Sweet Potatoes

Sweet potatoes can be damaged by soil and foliage-feeding insect species throughout the production season. In addition, sweetpotato weevils can be a problem in storage. Insect damage results in economic losses, due to yield and overall quality losses.

Root feeding Insects

Banded cucumber beetles, whitefringed beetles, and flea beetle species
Foliar applied insecticides are applied to manage the adult stages of these pests to prevent them from laying eggs in the soil. Insecticide applications should be made only when the pests are present in sufficient numbers to warrant control. The threshold for spotted and banded cucumber beetles is 2 beetles/100 sweeps. The threshold for whitefringed beetles is 1 beetle/100 sweeps. See the insecticide chart for approved insecticides. *Please read and follow all label directions.*

Wireworms, white grubs, and rootworms
These are larvae of click beetles, June bugs, and banded and spotted cucumber beetles that tunnel or chew large holes in the developing sweet potato roots. Preplant, soil-incorporated insecticides are applied to control the immature stages of these pests that are present in the soil at the time of application. These chemicals provide residual control for four to six weeks. Insecticides labeled for pre-plant application include Mocap, Brigade, Belay, and Admire Pro. Please consult the approved list of insecticides labeled for sweet potatoes in Louisiana included below. *Read and follow all label directions*.

Sugarcane beetle
Research is ongoing to identify management strategies for this insect in sweet potatoes. Damage may be increased in fields bordering pasture or field corn. The adult is the damaging stage of this insect. Damage occurs late in the production season prior to harvest. Soil applications of approved insecticides may reduce damage. Please consult the table on the next page for recommended insecticides.

Aphids, flea beetles, and whiteflies

- Apply Admire Pro to the soil and incorporate to control aphids and whiteflies (vectors of virus diseases). Rates per application range from 4.4-10.5 fl. ounces/acre.
- Use Platinum 2F (thiamethoxam) applied in-furrow at planting or as a lay-by-shanked application to control aphids, whiteflies, and flea beetles. Recommended rates per application range from 5-8 fl. ounces/acre. Follow mixing directions and read the label carefully.

Foliage-feeding loopers, beet armyworms, and other Lepidopteran species
When defoliation reaches 35% or higher apply approved insecticides. Please consult the below table for a list of foliar insecticides and consult the label for specific looper or armyworm species controlled.

Sweetpotato Weevils – Cultural and Chemical Control Measures

Sweetpotato weevil larvae attack the roots of the sweet potato plant, tunneling through the root as they feed. Sweet potatoes are susceptible to attack by the sweet potato weevil at any time during the growing period as well as in storage.

All cultural and sanitation practices for control of the sweetpotato weevil should be followed. This includes acquiring weevil-free seed, cutting vines or slips (rather than pulling), destroying all potatoes left in fields, controlling weevils in the seedbed, and destruction of the seedbed when plant production is finished. Also, if an infestation is bad, spray fields with approved insecticides (see insecticide chart). Pheromone traps should be placed in fields to help determine weevil population levels. If several weevils are caught per trap per night, then foliar spray applications should be made.

In the Field
Rotate field plantings. Plant the new crop as far away as possible from the previous year's plantings. Producers in the pink tag production region should follow the regulations set by the Louisiana Department of Agriculture and Forestry, regarding the mandatory spray program for sweetpotato weevils. Apply approved insecticides on a seven to 10-day spray schedule to all seedbeds and production fields to suppress sweetpotato weevil populations in the field.

At Harvest
Seed sweet potatoes should be selected at harvest from fields apparently free of sweetpotato weevil. Destroy all vines and roots left in the field. If seed potatoes appear to be heavily infested, consider purchasing weevil-free seed from a weevil-free area.

In Storage
Remove all old sweet potatoes from the storage area for at least one month before storing the new crop. Store only those potatoes that are apparently weevil-free and reasonably clean. Treat potatoes going into storage with 5% Imidan dust at 2-4 ounces per bushel using an applicator approved by the Louisiana Department of Agriculture and Forestry. **Note:** Although Imidan dust is labeled for use, it might be challenging to obtain the product.

In Seedbeds
Locate seedbeds away from sweet potato storage and last season's plantings. Weevils may enter seedbeds from outside sources. To minimize the infestation from invading weevils, apply approved insecticides at weekly intervals beginning when plants first emerge (or when the plastic cover is removed from the seedbed) and continuing as long as the seedbed is used. Almost all weevil eggs in plant stems are found near the soil surface so plants should be cut at least an inch above the soil level. Destroy the seedbed when it is no longer needed but no later than July 15 each year.

Warning
Re-entry time for workers entering treated fields should be strictly observed. Be sure to check for this information.

Sweet Potatoes

Table 1. Cucumber beetles, white grubs, whitefringed beetles, wireworms

Insecticide*	Amount Concentrate Per Acre	Pounds Active Ingredient/ Acre	Acres Treated Per Gallon/Lb	Comments
Bifenthrin**	19.2 fluid ounces	0.3	6.5	Preplant and layby, not to exceed 0.5 pounds AI/acre per year
Bifenthrin**	3.2-9.6 fluid ounces	0.05-0.15	40-13	At cultivation or layby
Mocap EC	5.1-6.9 fluid ounces per 1,000 row ft.	3.0-4.0	2-1.5	Preplant 12-15 in. band on 42 in. row
Mocap 15G	20-26 pounds	3.0-4.0	See label.	

