

VEGETARIAN

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TO: COUNTY AGENTS, ASSOCIATES AND ASSISTANTS

NO: 71

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1. Sweet Potato Variety Trials:

The sweet potato trials conducted by Dr. Victor F. Nettles at Gainesville and Dr. Phil J. Westgate at Sanford showed some interesting results, in 1964 and 1965.

At the Central Florida Experiment Station, Sanford, seed potatoes were put in the plant bed February 17, 1964. Plants set in field April 10, 1964. Each variety was dug at two week intervals beginning on August 25 until November 4, 1964.

Sanford Sweet Potato Trial Results 1964

Harvest Date For Highest Yield	Variety	Marketable Yield 50 Lb. Bu/Acre
Oct. 21	N. C. 162	562
Oct. 7 or 21	Centennial	456
Nov. 4	Georgia Red	389
Nov. 4	Porto Rico #1	361

Results Gainesville Sweet Potato Variety Trials 1965 Set In Field March 31 and Harvested September 13. Bushels Per Acre.

Variety	U. S. No. 1	Marketable U.S.1 & U.S.2	Marketable & Jumbos	Total
1. Unit 1 Porto Rico	190	288	376	480
2. Georgia Red	231	309	360	437
3. Centennial	259	342	417	490
4. Gem	406	460	678	737
5. Goldrush	267	317	353	432
6. NC 172	225	304	334	415
7. NC 210	222	300	309	433
8. Cuban (Alquizar)	220	292	516	716
9. Coastal Sweet*	99	156	156	204

* Coastal Sweet planted April 22 and harvested September 14.

North Florida Experiment Station, Quincy, 1965 Sweet Potato Trial Results. Planted April 23 and Harvested October 22.

Variety	Marketable Yield bu./A.	No. 1 bu./A.	Culls bu./A.
Centennial	502	424	55
Gem	432	349	128
NC 212	338	290	58
Ga. Red	245	194	46
Red E. Sweet	242	217	171
Coastal Sweet	84	67	13

2. Plants Susceptible To Watermelon Mosaic Virus:

Recently we have released a mimeo concerning watermelon mosaic virus and its control. Since this mimeo was sent out new information concerning host range has appeared in Phytopathology, Volume 55, No. 8, August 1965.

Recovery of Watermelon Mosaic Virus Groups 1 and 2 From Mechanically Inoculated Plants in Host-Range Test^a

Hosts	Isolates of Watermelon Mosaic Virus			
	Group 1		Group 2	
	1	2	5	7
Chenopodiaceae				
Chenopodium album	-	-	-	-
C. amaranticolor	-	-	± ^b	± ^b
Dixie Market spinach	-	-	-	±
Compositae				
Dwarf African marigold	-	-	-	-
Cucurbitaceae				
Charleston Grey watermelon	±	±	±	±
Prolific Straightneck squash	±	±	±	±
PMR 45 muskmelon	±	±	±	±
Table continued	-	-	±	±

Hosts	Isolates of Watermelon Mosaic Virus			
	Group 1		Group 2	
	1	2	5	7
Euphorbiaceae				
Snow-on-the-Mountain	-	-	+	+
Leguminosae				
Garden pea	-	-	+	+
Sweet pea	-	-	+	+
Crimson clover	-	-	+	+
Hubam clover	-	-	-	+
Common vetch	-	-	+	+
Guar	-	-	+	+
Solanaceae				
Nicotiana glutinosa	-	-	-	-
Samsun tobacco	-	-	-	-

a + indicates virus recovered.

b Recovered by aphids only.

3. Dormancy of Potato Seed and Treatments:

Every year at this time there is some question from growers of fall and early winter potatoes whether they should treat with dormancy breaking chemicals. Here is an excerpt from U.S.D.A. Agricultural Handbook No. 267.

Storage temperatures and humidities affect seed quality. High storage temperatures encourage early sprouting, if sprouts occur and you are not ready to plant removal of sprouts once does not hurt the seed. Repeated desprouting does reduce the value of seed. Varieties differ in the number of sproutings that can be removed before the tubers are unfit for seed. A storage of 40°F. or slightly lower is recommended for keeping seed potatoes. Seed stored at 40°F. or below should be warmed up at 60°F. or higher for 10 to 14 days before planting.

