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Cotton—Weighted Nematode Rating

Supplement to UC IPM Pest Management Guidelines: Cotton

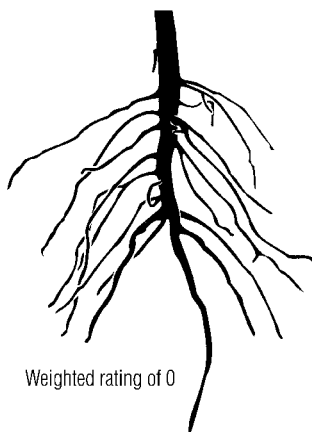
The ratings and calculations will help to determine the weighted nematode rating (WNR), expressed as a percentage for your field.

Sampling directions:

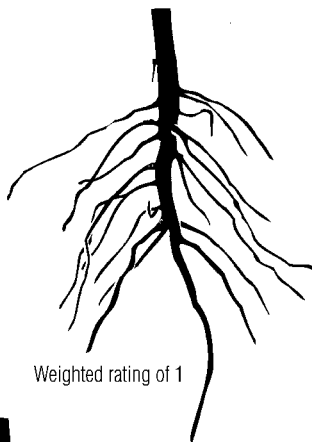
1. Divide the field into representative blocks.
2. Select 1 sample of 15 to 20 root systems in a random pattern from as broad of a representation of each block as possible. Remove as much of the root system as possible with a root lifter (for example, carrot or beet lifter), keeping side roots intact.
3. Gently wash or shake the soil from the roots.
4. To sort the root systems into weighted ratings (0, 1, 3, 5, 7), silhouette the root system against the sky or a white board. Use the table and diagrams below to evaluate for gall severity.
5. Use the weighted nematode rating (WNR) worksheet on page 2 to calculate the percent WNR.

Weighted root rating classes

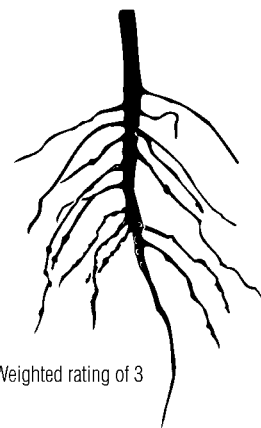
Weighted rating	Percent of root system with galls
0	0
1	1-25
3	26-50
5	51-75
7	76-100



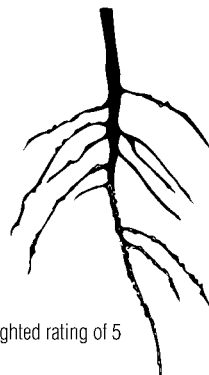
Weighted rating of 0



Weighted rating of 1



Weighted rating of 3



Weighted rating of 5



Weighted rating of 7

Cotton—Weighted Nematode Rating Worksheet

Field _____ Block _____ Number of plants sampled _____ Date _____

Worksheet directions:

1. Record the number of root systems in each rating category.
2. Determine the WNR (C) for each weighted rating category by multiplying column A by column B for each row.

Weighted rating (A)	1. Number of roots in each rating category (B)	2. WNR: Number of roots sampled in each category (B) x weighted rating (A) (C)
0		
1		
3		
5		
7		
	Total number of roots (column total):	Total WNR (column total):

3. Determine the maximum weighting possible:

$$\text{Total number of roots} \quad \times \quad 7 \quad = \quad \underline{\hspace{2cm}}$$

4. Determine percent WNR:

$$\frac{\text{Total WRN}}{\text{Maximum weighting
(From step 3 above)}} \quad \times \quad 100\% \quad = \quad \underline{\hspace{2cm}}$$

5. Compare the percent WRN to decision thresholds:

- The current threshold for management decisions is a WRN of 10% or greater.
- Do not plant a susceptible cotton variety back into a field that has a percent WNR greater than the threshold (10%), unless you manage the nematode populations first.

