



The light, fast steel loads are very effective on ducks out to 50 yards.

Lightweight steel loads – one year on...

Craig Maylam works with Target Products Ltd to develop “New Steel” –

Last year (issue #124 May/ June 2011) I wrote an article explaining how to load your own lightweight steel shot cartridges. On a personal level the response was amazing. It became apparent however that the reality these days is that few shooters seem to have either the time or inclination to load their own shotshells. The retailer selling the starter packs of components reported very modest sales.

Before penning the article last year, I considered that sales of reloading

components for creating your own shells might be poor so I devised a cunning plan, we will call it plan B.

Plan B involved some talks with Target Products Ltd in Timaru. If you are not aware, Target Products produces the Falcon range of shotshells right here in New Zealand. They also import all of the Fiocchi ammunition you see in the local sport shops, and in the pages of this publication.

I've had a long association with Target Products which started when I began to load my own steel shotshells (I've been loading steel longer than they have!). I needed some of my new loads run through a pressure gun, and after some negotiations they agreed to do my testing with their equipment.

All who know me will agree I can be very enthusiastic when I make any discovery. When I found the right steel loads I would rant endlessly with little provocation about their effectiveness. Some of this enthusiasm must have rubbed off on the guys at Target Products.

GOOD GEAR

Just because Target Products loads ammo in small town New Zealand doesn't

mean that their plant consists of a couple of old machines held together with number-8 wire. Their machinery and choice of cartridge components are equally the best you can source anywhere around the world, and identical to those widely used by major international cartridge producers. Wads are all imported from Italian manufacturers. The steel shot is so perfectly round it looks like small ball bearings and comes from the company that supplies 80% of global steel shot requirements. To round things off they use Fiocchi hulls together with magnum primers specially designed to ignite the selected propellant powders required for steel cartridges. These propellants are produced by recognized manufacturers in Europe and the USA. In my opinion the Falcon range of steel shotshells made right here in the South Island are equally as good as the best ammunition imported from overseas.

During production a sample of each load is tested for velocity and pressure every two to three hours and the results are checked and analyzed for consistency. Every part of the process is controlled in an effort to make a quality cartridge with no compromises. Finally, each cartridge is

“To deal with the pattern thinning I use #3 shot in the 24 gram loads, giving plenty of power and an equivalent pellet count to a 32 gram load of #2 steel shot.”





Years of hunting in the Canterbury and Lake Ellesmere region have allowed Craig to build up a store of knowledge about steel shot performance.

VELOCITY LOSS TABLE FOR STEEL SHOT LOADS #2 STEEL PELLET*						
DIST. YARDS	NEW STEEL 24G-1645	POWER STEEL 30G-1520	SPEED STEEL 32G-1450	ULTRA STEEL 35G-1460	HYPER STEEL 32G-1550	SUPER STEEL 35G-1490
0	1645	1520	1450	1460	1550	1490
1	1604	1483	1415	1425	1512	1454
5	1452	1346	1288	1296	1372	1312
10	1290	1202	1154	1161	1223	1182
15	1156	1085	1046	1052	1102	1068
20	1047	989	956	961	1003	975
25	957	908	880	884	920	896
30	881	838	814	818	849	828
35	815	778	756	759	787	768
40	757	724	705	707	732	716
45	705	676	659	661	683	668
50	659	632	617	619	639	626

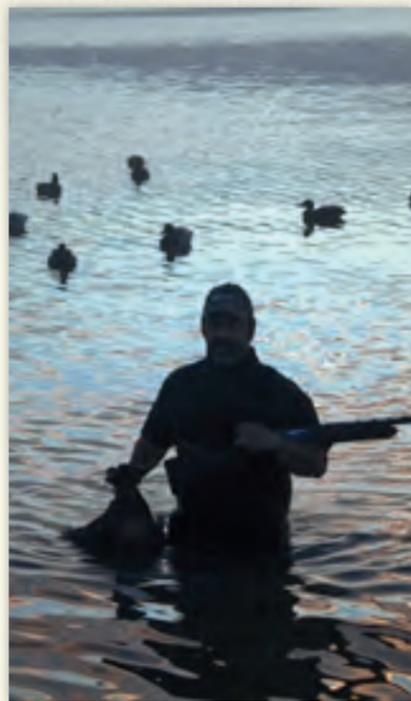
*Data generated using computer program Shotshell Ballistics for Windows.

PELLET ENERGY IN FOOT POUNDS REMAINING AT 50YD WITH #2 PELLETS					
NEW STEEL 24G-1645	POWER STEEL 30G-1520	SPEED STEEL 32G-1450	ULTRA STEEL 35G-1460	HYPER 3" STEEL 32G-1550	SUPER 3" STEEL 35G-1490
3.39	3.12	2.97	2.99	3.18	3.05

visually inspected prior to packing.

Initially, when Falcon's first steel loads became available back in 2004 shooters were offered only two choices – a 32 gram and a 36 gram cartridge in a 2-3/4 inch

case. These loads were okay but shooters wanted more velocity. In response to their requests the range was expanded in recent years to a 32 gram and a 36 gram load in a 3-inch case at a higher velocity.



