US Army Wants Biodegradable Bullets That Sprout Plants

By Tracy Staedter, Seeker | January 11, 2017 11:40am ET



U.S. soldiers participate in a training exercise on March 7, 2011, in Pocheon, South Korea.

Credit: Chung Sung-Jun/Getty Images

Not only are bullets a physical hazard, but they're an environmental hazard, too. At US Armytraining facilities around the world, hundreds of thousands of spent shells litter proving grounds. Because there is no efficient way to clean up the shells, they're left where they fall.

But that's a problem. The shells, which contain metal and other chemicals, can rust and pollute soils and groundwater.

The DoD wants to do something about it, though. They're soliciting proposals for biodegradable bullets "loaded with specialized seeds to grow environmentally beneficial plants that eliminate ammunition debris and contaminants."

Such materials best suited for these bullets could include the same biodegradable plasticsused to make water bottles or plastic containers. Or it could be some other material altogether.

According to the request for proposal, the US Army Corps of Engineers' Cold Regions Research and Engineering Laboratory has already developed and tested seeds that can be embedded into a biodegradable composite. They've been bioengineered to germinate only after they've been in the ground for several months.

Proposals are being solicited until February 8, after which time, the chosen contractors will produce the biodegradable bullets as part of a three-phase process. In phase one, the contractor will focus on making 40 mm to 120 mm training rounds. "Bullets" might be a bit of an understatement here. Even

the smaller 40 mm rounds, which are essentially grenades, are pretty hefty (see image below). The 120 mm rounds are even bigger; they're used in tanks.

Phase II includes developing a prototype and the means to manufacture it and phase III has the biodegradable round transitioning to use at the Army training facilities.

The plants that grow from the seeds could also help remove soil contaminants or feed local wildlife. According to the proposal, "Animals should be able to consume the plants without any ill effects."

In other words, these bullets won't kill.

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