Mrr Bullets Green Hunting: the test of the new non-toxic bullets

By
Matteo Brogi
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June 24- 2020

A new product fills the vast panorama of non-toxic bullets. It is made by Mrr Bullets, Sabatti's new entrepreneurial adventure, and it is also available in two versions for hunting.

Regular readers will know that I have a predilection for non-toxic ammunition. This is an ethical approach to hunting confirmed by a fair amount of rifle shots with monolithic and traditional ammunition: experience has taught me that the difference between a clean shot and a less effective one is always - I repeat, always – the shot's placement. I pay close attention to the development of the market which, for various reasons, is devoting a lot of attention to lead-free ammunition. I watched with great interest the entry of Sabatti manufacturer, who makes ballistics a strong point. At Hit Show he brought a first batch of bullets made by Mrr Bullets, the company it founded for this purpose. Monolithic bullets, obviously, made through solids turning. The choice was almost obligatory

With the availability of an adequate number of bullets came the idea of preparing a cartridge for my Merkel Helix in .30-06 S caliber – the touchstone for new cartridges' tests – and testing it with the Sabatti Saphire rifle I've got. Its test came out in April on Caccia Magazine. The health emergency has delayed all performing tests, but, in the end, I managed to complete the schedule.

One caliber, three models, six variants

The manufacturer has provided 3 lines, one of which is an hunting variation (Green hunting), available in the variants 152 and 167 grains. So as to satisfy the widest range of hunters. Sport, available in the variants 152 and 158 grains, and Long Range (160 and 176 grains) are the other two shooting series. The supply inlcudes only the .30 caliber (already available) at the moment, but, as soon as everything will go back to normal and the raw material will be easily available, there are already plans for new calibers. There's talk of September 2020 for 6 - 6,5 - and 7 mm calibers, which are already under study.

The bullet is made with turning, as I wrote, in pure copper in order to use the material's malleability for better expansion. At the extremity it has a progressive hole, covered with a dark yellow polymeric tip, which facilitates the work and the connection along four slit triggers. The external shape recalls that of other contemporary creations: the bullet is slightly under-calibrated and the rifling engagement is guaranteed by three driving bands that perfectly fill the rifling's gaps, by minimizing contact surfaces, friction, copper deposits and barrel's wear. This is a solution that allows to increase the bullet's speed with the same load.

The shape of the under-calibrated sections between the driving bands has been modified, compared with other products, from cylindrical to truncated conical. This solution facilitates the material's movement during the compression of the bullet in the rifling, decreasing the deposit of residues inside the barrel and improving the constancy of the barrel's harmonic vibrations.

In the ogive's project it was decided to place the aerodynamic barycenter near to the physical one, thereby improving trajectory's regularity. A complex blend of expertise, which led to the patent of the solutions adopted and should also lead to the rise of the multi-radial rifling's of Sabatti's rifle, as well as that of traditional weapons.

Mrr Bullets Green Hunting: the shooting range test

The first step of the test has been to hypothesize the right charge. After a series of adjustments, we obtained, with our friend Maurizio, an adequate quantity. With a speed of 828 m/s and a ballistic coefficient (G1) of 0,425 – the energy and trajectory's drop values are perfectly in line with those of commercial loadings.

During the test in the firing range it is quite unavoidable to me not evaluating the bullet's precision. So that's what I did. Well, Merkel showed much appreciation for the ogive's outline; the 4 mm pattern has been the best of all; the worst pattern was of 20 mm, but excellent nonetheless. During the February test, the patterns of Saphire rifle were slightly wider (between 15 and 21 mm), it had a 23 mm pattern with commercial ammunition.

This is an excellence range as regards the hunting guns' efficiency, most of the time M.O.A. is considered an adequate dispersion. The average speed of Saphire equipped with a multi-radial

barrel was up by 19 m/s, as expected. It is likely that a greater familiarity with the weapon (and with the optical sight) could improve the results that, I remember, were not realized from a padded rest, so they are affected by subjective element. The exam is passed, with distinction.

Mrr Bullets Green Hunting: the technical sheet

Manufacturer: MRR Bullets
Bullet: Green Hunting, monolithic in copper
Caliber: .30 "
Bullet's weight: 152 grains
Price: 67 euros (packs of 50 balls) with Italian VAT
Web: www.mrrbullets.com

Mrr Bullets Green Hunting: collected data
Bullet: 152.6 grains
V_0 recorded: 828 m/s
Standard deviation: 2.6
E_0 calculated: 3,324 J
Pattern: 4 mm

Mrr Bullets Green Hunting: the firing table

1 • V_{150}: -3.73 mm
2 • V_{200}: -12.16 mm
3 • V_{250}: -25.73 mm
4 • V_{300}: -44.97 mm

On Caccia Magazine all news about monolithic and lead-free cartridges.

4