The true rest period occurs after harvest when the tuber buds will not develop sprouts even though environmental conditions are favorable. Dormancy is that stage when the sprouts will initiate growth when environmental conditions are favorable. Freshly harvested potatoes are usually in a pronounced state of rest. Varieties vary in the length of time they will remain in the rest period or in a nonsprouting condition. When potatoes must be planted soon after harvest it may be necessary to break the rest period. We use two chemicals here in Florida. Recent research by Dr. Guzman at the Everglades Experiment Station indicates that potassium thiocyanate is slowly effective on some varieties and that gibberellic acid concentrations of from 1.0 ppm to 2.0 ppm are necessary depending on time of application and variety. Follow instructions found in Extension Circular 118A "Potato Production Guide."

Time Required To Sprout Potatoes Stored At Various Temperatures¹.

Variety	Storage Temperature			
	70°F.	60°F.	50°F.	40°F.
	Weeks	Weeks	Weeks	Weeks
Coyuga	7	7	10	25
Chippewa	8	8	12	*36
Houma	8	8	12	27
Irish Cabblo	8	9	13	20
Katahdin	8	8	13	*40
Kennebec	9	9	19	*38
Pontiac	8	9	18	*35
Russet Burbark	8	10	13	27
Sebago	6	6	11	*41
Teton	8	8	20	*41
White Rose	8	12	15	27

1. Adapted from Wright, R. C. and Whiteman, T. M., 1949, "The Comparative Length of Dormant Periods of 35 Varieties of Potatoes at Different Storage Temperatures." American Potato Journal 26: 330-335. No sprouting was visible at end of this storage test.

3. Short Subjects

(a) Kenaf a plant of many uses in the world and a member of the hibiscus family, along with cotton and okra, has a potential new use. Dr. Killinger of the Agronomy Department at Gainesville has a number of varieties and hybrids, of these several appear to be suitable for making pole bean stakes and from our observation they should produce a higher yield and better quality stake than Sesbania.

(b) County Agents Training

A one week training course in depth is being worked out to give County Extension Workers interested in vegetable production some intensified training in principles of nutrition, insect, disease, nematode and weed control, plant breeding and varieties and economics of production and marketing. The dates have already been set for the week of May 23-27, 1966. Keep this date open.

(c) Recent Publications You Should Have Copies Of.

1. U.S.D.A. Statistical Bulletin No. 362, "Conversion Factors and Weights and Measures for Agricultural Commodities and Their Products."
2. U.S.D.A. Agricultural Handbook No. 291, "Losses in Agriculture."
3. U.S.D.A. Farmers Bulletin No. 2169, "How to Control Soil Blowing." (Not a new one but worth having and reading again).

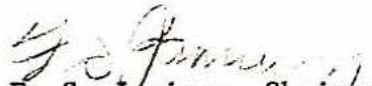
(d) New Varieties

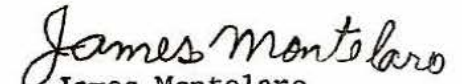
The bush snap bean tested in several locations for a number of years as B-3370 has been named Provider. It has been a high yielding good quality bean for fresh market and withstands mechanical picking with a minimum of damage.


(e) Organic fertilizer and soil fumigation do not go together. This was re-emphasized in a paper given at the Soil and Crop Science Society by Mrs. Overman. Her data on fumigation of strawberry land with most of the soil fumigants showed decreased nitrification and yields of berries, because of nitrate nitrogen deficiency.

(f) Zinc deficiency in tomatoes has been widespread in the sandy soils of both the lower East and West Coasts of Florida. More prevalent on staked tomatoes than on the ground crop. Heavy leaching rains coupled with less use of zineb fungicide has been responsible. A switch back to zineb for a couple of sprays has helped in mild cases, but one application of zinc sulphate at 4 lbs. per acre as a spray has been best. If you see a peculiar yellowing of mature leaves between the veins, then a rusty appearance on the under sides which die, then you can suspect zinc deficiency.

Sincerely,


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