

All .225 Winchester handloads were tested in a Ruger No. 1 single shot with an octagonal barrel paired with a Redfield 6-18x Five Star Scope.



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# .225 Winchester

## Thirty Loads for a Classic Cartridge

**Stan Trzoniec**

**T**he .225 Winchester has a very interesting history behind it, although its timing was off. Circa 1930, Winchester introduced the .22 Hornet to the U.S. commercial market. It was derived from the black-powder .22 WCF, and once the Hornet started to make a headway, Winchester introduced the Model 54 rifle so chambered. Winchester quickly followed up on the Hornet with the .218 Bee, .219 Zipper and the .220 Swift by 1935.

From then to the 1950s, there was not much activity from Winchester regarding small, .22-caliber cartridges. Competition arrived that decade with the .222 Remington Magnum. The .223 Remington (circa 1963) followed, along with the .224 Weatherby Magnum. Winchester countered in 1964 by introducing the .225 Winchester.

At the time, it seemed like a good idea, as the .220 Swift was starting to get a bad rap for barrel erosion – due to the use of mild steel in the barrels combined with the advent of modern powders and higher velocities. By injecting the .225 Winchester into the marketplace, the company hoped the cartridge's slightly slower velocities would help its sagging varmint rifle sales. The Swift was on the way out and was no longer chambered in the Model 70 rifle. At about the same time, Remington decided to commercialize the .22-250 with great fanfare and with the opportunity to combine it with the Model 700 rifle. The .225 Winchester was starting to lose



The .225 Winchester (left) was quickly overshadowed by the .22-250 Remington (center), itself an offshoot of the .250-3000 Savage (right).

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ground, and within a short period, it was dead commercially.

The .225 Winchester is actually a good cartridge for serious varmint shooters. It is easy to reload, and even though it headspaces on the shoulder and not on the rim, it is a semirimmed case with a rim diameter of .473 inch, the same diameter as the .220 Swift.

Winchester still shows .225 unprimed brass (as of 2015) on its list of available components, and a single 55-grain Pointed Soft Point factory load is listed at over 3,500 fps. In my rifle, velocity was 3,404 fps with a 1.23-inch group. Since the .225 Winchester uses .224-inch bullets, many bullets, primers and powders are available.

A few years ago, I had a heavy, 26-inch octagonal .225 Winchester barrel put on a Ruger No. 1. When the rifle was complete, I had mixed feelings after mounting a Redfield 6-18x Five Star scope atop it, because it checked in at a hefty 10 pounds. For a guy who likes to walk around the periphery of large farm pastures, this seemed a little out of line, but for short hunts it works fine.

The .225 Winchester is easy to work with, and reviewing the lat-



The list of powders used to test .225 Winchester handloads was extensive and included those pictured above.

est loading manuals shows there are plenty of component variations. Since I already had the rifle, the first thing was to set up the press with the proper dies and a few dozen cases. For the first go-around, I like to full-length size all new cases to get rid of any manufacturing defects, like dents or dings in the neck and shoulder areas. Since I enjoy going the extra mile when working with special or wildcat cartridges, Redding sent its Series C

.225 Winchester die set with both a full-length and neck-size-only die included. The neck-size-only die would be used once enough cartridge cases had been fireformed to the Ruger chamber.

After the cache of brass was sized and loaded, it was taken to the range for the initial fireforming and getting the scope sighted in for fine-tuning later. For this part, a mild load of 31.0 grains of BL-C(2) with a 50-grain bullet over a CCI 200 Large Rifle primer was used. Fired brass easily formed to the chamber. I did not lose a single case to splits around the neck or body, which I'm sure is because I try to make up fireforming loads of about 80 to 90 percent of the maximum loads that will be used later for accuracy.

From here a few of the cases would be blackened on the neck and shoulder to make sure the neck-sizing die does not touch the shoulder before loading. Checking the ball expander within the Redding neck-sizing die, it came out to .222 inch – perfect for my needs. After neck sizing, which helps eliminate case stretching, all cases were checked for overall length and nothing was out of line. For the record, new brass measured 1.928 inches, and that length never changed during testing. Checking the dimensions from the chamber in the rifle indi-



The .225 Winchester remains a fine cartridge for predator hunting.



Hornady 55-grain V-MAX bullets over 32-grains of IMR-4064 resulted in this .550-inch, 100-yard group.

cated there was no need to turn the necks, and refreshed cases fit into the Ruger with just a slight amount of pressure and a resounding *click* on the operating lever of the No. 1.

Primer selection seems to be the easiest, and for my loading chores, Winchester Large Rifle (WLR) primers were used. I've used this primer before with this cartridge, so there was no reason to change, and previous results were consistent in every way. As an option, the so called "benchrest primers" might be a good idea, but looking at my results on most of the loads, I'll stick with the Winchester standard primer when working with the .225 Winchester.

