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#### *About the Institute*

The Hunt Institute for Botanical Documentation, a research division of Carnegie Mellon University, specializes in the history of botany and all aspects of plant science and serves the international scientific community through research and documentation. To this end, the Institute acquires and maintains authoritative collections of books, plant images, manuscripts, portraits and data files, and provides publications and other modes of information service. The Institute meets the reference needs of botanists, biologists, historians, conservationists, librarians, bibliographers and the public at large, especially those concerned with any aspect of the North American flora.

Hunt Institute was dedicated in 1961 as the Rachel McMasters Miller Hunt Botanical Library, an international center for bibliographical research and service in the interests of botany and horticulture, as well as a center for the study of all aspects of the history of the plant sciences. By 1971 the Library's activities had so diversified that the name was changed to Hunt Institute for Botanical Documentation. Growth in collections and research projects led to the establishment of four programmatic departments: Archives, Art, Bibliography and the Library.

## Coffee C factory, 1,

The Hon. Jehoida McPherson at the annual general meeting of the co-operative Society at Moy Hall, promised to discuss the establishing centre at Cedar Valley with Hon. Edwin Allen.

For the first time, remarked the chairman of the Society, Mr. Willie Henry, in his opening address members were meeting in their own factory. The Moy Hall estate, consisting of the Arntully Great House, the Moy Hall coffee factory and 1,100 acres of land, had become the property of the Society during the last year.

It was the Arntully House to which Mr. McPherson referred when he spoke of a practical training centre. Mr. Henry made the observation that the Society would be ready to sell land for such a purpose.

Mr. McPherson congratulated members on their eighth annual report read by Mr. W. D. Linton J.A.S. Branch Organiser. He referred to the part which said that "many of our members yielded to the temptation of selling to dealers who were purchasing at higher prices" and warned them not to be shortsighted.

### Advice to members

"What you have here today through your co-operative efforts is as good as in any other country like Norway where co-operatives are run," said Mr. McPherson. He added that £30,000 could not put up those buildings today. He advised members to put aside as much as they could into their sinking fund while coffee prices were good.

He appealed for increased membership from its present 900 to at least 2,000.

Mr. McPherson expressed the opinion that the Yallahs Valley Land Authority should take over all the lands in the district. He had discussed this with Mr. Barrant, the Minister of Agriculture and Lands who he said, thought that the Christians area should be developed first. He promised to take the subject up again.

### Back to continue Fellowship studies

Dr. David J. Rogers, a professor of Biology in Allegheny College, Pennsylvania, U.S. is back in Jamaica continuing his studies for a Fellowship. His thesis will be devoted to the Taxonomy or Classification of Cassava in Jamaica and elsewhere.

Mr. Rogers expects to stay about six weeks. He was here last year for two months and the Department of Agriculture planted for him all the possible local varieties of cassava.

The officers of the Agronomy Division have been co-operating with him in this task of recognising the more than 100 different types. When the research work is finished, Mr. Rogers hopes to have a complete classification of every known variety of cassava.

  
CROP AGRONOMY DIVISION,  
MINISTRY OF AGRICULTURE AND LANDS,

P.O. BOX 480,

KINGSTON 6,

JAMAICA, W.I.

PLEASE QUOTE #1: 46

REFERENCE No. 442/400/60.

10th November, 19 60.

Dr. David J. Rodgers,  
Curator of Economic Botany,  
The New York Botanical Gardens,  
New York 58,  
New York.

Dear *Dave,*

.....

Herewith please find a copy of the notes you requested on the soil at Bodles where the cassava experimental plots are located. I hope these will be in order but if there are specific details which you require please let us know.

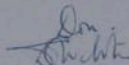
I am very anxious to hear from you concerning the results of the leaf material analyses. Please bear this in mind when next you write.

It is encouraging to hear of the reaction to the idea of supporting work at the Ministry. I do not know if Mr. Miller has taken any action but shall make it a point of duty to have a word with him shortly.

In the meantime we are establishing and maintaining additional plots for the specific purpose of biochemical studies.

I hope you will find it possible to be with us again soon.

