Lead-Free Wildlife

THE HUMANE SOCIETY OF THE UNITED STATES

Performance, Cost and Availability of Non-Lead Ammunition

Lead bullets can fragment into hundreds of pieces when fired into an animal, leaving behind a spread of toxic metal. In contrast, non-lead ammunition is designed to mushroom and remain intact upon impact.

More than 130 species of wild animals suffer the effects of lead poisoning from ingesting spent lead ammunition globally, either by foraging spent lead shot from the ground, feeding on the remains of lead-tainted gut piles or scavenging the carcasses of animals shot with lead ammunition and left behind.

Performance

A lead bullet can leave behind upwards of 450 lead shards[i] and anywhere from a few inches to more than 18 [ii] inches from the wound channel, making it nearly impossible to cut away all contaminated areas.

However, non-lead bullets, such as copper, expand similarly to lead bullets but without the fragmentation. A non-lead bullet is designed to mushroom and remain intact upon impact, providing complete penetration and longer sustained energy dispersal.

Texas Study

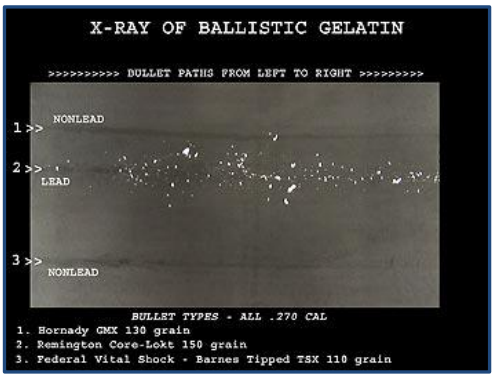
A multi-year, peer-reviewed study in Texas concluded that dove hunters using shotshells loaded with lead pellets have no advantage in effectiveness over those using shotshells firing non-toxic steel pellets of similar or slightly larger size.

After 62 Texas wingshooters fired more than 5,000 rounds at mourning doves under normal hunting conditions, it was determined that there was no statistical difference in the two types of ammunition. [iii]

Two different .270 caliber bullets show how lead (left) disintegrates when it penetrates while non-lead (right) expands and mushrooms upon impact. (© National Park Service)

Award-Winning Ballistics

Bullets made from 100% copper were originally developed to take down big game on the African safari. Today, hunters are choosing copper for deer, elk and other big game hunting partly for its superior ballistics. **Barnes's Vor-TX non-lead copper bullet won the product of the year award in 2012 from the National Rifle Association.** [iv]



Three bullet trails demonstrate the high fragmentability of a lead bullet in comparison to non-lead bullets. (© National Park Service)

Availability and Cost

Thirteen types of federally approved non-toxic shot cartridges are commercially available for hunting—both online and at major retail stores. [v] Steel shot cartridges are widely available, cost the same as lead and are stocked in many small retail stores. The more expensive Tungsten-matrix, Hevi-shot and Bismuth-tin cartridges are readily available online, but less frequently available in retail stores. Lead-free copper slugs are also available, either as shotgun cartridges or slugs for muzzle-loading rifles.

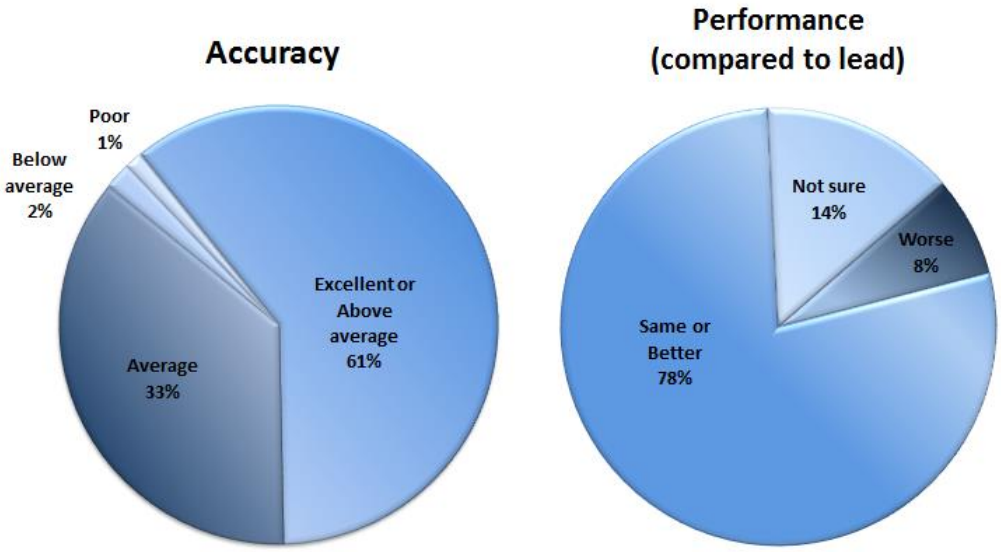
Hunters' Attitudes about Non-Lead Ammunition

The Arizona Game & Fish Dept. conducted a survey of more than one thousand hunters:

Nearly 80 percent of hunters who tested non-lead ammunition rated it the same as or better than lead ammunition.

More than 90 percent of hunters found the accuracy of non-lead ammunition to be at least average, if not above average or excellent, in comparison to lead.

In addition, 72 percent of all hunters said they would recommend the copper bullet to other hunters. [vi]



Industry will meet Demand

The availability of shotgun and rifle ammunition at the local retail level is heavily influenced by the date of entry of a regulation requiring non-lead ammunition. [vii] Ammunition makers will increase production and distribution in time to meet demand by a state requirement to use only a specific type of ammunition. One such example is the 1991 law requiring the use of non-lead ammunition for the taking of migratory birds. This law phased in the requirement over an extended period of time, allowing the industry to easily increase production. Sensible regulation like this, which allows a phase-in period for requiring non-lead ammunition, allows manufacturers and retailers to meet the demands of the hunting community.

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[i] National Park Service. 2014. Lead Bullet Risks for Wildlife & Humans. http://www.nps.gov/pinn/naturescience/leadinfo.htm

[ii] L. Cornicelli, M. Grund. 2008. Examing Variability Associated with Bullet Fragmentation and Deposition in White-Tailed Deer and Domestic Sheep: Preliminary Results. Minnesota Department of Natural Resources.

[iii] Texas Parks and Wildlife Department, 2014. A Comparison of Lead and Steel Shot Loads for Harvesting Mourning Doves. http://tpwd.texas.gov/publications/nonpwdpubs/media/wsb504.pdf

[iv] Vor-TX precision ammunition awarded the 2012 American Hunter Ammunition Product of the Year Golden Bullseye Award from National Rifle Association (NRA) Publications.

[v] U.S. Fish & Wildlife Service. Nontoxic Shot Regulations for Hunting Waterfowl and Coots in the U.S. June 4 2014.

[vi] Arizona Game & Fish Department. 2006. Non-lead Ammunition Program Hunter Survey. Prepared by D.J. Case & Associates.

[vii] V. Thomas. 2014. Availability and Use of Nonlead Rifle Cartridges and Nontoxic Shot for Hunting in California.