Bullets, like powders, represent a large amount of time in research to expand the versatility of the .225 Winchester over a large selection of game and shooting distances in the field. I am not partial to one brand so tried to use a large selection here. Bullets from Berger, Nosler, Speer, Hornady, Barnes and Sierra were used with various powders to find the best combinations that can be used repeatedly for clean kills downrange. In addition, many configurations (i.e., hollowpoint, soft-point, boat-tail) were tried to suit a majority of needs.

The choice of powders is extremely broad today. Sitting by the wood stove last winter, I researched propellants for the .225 Winchester that would be cost-effective in terms of yielding the best results in accuracy and velocity. In the end, I



At .441 inch, this is the best group of the entire series and was shot with Berger 40-grain flatbase bullets over 32.0 grains of IMR-3031 for a velocity of 3,848 fps.

came up with a baker's dozen (with a few reduced loads) that, with a few exceptions, should be useful to a handloader (see Table I).

Here is the breakdown in making good loads for the .225 Winchester. Looking at all the data, the .225 Winchester is still an impressive cartridge to have in one's varmint battery. Starting out with 40-grain



Speer 45-grain spitzers over 34 grains of IMR-4320 grouped in .585 inch at 100 yards.

bullets, the best groups overall went to the Berger FB Varmint over 32.0 grains of IMR-3031 for a .445-inch group. Long a favorite among .22-caliber shooters, IMR-3031 still leads the pack in many of the bullet (regardless of weight) combinations in my testing. Using a different powder, the highest velocity in this category was 4,142 fps with A-2495BR.

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The average velocity for all 40-grain bullets tested was 3,895 fps with a mean group of only .747 inch.

The Speer 45-grain spitzer has always been a favorite, especially with 34.0 grains of IMR-4320. I have used this combination before, and with the Ruger managed to squeak out groups around .585 inch at 3,749 fps. If looking for the best velocity, the Barnes 45-grain spitzer with IMR-3031 reached 3,822 fps, but groups were nothing to write home about with this particular bullet. The average of all groups with 45-grain bullets was .930 inch with a velocity average of 3,747 fps.

Fifty-grain bullets are favored due to their ability to reach decent velocities with enough mass left for woodchucks or badgers. The Nosler spitzer has always been a good bullet to have in my rifle, and over 34.0 grains of IMR-4064, a three-shot group that measured .475 inch was managed. With the Barnes X-Bullet and A-2015BR powder, the best velocity was 3,788 fps. Again, adding all the results together, the combined group average was .923 inch with a mean velocity of 3,668 fps.

Also tested were 52- and 53-grain bullets, and although not as



The case neck expander button on the Redding die used measured .222 inch, which provides reasonable neck tension to hold bullets in place when using the single-shot test rifle.

popular as the workhorse 50- and 55-grain projectiles, they gave decent results. The Berger 52-grain FB Varmint bullet over 31.5 grains of IMR-3031 gave impressive results in both group size (.635 inch) and a velocity of 3,615 fps. Averaging everything in the 52-grain category resulted in a mean group of .845 inch with a velocity of 3,572 fps. For some reason the Barnes 53-grain X-Bullet did not group as well but looked good in velocity readings.

Finally, my all-time favorite bullet weight for the eastern woodchuck is 55 grains. Hard to ignore, the Hornady V-MAX over 32.0 grains of IMR-4064 hit almost 3,500 fps

### Table 1 .225 Winchester Select Powders

**SR-4759:** best for reduced loads with good accuracy

**H-322:** easy to meter, benchrest accuracy

**A-2015BR:** great for medium varmint cartridges

**IMR-3031:** effective in smaller-capacity varmint cartridges

**H-4895:** versatile in a variety of cartridges

**IMR-4895:** longtime favorite for match shooters

**A-2495BR:** good for many smallbore applications

**IMR-4064:** perfect for the .225 Winchester

**RL-15:** medium burn rate suitable for varmint use

**IMR-4320:** short granulation, easy metering

**W-748:** suitable for a wide variety of center-fire use

**BL-C(2):** good choice for the .225 Winchester, easy to meter

**H-380:** excellent in most .22-caliber cartridges



The only compressed load tried consisted of 36.0 grains of RL-15 over a Nosler spitzer resulting in a velocity of 3,986 fps and a .575-inch group at 100 yards.

