

Lyalvale Hevishot cartridges

Tom Wylie looks at the first loads of this revolutionary product to be loaded commercially in Europe .

It feels like an eternity has passed since I brought back my first batch of Hevishot from the USA; a loose bag of shot that cost a small fortune. I thought I was a mug having just paid over \$10 a pound for pellets that were misshapen and some even had small nodules attached to the bigger pellets. There and hardly a uniform sized pellet to be seen! My instinct was telling me these pellets were going to fly and pattern, well, badly. How very wrong I was.

For 4 seasons now I have loaded this loose shot into my 10 bore, driven on by its effectiveness; it is absolutely stunning when used on geese. I still can remember the long drive to the Birmingham Proof House with the first ten loads as all the way I was convinced that they were going to break the test barrels with excessive pressure; instead they sailed through at approximately 1300fps for 890bar for a 2oz load. I remember the first pattern test, well actually not the actual test but the physical pattern board as I looked, in awe, at half inch steel pattern plate, pocked marked with mm deep craters; then, fearing the worst, immediately looking down by guns barrels; the barrels were as smooth as a politician's tongue. But, alas, although it was shot was excellent, it was only available to the home-loader.

Thankfully time has marched forever onward and at last Hevishot is available in the UK in commercial cartridges. How do they perform? Do they live up to my expectations?

I will answer these questions, but first let's step back, let's reflect on what Hevi-Shot is?

Hevishot is a dull metallic grey compound metal. It's a combination of Tungsten, Nickel, and Iron, amalgamated in approximately a 50%, 35% and 15% mix, respectively. Hevishot has an average density of 12.0g/cc (grams per centimetre cubed), which is greater than the 11.4g/cc for pure lead, 10.9g/cc for the high antimony premium hunting lead shot and approximately 7.87g/cc for steel shot. This makes Hevishot approximately 10% heavier than premium hunting lead and 52% heavier than steel when comparing similarly sized pellets.

In trying to size Hevishot, it must be pointed out that, it is hard to find a uniform pellet, for in this respect Hevishot is definitely an oddball. Hevishot pellets are anything but uniformly spherical; to be honest they tend to be all shapes of oval with or without attached smaller nodules. On initial viewing this un-uniformity is a source of ridicule, however this ridicule is short-lived once the ballistics results are viewed.

Hevishot is hard. This hardness is the reason why EnvironMetal, the manufacturers, and subsequently the Birmingham Proof House, do not recommend its use in shotguns that are not designed for Steel Shot; Additionally, even if your gun is steel shot proofed, it is recommended that you do not use any chokes that are not designed for steel shot and modified ($\frac{1}{2}$) is the maximum recommended restriction. You won't need more anyway. For home loaders another important consideration is that the shot must be enclosed in a special wad. This special wad is to ensure that whilst the shot is making its way up the barrel it does not come in contact with the barrel for if it does barrel damage may occur.

Advantages

Hevishot's pattern is tight, very tight, even when passed through an improved cylinder choke. This increase in pattern density enables a 12 bore cartridge containing a load of 36g to be used effectively at 40+ yards against the smaller species of waterfowl. This 40ish yard range is the debateable limit of use of commercially loaded steel shot cartridges in the UK, as, most of the steel 12 bore cartridges, that I have tested, tend to sadly lack one, of both, of the two critical criteria (penetration ability or pattern density) when this range is exceeded.

So, to the result from patterning the Lyalvale Hevishot cartridges. ;

The Test

Each test was shot through a Semi-Auto Benelli Super Black Eagle (SBE) that had a 28 " barrel and a 0.724" bore. The gun has a 3.5" chamber. The sole choke used during these tests was a Briley X2 in Light modified (3/8) and the choke is conical in profile.

The weather details are, wind = 0mph, temperature =15'C, pressure = 1017mB

The loads tested were

- A) Lyalvale Hevishot 2.75" No 5 (measured at 3mm average *) 36 grams (taking 3 apart confirmed that they where 36 grams and had an average of 210 pellets) . Measure muzzle at 2.5 (average of 10) 1305fps SD 23, and,
- B) Lyalvale Hevishot 3" No 4 (measured at 3.3mm average *) 40 grams (taking 3 apart confirmed that they where 40 grams and had an average of 175 pellets) Measure muzzle at 2.5 (average of 10) 1238fps SD 26

(* I measured the eyeballed median size pellets as it was like quality street they come in all shapes and sizes)

A synopsis of the results are shown below and each test was conducted in accordance with the methodology detailed in "Cartridge Patterning – we need to do it, and better!" (BASC Information Sheet, June 2002), ie. Counted in a 30" circle and the result is an average of 10 per test

30 yards, Cart A -- 208 (98%) SD 7 , Cart B --161 (92%) Standard deviation 7
40 yards, Cart A -- 185 (87%) SD 11 , Cart B --156 (88%) Standard deviation 6
50 yards, Cart A -- 136 (64 %) SD 10 , Cart B -- 96 (54 %) Standard deviation 5

60 yards, Cart A -- 75 (35 %) SD 4 , Cart B -- 80 (45 %) Standard deviation 4

Comments

My own requirements for a clean kill of a goose and large duck load are 80 and 120 appropriately penetrating pellets in a 30" diameter circle, respectively, and this must be achieved, obviously, at the maximum range I intend to shoot.

Load A) the 2 ¾ load, achieves the pattern figures for duck and geese to 50 yards, however when working out the energy density (penetrating ability), it is debatable if this pellet size has the energy to bring down a medium goose at 50 yards.

Load B) the 3" load, because of its increase pellet size it will quite happily cause the demise of a goose at 50 yards, but the pattern at 50 is a bit too light for duck, and at 60 the pattern is my minimum requirement for geese.

Hence, in my humble opinion, these are two loads that best used for two different type of quarry.

Load A and B will kill Geese and Duck to 40 yards, but neatly divide into a goose (3 inch cartridge and larger pellet) and a duck (2 ¾ inch cartridge and smaller pellet) load after 40 yards. This is not surprising really, as I am sure that this was Lyalvale's intention. At 30 yards both will shred the quarry and you will have to be "on form" to hit the bird as the pattern is very dense.

In summary

So what is Hevishots future in the UK?

Even at the current RRP I reckon it will sell. If the price can be made more competitive with the other non steel alternatives it would, at this point in time, be my first choice in a modern steel proofed gun, as wherever and whenever it is used it will excel in its ability to put a hole in anything, more so than lead ever could.

One word of caution, this stuff will penetrate well, very well, so bear this in mind when you sit within 200 yards of the next Fowler, especially if he is the one shooting Express Hevishot.

An Addendum to the original article

The current commercially available loads

Following on from a survey conducted during the last wildfowling season by Lyalvale Limited, the producers of Express Hevi shot cartridges for the UK and Europe, they are marketing a range of 3 different loads which are available from Express cartridge retailers from mid July 2004 and onwards.

2 1/2 inch 28 gram load in shotsize number 5

2 3/4 inch 32 gram load available in shot sizes number 4 and 3

3 inch 36 gram load available in shot sizes number 3 and 1

The cartridges are packed in boxes containing 10 cartridges

The other good news I have heard is that Lyalvale will be making Hevishot available for reloaders through their dealer network in tubs of 5 kilos.