



ARROW FLETCHING PROS AND CONS

Straight fletching- the feathers or vanes are straight with the arrow shaft

	<p>Pros:</p> <ol style="list-style-type: none">1. Creates the fastest flying arrow.2. Does not create additional spin so it is better for close range shots. <p>Cons:</p> <ol style="list-style-type: none">1. Greatest chance for arrow to be affected by wind.2. Less spin may be less stable for distance shooting.
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Offset fletching (1-4 degree) – the feathers or vanes are straight on the arrow shaft, but are turned (offset) from the front to the back of the fletching. Very similar to bullet rotation caused by the rifling of a gun barrel.

	<p>Pros:</p> <ol style="list-style-type: none">1. Increased arrow stability over straight, especially when shooting broadheads.2. Better for long range shooting. <p>Cons:</p> <ol style="list-style-type: none">1. Slight air resistance in flight results in some loss of arrow speed. About 2-4 fps. <p>Note: No significant advantage using RH or LH spins on fletches has been proven. Left spin <i>may</i> clear the riser better using feather fletches with traditional bow set ups.</p>
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Helical fletching – Feathers or vanes are fletched with a slight curve, right or left, using a helical clamp. Spin is very similar to bullet rotation caused by the rifling of a gun barrel.

	<p>Pros:</p> <ol style="list-style-type: none">1. Maximum arrow stability (best choice for shooting broadheads and low speed bows)2. Highest accuracy at longer distances due to arrow spin.3. Least affected by wind. <p>Cons:</p> <ol style="list-style-type: none">1. Greater loss of arrow speed. 5-8 fps.2. Potential to contact some fixed blade/prong arrow rests.
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BULLSEYE ARCHERY'S INDESPUTIBLE ARROW FACTS

1. **Arrows need to have good balance to fly well** – Shaft weight and length and the weight of all components are important for arrow balance.
2. **Vanes are heavier than feathers.** **Recommendation:** If you are *not* shooting a high power, high speed bow and want more arrow flight speed, choose feather fletching, even if using a compound bow.
3. **The most common fletching lengths range from 2" to 5", vanes or feathers.** The longer fletches are recommended for beginners with lower speed bows, because the arrow flight is more predictable and stabilizing than with short fletches. With high power bow set ups and for compound bowhunting the short, razor vanes are recommended because they have less surface area drag and are more durable than feathers.

MORE ABOUT ARROW FLETCHING CHOICES

1. Compound high speed bows use plastic vanes instead of feathers because feathers are too fragile for the speed of the bow *and* some of the arrow rests used (like whisker biscuits).
2. Feathers are lighter weight so best for bows of lower speeds or draw weights. Always preferred for traditional bows – wooden recurves and longbows. Feathers do not perform well when wet however.
3. Straight fletching on arrows has the advantage of no speed loss, however it resists arrow spin, causing them to be less stable. This disadvantage is hard to notice at short distances but becomes noticeable at 40 yards and longer. (Note: GOLD TIP factory fletching is usually straight)
4. Offset fletching is possibly the best for most set ups. At 3 or 4 degree offset the speed loss is only 2-3 FPS and the arrows are much more stable than with straight fletching. Right spin is almost always chosen over left spin because it is *assumed* that left spin loosens screw-in points.
5. Helical fletching is an extreme version of offset, with a curve in the middle that creates significant arrow spin to greatly help stabilize the arrow and improve accuracy. Best used for low draw weight, low speed bows or with broadheads. These arrows catch a lot of wind so have the most speed loss. 5-8 fps. Many choose Right Helical over Left Helical to avoid loosening of screw-in points, but many others say that's an Old Wives Tale, with no basis in fact. You can always wax point threads to keep them tight on the arrow.
6. Longer fletches are more stabilizing and predictable than shorter fletches. 4"- 5" vanes or feathers are sometimes recommended if you plan to regularly shoot 60 yards or more. This length vane warps over time, but can be straightened by heating with a blow dryer. 2" – 3" vanes have plenty of surface area for stable arrow flight up to 60 yards.
7. Hunters should not need to shoot further than 40 – 60 yards, which is one reason why 2" razor vanes are so popular for bowhunters using compound bows.
8. Possible reasons for choosing Left Helical over Right Helical fletching: LW fletching clamp makes LW feathers look nicer? There is a natural spin on each set of arrows. When you do a bare shaft test or with a shafted arrow, see which way they are turning. Most agree you will get a faster arrow spin by fletching in the direction of that spin. Most also say there is no benefit to accuracy between RH and LH fletching. Some say traditional archers prefer Left Helical feather fletches because they clear the rest/riser better than Right Helical.

9. How to know what offset degree you are using: Calculating degree offset with a set number is an imprecise practice. Generally, on a Bitzenburger the first notch off center "C" is 1 degree or 3/32" left or right of center. If you set your jig to 1 on the left of 0 on one end and 1 on the right at the other end, you will be giving your fletches 2 degree offset.
10. Finding the correct offset with your fletches and jig: Take a vane or feather and put it in the clamp. Without putting glue on the fletch, find the spot where you can put as much offset as you can get and still have solid contact the whole way down the vane on the shaft. Solid contact is what matters, that's what is going to make the glue stay effective. Once you have found this spot, keep it there and set the jig there, and fletch all of your arrows there. You can mark it with a sharpie on your jig adjustment, to use the same spot later for another set of arrows, just like you mark a chosen point for the end of fletch on the clamp.



Above is a Bitzenburger fletching jig with a right helical clamp.

The purpose of arrow fletchings is to steer the arrow during flight. For an arrow to cleanly fly through the air, the back end of the arrow needs to follow the front end of the arrow. The fletchings keep the front and back end of the arrow in proper alignment, correcting the path of the arrow when needed.

Trade-offs when choosing your fletches

There are trade-offs you need to think about when selecting a vane or feather. Higher profile vanes or feathers increase the stability of the arrow but will slow the arrow down. Vanes or feathers with greater surface area are heavier and slow the arrow down, but they are also better at correcting arrow flight.

Overall, choosing how to fletch your arrows and selecting the style of vanes has a lot to do with what you will be doing with them. Bowhunters should consider choosing a fletching setup that will produce higher accuracy rather than more speed because speed is hard to tame and is not that forgiving. Fixed blade broadheads are harder to stabilize in flight than mechanicals and field points. Large, high profile vanes will help stabilize the arrow in flight when using fixed blade broadheads, whereas with mechanical broadheads you can get by with smaller vanes.

<https://www.gohunt.com/the-archers-guide-to-fletchings>