Yours sincerely,



D. C. Webster  
Food Crops Specialist.

DCW/emg

## CASSAVA PROJECT AT BODLES

### Soil

The experiments were located at Bodles on the soil type Lodge Clay Loam (Low Salinity Phase). This is a soil derived from old alluvium mainly brought down from the upper valley of the Bowers Gully. This soil covers approximately 2,000 acres and occurs mainly on slopes less than 2°, but slopes may be as high as 5° bordering natural gully-courses.

### Typical Profile

- 0 - 8 inches : Rich brown clay loam or sandy clay loam with good structure and good internal drainage.
- Below 8 inches : Slightly paler, stiffer clay or silty clay with no mottling becoming slightly paler with depth. Maybe occasional gravel fragments sometimes increasing in number with depth. Slow to moderate internal drainage. Sometimes rotten gravel may be reached at 20 inches but normally the soil is much deeper.

Usually salinity is low (less than 500 ppm) right to 30 inches, but occasionally between 500 and 1000 ppm may be found below 20 inches. The soil is found associated with a saline phase and with other saline soils.

∠ soil

This normally has nearly neutral pH in the topsoil and becomes slightly alkaline with depth. It has medium-low phosphate and high to medium-high potash status.

### Present Land Use

Chiefly pasture, especially irrigated Guinea Grass. Small areas are in other crops such as coconuts, citrus, cane, bananas, etc.

### Recommended Land Use

With irrigation and drainage the following crops may be grown - cane, grass, food crops, tobacco, bananas and coconuts.

November 14, 1960

Mr. D. C. Webster  
Crop Agronomy Division  
Ministry of Agriculture and Lands  
P. O. Box 480  
Kingston 6, Jamaica, W.I.

Dear Don:

Thank you very much for the soil analysis at Bodles.

You may be assured that as soon as we have the data on the analysis of the leaves we will forward a copy to you. So-called proximate analyses have been made which are straight-forward analyses of the protein, nitrogen, water, carbohydrates, etc. have been made, but the analyses for the amino acids themselves have not been completed. The laboratory that is handling the analyses apparently had some breakdown in their equipment and have been slowed down as a result. We are ourselves eager to have this information, but nothing so far has been forthcoming.

I do hope that you and Mr. Miller will be able to move soon on the United Nations activities because they are eager to help, I am sure.

I will probably be leaving for various parts of Brazil this coming January and will probably be down there for about two months. I have not made any plans to stop by Jamaica this trip because I will be so thoroughly occupied with the Brazilian activities. However, if my plans change, I will notify you in plenty of time.

Sincerely

DJR:MDF

RESULTS OF ANALYSIS OF CASSAVA TUBERS

Samples received from Grove Place

| Lab. No.  | Variety                | On whole tuber                     |                                    |                       | On skin                | On flesh            |
|-----------|------------------------|------------------------------------|------------------------------------|-----------------------|------------------------|---------------------|
|           |                        | %Glucose                           | %Sucrose                           | %Starch               | p.p.m. HCN             | p.p.m. HCN          |
| 193/54    | Yellow Stick           | 1.1                                | 1.8                                | 30.0                  | 1153                   | 137                 |
|           | Marigold               | 1.2                                | 1.5                                | 33.9                  | 1104                   | 179                 |
|           | Mullings-Spring Garden | 1.5                                | 1.2                                | 29.4                  | 1012.5                 | 128.5               |
|           | Bull Tiger             | 1.4                                | 1.7                                | 31.8                  | 1399                   | 219                 |
|           | Ingram                 | .96                                | 1.3                                | 34.4                  | 845                    | 159                 |
|           | Yellow Belly Sweet     | .87                                | 1.8                                | 31.8                  | 699                    | 64                  |
|           | Smalling               | .89                                | 2.4                                | 28.8                  | 930                    | 76                  |
|           | Sweet Westmoreland     | .93                                | 1.4                                | 32.1                  | 730                    | 68                  |
|           | Blue Top               | 1.3                                | 1.6                                | 29.6                  | 1297.5                 | 248                 |
| 194/54    | Blue Stick #12         | 1.5                                | 1.7                                | 22.2                  | 919                    | 92                  |
|           | Red Stick #41          | 1.1                                | 1.2                                | 33                    | 1067                   | 131                 |
|           | Smalling #49           | 1.1                                | 1.5                                | 33                    | 1266                   | 116                 |
|           | Gordon #40             | .91                                | 2.2                                | 30.8                  | 1185                   | 225                 |
|           | Mt. Pleasant #57       | .92                                | 1.4                                | 35.5                  | 1015                   | 283                 |
|           | Black Stick #36        | .65                                | 1.4                                | 34.5                  | 1177                   | 139                 |
|           | Sweet Cassava #97      | 1.6                                | 1.8                                | 25.5                  | 1079                   | 137                 |
|           | Red Stick Sweet        | 1.8                                | 1.5                                | 27.2                  | 1018                   | 105                 |
|           | Blue Stick #16         | 1.6                                | 1.9                                | 26.1                  | 845                    | 84                  |
|           | Esther #54             | .74                                | 2.2                                | 36.1                  | 980                    | 176                 |
|           | Eye Water #43          | 1.9                                | 2.4                                | 24.7                  | 940                    | 270                 |
|           | Rodney                 | 1.5                                | 1.8                                | 31.7                  | 1185                   | 60                  |
|           | Cashew Long Leaf #48   | .44 <sup>25.91</sup> <sub>22</sub> | .929 <sup>36.7</sup> <sub>22</sub> | 39.0 <sup>62.11</sup> | 576 <sup>22422</sup>   | 72 <sup>3168</sup>  |
| Range     |                        | 1.1 - 3.1                          | .20 - 2.6                          | 21.5 - 37.1           | 238 - 2208.6           | 27 - 354            |
| P-1 Range |                        | 1.17<br>(.44 - 1.9)                | 1.67<br>(.9 - 2.4)                 | 31<br>(27.2 - 39.0)   | 1019.2<br>(576 - 1399) | 144.0<br>(64 - 283) |

