

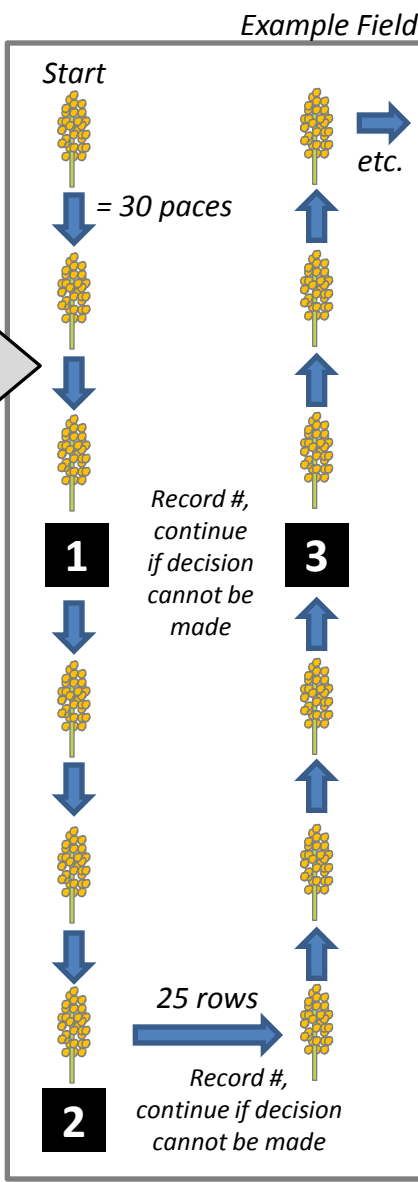
# Sorghum Headworm Quick Count Sampling Plan

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](http://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.



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 37	38 or more	---	0 to 155	156 or more	---	0 to 82	83 or more
2	___ + ___ =	---	0 to 48	49 or more	---	0 to 210	211 or more	---	0 to 110	111 or more
3	___ + ___ =	---	0 to 58	59 or more	26 or less	27 to 265	266 or more	6 or less	7 to 137	138 or more
4	___ + ___ =	4 or less	5 to 69	70 or more	82 or less	83 to 320	321 or more	34 or less	35 to 165	166 or more
5	___ + ___ =	14 or less	15 to 79	80 or more	137 or less	138 to 376	377 or more	61 or less	62 to 193	194 or more
6	___ + ___ =	25 or less	26 to 89	90 or more	192 or less	193 to 431	432 or more	89 or less	90 to 220	221 or more
7	___ + ___ =	35 or less	36 to 100	101 or more	247 or less	248 to 486	487 or more	116 or less	117 to 248	249 or more
8	___ + ___ =	46 or less	47 to 110	111 or more	302 or less	303 to 541	542 or more	144 or less	145 to 275	276 or more
9	___ + ___ =	56 or less	57 to 121	122 or more	357 or less	358 to 596	597 or more	171 or less	172 to 303	304 or more
10	___ + ___ =	67 or less	68 to 131	132 or more	413 or less	414 to 651	652 or more	199 or less	200 to 330	331 or more
11	___ + ___ =	77 or less	78 to 142	143 or more	468 or less	469 to 707	708 or more	227 or less	228 to 358	359 or more
12	___ + ___ =	87 or less	88 to 152	153 or more	523 or less	524 to 762	763 or more	254 or less	255 to 386	387 or more
13	___ + ___ =	98 or less	99 to 163	164 or more	578 or less	579 to 817	818 or more	282 or less	283 to 413	414 or more
14	___ + ___ =	108 or less	109 to 173	174 or more	633 or less	634 to 872	873 or more	309 or less	310 to 441	442 or more
15	___ + ___ =	119 or less	120 to 184	185 or more	688 or less	689 to 927	928 or more	337 or less	338 to 468	469 or more
16	___ + ___ =	129 or less	130 to 194	195 or more	744 or less	745 to 982	983 or more	365 or less	366 to 496	497 or more
		Economic Threshold for LARGE Headworms: <b>THRESHOLD = 3.50/HEAD</b>			Economic Threshold for MEDIUM Headworms: <b>THRESHOLD = 18.40/HEAD</b>			Economic Threshold for MIXED Headworms: <b>THRESHOLD = 11.0/HEAD</b>		

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