UNIVERSITY OF FLORIDA
EXTENSION
IFAS

Chapter 22.
Beet Production in Florida

G.J. Hochmuth, D.N. Maynard, C.S. Vavrina, W.M. Stall, K.L. Pernezny

BOTANY

Nomenclature

Family - Chenopodiaceae
Beet - *Beta vulgaris*

Origin

Beet is native to the areas of Europe, the Near East, and Africa that are adjacent to the Mediterranean Sea. Leaves and roots (enlarged hypocotyl) are the plant parts consumed (Fig. 22-1).

Related Species

Spinach and Swiss chard are the only other vegetables of significance in the Chenopodiaceae family. The most important crop plant in this family is sugar beet.

VARIETIES

Varieties of beet grown in Florida:

Asgrow Wonder
Green Top
Pacemaker III
Red Ace

SEEDING AND PLANTING

Seeding and planting information for beet production is listed in Table 1.

FERTILIZER AND LIME

Broadcast all P_2O_5 and micronutrients, and 25 to 50% of N and K_2O before planting. Sidedress remaining N and K_2O 4 to 5 weeks after planting (when plants are 4 to 6 inches tall). Soil test and fertililzer recommendations for beet grown on mineral soil are shown in Table 2.

PLANT TISSUE ANALYSIS

Plant tissue analysis data for beet is listed in Table 3. Testing was done on leaf blades 5 weeks after seeding.

IRRIGATION

Irrigation is critical if rainfall is low during the rapid growth period of root (hypocotyl) development. Crop water requirements (see Chapter 8, *Principles and Practices of Irrigation Management for Vegetables*, Tables 4-6) will equal ETo (see Chapter 8, Table 3) during this

Table 1. Seeding and planting data for beet in Florida.

Planting dates	
North Florida	Aug - Feb
Central Florida	Sept - Feb
South Florida	Oct - Jan
Seeding information	
Distance between rows (in)	12 - 30
Distance between plants (in)	2 - 4
Seeding depth (in)	0.5 - 1.0
Seed per acre (lb)	10 - 15
Days to maturity from seed	50 - 70
Plant population[1] (per acre)	261,360

[1]Population based on closest between and within row spacing.

Table 2. Soil test results and fertilizer recommendations for beet on mineral soils[1]

Target pH	N lb/A	P_2O_5 VL	P_2O_5 L	P_2O_5 M	P_2O_5 H	P_2O_5 VH	K_2O VL	K_2O L	K_2O M	K_2O H	K_2O VH
		(lb/A/crop season)					(lb/A/crop season)				
6.5	120	120	100	80	0	0	120	100	80	0	0

[1] See Chapter 2 section on supplemental fertilizer application and best management practices, pg. 11.

This document is HS721, Horticultural Sciences Dept., UF/IFAS, Fla. Coop. Ext. Serv., Dec. 05

Table 3. Plant tissue analysis five weeks after seeding for beet. Dry weight basis.

	N	P	K	Ca	Mg	S	Fe	Mn	Zn	B	Cu	Mo
Status	**Percent**						**Parts per million**					
Deficient	<3.0	0.22	2.0	0.7	0.25	0.2	40	30	15	30	5	0.05
Adequate range	3.0-5.0	0.25-0.40	2.0-6.0	0.7-2.0	0.25-1.0	0.2-0.5	40-200	30-200	15-30	30-80	5-10	0.2-0.6
High	>5.0	0.40	6.0	2.0	1.0	0.5	200	200	30	80	10	0.6
Toxic(>)										650		

Table 4. Chemical weed control: Beets

Cycloate (Ro-Neet)	Beet	Preplant Incorporate	3-4 lb	
Remarks: Apply to mineral soils only. Use on trial basis.				
Pyrazon (Pyramin)	Beet	Preemergence Early Postemergence	3-3.5	
Remarks: Apply preemergence or early postemergence to beet and weeds for control of many broadleaf weeds. Do not use on muck soils.				
Carfentrazone (Aim)	Beets	Directed-hooded row middles	0.008-0.025	0.008-0.025
Remarks: Aim may be applied as a post-directed hooded burn-down application to emerged broadleaf weeds in row middles. Aim is not labeled for grassy weeds. May be tank mixed with other herbicides registered for this treatment pattern. May be applied at 0.3 oz (0.008 lb ai) to 1 oz (0.025 lb ai). Use a quality spray adjuvant such as crop oil concentrate (coc) or non-ionic surfactant (nis) at recommended rates.				

Table 5. Disease management for beet.

Chemical	Maximum Rate/Acre/ Application	Crop	Minimum Days to Harvest	Pertinent Diseases	Select Remarks
Ridomil Gold 4 EC	2 pts/trtd A			Pythium seedling blight	Apply at seeding in a 7-12" band on soil over seed furrow
Amistar 80DF	6.5 ozs	26 ozs	0	Cercospora leaf spot Rhizoctonia	Limit is 1 sequential appl. and 4 appl./crop
Cabrio 2.09F	16 fl oz	48 fl ozs	0	Various, see label	Limit is 2 sequential appl. and 3 appl./crop
Various copper compounds (see ind. Labels), including Basic Copper 53, Basicop, Champ, COC, Copper Count-N, Cuprofix Disperss, Kocide, Nordox, Nu Cop, Stretch, Tenn Cop					Cercospora leaf spot
Flint	3 oz	12oz	7	Cercospora leaf spot, Leaf blight, Powdery mildew, Rust	No more than 3 sequential application
Quadris 2.08FL	15.4oz	3.75 qt	0	Cercospora leaf spot, Rhizoctonia	
Serenade Max (biofungicide)	3lb		0	Powdery mildew	
Sonata (biofungicide)	4qt		0		
Ultra Flourish	4pt		0	Pythium and Phytophthora seedling diseases	Soil treatment at planting only

stage of growth, and decrease to 90% of ETo during the final stage of production. Overhead (sprinkler) irrigation might be needed to aid seedling emergence, especially on crusting soils in dry periods. Sprinkler irrigation might also be needed at harvest to freshen crops where leaves are sold separately or where bunched beets are harvested.

WEED MANAGEMENT

Herbicides labeled for weed control in beets are listed in Table 4. Information on weed manager.

DISEASE MANAGEMENT

Information on managing diseases affecting beet is given in Table 5.