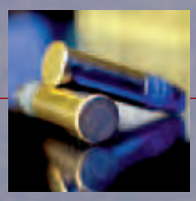

The *right bullet* for the job

So what's the best calibre out there? What about the best bullet weight? Andrew Venables says it all depends on your quarry, environment and purpose

I have often read that one of the many attractions of the excellent .30-06 calibre, named simply because it is the .30 calibre invented in 1906, is that it can handle bullet weights between 110 grains (gn) and 220gn with equal aplomb. If you ever wondered where the grain unit of weight came from, it is literally the historic weight of one grain of dry barley in Bronze Age times. We might use a 110gn soft-point for plinking and pests, our 150gn full metal jacket for target shooting, a 180gn soft-point for deer stalking and a 220gn soft-point for driven boar – but do we really need all these different bullet weights? Such a range could be beneficial in theory, but in my experience, having a rifle and focusing on one bullet weight makes the task of zeroing and knowing the bullet's performance infinitely easier.

The bullets listed above, which vary by weight, design, ballistic coefficient (aerodynamic quality) and sectional density (penetrative ability) will not, in my experience, zero the same or follow the same ballistic curve. As a hunter, I need a good mental picture of the ballistic curve of the ammunition I hunt with. Chopping and changing rifles and bullet weights does not help.

So how should you choose the ideal bullet weight for your particular rifle? The first question is what the calibre was designed to do. If you own a .22-250, the answer is simple: to terminate pests with little regard for their food value at all sorts of ranges. If you own a .243 Winchester the answer is more complicated, because it can stand in for the .22-250 for pest control with bullet weights from 58gn to 75gn. However, if you use well-constructed bullets in the 85-105gn range, the round becomes a well-accepted calibre for the management of deer in the 30-150kg body weight range, although not in my mind ideal when compared to the likes of the .308, its parent calibre.

The .308 is used with bullet weights from 123gn and up in the UK. The poor sectional density of these bullets can make them rather destructive on small deer and of limited penetration on larger deer. However, it has found universal acceptance as an accurate target-shooting calibre and a mild-mannered yet effective harvester of game, generally in the 30-400kg body

Smaller animals have smaller kill zones. Pick your calibre accordingly

weight range, with most shooters settling on bullets in the range of 150-180gn.

To simplify matters and deal with the main area of concern in bullet choice, let us assume we are choosing expanding bullets for harvesting venison. The theory that you might shoot light animals with light bullets and heavy animals with heavy ones is debunked by the experience of rounds such as the legendary .375 Holland & Holland. This superb round, invented in 1912, does an excellent job of cleanly harvesting anything from impala to buffalo with the standard 300gn soft-point.

If you want to avoid undue carcase damage, avoid using light, fragile bullets with poor sectional densities, which hit animals at over 760mps. This is because hydraulic shock, also known as hydrostatic shock, occurs when flesh cannot assimilate shock if hit at velocities of over 780mps. Such impacts make the surrounding flesh rupture, bruise and transfer blood and fragments widely, creating the red, jellied flesh so loathed by game dealers, butchers and chefs. So in .243, avoid shooting deer with bullets under 85gn – the lighter bullets are really made for serious terminal damage to pest species where meat is of no concern.

Animals shot through the thoracic cavity by bullets with high sectional densities at modest velocities provide cleaner carcases. The star performers are loads in 6.5x55, 140-160gn; 7mm calibres in 140-170gn; .30 calibres in 165-200 gn; and .375 in 270-300gn. These bullets, loaded to factory specification, all hit in the ideal 700-760mps range if engaging game at 50-150 metres.

Interestingly, this makes a good case for using regular soft points in .308 in 180-200gn for woodland stalking, where ranges are typically short. Leaving the barrel at around 780mps, they will strike at between 625-750mps at 50-150m. If using the 10cm kill zone formula and sighted at 150m, they will strike in the lethal zone out to 176m, more than enough for regular deer management – and the game dealer will smile when you arrive.

When hunting with medium calibres and on a set zero, I like to sight in at 180 metres and reckon the bullets will be 5cm high at 100 metres, dead on at 180 metres and 5cm low at 210 metres. This makes the best use of what is known as the point-blank zero. If an animal has a 10cm diameter kill zone, all I have to do from the end of my boots to 210 metres is aim in the middle of it to make a humane kill. If the animal is wounded and is 300 metres away, I would need to aim 33cm high – just over the top of its back on red hind for instance. I have this formula in my head and it serves me well.

If you only hunt foxes, your formula may be based on a 5cm kill zone; if you only hunt elk, it might be on a 25cm kill zone. If you hunt elk and use a .300 Win Mag, your ideal zero range would be 266 metres to ensure you will hit between the top and bottom of your 25cm kill zone from zero to 313 metres with no holdover needed. The holdover required for a 400-metre shot would be 39cm – at the top of an elk's back.

I have been known to suffer from bouts of 'magnumitis', a troublesome condition leading to the sufferer tooling up for theoretical long shots, with super-flat trajectories, high velocities and light bullets. In truth, this condition forgets the 30-150m reality of virtually all hunting shots, and

For the best chance of success, stick to sensible shots and good practice

leads to buckets of jellied red flesh on the game room floor. Many of you reading this may now be blushing.

You may wish to research this subject yourself. I was initially surprised to discover articles and books going back to about 1920, which told me what I had discovered myself. Choose medium to heavy loads in modest calibres and learn to shoot them well. Commit the ballistic curve to memory, zero for what you actually hunt, and remember it is generally better to shoot a small animal with a large bullet than to shoot a large animal with a small bullet. Timeless classics are there for a reason, and the reason is, there is no such thing as long-range hunting.

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