

Think you know how your gun shoots that load? Not if you haven't patterned it.

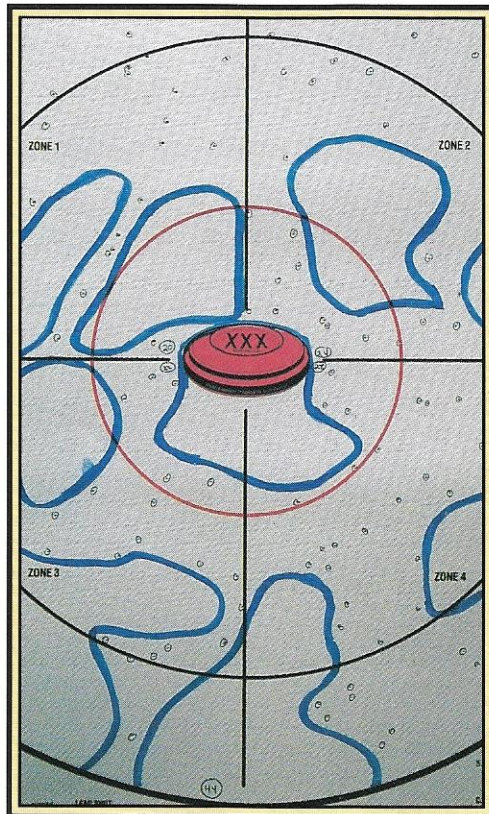
“What do you mean you don’t pattern your loads?” Tom Armbrust asked with some amazement. “How do you know what they are doing?”

Like everyone else, I had heard and read about patterning shotgun loads. And, like everyone else, I’d never done it. I had, like everyone else, even fired a round or two onto the flat surface of a pond and convinced myself I could tell what the pattern was from that.

Like everyone else, I had my hits and misses. When I missed, especially on clay birds, I just blamed myself. After all, I figured, shells were shells. Maybe the real cheapies weren’t any good. But those high-priced target loads were all the same, right?

Then I met Tom Armbrust, who set me straight. Armbrust is president of Ballistics Research, a firearms and ammo testing lab in McHenry, Illinois. While Ballistics Research works with all types of ammunition, Tom specializes in shotguns and shells. So he was someone worth listening to.

“Every load is different and shoots differently, even from a test barrel,” he



pointed out. “Even more important is the fact that every shotgun has its own personality and handles loads differently.”

I still wasn’t convinced. Then I spent a day watching him as he developed some new loads for a client. The same powder and wad loading produced radically different patterns just by changing shot size.

“Change any component of the shooting mix—size, quantity, or quality; powder type or amount; wads; chokes; even your distance from the target—and you can totally change shotgun performance,” he stressed. I believed him.

What’s this got to do with you? Plenty when you consider the incredible number of target loads on the market right now.

Federal, for instance, has 12 target loads and three field loads that qualify for sporting clays use (3¼-dram, 1⅛-ounce maximum load with No. 7½ or smaller shot). Consider that these are loaded with four different shot sizes, and you have well over 50 different loads just from Federal. Remington’s entries number nine target and one qualifying field load in four shot sizes plus duplex loadings. Winchester has six target and one field load in four

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Now add in smaller, albeit high-quality, ammo makers like Focchi and Victory, and you have innumerable choices. The only way to focus on the ones that serve your needs best is to fire them at a patterning board.

By the way, you should be patterning your hunting loads, too. Field loads, because they usually are higher velocity than target loads, are more sensitive to guns and chokes. A load that performs well for me—from my gun—might have holes in its pattern big enough to throw a cat through when fired from yours.

There are two approaches to patterning—hunting and target. A hunter's pattern is much more simple. All you do is draw a life-size picture of the game being hunted on a large sheet of paper, step back the distance you normally shoot at that game, and fire.

You're looking to find two things. First, eyeball the mass of the pellet holes to determine if your point of aim and point of impact are the same—or near enough to make no never mind. You can make up for minor differences by Kentucky windage. Major changes, however, may mean a different load is needed or that you need some barrel work.

The second thing to check is how many pellets actually hit the target. Generally speaking, for game birds like pheasant and duck, you need at least five pellets in a vital region. Lighter birds, like dove and quail, should go down with three.

Eyeball the pattern, too, to assure there are no game bird-size holes in the spread. It's really a simple procedure. And if you do it with a couple of buddies, you can turn it into a game.

