

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.

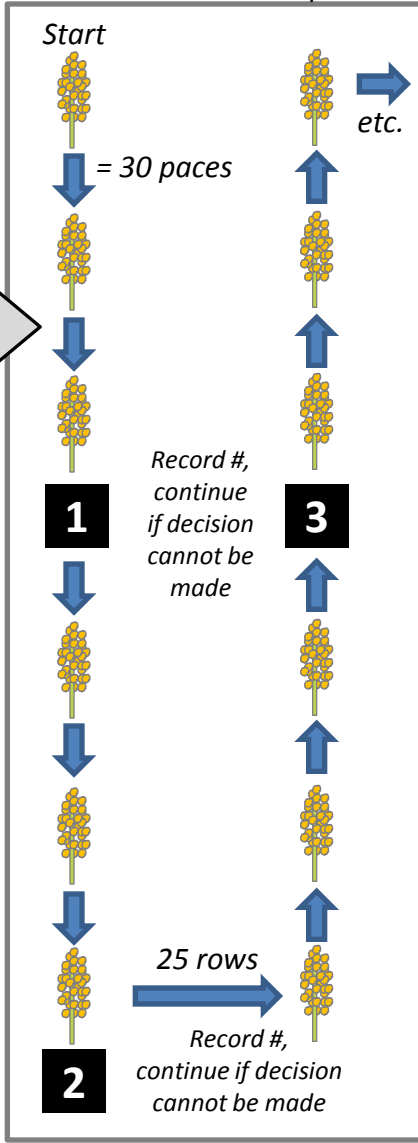
Go to entopl.okstate.edu/shwweb/index.htm for more forms!

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 6	7 or more	2 or less	3 to 24	25 or more	---	0 to 13	14 or more
2	<input type="text"/> + <input type="text"/> = <input type="text"/>	---	0 to 9	10 or more	17 or less	18 to 39	40 or more	6 or less	7 to 21	22 or more
3	<input type="text"/> + <input type="text"/> = <input type="text"/>	3 or less	4 to 12	13 or more	32 or less	33 to 55	56 or more	14 or less	15 to 28	29 or more
4	<input type="text"/> + <input type="text"/> = <input type="text"/>	6 or less	7 to 15	16 or more	47 or less	48 to 70	71 or more	22 or less	23 to 36	37 or more
5	<input type="text"/> + <input type="text"/> = <input type="text"/>	9 or less	10 to 18	19 or more	63 or less	64 to 85	86 or more	29 or less	30 to 44	45 or more
6	<input type="text"/> + <input type="text"/> = <input type="text"/>	12 or less	13 to 21	22 or more	78 or less	79 to 100	101 or more	37 or less	38 to 51	52 or more
7	<input type="text"/> + <input type="text"/> = <input type="text"/>	15 or less	16 to 24	25 or more	93 or less	94 to 116	117 or more	45 or less	46 to 59	60 or more
8	<input type="text"/> + <input type="text"/> = <input type="text"/>	17 or less	18 to 27	28 or more	108 or less	109 to 131	132 or more	52 or less	53 to 67	68 or more
9	<input type="text"/> + <input type="text"/> = <input type="text"/>	20 or less	21 to 30	31 or more	123 or less	124 to 146	147 or more	60 or less	61 to 74	75 or more
10	<input type="text"/> + <input type="text"/> = <input type="text"/>	23 or less	24 to 32	33 or more	139 or less	140 to 161	162 or more	68 or less	69 to 82	83 or more
11	<input type="text"/> + <input type="text"/> = <input type="text"/>	26 or less	27 to 35	36 or more	154 or less	155 to 177	178 or more	75 or less	76 to 90	91 or more
12	<input type="text"/> + <input type="text"/> = <input type="text"/>	29 or less	30 to 38	39 or more	169 or less	170 to 192	193 or more	83 or less	84 to 97	98 or more
13	<input type="text"/> + <input type="text"/> = <input type="text"/>	32 or less	33 to 41	42 or more	184 or less	185 to 207	208 or more	91 or less	92 to 105	106 or more
14	<input type="text"/> + <input type="text"/> = <input type="text"/>	35 or less	36 to 44	45 or more	200 or less	201 to 222	223 or more	98 or less	99 to 113	114 or more
15	<input type="text"/> + <input type="text"/> = <input type="text"/>	38 or less	39 to 47	48 or more	215 or less	216 to 238	239 or more	106 or less	107 to 120	121 or more
16	<input type="text"/> + <input type="text"/> = <input type="text"/>	41 or less	42 to 50	51 or more	230 or less	231 to 253	254 or more	113 or less	114 to 128	129 or more
		Economic Threshold for LARGE Headworms: THRESHOLD = 1.00/HEAD			Economic Threshold for MEDIUM Headworms: THRESHOLD = 5.30/HEAD			Economic Threshold for MIXED Headworms: THRESHOLD = 3.20/HEAD		

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