

Sorghum Headworm Quick Count Sampling Plan

The Sorghum Headworm Decision Support System can help you identify sorghum pests, learn more about their biology, and determine the economic threshold for headworms in your sorghum field. You can print out other sequential sampling forms for use in sampling your field.

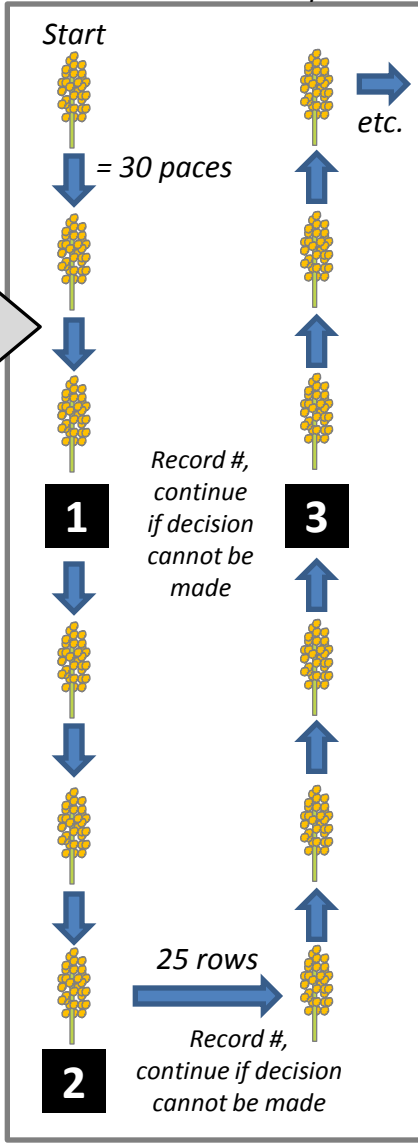
Go to entopl.okstate.edu/shwweb/index.htm for more forms!

Directions for using the Quick Count:

1. Walk at least 15-20 feet into the sorghum field to begin sampling in one row.
2. Grasp the stalk just below the emerged sorghum head, bend the head into the bucket opening and vigorously beat the head against the side of the bucket where they can be seen and counted.
3. Walk 30 paces down the row and sample another head, then walk 30 more paces and sample another head in the same row.
4. After sampling 3 plants, stop, count and record the total number of medium size ($\frac{1}{4}$ - $\frac{1}{2}$ inches long) and large (greater than $\frac{1}{2}$ inches long) headworm caterpillars in the bucket. Ignore all caterpillars less than $\frac{1}{4}$ inches long. If there are mostly large caterpillars, use the Large Threshold. If there are mostly Medium-sized caterpillars, use the Medium Threshold. If there are about 50% large and medium, use the Mixed Threshold.
5. Sample 3 more plants in the same row and add the counts from the previous 3 plants, and add the caterpillar totals.
6. After sampling 6 plants within a row, move over 25 rows and continue the process for each 6 heads.
7. Compare counts with numbers in red (right) and green (left) boxes. If they equal or exceed the "Treat" box, then stop and treat. If they equal or are lower than the "Don't Treat Box, then stop sampling and Don't Treat. If they fall in the yellow "sample" box, keep sampling until you have sampled 48 heads. If you still can't make a decision at Stop #16, return in 3 days and resample the field.



Example Field



The information in this sampling guide was developed in collaboration by:

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Use Caterpillar Size from First 3 Heads to Choose Threshold Below

Stop #	3 more heads + Previous total = New total	Large			Medium			Mixed		
		Do Not Treat	Sample 3 More Heads	Treat Field	Do Not Treat	Sample 3 More Heads	Treat Field	Do Not Treat	Sample 3 More Heads	Treat Field
1	First 3 heads <input type="text"/>	---	0 to 1	2 or more	1 or less	2 to 4	4 or more	---	0 to 2	3 or more
2	<input type="text"/> + <input type="text"/> = <input type="text"/>	---	0 to 1	2 or more	4 or less	5 to 7	8 or more	1 or less	2 to 4	5 or more
3	<input type="text"/> + <input type="text"/> = <input type="text"/>	0	1 to 2	3 or more	7 or less	8 to 10	11 or more	3 or less	4 to 5	6 or more
4	<input type="text"/> + <input type="text"/> = <input type="text"/>	1 or less	2 to 3	4 or more	11 or less	12 to 14	15 or more	5 or less	6 to 7	8 or more
5	<input type="text"/> + <input type="text"/> = <input type="text"/>	2 or less	3	4 or more	14 or less	15 to 17	18 or more	6 or less	7 to 9	10 or more
6	<input type="text"/> + <input type="text"/> = <input type="text"/>	2 or less	3 to 4	5 or more	17 or less	18 to 20	21 or more	8 or less	9 to 10	11 or more
7	<input type="text"/> + <input type="text"/> = <input type="text"/>	3 or less	4 to 5	6 or more	20 or less	21 to 23	24 or more	10 or less	11 to 12	13 or more
8	<input type="text"/> + <input type="text"/> = <input type="text"/>	3 or less	4 to 5	6 or more	24 or less	25 to 27	28 or more	11 or less	12 to 13	14 or more
9	<input type="text"/> + <input type="text"/> = <input type="text"/>	4 or less	5 to 6	7 or more	27 or less	28 to 30	31 or more	13 or less	14 to 15	16 or more
10	<input type="text"/> + <input type="text"/> = <input type="text"/>	5 or less	6 to 7	8 or more	30 or less	31 to 33	34 or more	15 or less	16 to 17	18 or more
11	<input type="text"/> + <input type="text"/> = <input type="text"/>	5 or less	6 to 7	8 or more	33 or less	34 to 36	37 or more	16 or less	17 to 19	20 or more
12	<input type="text"/> + <input type="text"/> = <input type="text"/>	6 or less	7 to 8	9 or more	37 or less	38 to 40	41 or more	18 or less	19 to 20	21 or more
13	<input type="text"/> + <input type="text"/> = <input type="text"/>	7 or less	8 to 9	10 or more	40 or less	41 to 43	44 or more	20 or less	21 to 22	23 or more
14	<input type="text"/> + <input type="text"/> = <input type="text"/>	7 or less	8 to 9	10 or more	43 or less	44 to 46	47 or more	21 or less	22 to 24	25 or more
15	<input type="text"/> + <input type="text"/> = <input type="text"/>	8 or less	9 to 10	11 or more	46 or less	47 to 49	50 or more	23 or less	24 to 25	26 or more
16	<input type="text"/> + <input type="text"/> = <input type="text"/>	9 or less	10	11 or more	50 or less	51 to 53	54 or more	25 or less	26 to 27	28 or more
		Economic Threshold for LARGE Headworms: THRESHOLD = 0.25/HEAD			Economic Threshold for MEDIUM Headworms: THRESHOLD = 1.3/HEAD			Economic Threshold for MIXED Headworms: THRESHOLD = 0.80/HEAD		

If you still can't make a decision at Stop #16, then return in 3 days and resample the field.