

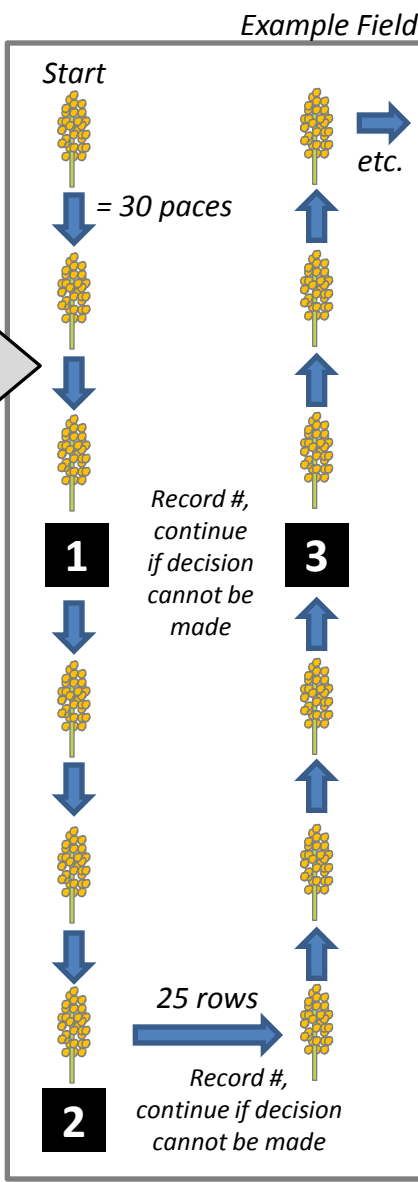
# Sorghum Headworm Quick Count Sampling Plan

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 4	5 or more	3 or less	4 to 16	17 or more	---	0 to 9	10 or more
2	___ + ___ =	0	1 to 6	7 or more	14 or less	15 to 27	28 or more	6 or less	7 to 14	15 or more
3	___ + ___ =	2 or less	3 to 8	9 or more	25 or less	26 to 38	39 or more	11 or less	12 to 20	21 or more
4	___ + ___ =	5 or less	6 to 10	11 or more	36 or less	37 to 49	50 or more	17 or less	18 to 25	26 or more
5	___ + ___ =	7 or less	8 to 13	14 or more	47 or less	48 to 61	62 or more	22 or less	23 to 31	32 or more
6	___ + ___ =	9 or less	10 to 15	16 or more	59 or less	60 to 72	73 or more	28 or less	29 to 37	38 or more
7	___ + ___ =	11 or less	12 to 17	18 or more	70 or less	71 to 83	84 or more	34 or less	35 to 42	43 or more
8	___ + ___ =	13 or less	14-19	20 or more	81 or less	82 to 94	95 or more	39 or less	40 to 48	49 or more
9	___ + ___ =	15 or less	16 to 21	22 or more	92 or less	93 to 105	106 or more	45 or less	46 to 53	54 or more
10	___ + ___ =	17 or less	18 to 23	24 or more	103 or less	104 to 116	117 or more	50 or less	51 to 59	60 or more
11	___ + ___ =	20 or less	21 to 25	26 or more	114 or less	115 to 127	128 or more	56 or less	57 to 65	66 or more
12	___ + ___ =	22 or less	23 to 28	29 or more	125 or less	126 to 138	139 or more	62 or less	63 to 70	71 or more
13	___ + ___ =	24 or less	25 to 30	31 or more	136 or less	137 to 150	151 or more	67 or less	67 to 76	77 or more
14	___ + ___ =	26 or less	27 to 32	33 or more	148 or less	149 to 161	162 or more	73 or less	74 to 81	82 or more
15	___ + ___ =	28 or less	29 to 34	35 or more	159 or less	160 to 172	173 or more	78 or less	79 to 87	88 or more
16	___ + ___ =	30 or less	<b>31 to 36</b>	37 or more	170 or less	<b>171 to 183</b>	184 or more	84 or less	<b>85 to 92</b>	93 or more
		Economic Threshold for LARGE Headworms: <b>THRESHOLD = 0.75/HEAD</b>			Economic Threshold for MEDIUM Headworms: <b>THRESHOLD = 3.90/HEAD</b>			Economic Threshold for MIXED Headworms: <b>THRESHOLD = 2.30/HEAD</b>		

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