

Extraction of *Heterodera cajani* cysts using modified sieving technique

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The accepted procedure of sieving a soil suspension through 20 and 60 mesh sieves (Cobb, 1918), followed by scanning the debris for cysts collected over a 60 mesh sieve was used to collect *Heterodera cajani* cysts from pigeonpea Vertisol fields at ICRISAT Centre. When the slurry, passing through the 60 mesh sieve, was examined, it was found to contain some cysts. An experiment was, therefore, conducted using 5 replicates each of two soil samples, 100 cc and 200 cc, where

debris was examined on 60, 80, and 100 mesh sieves. Approximately 10-22 per cent of the cysts passed through the 60 mesh sieve, but could be recovered on the 80 mesh sieve (Table 1). Cysts were not recovered on the 100 mesh sieve. Cyst recovery per unit of soil did not differ significantly with soil sample size.

Most of the cysts collected on the 80 mesh sieve were elongate almost twice as long as wide. Sharma and Swarup (1984)

TABLE 1. *Recovery of Heterodera cajani cysts through 60 and 80 mesh sieves*

Sieve mesh	Soil sample size	
	100 cc No. of cysts	200 cc No. of cysts
60	109 (10.5±0.7)	200 (14.2±0.6)
80	17 (4.1±0.2)	29 (5.4±0.3)

Figures in parentheses are square root transformations

recorded considerable variation in cyst shape and size within six *Heterodera* species including *H. cajani*. It is obvious that small cysts pass through the 60 mesh sieve, so that if total population counts are made using only a 60 mesh sieve,

there is a chance some cysts will be missed.

Because of the economic importance of cyst nematodes to crop production, it is desirable to have as accurate a population estimate as possible, particularly when assessing their role in limiting crop production. This study shows that an 80 mesh sieve should be used instead of a 60 mesh for estimating the cyst number of *H. cajani*.

REFERENCES

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