

# Bullets for Muzzleloaders

Traditional muzzleloader rifles often sport a 1-in-66 inch or similar twist rate suitable for stabilizing round-ball projectiles. Many modern reproduction sidelocks shortened that to a 1-in-48 twist to make the rifles suitable for both round balls and conical bullets. Today's in-lines use a faster twist rate of 1-in-32, 1-in-28, or even 1-in-24. This will stabilize long conical bullets with or without sabots.

Conical bullets are better ballistically than round balls because they allow more bullet weight in a given bore diameter. This helps maintain velocity downrange and increases penetration. Assuming adequate bore diameter, full-caliber lead bullets of any design are one of the best choices a hunter can make. They almost always exit on deer-size game, leaving behind a long and large wound channel, and they shoot flat enough at muzzleloader ranges.

Perhaps the biggest problem with conical, full-caliber, engraved-on-loading bullets is in achieving consistent accuracy. Flyers are common and can be frustrating.

There is no easy solution to this problem except to pay attention to loading technique and consistency. Lead is malleable. If the bullet is tipped when it's started in the bore, it can enter out of alignment and it will not shoot well. Or if the nose is mashed when engraving the rifling while starting, or while jamming the bullet down a fouled bore, accuracy will suffer. Bullets can also deform while seating against the powder. Bouncing the ramrod against a seated bullet is a guessing game that will give you inconsistent seating pressure and almost guarantee nose deformation. Instead, use constant pressure on the rod.

Black Belt Bullets from Big Bore Express offer a different approach. These bullets are sized to land diameter and are designed to upset on firing to fill the grooves. They feature attached plastic wads on their base to ease in alignment and to seal the bore. They are easy to load, and deformation is all but eliminated.

Recent years have seen gun makers attempting to create a modern rifle from a muzzleloader. Trying to flatten trajectories by using pistol bullets at higher velocities creates false gains, as the flatter trajectories come at a price in terminal performance. While the trend to pistol bullets in sabots is probably an improvement over round-ball terminal ballistics, they have some flaws, not the least of which is poor penetration. Pistol bullets aren't designed to hit targets at high velocities, so they often show core and jacket separation.

Another reason for the popularity of sabot bullets is their accuracy; they are easier to load consistently and that translates to better accuracy. In any firearm, choosing a hunting bullet solely on accuracy is a big mistake. What the bullet does after it hits the critter is far more important. The Barnes



***Above: The biggest problem with conical, full-caliber, engraved-on-loading bullets is in achieving consistent accuracy. There is no easy solution to this problem except to pay attention to loading technique and consistency.***

all-copper Expander-MZ bullets offer what is arguably the best terminal ballistic performance of any sabot bullet. They performed well in expansion testing with wet newspapers and on game, including two deer and five or six hogs. We used the 300-grain version to take the deer and wild hogs. Only one bullet was recovered. (One actually hit a smallish whitetail head-on and penetrated the full length to exit on the hip.) That single recovered bullet hit a large boar hog in the left shoulder and was found imbedded in the thick cartilage shield on the right shoulder. The bullet showed classic six-petal expansion to 0.950 inch and 100 percent weight retention.

We also have had excellent results using a 405-grain cast bullet from an RCBS mold #45-405-FN, designed for the .45-70 and other similar cartridges, sized, without lube or a gas check, to .452 in a die designed for the .45 Auto. It's loaded with the same long sabots that are used for the Barnes 300-grain Expander-MZ bullets. This flat-nose design has been proven effective on big game.

They are usually cast from wheel-weights. This alloy is tough enough to penetrate fully on game to elk size while still providing a little expansion. For bigger stuff we would use the harder Linotype so the bullet will act almost like a solid and penetrate well. With deer or antelope, pure lead can be used to ensure some expansion, although a .45-caliber hole from a good flat point bullet usually gets results all by itself. This bullet can be made for almost nothing, keeping the cost of shooting down.