

# [***Device helps soil health by worm count***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:69VJ-CR11-JCBW-N2NH-00000-00&context=1516831)

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**Body**

A DERBYSHIRE company has been involved in work to help make it easier to assess ***soil health*** by detecting the presence of earthworms through use of a handheld device.

Since being awarded a DEFRA Farming Innovation Programme grant earlier this year, researchers from the University of Warwick and award-winning ecologists at Matlock-based Baker Consultants have been exploring different aspects of the ***soil*** soundscape.

Earthworms can now be identified from the sound they make moving through the ***soil*** and these recordings are being used to try to determine the number of worms present.

The prototype ***Soil*** Acoustic Meter (SAM), for which worldwide patents are pending, will aid researchers in collecting this data and eventually be available for commercial sale to farmers, vineyards and estate managers.

Andrew Baker, founder and managing director of Baker Consultants, said: "We have been working for the past 12 months to develop a cost-effective method for assessing ***soil health*** through the sounds found underground.

"We are increasingly finding that a healthy ***soil*** is a noisy ***soil*** as the worms, insects and even small mammals all make sounds that can be recorded. Our ecoacoustic team has now developed a hand-held device that can make collecting the sounds of ***soil*** accessible to all. The principle is simple: the device allows users to place a probe within the ground and record ***soil*** sounds and measure the relative ***health of the soil***."

Historically farmers assess the numbers of earthworms by manually digging sample pits and then extracting and counting the worms present - a process which is extremely labour and time intensive. The SAM will allow large volumes of data to be collected quickly and easily, saving not only time, but money and resources.

Organisations including First Milk, Yeo Valley, The National Trust and Moet Hennessy have been some of the first to sign up to provide trial sites for the data collection, providing a wide range of ***soil***, habitat and management types.

Dr Jacqueline Stroud from the University of Warwick Crop Centre said: "***Soil health*** is fundamental to crop production and the maintenance of ***soils*** is vital to global food security. Earthworms are critically important for maintaining ***soil health*** across all outdoor cropping systems. This device will simplify the collection of important data to inform farming practices."

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