

ALTERNATIVES TO LEAD AMMUNITION: SORTING FACT FROM FICTION

A fact sheet for non-hunting decision makers from scientists and others who are hunters with extensive experience in this issue

To aid those involved in regulatory processes, here are the key points about the importance of switching to non-lead ammunition provided by experts who are experienced hunters, and who desire the continuation of hunting in Europe in the 21st century.

It is in [every hunter's best interest to switch to non-lead ammunition](#). Lead from ammunition pollutes the environment and poisons animal- and human-food chains. As the switch to non-lead ammunition has long been proven practical for both shotgun and rifle ammunition, hunters continuing the use of lead ammunition are finding justification increasingly difficult. Pending regulation under REACH will further contribute to the necessity for change. There are many myths about non-lead ammunition which persist by those resisting change. Here are the facts, focussing on shot, drawn from the extensive scientific literature on ballistics, practical trials and market research, as well as our collective practical hunting experience.

Why change is essential:

- 1) **Lead is toxic to humans and animals:** Hunters are typically unaware of the enormous scale of the lead poisoning problem they inadvertently cause. Sick birds often become increasingly reclusive and dead birds may be scavenged before being detected. Therefore hunters rarely if ever find poisoned birds. If hunting is to provide food, the use of lead ammunition immediately creates a toxic food safety issue. Most hunters are unaware of the poison they are feeding to their families. Ingested lead affects all major body systems causing acute, chronic or sub-clinical effects including neuro-developmental deficits. Game killed with lead ammunition is becoming less marketable through food outlets including markets, supermarkets and restaurants as awareness of its toxicity increases.
- 2) **Sustainable hunting:** The use of lead ammunition means [hunting cannot be considered sustainable](#). The move away from lead is not anti-hunting, it is advocated by health professionals and food outlets and importantly those wanting to *sustain* hunting - not stop it.

Why change is now entirely possible:

- 1) **Non-toxic alternatives exist and work well:** The ammunition industry has already produced a wide and growing range of alternative non-toxic cartridges which can be purchased in a variety of loads and velocities. Consequently there are brands that can be used in any gun that is safe for lead shot. Steel shot has been proven effective for hunting upland gamebirds, waterfowl including large geese, and even for mammals up the size of roe deer. Hunters in countries which banned lead shot decades ago have proven how well this works. In Europe, commercially available ammunition will be proven safe by C.I.P. Standards.
- 2) **Price of non-lead shot is comparable:** Steel is the substance most commonly used in non-toxic shot and is comparatively priced or even cheaper than lead. Bismuth is 'soft' like lead and suitable for very old fine-barrelled guns, but is more expensive. Tungsten is more expensive and rarely used.
- 3) **Availability of non-lead ammunition is good and growing:** Recent studies such as [this](#) find the range of non-toxic alternatives to lead are increasing and will continue to do so with guaranteed markets. Timelines for regulation will drive further innovation.

- 4) **“Coatings” on lead shot do not work:** Lead shot picked up by those birds with a gizzard (mistaking it for food or grit) grind it up in this muscular organ with its sandpaper-like lining. Coatings on shot have not been successful at preventing poisoning due to the powerful grinding that occurs.
- 5) **Alternatives to lead ammunition are safe:** Safety testing of new products is undertaken. The EU can rely on the North American model of extensive, mandatory experimental testing of new ammunition types to receive approval under federal law. Also ricochet of steel shot has been raised as a potential problem but an unsafe shot with steel is an unsafe shot with lead. There is no evidence of non-lead shot being unsafe.
- 6) **Change to non-lead shot does not affect hunter numbers:** This has been [studied well in Denmark](#) where hunting remains as popular as ever.
- 7) **Biodegradable wads:** Previously, steel and other shot types required cartridges to contain inner plastic wads (cups) – to either protect soft lead shot from the hard gun barrel, or *vice versa* to protect the barrel from the hard hevishot/steel shot. Today, alternative materials have been developed and an increasing number of cartridges are produced with biodegradable wads, including those with steel shot. Thus, wad material is no longer a reason for not phasing out lead shot. As the majority of plastic pollution from shooting is from the outer shell of the cartridge, irrespective of shot type, manufacturers are producing more sustainable products using alternative materials.
- 8) **Practicalities of change:**
 - a. **Advice:** Good advice on use of non-toxic ammunition exists already e.g. the [FACE ammunition guidance website](#).
 - b. **Ensure the gun is suitable for steel shot:** While ammunition suitable for any technically sound shotgun exists, hunters should ensure their shotgun is suitable for the use of steel shot.
 - c. **Ensure familiarity and training:** When switching to any new ammunition the hunter should familiarize themselves with the characteristics of the new gun/ammunition combination.
 - d. **Select the right size of non-toxic shot:** For steel shot, the hunter should select pellet sizes one or two sizes bigger than lead to counter the reduced mass of steel, with one size bigger for bismuth.

Switching to non-lead shotgun and rifle ammunition does require some effort yet brings about a wide range of benefits to hunting, people, wildlife, soils, food safety, innovation and markets.

Senior hunting leaders in Europe previously wrote to the European Commission on the issue of transition to alternatives to lead ammunition:

“We know and appreciate that lead is ballistically attractive, that hunters are familiar with it and that the gun and ammunition industry have built up to use and supply it. However, the wide availability of effective, safe and affordable alternatives means that it can no longer be acceptable from the perspective of ecological and human health and ultimately our collective vision for sustainability.

We therefore urge you not to succumb to suggestions that it is not possible to change. It is.”

The future of hunting in Europe requires non-toxic ammunition.

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