BOW TUNING TRAP

Fiddling with equipment is one of the biggest traps new archers can fall into, Andrew Smith explains why

The shackles are off, you have completed your beginners course, bought all your equipment and thoroughly enjoyed shooting with it over the winter months. Spring is in the air and now you can't wait to get outdoors and start shooting at the longer distances.

But for many this transition proves to be a difficult one, no longer are you cocooned in a comfortable, consistent environment, you have to contend with uneven shooting lines, targets further away and the weather – especially the wind.

Indoors, your arrows appeared to fly straight and true, but outdoors some wobble on their way to the target and the inevitable happens – you start to question why.

Then out of the blue all your questions are answered as somebody, usually a more experienced archer turns up at your shooting ground, puts down their bow case and exclaims: "I need to tune my bow for outdoors." Before you know it, the next few weeks are taken up with bare shaft testing, tuning for groups, shooting through paper and walk back testing, and archers walking around with confused looks on their faces trying to make sense of what is happening.

While there is nothing wrong in wanting your bow to shoot as accurately as possible, is it reasonable or feasible to expect to get this right, or for that matter does all this effort do any good in your first year of shooting?

Perhaps to answer this we need to first examine why we bow tune.

Simply put, bow tuning is setting up a bow to shoot arrows accurately from shot to shot and at the same time trying to lessen the negative effects of an archer's less than perfect shooting style.

In truth, any recurve or compound bow set up within the manufacturers guidelines and with the right spine arrows will do this. In fact, it has been proved that a bow set up to only the basic requirements, using a shooting machine, will put all arrows more or less in the same spot arrow after arrow – the process of getting the arrows to land in the gold is just a matter of moving the sight pin or scope.

Setting your tiller at factory standard will get you at least close to optimum performance from your bow

Problems only start to arise when we introduce the archer; studies have shown that we humans, unlike the bow, are not very good at doing repetitive tasks exactly the same time after time, it is something we have to work very hard at – more commonly known as practice.

This single weakness, although a strength in other areas, makes bow tuning very difficult, because when bow tuning you look at cause and effect. By this I mean you change a setting on the bow and you see a good or bad corresponding result. So, if your technique is not consistent from shot to shot how will you be able to recognise any sort of emerging pattern, let alone the ones printed in books and magazines that have been achieved by some high ranking archer?

I am not saying that bow tuning does not work, but I am saying that you have to be realistic about your ability and current group sizes at differing distances. As much as we would all like it to be true, 3ft groups at 60 yards are not going to be cured by the turn of an allen key or the stiffening of a spring. However with a 25cm group at 90m, and good constant technique, bow tuning might reap a few more points.

Now that I have saved you a lot of time and frustration what should you be doing when you turn up at your club, well the simple answer is practice, as very quickly you will see a positive result for all that hard work.

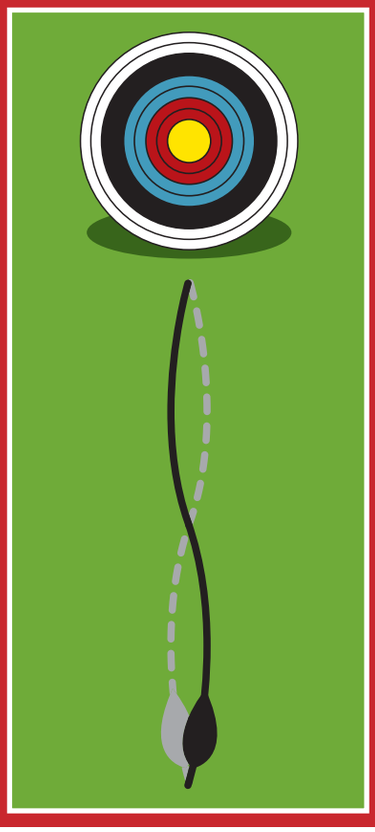
From an equipment point of view, the most important thing is to put your bow together correctly and the same each time, this means checking for damage, loose screws and for recurve archers paying particular attention to the bracing height – make sure it is the same measurement each session. Everything else should have been sorted and locked down months ago by the Pro-shop you bought your equipment from,

or your club coach. It should not really need changing for quite a while, unless something breaks or you cannot resist some shiny new item. For both recurve and compound archers, my biggest tip for accuracy and consistency is that your arrows are the right spine – nothing else destroys accuracy like an arrow that does not shoot straight because the amount it bends is either too much or not enough. Additionally, for recurve archers, make sure your limb tips are straight after stringing the bow, there is no point in exerting all that energy if half of it is lost in the wrong direction, it also stops your string falling off at full draw (from a saftey perspective).

I've included two of the most common issues that archers are looking to cure when bow tuning below:

Arrows wobbling to the target

While this can be attributed to a low or high nocking point, incorrect centreshot adjustment or poor arrow clearance – when part of the arrow hits the handle on its way through – it can also be attributed to a poor release, twisting the bow, dropping the bow arm at the same time as releasing the arrow or just trying to watch the arrow as it flies down the range, not to mention factors outside of your control like the effects of the wind.



Right: As long as your bracing height is within reccommended limits and consistent, you'll see results downrange

If you have to change your windage at different distances it does not mean for certain you need to adjust your bow's tune

Changing the windage sight pin position for each distance, even if it isn't windy

For many bow tuners this is the Holy Grail – not having to adjust the windage on a calm day should indicate that the arrow is leaving the bow consistently, flying straight and true, but sadly it is not that simple and does not always lead to tighter groups, which is what we need to get higher scores.

Having to change the windage could be an indication that your arrows are the wrong spine or the centreshot/button spring tension may need a minor adjustment. However, it could also be attributed to your stance, form, release and string picture. At each distance it is important to shoot the same way, making sure that the bow, bow arm and shoulders are all in the correct line – this can easily be thrown off at the longer distances where the shooting angles are different. Get the elevation needed for 90m by tilting from the waist and hips, not just lifting up your bow arm.

There are faults that archers try to fix with bow tuning and over time you will no doubt be drawn in. I am not saying that your equipment and how it is set up does not matter, because it does. It would be wrong of me to suggest that you do not find out more, but investigate to the level to which it matters, the information should be applied depending on how accomplished you are. In time, when you have got more practical experience and your form becomes more consistent, better bow tuning will make a difference. But, for many, it is just confusing and a distraction from doing the real hard work – practise. It is practise that really makes the difference, after all our sport is quite a simple process of pulling the string back and letting it go the same time after time after time.