Samples received from Grove Place

| Lab. No. | Variety                          | On whole tuber |          | On skin |            | On flesh   |
|----------|----------------------------------|----------------|----------|---------|------------|------------|
|          |                                  | %Glucose       | %Sucrose | %Starch | p.p.m. HCN | p.p.m. HCN |
| 194/54   | Bitter Sweet#101                 | 1.9            | 1.2      | 29.4    | 238        | 46         |
| 195/54   | Pusey Sweet#75                   | 1.6            | 1.4      | 35.5    | 975        | 66         |
|          | Tall Leaf Cotton Tree<br>#15 - A | 3.1            | .59      | 27.2    | 1389       | 354        |
|          | Tall Leaf Cotton Tree<br>#15 - B | 1.7            | 1.3      | 32.0    | 758        | 167        |
|          | White Cuban#22                   | .67            | 1.3      | 34.6    | 2208.6     | 248        |
|          | White House#19                   | 1.9            | 1.7      | 57.1    | 1009       | 229        |
|          | Short Leaf Cotton Tree<br>#14    | 1.3            | 2.3      | 32.5    | 1605       | 159        |
|          | Ingram #77 - A                   | 2.3            | 1.2      | 33.8    | 748        | 42         |
|          | Ingram #77 - B                   | 1.9            | .89      | 32.2    | 729        | 78         |
|          | Blue Bud Sweet #90-A             | 1.2            | 2.9      | 28.9    | 675        | 67.5       |
|          | Blue Bud Sweet #90-B             | 1.6            | 2.3      | 34.6    | 716        | 53         |
|          | White Stick No.7 -A              | 2.4            | .20      | 31.4    | 1068       | 154        |
|          | " " " 7 -B                       | 1.9            | .94      | 34.4    | 853        | 129        |
|          | Brown Stick #1                   | 1.00           | 1.1      | 35.1    | 958.5      | 80         |
|          | Egg Yolk#88                      | .60            | .75      | 29.8    | 367        | 68         |
|          | Blue Bud Sweet #91               | .99            | 2.6      | 24.6    | 572        | 27         |
|          | Blue Bud #105                    | 1.1            | 2.0      | 30.3    | 1895       | 210        |
|          | Blue Bud #104                    | 2.00           | 1.4      | 25.1    | 1358       | 73         |
| 196/54   | Westmoreland#46                  | .88            | 1.3      | 39.7    | 701        | 62         |
|          | Long Leaf White Tuber<br>#55     | 1.2            | 1.8      | 35.5    | 817        | 204        |