Table 2. Sugarcane beetles, flea beetles, white grubs, wireworm suppression

Insecticide*	Amount Concentrate Per Acre	Pounds Active Ingredient/ Acre	Acres Treated Per Gallon/Lb	Comments
Belay	9-12 fluid ounces	0.15-1.21	10.0-9.0	Preplant and layby

Table 3. Aphids, whiteflies, flea beetles

Insecticide*	Amount Concentrate Per Acre	Pounds Active Ingredient/ Acre	Acres Treated Per Gallon/Lb	Comments
Admire Pro	4.4-10.5 fluid ounces	0.16-0.38	29-12	Preplant and layby

Table 4. Aphids, flea beetles

Insecticide*	Amount Concentrate Per Acre	Pounds Active Ingredient/ Acre	Acres Treated Per Gallon/Lb	Comments
Platinum 2F	5-8 fluid ounces	0.078-0.125	25-16	Preplant and layby

Table 5. Cucumber beetles, whitefringed beetles, flea beetle

Insecticide*	Amount Concentrate Per Acre	Pounds Active Ingredient/ Acre	Acres Treated Per Gallon/Lb	Comments
Bifenthrin**	2.1-6.4 fluid ounces	0.033-0.10	61-20	Foliar application
Imidan 70-W	1.3 pounds (pH 5.5)	0.91	See label.	
Sevin XLR- Plus	1-2 quarts	1.0-2.0	4.0-2.0	
Assail 30 SG	1.5-4 ounces	0.028-0.075	10.5-4	
Baythroid XL	1.6-2.8 fluid ounces	0.013-0.022	80-46	
Mustang Maxx	1.76-4 fluid ounces	0.011-0.025	73-32	
Leverage 360	2.4-2.8 fluid ounces	See label.	53-46	
Endigo ZC	4.0– 4.5 fluid ounces	0.036-0.041 0.027-0.03	32-28	

Table 6. Sweetpotato weevils

Insecticide*	Amount Concentrate Per Acre	Pounds Active Ingredient/ Acre	Acres Treated Per Gallon/Lb	Comments
Leverage 360	2.4-2.8 fluid ounces	See label	53-46	Foliar application
Bifenthrin**	2.1-6.4 fluid ounces	0.033-0.10	61-20	
Imidan 70-W	1.3 pounds (pH 5.5)	0.91		
Sevin XLR- Plus	1-2 quarts	2-Jan	4.0-2.0	
Baythroid XL	1.6-2.8 fluid ounces	0.013-0.022	80-46	
Imidan Dust 5%	*2-4 ounces/bushel*	See label.	See label.	Dust after harvest. At present, it's hard to obtain this product.

Table 7. Armyworms

Insecticide*	Amount Concentrate Per Acre	Pounds Active Ingredient/ Acre	Acres Treated Per Gallon/Lb	Comments
Intrepid 2F	6-10 fluid ounces	0.09-0.16	21-12.8	Foliar application
Coragen	3.5-5 fluid ounces	0.04-0.06	36-25	
Mustang Maxx	3.2-4 fluid ounces	0.02-0.025	40-32	
Besiege	6-9 fluid ounces	0.04-0.06 0.02-0.03	21-14	

Table 8. Soybean looper

Insecticide*	Amount Concentrate Per Acre	Pounds Active Ingredient/ Acre	Acres Treated Per Gallon/Lb	Comments
Besiege	6-9 fluid ounces	0.04-0.06 0.02-0.03	21-14	Foliar application
Intrepid Edge	4.5-12 fluid ounces	0.08-0.23 0.02-0.05	28.4-10.6	

Table 9. Cabbage looper

Insecticide*	Amount Concentrate Per Acre	Pounds Active Ingredient/ Acre	Acres Treated Per Gallon/Lb	Comments
Avaunt	2.5-6.0 fluid ounces	0.045-0.11	51-21	Foliar application
Mustang Maxx	1.76-4 fluid ounces	0.011-0.025	72-32	
Baythroid XL	1.6-2.8 fluid ounces	0.013-0.022	80-46	
Intrepid Edge	4.5-12 fluid ounces	0.08-0.23 0.02-0.05	28.4-10.6	

Table 10. Aphids

Insecticide*	Amount Concentrate Per Acre	Pounds Active Ingredient/ Acre	Acres Treated Per Gallon/Lb	Comments
Assail 30 SG	2.5-4 ounces	0.048-0.075	10.5-4	Foliar application
Leverage 360	2.4-2.8 fluid ounces	See label.	53-46	

*Note incorporation instructions and methods of application for pre-plant and layby insecticides.
*Apply preplant insecticides as close to transplant as possible in accordance with label directions.
*Please note species listed, preharvest intervals, and maximum usage per acre on all labels.
*Do not exceed 0.5 lb of active ingredient bifenthrin per acre/season.
** Bifenthrin is labeled under several trade names.