Patterning target loads gets more com-

These percentages are averages of five patterns fired with each listed load at 40 yards from a Browning Lightning Sporting Clays shotgun choked improved cylinder. Remember that your shotgun will most likely pattern these loads differently.

Shotshell Pattern Performance Of Various Target Loads

LOAD	TOTAL% (30" circle)	CORE% (20" core)	EDGE% (5" annual ring)	TOTAL PELLETS (30" circle)
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Federal:				
Handicap 7 ¹ / ₂	33	19	14	129
Gold Medal 7 ¹ / ₂	37	21	16	146
Extra-Lite 9	35	20	15	234
Focchi:				
Max.Vel. 7 ¹ / ₂	37	22	15	146
Lite 8	38	23	15	177
VIP America 8	37	22	15	173
Remington:				
Duplex 7 ¹ / ₂ x 8	39	22	18	169
International 8	34	19	15	140
Light Target 8	42	26	17	197
Victory:				
1 oz. Trap 7 ¹ / ₂	39	24	16	139
1 oz. Skeet 9	30	17	13	199
Sporting 8	39	23	16	182
Winchester:				
Super				
Handicap 7 ¹ / ₂	35	20	14	121
Super				
Handicap 9	26	14	12	172
Super-Lite 8	32	18	13	146

plicated. You start with a sheet of paper at least 40 inches square. Actually, 40x48 is the traditional size. In the center, put an aiming mark. Move back 40 yards and fire at that mark.

Back in the house, eyeball the pattern and draw a 30-inch circle around the densest part of it. Then inscribe a 20-inch circle inside that. If you want, you can subdivide these even more.

Merely bisect the circles with straight lines

both vertically and horizontally, and you end up with eight quadrants, four in the inner core and four in the outer ring.

The British, who tend to go overboard, create 16 separate zones when patterning loads, then figure the percentages for each one. The more zones you create, the more information you can gather.

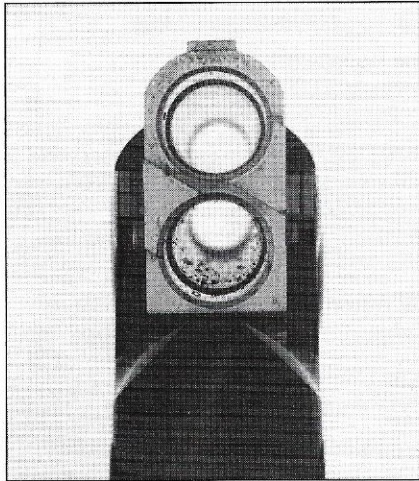
Look, for example, at Victory's Sporting load with No. 8 shot (see accompanying chart). The two-zone pattern tells me that 23 percent of the pattern falls in the 20-inch core when fired at 40 yards from my Browning Lightning Sporting Clays gun with the improved-cylinder choke installed. The

Continued on page 84

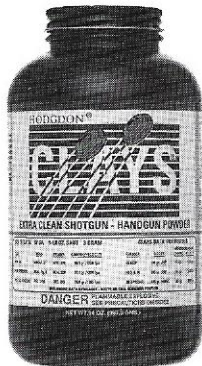
The author found patterning loads as easy as it is vital to a shotgunner's success. He used Visible Impact Targets (left), which are pre-printed with convenient pattern zones.



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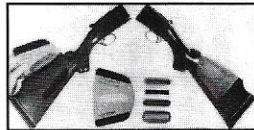
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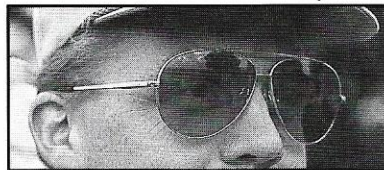
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Targeting (from page 39)

five-inch outer ring holds 16 percent. Total count is a very respectable 39 percent, which amounted to 182 pellets.

If I divide the circles vertically and horizontally, however, I also learn that this load shoots a hair to the right. There's only a percentage point difference, though, so it isn't significant.

Note that I said to do your counting and calculating indoors. The reason is that you're doing a lot of math, and you want to be as comfortable as possible. You start by counting each pellet hole in each zone you are working with. Mark each hole with a tick or circle so you don't lose track. Record the total number of holes in each zone.

To figure the percentages, you first need a chart that tells you the average number of that size pellet in the charge you are using. Most of the time, this means looking up the number contained in one ounce, then adjusting for your shot charge weight as appropriate. Counting the pellets in several loads you carefully cut open, then averaging the counts, is an option some use.

A minimum of five shots should be fired for each load. Ten is even better.

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