

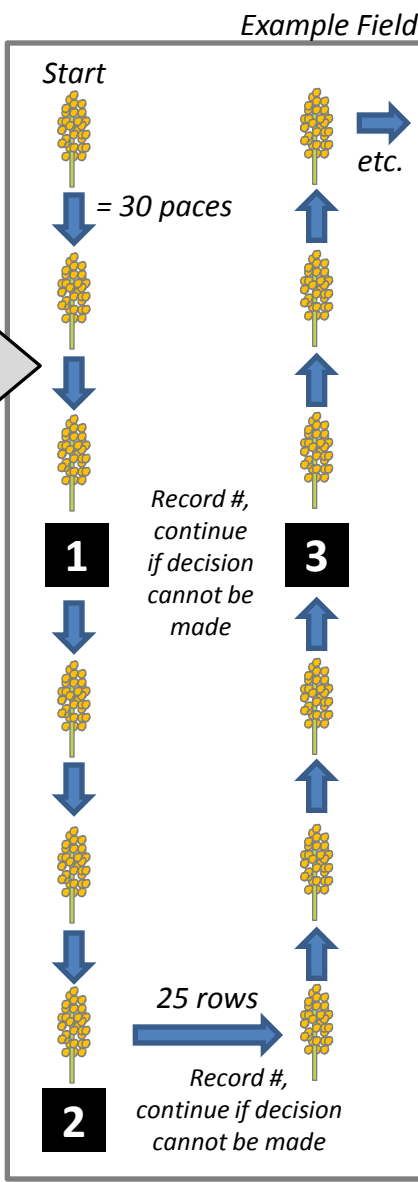
Sorghum Headworm Quick Count Sampling Plan

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.



The information in this sampling guide was developed in collaboration by:

Research was funded by:



THESE INTEGRATED PEST MANAGEMENT SAMPLING PLANS ARE BASED ON EMPIRICAL DATA OBTAINED THROUGH MANY YEARS OF RESEARCH. HOWEVER, NEITHER THE USDA, OKLAHOMA STATE UNIVERSITY, WEST TEXAS A&M UNIVERSITY OR KANSAS STATE UNIVERSITY WARRANT THE VALIDITY OF THE INTEGRATED PEST MANAGEMENT SOFTWARE AND MAKE NO REPRESENTATIONS WHATSOEVER WITH REGARD TO THE USE OF THE SOFTWARE FOR PEST MANAGEMENT. FURTHER, USDA, OKLAHOMA STATE UNIVERSITY, WEST TEXAS A&M UNIVERSITY AND KANSAS STATE UNIVERSITY MAKE NO WARRANTIES AS TO THE MERCHANTABILITY OR FITNESS OF THE INTEGRATED PEST MANAGEMENT SOFTWARE FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTIES EXPRESS OR IMPLIED.

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 23	24 or more	---	0 to 92	93 or more	---	0 to 49	50 or more
2		---	0 to 30	31 or more	5 or less	6 to 131	132 or more	---	0 to 69	70 or more
3		0	1 to 38	39 or more	44 or less	45 to 170	171 or more	17 or less	18 to 88	89 or more
4		7 or less	8 to 45	46 or more	84 or less	85 to 209	210 or more	37 or less	38 to 108	109 or more
5		15 or less	16 to 52	53 or more	123 or less	124 to 249	250 or more	56 or less	57 to 128	129 or more
6		22 or less	23 to 60	61 or more	162 or less	163 to 288	289 or more	76 or less	77 to 147	148 or more
7		30 or less	31 to 67	68 or more	201 or less	202 to 327	328 or more	96 or less	97 to 167	168 or more
8		37 or less	38 to 75	76 or more	241 or less	242 to 367	368 or more	115 or less	116 to 187	188 or more
9		45 or less	46 to 82	83 or more	280 or less	281 to 406	407 or more	135 or less	136 to 206	207 or more
10		52 or less	53 to 90	91 or more	319 or less	320 to 445	446 or more	155 or less	156 to 226	227 or more
11		60 or less	61 to 97	98 or more	359 or less	360 to 484	485 or more	174 or less	175 to 246	247 or more
12		67 or less	68 to 105	106 or more	398 or less	399 to 524	525 or more	194 or less	195 to 265	266 or more
13		75 or less	76 to 112	113 or more	437 or less	438 to 563	564 or more	213 or less	214 to 285	286 or more
14		82 or less	83 to 120	121 or more	476 or less	477 to 602	603 or more	233 or less	234 to 305	306 or more
15		90 or less	91 to 127	128 or more	516 or less	517 to 642	643 or more	253 or less	254 to 324	325 or more
16		97 or less	98 to 135	136 or more	555 or less	556 to 681	682 or more	272 or less	273 to 344	345 or more
		Economic Threshold for LARGE Headworms: THRESHOLD = 2.50/HEAD			Economic Threshold for MEDIUM Headworms: THRESHOLD = 13.20/HEAD			Economic Threshold for MIXED Headworms: THRESHOLD = 7.90/HEAD		

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