

Treatment/formulation	Rate lb (AI)/acre	Application	% roots damaged by sweetpotato weevil
1. Untreated check	—	—	0.67a
2. Agenda 1.675 SC none	0.1 —	Band (15") preplanting —	2.00a
3. Agenda 1.675 SC Imidan 70 WP/Sevin XLR 4SC/Pennacp M 2ME	0.1 0.9/1.0/0.75	Band (15") preplanting Foliar spray	1.00a
4. Agenda 1.675 SC Imidan 70 WP/Sevin XLR 4SC/Pennacp M 2ME	0.1 0.9/1.0/0.75	Broadcast preplanting Foliar spray	0.00a
5. none Imidan 70 WP/Sevin XLR 4SC/Pennacp M 2ME	— 0.9/1.0/0.75	— Foliar spray	0.33a
6. Mocap 6 EC none	3.0 —	Band (15") preplanting —	2.00a
7. Mocap 6 EC Imidan 70 WP/Sevin XLR 4SC/Pennacp M 2ME	3.0 0.9/1.0/0.75	Band (15") preplanting Foliar spray	0.00a
8. Mocap 6 EC/Agenda 1.675 SC none	3.0 —	Band (15")/layby preplanting —	2.00a
9. Mocap 6 EC Agenda 1.675 SC	3.0 0.025	Band (15") preplanting Foliar spray	0.67a
10. Mocap 6 EC Agenda 1.675 SC - biweekly	3.0 0.05	Band (15") preplanting Foliar spray	1.00a
11. Mocap 6 EC Agenda 1.675 SC - biweekly Sevin XLR 4SC as needed	3.0 0.05/1.0	Band (15") preplanting Foliar spray	0.33a

Means within a column followed by the same letter are not significantly different ( $P = 0.05$ ; DMRT)

**SWEETPOTATO:** *Ipomoea batatas* L. 'Beauregard'

Wireworm; *Melanotus communis* (Gyllenhal)  
Tobacco wireworm; *Conoderus vespertinus* (F.)  
Southern corn rootworm; *Diabrotica undecimpunctata howardi* Barber  
Flea beetles; *Systema* sp.

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**LAYBY APPLICATIONS AND FOLIAR SPRAYS IN COMBINATION WITH LORSBAN AT PLANTING TO CONTROL INSECTS**

**ON SWEETPOTATOES, 1997:** Sweetpotatoes were planted on 13 Jun at the Eastern Shore Agricultural Research and Extension Center, Painter, VA. Soil type was classified as Bojac sandy loam. Each plot consisted of 3 rows 20 ft long with 3-ft spacing between rows. Plots were separated from each other by an untreated guard row. Each treatment was replicated 6 times in a RCBD. Sprays were applied with a propane-powered backpack sprayer using 9 flat fan nozzles/3 rows and delivering 21 gpa at 40 psi. Granular materials were broadcast over the appropriate rows using a hand-held shaker. Lorsban 4 EC was applied at planting to all plots, except for the untreated control. Layby treatments were applied on 28 Jul. The foliar sprays were applied on 16 and 28 Jul and 6 and 13 Aug and were timed to coincide with click beetle flights, which were monitored using a black light trap.

On 29 Sep, the center row of each plot was mechanically harvested and 25 market-sized roots were randomly selected, washed, and examined for insect damage. Because feeding damage by wireworms, *Diabrotica undecimpunctata howardi*, and *Systema* sp. is difficult to distinguish, the percentage of damaged roots and total number of feeding scars by all 3 species combined (WDS) in each plot was compared among treatments. WDS pressure was moderate. The percentage of WDS-damaged roots in the untreated check was significantly higher than the percentages of damaged roots in all treatments, except for Lorsban + Diazinon AG 600 at 4.00 lb (AI)/acre. Similarly, there were significantly more feeding scars on roots in the untreated check than in all treatments, excluding Lorsban + Diazinon AG 600 at 4.00 lb (AI)/acre and Lorsban alone. The 1997 growing season was very dry, which delayed the growth of the crop and the application of the layby treatments. Although layby treatments were applied, the insecticides were not soil incorporated because conditions were too dry. These factors may have reduced the efficacy of the layby treatments. Plots treated with either Sevin or Garlic Barrier foliar sprays had the least amount of WDS damage.

Treatment/ formulation	Application method	Rate lb (AI)/acre	WDS damage/25 market size roots	
			% damaged roots	No. feeding scars
Lorsban 4 EC	broadcast pre-planting	2.00		
+ Diazinon AG 600	broadcast at layby	+ 3.00	12.67bc	11.33b
Lorsban 4 EC	broadcast pre-planting	2.00		
+ Diazinon AG 600	broadcast at layby	+ 4.00	21.33ab	19.67ab
Lorsban 4 EC	broadcast pre-planting	2.00		
+ Diazinon 14G	broadcast at layby	+ 3.00	14.00bc	12.33b
Lorsban 4 EC	broadcast pre-planting	2.00		
+ Force 3G	broadcast at layby	+ 0.135	12.67bc	8.50b
Lorsban 4 EC	broadcast pre-planting	2.00		
+ Sevin XLR	foliar sprays	+ 1.00	10.67bc	8.17b
Lorsban 4 EC	broadcast pre-planting	2.00		
+ Garlic Barrier	foliar sprays	+ 1:100 v/v	7.33c	8.00b
Lorsban 4 EC	broadcast pre-planting	2.00	12.67bc	15.33ab
Untreated check			33.33a	29.00a
Pr>F			0.0117	0.0384
LSD			12.42	15.55

Means in a column followed by the same letter are not significantly different ( $P > 0.05$ , LSD).

WDS: Wireworms, southern corn rootworm and flea beetles combined.