



Choosing the Right Ammunition

Throughout this series of articles we've discussed at length **how** to successfully shoot a sporting shotgun to break targets or take game birds. In this article we're look at **what** to shoot.

When you walk into a gun shop, sporting goods retailer or a 'big box' store that sells ammunition you may feel somewhat overwhelmed by the number of choices that are available, such as we see here.



At your friendly local gun shop the staff can often give good advice, but in big box stores where prices are often lower, the sales staff often doesn't know very much about what they are selling and advice can be spotty at best. When buying ammunition on line, which is typically the best bargain, the buyer is largely on their own to make the right call. The good news is that the manufacturers give us correct information on every box, if we know how to read it. More on that shortly.

Shotshells vary in size, called gauge or bore, weight of powder charge and weight of payload of shot. At their core all shotgun shells have the same basic components; case or hull, primer, powder, wad and payload. This cutaway (next page) of a Winchester AA shell, the gold standard for many decades of target shooters, is a good example.



Shot

Shot comes in a variety of sizes. See chart below.

Wad

The one piece AA wad is designed to produce more consistent patterns by protecting the shot and ensuring reliable powder combustion.

Powder

Winchester new and improved powders burn cleanly and consistently for more uniform patterns and velocities.

Primer

Shotshell primers are designed for quick, sure ignition.

First and foremost we need to understand the intended use for the ammunition. Shotguns, as we've learned, are very versatile arms capable of wide range of applications from breaking targets to hunting game birds of all sizes through to larger four legged game animals and personal protection. The key to remember here is that how the shell is loaded dictates the application.

The first thing to take into account is the length of the shell... if your gun has a 2 3/4 inch chamber you won't be able to shoot 3 inch or longer shells in it. Conversely, a gun with a longer chamber can safely shoot shorter shells and for clay shooting the 2 3/4 inch shell length is all you need.

Next up is what type of payload is in the shell. In the illustration below we can see the three basic loadings; bird shot, buck shot and slug. For clay targets, or taking small game birds like doves and quail, a shot size of 7 1/2 or 8 is optimal and what we recommend at VOMTC. Larger shot sizes have other uses; 6 is often used for rabbits and squirrels, 4, 5 or 6 for turkey and pheasant, 2 and 4 for ducks. Buck shot and slugs are for hunting game animals or personal protection only and have no use on clays.



Then there is velocity to consider. How fast the payload moves is going to dictate how far the load can effectively shoot and how much recoil it will deliver to the shooter. The faster the velocity the farther the effective range of the payload, generally, and the more recoil the shooter will receive when they pull the trigger, absolutely. Shooting a couple of rounds of trap can be a much different experience if you're shooting high velocity, heavy payload shells intended for pheasant hunting as opposed to using lighter target loads with a smaller shot size.

Let's look at an example. In comparing the two box tops shown below both are 2 3/4 inch 12 gauge shells carrying 1 1/8 ounces of 7 1/2 size shot. Should be same same, right?



Look more closely and you can see that the Federal load is at 1145 feet per second, while the Remington load is set up to run at 1300 feet per second. The Federal load is a great choice for 16-21 yards on a trap field while the Remington load is designed from keeping a tighter, hard hitting pattern at intermediate and longer distances on a sporting clays course or at the longest yardages on a trap field. Bear in mind also that lighter weight of charge means less power is needed to reach the desired velocity; e.g. a 1 ounce payload at 1200 feet per second will shoot softer than a 1 1/8 ounce payload at the same velocity. That translates into less felt recoil for the shooter.

Finally comes results. Not all guns shoot all loads well and manufacturers use different component combinations of case, wad, powder and primer to reach their designed and intended performance standard. Once you determine the best load for your purpose using shell length, type of payload and velocity you will want to fire a few of several different maker's shells on the patterning board through your gun to see what works best for you. In some cases you may see large variations in performance from brand to brand of ammunition. Your goal is to identify the shell that shoots the tightest and most consistent pattern as that will be the one that gives you the best chance at scoring well.

While you are searching for that “best load”, don’t get hung up on things like “dram equivalent” and “high brass” versus “low brass” when discussing shotshells. Dram equivalency is an archaic measurement from the days when smokeless powder took over from black powder as the propellant of choice and represents the equivalent power of a 12 gauge shotgun shell (only) containing a given amount of black-powder measured in drams avoirdupois. Today this represents a poorly understood equivalence of the powder charge power in a shotgun shell and I recommend to ignore it in favor of the velocity stated on the box.

As to “high brass” versus “low brass”, in the days of paper cased shells the manufacturers used taller metal bases on their more powerful shells as a matter of safety. With the advent of one piece plastic hulls beginning in the 1950’s and 60’s the practice is largely no longer necessary.



Compare again the Federal and Remington loads pictured above. The Remington shell is at a significantly higher velocity, but the shell is what would be considered “low brass”. Many of the shell manufacturers still continue to this day to load some of their offerings in high brass, as we see in this illustration, in part as a way to allow shooters to visually identify higher power loads, but also to lend a certain amount of marketing cachet to their premium offerings. I still run into shooters who hold the opinion that shells with a taller base are somehow better than their lower based counterparts simply because the base is taller. Internally, where it matters, the height of the base makes no difference.

At the end of the day when buying shotgun ammunition, pay attention to the gauge and length of shell to make sure it fits your gun, then the size of shot and weight of the payload and then the velocity as it’s printed on the box or, in some cases, the shells themselves. Don’t

be afraid to try several different brands in a given loading to see what gives the best results for your gun. Then come out and enjoy the shooting sports.

~~Remember, that there are NRA Certified Instructors at trap six and seven on every public day who can help you improve your skills and help you discover your personal solution. See you again soon with another shooting tip, but in the meantime, remember to keep those muzzles pointed to the ground when not on the firing line, and keep those actions open whenever you are not actually shooting. **Safety first, foremost and always!** -- *Frank*~~