Samples from Grove Place

| Lab. No. | Variety                | On whole tuber |          |         | On skin    | On flesh   |
|----------|------------------------|----------------|----------|---------|------------|------------|
|          |                        | %Glucose       | %Sucrose | %Starch | p.p.m. HCN | p.p.m. HCN |
| 196/54   | White Stick #34        | 1.4            | 2.23     | 33.6    | 343        | 170        |
|          | Blue Top #39           | 2.1            | 1.3      | 21.5    | 398        | 190        |
|          | Laura #53              | 2.0            | 1.1      | 27.0    | 783        | 257        |
|          | White Brown Stick#37-A | 2.3            | .52      | 34.4    | 562        | 70         |
|          | White Brown Stick#37-B | 1.6            | 1.3      | 34.3    | 761        | 148        |
|          | White Stick#52         | 2.1            | 1.4      | 25.1    | 564        | 221        |
|          | White Margaret#51      | .91            | 1.5      | 31.5    | 755        | 134        |
|          | Walters#58             | 1.2            | 1.4      | 29.5    | 821        | 77         |
|          | Cotton Tree #59        | 1.2            | 1.7      | 34.9    | 1080.5     | 140        |
|          | Bunch of Keyes#73      | 1.8            | .88      | 27.7    | 1004       | 259        |
|          | Agr. White Sticks#76   | 2.00           | 1.6      | 31.4    | 562        | 94         |
|          | Marlie Hill#56         | 1.7            | 1.9      | 30.9    | 1080       | 141        |
|          | Damsel#80              | 2.1            | 1.8      | 27.8    | 456        | 72         |

# RESULTS OF ANALYSIS OF CASSAVA TUBERS

Samples received from Bodles Agricultural Station

| Lab. No. | Variety                           | On whole tuber |          |          | On skin      |            | On flesh |
|----------|-----------------------------------|----------------|----------|----------|--------------|------------|----------|
|          |                                   | %Glucose       | %Sucrose | %Starch  | p.D.m. HCN   | p.D.m. HCN |          |
| 280/54   | A.G.R. Sweet                      | .29            | 1.2      | 29.3     | 597.8        | 62.64      |          |
|          | White Cuban-Bitter                | .30            | .64      | 25.8     | 544.9        | 140.4      |          |
|          | Bullet Tree                       | .31            | -        | 34.9     | 854.3        | 180.4      |          |
|          | Yellow Saunders                   | -              | -        | 27.7     | 521.1        | 115.6      |          |
|          | Catch Thief                       | .53            | 1.1      | 20.5     | 396.9        | 136.1      |          |
|          | Smalling Sweet(Red Bank)          | 1.02           | 1.3      | 3.5      | 376          | 126.4      |          |
|          | Portland No.6(White Stick)        | .51            | 1.3      | 12.5     | 444          | 85.3       |          |
|          | Richmond Stick                    | 1.1            | 1.3      | 29.3     | 629.6        | 306.7      |          |
|          | Sour Banmy                        | .72            | 1.7      | 18.8     | 329.4        | 78.8       |          |
|          | New Stick No.5                    | 1.1            | 1.3      | 18.2     | 346.1        | 88.9       |          |
|          | Bobby Hanson                      | -              | -        | 23.0     | 563.8        | 275.4      |          |
|          | Portland No.2 (Sugar Loaf)        | .99            | 1.1      | 16.0     | 441.7        | 79.9       |          |
|          | Marlie Hill (Big Yard)            | 1.3            | .83      | 21.7     | 568.6        | 87.5       |          |
|          |                                   | 1.2            | 1.6      | 19.9     | 626.4        | 81.0       |          |
|          | Elmo Stick                        | .30            | .13      | 21.1     | 507.6        | 90.4       |          |
|          | Portland No.4 Cotton Tree         | .94            | 1.4      | 25.5     | 418.0        | 127.4      |          |
|          | Portland No.3 (Agricultural)      | .69            | 1.5      | 18.8     | 496.8        | 66.6       |          |
|          | Black Stick Buck-Buck             | .69            | 1.1      | 33.1     | 885.6        | 91.8       |          |
|          | Portland No. 1 White Stick Bitter | 1.0            | 1.4      | 25.8     | 582.1        | 151.2      |          |
|          | Portland No.5 (Blue Bud)          | .30            | 1.1      | 19.4     | 344.0        | 86.2       |          |
| 282/54   | Laura Bitter (Litlitz)            | .86            | .91      | 26.7     | 317.5        | 141.5      |          |
|          | Bobby Hanson(Bitter)              | .31            | 1.1      | 23.3     | 542.2        | 142.6      |          |
| Range    |                                   | .29-2.40       | .13-1.70 | 3.5-34.9 | 130.7-1097.8 | 36.7-306.7 |          |
| Av       |                                   | .98            | .98      | 20.75    | 432.9        | 102.3      |          |

