

The Classic .30-30 Winchester (.30 WCF)

By Chuck Hawks



Illustration courtesy of Hornady Mfg. Co.

The most popular American sporting cartridge of all time in terms of total numbers of rifles and cartridges sold, and on average the 4th best selling centerfire rifle cartridge in the U.S. in the year 2000 (first on some sales lists), the .30-30 Winchester is a classic. It is also the most popular centerfire rifle cartridge in Canada and Mexico. In Europe, where it has been used in combination guns and drillings, it is called the 7.62x52R. The .30-30 is not generally considered a reloader's cartridge, but the latest sales figures I saw for RCBS reloading dies put the sales of .30-30 dies in fifth place among all rifle cartridges.

The .30-30 was introduced in 1895 for the new John Browning designed Winchester Model 1894 lever action rifle. The .30-30 was the first American sporting cartridge loaded with smokeless powder. That is what the name .30-30 stands for, a .30 caliber bullet with 30 grains of the (then) new smokeless powder. At times the .30-30 has also been called the .30 WCF (Winchester Center Fire).

The .30-30 case is based on a necked-down version of the rimmed .38-55 case. It has a 15 degree 39 minute shoulder angle and a fair amount of body taper, which makes it a smooth and reliable feeding cartridge. The case is 2.04 inches long, and the overall cartridge length is 2.55 inches. The SAAMI maximum average pressure is 38,000 cup.

The .30-30 was a revolutionary sporting cartridge back before the turn of the 20th Century and it was primarily responsible for killing off the big bore black powder cartridges that, up until the advent of the .30-30, had reigned supreme. The .30-30 extended the point-blank range of the big game rifle from about 125 yards to a full 200 yards. (Check the trajectory of the black powder .44-40 or .45-70-405 sometime.) Heady stuff in 1895 and maybe even today: an estimated 90% of all deer are still killed within 100 yards.

The .30-30 is the great North American deer cartridge, and for good reason. It is a virtually ideal compromise between power and recoil. A 7.5 pound .30-30 rifle shooting the standard 150 grain factory load generates about 11.7 ft. lbs. of recoil energy. For comparison, a .30-06 rifle of the same weight shooting a 150 grain factory load generates about 21.7 ft. lbs. of recoil energy. Most hunters can shoot the .30-30 well, as its recoil is below the 20 ft. lb. upper limit for sustained use and the 15 ft. lb. maximum that most hunters can shoot comfortably.

The .30-30 is just about perfect for hunting deer, antelope and black bear at medium ranges. It will also take elk and caribou at moderate ranges. Even huge and/or dangerous game like moose, grizzly bear and polar bear have fallen to the trusty .30-30, but it is not recommended for very large, dangerous, or thick skinned game.

.30-30 cartridges are available virtually everywhere in North America that ammunition is sold. I have seen remote general stores where only 4 or 5 different cartridges were stocked, but I have never seen one that did not sell .30-30 Winchester ammo.

Rifles for the .30-30 have been made in bolt action, pump action, break action and, of course, lever action models. It is in the latter that the .30-30 became famous. Gun writers generally ascribe the popularity of the .30-30 to the short, flat, and handy lever action rifles for which the cartridge has traditionally been chambered. This may be partly true, but there have been other cartridges chambered in these neat Winchester and Marlin lever guns. In recent years the .307 Win., .308 Marlin, .356 Win., .375 Win., .444 Marlin and .450 Marlin were all developed specifically for traditional lever action rifles. Of course, they all kick harder than the .30-30. And guess what? The .30-30 continues to outsell all of them combined.

At one time Remington introduced a line of rimless cartridges for their pump and autoloading rifles to compete with Winchester's popular .30-30, .25-35, and .32 Special. The rimless .30 Rem. is so similar to the .30-30 that the same loading data may be used for both. Savage got into the game with the rimmed .303 Savage, another .30-30 copy. Both these cartridges are obsolete now. If imitation is the sincerest form of flattery, the .30-30 has been flattered plenty.

Gun writers tend to fall into two groups: those who favor high velocity cartridges and bolt action rifles (the majority party), and those who favor big bore calibers and bolt action (or occasionally double-barreled) rifles. Needless to say, both groups belittle the medium size, medium velocity .30-30 Win. and the lever action rifle. Ordinarily, writers from either school never mention the .30-30 unless it is to bad rap some other cartridge, as in: "A .44 Magnum revolver has even less energy at 100 yards than a .30-30." (True, but the .44 still has enough energy to stop deer in their tracks.)

The late Jack O'Connor, from the high velocity party but also a fine writer who called 'em as he saw 'em, was one of the few gun scribes who gave the .30-30 any credit. In *The Rifle Book* he wrote: "With its good killing power, its fair velocity, and its light recoil, the .30-30 is still an adequate deer cartridge for most conditions under which deer are shot in America, if the man behind it does his stuff. The .30-30 will also do for moose and elk if the animals are taken at reasonable ranges and if the man behind the rifle is a good shot and gets his bullets in the chest area. Tens of thousands of moose have been killed in Canada by .30-30's and will continue to be. Plenty of grizzlies have been killed by .30-30's."

