## **ACCURACY AND CHRONOGRAPH DATA**

Ultramax 223 Rem.	Ruger	Adcor
52-gr. HP #223R1	SR-556E	B.E.A.R. Elite
Average Velocity	2758 fps	2720 fps
Standard Deviation	63 fps	26 fps
Muzzle Energy	878 ftlbs.	854 ftlbs.
Smallest Group	0.6 in.	0.5 in.
Largest Group	1.7 in.	1.2 in.
Average Group	0.9 in.	0.7 in.

Hornady Superformance	Ruger	Adcor
223 Rem. Varmint 53-gr. SPF	SR-556E	B.E.A.R. Elite
Average Velocity	3039 fps	2999 fps
Standard Deviation	19 fps	17 fps
Muzzle Energy	1087 ftlbs.	1058 ftlbs.
Smallest Group	0.9 in.	1.0 in.
Largest Group	2.0 in.	2.8 in.
Average Group	1.1 in.	1.4 in.

Monarch (Barnaul)	Ruger	Adcor
223 Rem. 55-gr. FMJB	SR-556E	B.E.A.R. Elite
Average Velocity	2812 fps	2748 fps
Standard Deviation	25 fps	41 fps
Muzzle Energy	965 ftlbs.	922 ftlbs.
Smallest Group	1.2 in.	0.9 in.
Largest Group	1.7 in.	2.1 in.
Average Group	1.5 in.	1.1 in.

To collect accuracy data, we shot up to 10 five-shot groups at 50 yards with red-dot sights. We recorded velocities using a Competitive Edge Dynamics M2 chronograph (\$200, #399-000-012), with the first screen set 12 feet from the muzzle. Velocities were recorded with an air temperature of 76 degrees, at an elevation of 541 feet with 28% percent humidity. Accuracy is the average group size for five-shot groups, measured center-to-center of the widest-apart bullet holes in each group. To measure the group sizes, we scanned the targets into PhotoShop CS5, then used the Ruler tool to measure to the thousands of an inch. We then rounded the results to the nearest tenth of an inch.