

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.

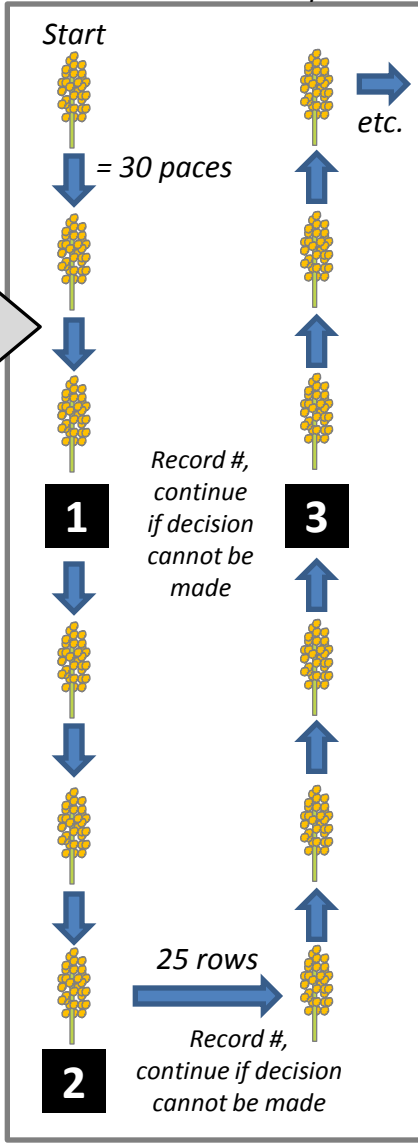
Go to entopl.okstate.edu/shwweb/index.htm for more forms!

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:

Research was funded 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 2	3 or more	3 or less	4 to 9	10 or more	1 or less	2 to 5	6 or more
2	<input type="text"/> + <input type="text"/> = <input type="text"/>	0	1 to 3	4 or more	10 or less	11 to 15	16 or more	4 or less	5 to 8	9 or more
3	<input type="text"/> + <input type="text"/> = <input type="text"/>	2 or less	3 to 5	6 or more	17 or less	18 to 22	23 or more	8 or less	9 to 12	13 or more
4	<input type="text"/> + <input type="text"/> = <input type="text"/>	3 or less	4 to 6	7 or more	23 or less	24 to 29	30 or more	11 or less	12 to 15	16 or more
5	<input type="text"/> + <input type="text"/> = <input type="text"/>	4 or less	5 to 7	8 or more	30 or less	31 to 36	37 or more	14 or less	15 to 18	19 or more
6	<input type="text"/> + <input type="text"/> = <input type="text"/>	6 or less	7 to 9	10 or more	37 or less	38 to 43	44 or more	18 or less	19 to 22	23 or more
7	<input type="text"/> + <input type="text"/> = <input type="text"/>	7 or less	8 to 10	11 or more	44 or less	45 to 50	51 or more	21 or less	22 to 25	26 or more
8	<input type="text"/> + <input type="text"/> = <input type="text"/>	8 or less	9 to 11	12 or more	51 or less	52 to 57	58 or more	25 or less	26 to 29	30 or more
9	<input type="text"/> + <input type="text"/> = <input type="text"/>	10 or less	11 to 13	14 or more	58 or less	59 to 63	64 or more	28 or less	29 to 32	33 or more
10	<input type="text"/> + <input type="text"/> = <input type="text"/>	11 or less	12 to 14	15 or more	64 or less	65 to 70	71 or more	32 or less	33 to 36	37 or more
11	<input type="text"/> + <input type="text"/> = <input type="text"/>	12 or less	13 to 15	16 or more	71 or less	72 to 77	78 or more	35 or less	36 to 39	40 or more
12	<input type="text"/> + <input type="text"/> = <input type="text"/>	14 or less	15 to 17	18 or more	78 or less	79 to 84	85 or more	39 or less	40 to 43	44 or more
13	<input type="text"/> + <input type="text"/> = <input type="text"/>	15 or less	16 to 18	19 or more	85 or less	86 to 91	92 or more	42 or less	43 to 46	47 or more
14	<input type="text"/> + <input type="text"/> = <input type="text"/>	17 or less	18 to 19	20 or more	92 or less	93 to 98	99 or more	46 or less	47 to 50	51 or more
15	<input type="text"/> + <input type="text"/> = <input type="text"/>	18 or less	19 to 21	22 or more	99 or less	100 to 104	105 or more	49 or less	50 to 53	54 or more
16	<input type="text"/> + <input type="text"/> = <input type="text"/>	19 or less	20 to 22	23 or more	105 or less	106 to 111	112 or more	53 or less	54 to 57	58 or more
		Economic Threshold for LARGE Headworms: THRESHOLD = 0.50/HEAD			Economic Threshold for MEDIUM Headworms: THRESHOLD = 2.60/HEAD			Economic Threshold for MIXED Headworms: THRESHOLD = 1.50/HEAD		

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