Table II

**.225 Winchester Handloads**

bullet (grains)	powder	charge (grains)	100-yard velocity (fps)	group (inches)
40 Berger FB Varmint	IMR-3031	32.0	3,848	.445
	A-2495BR	34.0	4,142	.530
40 Nosler spitzer	A-2015BR	32.0	4,032	.750
	RL-15	36.0*	3,986	.575
40 Speer softpoint	H-4895	33.0	3,743	.730
	H-322	31.0	3,622	.860
45 Barnes spitzer	IMR-3031	31.5	3,822	1.190
	IMR-4064	33.0	3,739	1.170
45 Speer spitzer	IMR-4320	34.0	3,749	.585
	W-748	33.0	3,680	.775
50 Hornady Spire Point	A-2495BR	31.5	3,638	.920
	BL-C(2)	33.0	3,455	.990
50 Barnes X-Bullet	A-2015BR	31.0	3,788	1.250
	H-4895	33.0	3,668	1.395
50 Nosler spitzer	IMR-3031	32.0	3,753	.510
	IMR-4064	34.0	3,707	.475
52 Berger FB Varmint	A-2015BR	30.0	3,597	.970
	IMR-3031	31.5	3,615	.635
52 Hornady A-MAX	IMR-4064	32.0	3,532	.655
	W-748	33.5	3,545	1.120
53 Barnes X-Bullet	A-2495BR	31.5	3,666	1.840
	BL-C(2)	33.0	3,615	1.130
55 Hornady V-MAX	IMR-4064	32.0	3,469	.550
	H-4895	31.4	3,480	.695
55 Nosler spitzer	IMR-4064	30.9	3,357	.590
	W-748	33.0	3,437	.840
55 Berger FB Varmint	A-2495BR	31.0	3,565	.580
	H-4895	30.4	3,352	.750
55 Sierra boat-tail	H-380	34.3	3,420	.610
		36.3	3,583	.652
<b>reduced loads:</b>				
55 Speer FMJ	SR-4759	10.0	1,820	.937**
		12.0	2,108	.942**

\* compressed

\*\* reduced loads fired at 50 yards

**Notes:** All loads tested in Winchester once-fired cases in the Ruger No. 1 with a 26-inch barrel. All loads were trickle charged. Winchester WLP (large rifle) primers were used throughout.

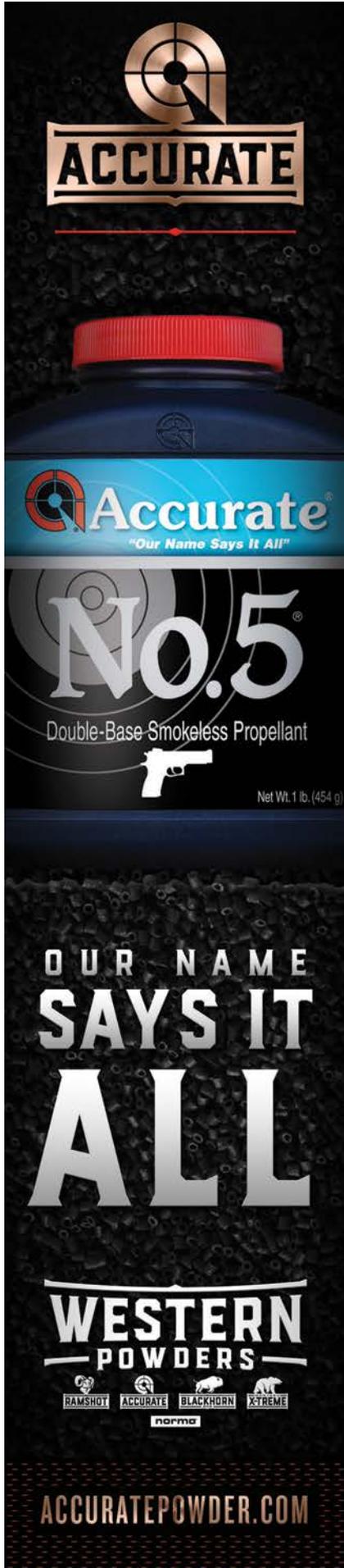
*Be Alert – Publisher cannot accept responsibility for errors in published load data.*

with a three-shot group of .550 inch at 100 yards. Just a little larger (.652 inch), the Sierra boat-tail reached the highest velocity – 3,583 fps with 36.3 grains of Hodgdon's H-380 powder. All groups averaged .658 inch with an average velocity of 3,457 fps. Lastly, I ran a check of all cases loaded with 55-grain bullets and found nothing out of the ordinary in the way of cratered primers, split cases or excessive overall length. I only came across one compressed load – that of RL-15 powder – that filled the case neck halfway up to the mouth.

Finally, I like to shoot reduced loads in all calibers for smaller game and plinking when the grand-

son comes over. Small kids don't like hard-kicking rifles, so with a 55-grain Speer FMJ with the loads shown in Table II, at 50 yards or closer he is a happy camper just to hit clay targets. Since the powder charges are small, a tuft of cotton tamped over the powder ensures good ignition.

When it comes to favorite bullets and powders, I like the bullets from Berger, Nosler, Speer and Hornady loaded in the .225 Winchester, and for powders, my vote goes to IMR-3031, A-2495BR and especially IMR-4064. SR-4759 is great for reduced loads. With these, some patience and a good rifle, the .225 Winchester really shines. 



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