Biomede examines the soils to determine the types of metals present, then designs a mix of plants that can extract the problematic metals

Spotted: According to French startup Biomede, around 25 per cent of agricultural soils around the world are contaminated by pollutants such as heavy metals. These pollutants can have a severe effect on human health but are often too diffused to be removed conventionally. The company has developed a way to treat agriculturally-contaminated soils using plants, which are able to remove pollutants naturally from the soils.

These plants are often referred to as hyperaccumulators — plants capable of growing in areas with high concentrations of metal. The plants absorb and concentrate the metals in their tissues, and pulling them up then removes the metals from the soil.

Biomede examines the soils to determine the types of heavy metals present, then designs a mix of plants that are ideal for the extraction of the problematic heavy metals. Once the plants have grown, they are harvested and the metals are extracted and reused for other purposes. The company has been focusing its efforts on copper but is also developing ways to effectively remove other types of metals.

So far, Biomede has received a number of awards in France, as well as financial support from a programme for innovations in agriculture. The company’s stated goal is to, “provide a simple and practical solution which will make it possible to clean up all the soils, especially agricultural.” They hope to achieve this by expanding globally and working with, “innovative farmers who want to cultivate excellence.”
Sustainable solutions to agricultural problems are becoming more and more popular. Some of these innovations spotted by Springwise include the development of a tomato that grows on shrubs, and the use of AI to advise farmers on the best crops to plant on their land.

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**Takeaway:**

Farmers are at the forefront of the battle against climate change and environmental degradation. At the same time, there is growing awareness that simply piling more chemicals onto the land is not going to fix problems like heavy metal contamination. Biomed is working to help farmers remove these contaminants using traditional farming techniques. As such, they are creating a sustainable and circular decontamination process.