For many years the standard factory loads for the .30-30 have included 150 grain and 170 grain flat point bullets of either JHP or JSP design. The ballistic coefficient (BC) for the Speer 150 grain FP bullet is .268 and the sectional density (SD) is .226. For the 170 grain Speer FP bullet the BC is .304 and the SD is .256.

During 2005, Hornady introduced a 160 grain Evolution spitzer bullet in Hornady LeverEvolution factory loads. This soft tip, pointed and boat-tailed bullet represents a real breakthrough in .30-30 bullet design. Its BC is .330 and its SD is .240. Launched at a MV of 2400 fps from a 24" barrel, the LeverEvolution load makes the .30-30 about a 250 yard CXP2 game cartridge.

The standard 150 grain factory load from the Big Three has a muzzle velocity (MV) of 2,390 fps (formerly 2,400 fps) and 1,902 ft. lbs. of muzzle energy (ME). In addition, Winchester offers a premium Supreme factory load with a 150 grain Power-Point Plus bullet at a MV of 2480 fps with 2049 ft. lbs. of ME. The Hornady LeverEvolution 160 grain factory load has MV of 2,400 fps and ME of 2046 ft. lbs. The standard 170 grain factory load has a MV of 2,200 fps and ME of 1,827 ft. lbs. 125 grain bullets at 2,570 fps are offered by some ammo manufacturers.

All bullets for the .30-30, except the Hornady Evo boat-tail spire point, are flat point bullets because cartridges in the tubular magazines of traditional Marlin and Winchester lever action rifles ride in a

straight line, with the nose of one bullet touching the primer of the round in front of it. Note, however, that the ballistic coefficient for the 150 grain flat point .30-30 bullet is slightly better than the BC for the "long range" 60 grain .224 spitzer bullet for the .223/5.56 NATO (BC=.262). The Hornady Evo bullet avoids the problem by using a soft polymer tip that will not set off the primer of the cartridge it bears against.

Set up a scoped .30-30 for its maximum point blank range (+/- 3") and the trajectory of the Winchester Supreme 150 grain factory load looks like this: +2.9 inches at 100 yards, +0.1" at 200 yards, -3.0" at 235 yards. The trajectory of the standard 170 grain factory load looks like this: +2.9" at 100 yards, 11.8" at 200 yards, -3.0" at 211 yards.

The 160 grain Hornady LeverEvolution factory load does a little better. Here is its trajectory: +2.9" at 100 yds, -0.2" at 200 yds, -3" at 232 yards. This bullet is down about a foot at 300 yards. In our testing here at *Guns and Shooting Online*, we have found the LeverEvolution factory load to be exceptionally accurate in all of the Marlin and Winchester lever action rifles in which we have been able to test it. The entire staff has switched to this load for their .30-30 rifles.

With iron sights, the 170 grain load should be set up to print 3 inches high at 100 yards. It will then be dead on at 175 yards and 2 inches low at 200 yards. Your .30-30's point-blank range (+/- 3") is now about 210 yards.

Remaining energy for the 150 grain Power-Point Plus bullet is 1,462 ft. lbs. at 100 yards and 1017 ft. lbs. at 200 yards. For the 170 grain Silvertip bullet the remaining energy figures are 1,355 ft. lbs. at 100 yards and 989 ft. lbs. at 200 yards. For the 160 grain LeverEvolution bullet the numbers are 1643 ft. lbs. at 100 yards, 1304 ft. lbs. at 200 yards and 1025 ft. lbs. at 300 yards. Note that at 300 yards the Evo bullet retains more kinetic energy than the standard bullets do at 200 yards.

The reloader has access to a larger variety of bullet weights than the factories offer. These include 110 grain, 125 grain, 130 grain, 150 grain and 170 grain bullets. Unfortunately, as of this writing (at the end of 2007), Hornady has not released the 160 grain Evo bullet for reloaders. Premium .30-30 bullets such as the 150 grain Barnes X-Bullet and 170 grain Nosler Partition bullet are available to the reloader. Handloads can essentially duplicate the factory loads, but cannot exceed them by a meaningful amount.

The *Hodgdon Data Manual No. 26* shows that 31.0 grains of IMR 3031 powder will drive a 150 grain bullet to a MV of 2184 fps, and 33.0 grains of IMR 3031 will drive a 150 grain bullet to a MV of 2364 fps. 30.0 grains of H4895 powder will give a 170 grain bullet a MV of 1919 fps, and 32.0 grains of H4895 will give the same bullet a MV of 2212 fps.

When choosing hunting bullets for a .30-30 select a lighter, quick opening type for deer size animals. Reserve the heavier "controlled expansion" type bullets for larger game. In the Winchester bullet line, this might mean the 150 grain Power-Point for deer and the 170 grain Silvertip for tougher game. The 160 grain Evo bullet is a pretty good all-around projectile.

As I write this, the .30-30 Winchester is 107 years old. It has compiled a record in the field that will never be equaled, let alone surpassed, and it is still going strong. The .30-30 is also covered in my article "*Ideal Deer Cartridges*" and in several cartridge comparisons.