

Field validation of senesced banana leaf extracts for trapping banana weevils on smallholder banana/plantain farms

Article

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Table 4 Mean (\pm SE) number of adult banana weevils, *Cosmopolites sordidus*, captured at five field locations in Ashanti region, Ghana, using aggregation pheromone, senesced banana leaf palm alcohol extract, pseudostem, and combinations thereof, in type TAL and Voltic traps. Also shown are the mean (\pm SE) per field and treatment over weeks, the weekly means over treatments, the mean total catch per field and the mean of weekly means per field.

(i) FIELD ONE (TAL trap)

Week	Aggregation pheromone plus banana leaf extract	Banana leaf extract	Aggregation pheromone	Pseudostem plus banana leaf extract	Pseudostem	Mean \pm SE
1	36	-	22	4	2	16 \pm 8.0
2	9	-	7	1	1	4.5 \pm 2.1
3	13	-	8	1	0	5.5 \pm 3.1
4	8	2	7	0	0	3.4 \pm 1.7
5	33	2	21	0	1	11.4 \pm 6.7
6	12	3	8	0	0	4.6 \pm 2.4
7	2	3	10	0	0	3.0 \pm 1.8
8	2	1	10	0	0	2.6 \pm 1.9
9	13	3	7	1	0	4.8 \pm 2.4
10	5	1	3	3	1	2.6 \pm 0.7
11	9	3	3	0	0	3.0 \pm 1.6
12	9	2	3	0	0	2.8 \pm 1.7
Total	151	20	109	10	5	59.0\pm29.8
Mean \pm SE	12.58 \pm 4.9	2.22 \pm 0.4	9.08 \pm 2.8	0.83 \pm 0.6	0.42 \pm 0.3	5.4\pm1.2

(ii) FIELD TWO (Voltic trap)

Week	Aggregation pheromone plus banana leaf extract	Banana leaf extract	Aggregation pheromone	Pseudostem plus banana leaf extract	Pseudostem	Mean±SE
1	18	2	7	0	0	5.4±3.4
2	5	1	2	0	1	1.8±0.9
3	5	1	3	5	1	3.0±0.9
4	3	1	2	1	1	1.6±0.4
5	12	1	4	6	2	5.0±1.9
6	7	2	4	1	0	2.8±1.2
7	37	11	10	4	2	12.8±6.3
Total	87	19	32	17	7	32.4±14.2
Mean± SE	12.43 ± 5.4	2.71 ± 1.6	4.57 ± 1.3	2.43 ± 1.1	1.00 ± 0.4	4.6 ± 1.5

(iii) FIELD THREE (TAL trap)

Week	Aggregation pheromone plus banana leaf extract	Banana leaf extract	Aggregation pheromone	Pseudostem plus banana leaf extract	Pseudostem	Mean±SE
1	27	-	21	0	0	12.0±7.1
2	19	-	6	4	1	7.5±4.0
3	9	-	7	4	0	5.0±2.0
4	11	6	4	0	0	4.2±2.1
5	12	4	7	2	0	5.0±2.1
6	24	4	16	0	0	8.8±4.8
7	4	1	1	1	0	1.4±0.7
8	16	4	5	11	5	8.2±2.3
9	10	1	2	2	0	3.0±1.8
10	11	2	3	0	1	3.4±2.0
11	24	5	9	3	1	8.4±4.1
12	13	3	5	2	1	4.8±2.2
Total	180	30	86	29	9	66.8±31.1
Mean ± SE	15.00 ± 3.2	3.33 ± 0.8	7.17 ± 2.6	2.42 ± 1.4	0.75 ± 0.6	6.0±0.9

(iv) FIELD FOUR (Voltic trap)

Week	Aggregation pheromone plus banana leaf extract	Banana leaf extract	Aggregation pheromone	Pseudostem plus banana leaf extract	Pseudostem	Mean±SE
1	53	-	42	2	2	24.8±13.3
2	48	-	26	3	1	19.5±11.1
3	19	-	11	1	1	8.0±4.4
4	26	5	3	1	0	7.0±4.8
5	9	1	2	2	0	2.8±1.6
6	74	12	23	1	0	22.0±13.7
7	17	2	8	0	1	5.6±3.2
8	36	4	17	0	0	11.4±6.9
9	24	3	10	1	0	7.6±4.5
10	17	2	4	1	0	4.8±3.1
11	65	13	34	2	0	22.8±12.2
12	45	9	17	1	2	14.8±8.1
Total	433	51	197	15	7	140.6±80.7
Mean ± SE	36.08 ± 9.3	5.67 ± 2.0	16.42 ± 5.7	1.25 ± 0.4	0.58 ± 0.4	12.6 ± 2.3

(v) FIELD FIVE (Voltic trap)

Week	Aggregation pheromone plus banana leaf extract	Banana leaf extract	Aggregation pheromone	Pseudostem plus banana leaf extract	Pseudostem	Mean±SE
1	9	1	2	3	0	3.0±1.6
2	0	0	1	0	0	0.2±0.2
3	4	1	2	1	0	1.6±0.7
4	7	1	5	0	0	2.6±1.4
5	4	0	1	0	1	1.2±0.7
Total	24	3	11	4	1	8.6±4.2
Mean ± SE	4.80 ± 1.5	0.60 ± 0.3	2.20 ± 0.7	0.80 ± 0.6	0.20 ± 0.2	1.7±0.5