cm long and 1.65cm wide. Applying this vinyl is very easy – all you need is a mouse pad! Measure 1cm from the edge of the pad, and mark out a line. This line can then be used as a reference mark, so that all your vinyl is in the same place on all the shafts. I put the vinyl 1cm from the end of the shaft, as this leaves 1cm of carbon – so if the shaft becomes damaged from impact in the future, you can see it. Once you have a mark on the mouse pad, there are only four easy steps to applying the vinyl. Peel the wrap from the paper, and lay it with the adhesive side up

three new vanes in my jig clamp, and wipe the bases with acetone (using a clean towel). I do this outside so I don't die from the fumes. After you have cleaned all the vanes in the pack, mark the packs 'clean' with a pen; you can then glue them onto anything you want. I personally use the flex fletch vane, because of its durability. The problem with flex fletches is that most people don't clean them properly or use the right glue. Make sure they're cleaned with acetone, and use Fletch Bond Glue or Fletch Tite. Both of these glues are slow-curing, but with the vinyl you should be able to move the clamp to a new vane in about five minutes. Use only enough glue to cover the base of the vanes. If you have glue squirting out and dripping all over after you place it on the shaft, you are using way too much! Learn how to use only enough to cover the base, without leaving air pockets. After you have put all three vanes on, you need to tip and tail the vanes by putting a small drop of glue on the front and back of each one. Then lay the arrow to the side, and do another. I recommend



From left: wrapped arrows; arrow wrap in pre-cut and cut form; a razor to cut the wrap; a bracing gauge used for measuring the wrap; and unwrapped arrows

on the mouse pad, with the edge of the vinyl aligned with the 1cm reference mark you have made. Then place the arrow flat on the mouse pad, and align the end of the shaft with the edge of the pad. Slide the nock end of the shaft towards the wrap until it makes contact. Then slide the opposite end of the shaft, until it too makes contact. Now press down firmly and role the shaft into the wrap. Now you're done – just assure adhesion by rubbing the wrap with your fingers.

Fletching

People often screw up here through sloppy vane adhesion. It is critical that you clean the bases on all your vanes with acetone. I normally put

letting the vanes cure overnight. Even if the glue sets more quickly than this, they won't be cured enough to shoot at this stage. After you have fletched all the shafts and tipped and tailed the vanes, you should turn all your nocks according to the style or arrow rest you are shooting. Line them all up in the same way. Once you've done that, your arrows should be ready to add points.

Points

This finishing step does take a little extra time, but it's worth it in the end – especially at 90m! Take all your finished shafts, and weigh them. Each time you weigh them, take a piece of tape and write down the exact weight of the shaft; then stick this tape to the shaft. Because there

will be some variance in weight between some points and some shafts, the best way is to mix and match points and shafts until you find combinations with precise total weight measurements. For example, you may have some shafts that weigh 268gn and points that weigh 110gn. But maybe you have, among these, one shaft that weighs 266gn and a point that weighs 112gn. Well, obviously this is the matching pair needed to make the overall arrow weight as precise as possible. I am almost always able to get a dozen stock shafts and points to match up by doing this. The process is tedious, but you will reap the benefits.

We all spend so much time working on bows; releases; form; fitness; coaching; etc. Don't skimp on accuracy with your projectiles. In the early days of archery, fletching was a direct reflection of the archer's skill and marksmanship. People would spend months building arrows for themselves. Granted, we don't have to make arrows from wood anymore – so the process is much quicker now. However, you should still take pride in making the best arrows you can.

Good Shooting!
John Dudley



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