

## HIGH VELOCITY ADVANTAGE?

Dear Technoid:

I am a dedicated trap shooter and reloader. I spend allot of time, between events, listening to the philosophy of shooting and reloading and it seems that an inordinate amount of energy is spend discussing shot velocity.

I shoot allot of 7/8 oz reloads that are listed at about 1250 fps. They are surprisingly effective but I have been clucked at by the oldtimers that this will throw off my shooting timing because the shot is too traveling too fast.

Frankly I shoot a number of recipes that range from about 1100 fps to 1300 fps and I don't notice a bit of difference on speed to target, even at handicap distances. I can't easily do the math but it seems to me that a clay target at 60mph isn't going to travel much farther when shot at with 1100 fps loads or 1300 fps loads. Velocity drops off quickly at higher muzzle velocities anyway so the actual velocity difference is much lower at 35 yards.

I guess the basic question is "why all this fuss about velocity?" Am I way off base here or is there some actual data to support or shoot down my theory that velocity is much overrated?

Regards, Jerry

Dear Jerry:

Like you, I have always felt that velocity was highly overrated. You are absolutely correct when you say that shot velocity falls off rapidly. Higher velocity falls off MORE quickly than lower velocity. Since you are a handicap trap shooter, I will deal with 40 yard shots and #7.5s.

Examples for #7.5 shot:

3' vel 1330 time to 40 yds .129 seconds energy 1.4 ft/lbs

1240	.136	1.3
1200	.139	1.3
1145	.144	1.2

While a clay may start at around 60 mph (actually most start a bit slower), it also slows down quite rapidly. After the clay has gone 25 yards or so, it will have slowed down to about 30 mph or 44 feet per second.

Now that you know target speed at point of impact and time of flight to point of impact, you can easily calculate the differences in lead on a crossing target (sporting clays type shot) between loads of different speeds. (I'll let you do the math. It is good for you!)

For trap, where the bird is almost a straight away shot, the difference in lead between the fastest and slowest shell would be so small as to be difficult to measure. As you can also see, retained energy varies very little with increased velocity at the muzzle because the pellets slow down so rapidly. The increased speed offers very little advantage.

It does have some disadvantages. One other thing to remember when discussing high velocity shells is that high velocity shells tend to deform more lead shot. Deformed pellets do not pattern as well as rounder pellets.

Lastly, there is the recoil factor. Recoil is NEVER good. If someone says that recoil doesn't bother him, that just means that he hasn't shot enough or is too dumb to notice what is happening to him. Recoil affects everyone. Less is ALWAYS better. Having said that, I am not an advocate of 7/8oz loads unless the rules require you to use them. In ISU trench (every bit as hard as 27 yard handicap), shot content was reduced to 7/8 oz to make the game harder. I hate to say this, but if you shoot 7/8 oz better than 1 1/8 oz at American-style trap, your gun kicks you too much and you should find a gun that kicks you less. Everyone hates it when I say this, but it is the truth. Fewer pellets mean a smaller effective pattern and less chance of hitting the target. This is why I shoot a gas gun in 12 gauge and use all the pellets that the law allows.

Personally, I load everything to 1200 fps- subgauge and 12 gauge, light shot charges and heavy ones. Since I shoot such a variety of shells and gauges, I find that keeping the speed consistent helps me remember the appropriate sight picture no matter what the shell. I also shoot gas guns in 12 gauge and that cuts recoil too.

One final thought: One of the reasons that 24 gram and 7/8 oz loads are often run at high velocities may be the manufacturer's desire to maintain consistent pressure. If shell pressure gets too low, shell inconsistency will result. The best consistency occurs at the higher end of the safe pressure range. This may be hard to achieve with very light payloads and low powder charges.

Best regards,

Bruce Buck  
Shotgun Report's Technoid