

This Week's Citation Classic

Jenkins W R. A rapid centrifugal-flotation technique for separating nematodes from soil. *Plant Dis. Rep.* 48:692, 1964. [Dept. Entomology and Economic Zoology, Rutgers University, New Brunswick, NJ]

This paper presented a simple, rapid, and inexpensive method for the extraction of nematodes from soil. It used readily available equipment and was easy to teach to untrained assistants. [The SCⁱ® indicates that this paper has been cited over 170 times since 1964.]

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"The intent of this paper was to share with others in nematology a simple method of extracting nematodes from their soil habitat. The method itself was the result of many changes made in previously developed techniques while seeking one which would make life in a busy laboratory easier. To have this brief paper cited so frequently is a distinct pleasure — and a bit of a surprise. While my colleagues and I at Rutgers all used this process and appreciated its virtues, we thought of it mainly as 'our own' and not as something which might ultimately be so widely accepted.

"Nematology was in its heyday in the 1960s. It was only recently that the extent of damage caused by plant parasitic nematodes had been guessed at, and the number of workers in the field was quite small. We all knew each other and even one another's graduate students, so small a group were we. Much of our time was involved in method development for we had to extract these microscopic animals from soils and roots in order to identify them and do research on them. We all

wished to get at them quickly and with a minimum of bother. Thus, publication of techniques was often preceded by many diverse trials and modifications.

"Prior to the development of the method described, many of us used a modified Baerman funnel technique, which relied on the nematode moving from moistened soil through a filter and then falling through water to be collected. Another commonly used technique was a decanting and sieving method, which involved swirling soil in water, allowing the heavier soil to settle, and then decanting the supernatant through fine mesh screens on which the nematodes were collected. A third frequently used technique was to centrifuge soil in a sugar solution to suspend nematodes in the supernatant while concentrating the soil in the bottom of the centrifuge tube. This and other methods are described by J.F. Southey.¹ Each of these techniques contributed to the evolution of my own method as published, but were of themselves unsatisfactory in one or several ways. The principal reason for publication of this procedure was the interest shown by others when they visited my laboratories or when we who were using this method visited elsewhere. My thought was, if there is so much interest, why not publish so that even more would know of this procedure?

"Frequent citation of this article is due quite simply, I think, to the fact that this method is easy, inexpensive, rapid, and requires little equipment. It is possible to teach it to an untrained assistant in a short time, perhaps a half hour or so, and to be assured of consistent results. Nematodes are collected in large numbers, in good shape, and can be examined under the microscope just minutes after the soil is brought into the laboratory for processing. Others have seen these advantages. It is gratifying to see one's own efforts continue to be of use."

1. Southey J F, ed. *Laboratory methods for work with plant and soil nematodes*. London: Her Majesty's Stationery Office, 1970. 148 p.