With the right gun and loads, opening morning can be a success story...

In 2011 another load was added – a high speed 2-3/4 inch load with a lighter 30 gram payload called "Power Steel 30". The trend of lighter, faster loads had begun!

THE LATEST DEVELOPMENTS

I'm pleased to announce that Target Products now have in development a further load which will be released in time for the 2013 season. Though no name has been given to it as yet (I wonder if "Craig" would be suitable!), we'll call it for now "New Steel". It'll be a load similar to what I've been using for some years now, featuring a 24 gram payload at the highest velocity of any steel shot load they manufacture – 1645fps. It has undergone field trials and has been proven to a dependable performer. Watch this space...

LET'S LOOK AT VELOCITY

I'm going to open the proverbial can of worms now. When you go shopping for your ammunition for opening day and just buy the cheapest ammo you can find, then stop reading now.

On the other hand if you shop by velocity then I am going to dispel some myths. There's no standard that I can find that dictates exactly where the manufacturers measure the velocity of the load they're selling. Target Products quote the velocity at the muzzle. I am unsure where other companies measure their velocities, but

ENERGY COMPARISON BY SHOT SIZE POWERSTEEL 30

DIST. YARDS	POWER STEEL #2	POWER STEEL #4	POWER STEEL #6
	30G-1520	30G-1520	30G-1520
0	18.03	11.74	7.11
1	17.16	11.08	6.65
5	14.14	8.88	5.13
10	11.78	7.22	4.04
15	9.18	5.48	2.96
20	7.63	4.46	2.36
25	6.43	3.7	1.91
30	5.48	3.11	1.57
35	4.72	2.63	1.31
40	4.09	2.25	1.09
45	3.56	1.93	0.92
50	3.12	1.67	0.78

Notice that the available energy falls off quite quickly, and that there's a point where the smaller shot becomes ineffective.

some loads I've had tested never made the advertised velocity, one exceeded it and two were spot on. This article is not the correct forum for discussing how various brands of ammo stack up though, so I'll leave that discussion here.

Please refer to the table (Table 1) published here; the horizontal columns represent each of the five loads Target Products Ltd currently offers, but for interest the new steel loading has also been added. I have included the muzzle velocity of each of their loads for you too. The rows down the table represent the velocity in five yard intervals right out to 50 yards.

You will notice that the higher velocity loads retain more of their speed for longer, but by the time the pellets have flown 50 yards the velocity difference is quite small. The other thing you may notice is how fast each load loses its initial velocity. This is why it is so important to find out where velocity is taken from as the losses are huge in the first few metres. You must also remember that you are shooting spheres, and they are one of the least efficient projectile shapes.

Let's equate the 50 yard velocity to killing power. From research it has been found that you require at least three pellet strikes in the chest area with a minimum of 1.5 ft/lbs of energy to cleanly dispatch a duck. I've calculated the pellet energy for each load at 50 yards to see how they



Steel shot is here to stay, so you might as well learn how to get the best out of it.

measure up. Let's assume here that you and your gun can do your part and deliver three hits to the chest of a duck at the 50 yard range.

As you can see there is plenty of energy in all of these loads to get the job done properly at 50 yards. Let's see how the energies compare if we use the same load with different shot sizes. We'll use Power Steel 30 as an example.

WHAT DOES THIS INFO MEAN TO ME?

I wanted to show how quickly steel shot pellets shed their velocity. All the loads I've supplied data for are quite suitable for duck shooting out to 50 yards. You will still have to deliver three pellets to the target, but each load with #2 shot has enough energy to dispatch game humanely.

The New Steel #2 will give you the advantage of higher velocity and low recoil while delivering the most energy at the target, but this comes at a cost of lower pellet count. This means that you'll have a thinner pattern at long range. To deal with the pattern thinning I personally use #3 shot in the 24 gram loads which will give you plenty of power and an equivalent

pellet count to a 32 gram load of #2 steel shot. The combination of good pellet count and ample energy will give you the best of both worlds. The low pellet count can be an advantage on ponds or over decoys where shots are close. You have fewer pellets clustered in the air, reducing the number of ruined birds due to what I call the "colander effect". Finally the low recoil of New Steel will be most welcome by those who are recoil shy.

Come and join the light load club and try a couple of boxes of "Power Steel" and start to enjoy the benefits of lower recoil levels. Power Steel is loaded into 2-3/4 inch cases, so you might even fit an extra shell in that magazine too! Good luck for opening day.

Thanks to Hayden Brown at Target Products for making information available to me and for running the Ballistics for Windows program where all of the tabled data for this article came from. **Craig Maylam**

"...you require at least three pellet strikes in the chest area with a minimum of 1.5 ft/lbs of energy to cleanly dispatch a duck."



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Alcohol & firearms



Photograph: Chris Ziesler

Alcohol & some drugs (even if prescribed) dull & slow your physical & mental reactions.

Alcohol & drugs must never be taken before you go shooting or while you are shooting.

Do not shoot with others that are, or have been, drinking alcohol or taking drugs.

Wait until your firearm is safely locked away before drinking alcohol.



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