

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.

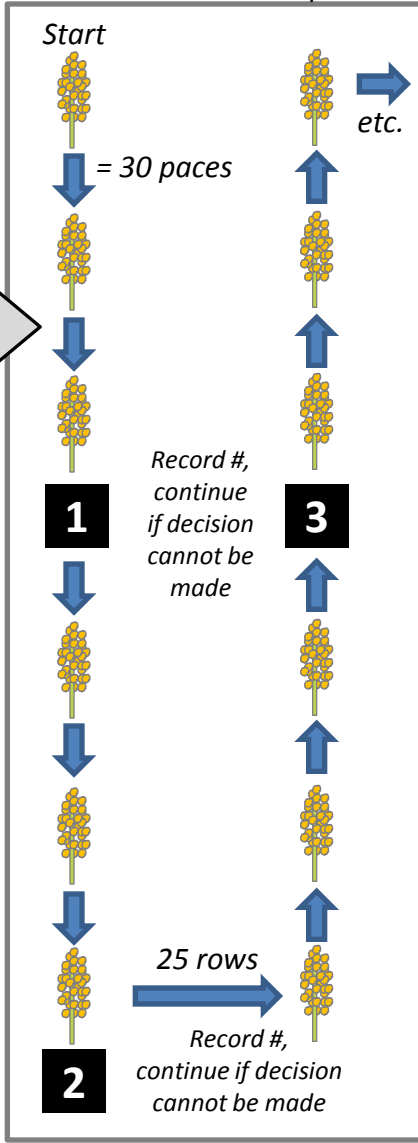
Go to entopl.okstate.edu/shwweb/index.htm for more forms!

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	---	0 to 14	15 or more	---	0 to 54	55 or more	---	0 to 29	30 or more
2		---	0 to 19	20 or more	17 or less	18 to 81	82 or more	5 or less	6 to 43	44 or more
3		3 or less	4 to 24	25 or more	44 or less	45 to 108	109 or more	18 or less	19 to 56	57 or more
4		8 or less	9 to 29	30 or more	71 or less	72 to 136	137 or more	32 or less	33 to 70	71 or more
5		13 or less	14 to 34	35 or more	99 or less	100 to 163	164 or more	46 or less	47 to 84	85 or more
6		18 or less	19 to 40	41 or more	126 or less	127 to 190	191 or more	59 or less	60 to 97	98 or more
7		23 or less	24 to 45	46 or more	153 or less	154 to 218	219 or more	73 or less	74 to 111	112 or more
8		29 or less	30 to 50	51 or more	181 or less	182 to 245	246 or more	87 or less	88 to 125	126 or more
9		34 or less	35 to 55	56 or more	208 or less	209 to 272	273 or more	101 or less	102 to 138	139 or more
10		39 or less	40 to 60	61 or more	235 or less	236 to 300	301 or more	114 or less	115 to 152	153 or more
11		44 or less	45 to 66	67 or more	263 or less	264 to 327	328 or more	128 or less	129 to 166	167 or more
12		49 or less	50 to 71	72 or more	290 or less	291 to 354	355 or more	142 or less	143 to 179	180 or more
13		55 or less	56 to 76	77 or more	317 or less	318 to 382	383 or more	155 or less	156 to 193	194 or more
14		60 or less	61 to 81	82 or more	345 or less	346 to 409	410 or more	169 or less	170 to 207	208 or more
15		65 or less	66 to 86	87 or more	372 or less	373 to 436	437 or more	183 or less	184 to 220	221 or more
16		70 or less	71 to 92	93 or more	399 or less	400 to 464	465 or more	196 or less	197 to 234	235 or more
		Economic Threshold for LARGE Headworms: THRESHOLD = 1.75/HEAD			Economic Threshold for MEDIUM Headworms: THRESHOLD = 9.20/HEAD			Economic Threshold for MIXED Headworms: THRESHOLD = 5.50/HEAD		

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