How We Tested

Testing was done with four bullets, two sabot and two full caliber. All charges were 100 grains, by volume, of Pyrodex Select. All groups were three shots each. We cleaned between each shot by scrubbing the bore with a patch soaked in Rusty Duck Black Off, followed by two dry patches. We then snapped two caps on the empty gun to ensure that the ignition channel was clear. Where necessary, the bullets were started with a starting tool and then seated with the supplied rod using the Barnes Muzzleload Bullet Alignment Tool to assure correct alignment with the bore.

The ramrod was not bounced or tapped during loading. Instead, the powder was compressed with hard, constant pressure, and all charges were compressed with the same amount of pressure. Shooting was done from a benchrest at 100 yards. We strove to be consistent during the test. When testing the Knight rifle, the cleaning protocol was varied for one shot. Loading was interrupted, and testers couldn't remember if a powder charge had been dumped. The rule of thumb is to assume that a charge was dropped, so the shooter dumped it out on the ground. We then popped a cap to burn any residual powder and cleaned the barrel again. In effect, this meant that it was cleaned twice. The result was a flyer that was 5 inches right of the group center. After that shot the cleaning protocol was maintained and the next shot was in the group. We ignored the flyer, and the three correctly loaded shots were measured.

As testing progressed we noticed that the tapered design of the Great Plains bullet was a big asset in loading consistency. By starting it carefully by hand, followed by more careful use of a bullet starting tool, accuracy was greatly improved. The poor group in the Remington was not a fair indication of how well this bullet will shoot. Two shots were in less than 2 inches when the third opened the group. Because, unlike the same bullet in the Knight, there was nothing to explain this flyer, the group was recorded as fired. This bullet shows promise in the Remington and more extensive testing is called for before ruling it out.

The Black Belt Bullet is sized to land diameter and is held in alignment with the bore by the plastic cup at the base. It is easy to load and doesn't suffer from the maiming that often occurs when loading tight-fitted groove-diameter bullets. The bullet is designed to upset upon firing and fill the grooves.

Certainly experimenting with different charge weights or powders will improve group size with some bullets in any of the rifles. For example, in the Remington group sizes were improved by using black powder instead of Pyrodex. However this test was designed to remain constant throughout, and so a standard charge of 100 grains of Pyrodex was settled on for all bullets.

Above: Test bullets included Hornady's .44 .300-grain XTP Sabots (two bullets, middle right) and .50-caliber, 410-grain Great Plains product (left), the Barnes 300-grain Expander MZ Sabot (middle left), and 405-grain Black Belt Bullets (right). The 405-grain cast bullet is from RCBS mold #45-405-FN.