

Which Arrow?

By Tom Barker

Shortly after someone purchases a new bow, the conversation quickly turns to choosing the correct arrows. For safety and accuracy considerations, the arrow should be matched to the bow and the intended purpose, be it hunting or target.

First, determine the proper spine of the arrow that matches the bow draw weight, draw length, and anticipated arrow point weight. Spine is a measurement of how much the arrow deflects or bends when shot. Correct spine is important for optimum arrow flight, but even more important from a safety perspective, for if an arrow is underspined it can snap when shot and create a serious injury potential. Another safety consideration is arrow weight. Manufacturers' bow warranties can be voided if a bow is shot with an arrow with less than 5 grains per pound of draw weight. With too light of an arrow, the kinetic energy that would be used to propel an arrow is instead channeled into the bow, damaging or weakening it. Once the properly spined arrow has been determined, we then start talking about the arrow choices.

There are three main types of arrows (forgetting wood and fiberglass for now). There are all aluminums, the all carbons or graphites and the aluminum carbon composites (ACC). The all carbon arrows are most often used with compound bows and typically come in four spine ranges. However, there may be three dozen aluminum or ACC choices for compound and recurve equipment with greatly varying arrow diameters. To help refine the choices, let's consider 5 basic determinants in choosing arrows and see how the three main types of arrows compare. We begin with the most important categories.

Arrow to arrow spine consistency:

All aluminum arrows are the best in this category followed closely by the aluminum/carbon composites and finally the all carbon.

Arrow to arrow weight consistency:

Aluminum arrows do very well in this category too with the ACC closely behind and then the all carbons, which can vary considerably by manufacturer. However, this is not always that important, since for most archers even the most inconsistently straight arrow is still more consistent than our shooting ability, especially at the distances we shoot.

Durability:

All carbon arrows win this category hands down with the ACC and aluminums coming in a distant second.

Weight:

Light arrow weight is important assuming the archer wants a flat arrow trajectory. If arrow penetration in a hunting situation is more important, then a heavier arrow is desired. All carbon arrows normally provide the lightest choices with the aluminums or ACC being the heaviest

Cost:

In the short term, all aluminums are the cheapest with carbons becoming more competitive and the ACC typically being the most expensive. However, in the long run, the all carbon can be used for many years.

So depending on what determinants are most important to you, consider your options and make a good choice. I heavily emphasize arrow to arrow weight and spine consistency followed by straightness consistency in my arrow determinations. All aluminum arrows are still a very good choice but some of the better all carbon arrows can make the switch to the graphites a good economical choice that will keep you on target.

Shoot Straight!

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