- 2 -  
Samples received from Bodles Agricultural Station

| Lab. No. | Variety                         | On whole tuber |          |         | On skin    |            | On flesh |
|----------|---------------------------------|----------------|----------|---------|------------|------------|----------|
|          |                                 | %Glucose       | %Sucrose | %Starch | p.p.m. HCN | p.p.m. HCN |          |
| 282/54   | Yellow Heart Sweet (Lillitz)    | 1.02           | .86      | 7.4     | 306.7      |            | 40.7     |
|          | Eye Water, Bitter, Red Bank     | .81            | 1.1      | 19.8    | 476.3      |            | 174.6    |
|          | White Margaret Bitter           | .70            | 1.2      | 25.5    | 727.4      |            | 218.2    |
|          | Long Leaf Black Stick Stem      | .37            | .88      | 31.2    | 544.9      |            | 111.7    |
|          | Long Leaf White Tuber           | .56            | 1.2      | 29.8    | 589.7      |            | 65.9     |
|          | Brown Stick, Bitter             | .51            | .96      | 29.4    | 496.8      |            | 163.5    |
|          | Westmoreland, Bitter            | -              | -        | 19.8    | 391.5      |            | 54.0     |
|          | Bunch of Keyes, Bitter (Pepper) | .82            | 1.0      | 25.28   | 497.3      |            | 119.9    |
|          | Cashew Long Leaf                | .51            | 1.6      | 21.94   | 327.8      |            | 80.4     |
|          | Damsel, Sweet                   | 1.2            | 1.2      | 14.60   | 206.3      |            | 74.1     |
|          | White Heart Sweet               | 1.3            | 1.4      | 11.80   | 259.2      |            | 59.4     |
|          | Blue Top, Bitter                | 1.1            | .98      | 20.16   | 521.1      |            | 40.0     |
|          | New Green (ST. MARY)            | .35            | .47      | 16.9    | 259.2      |            | 61.6     |
|          | White House                     | 1.2            | 1.3      | 30.90   | 1097.8     |            | 212.8    |
| 283/54   | Yellow Belly Sweet              | .71            | 1.1      | 25.6    | 309.4      |            | 44.9     |
|          | White Brown Stick (Bitter)      | .63            | 1.2      | 24.0    | 306.7      |            | 132.3    |
|          | Wallis, Bitter                  | .55            | 1.1      | 19.3    | 221.9      |            | 112.3    |
|          | Smalling, Bitter                | .26            | .23      | 30.5    | 319.7      |            | 85.3     |
|          | Esther, Bitter, Santa-Cruz      | .56            | .92      | 27.7    | 409.9      |            | 103.7    |
|          | Gordon, Bitter                  | .71            | .55      | 33.7    | 502.2      |            | 126.4    |
|          | Blue Bud, Sweet                 | 1.0            | 1.3      | 20.4    | 230.2      |            | 38.9     |
|          | John Henry Bitter               | 1.2            | .75      | 17.6    | 365.0      |            | 130.1    |
|          | Rodney Bitter                   | 1.1            | .73      | 16.2    | 423.4      |            | 90.0     |

- 3 -  
Samples received from Bodles Agricultural Station

| Lab. No. | Variety                                      | On whole tuber            |                           |                             | On skin                    |  | On flesh                    |
|----------|----------------------------------------------|---------------------------|---------------------------|-----------------------------|----------------------------|--|-----------------------------|
|          |                                              | %Glucose                  | %Sucrose                  | %Starch                     | p.p.m. HCN                 |  | p.p.m. HCN                  |
| 283/54   | Who-fe-Patrick(Bitter)                       | 1.3                       | 1.3                       | 16.9                        | 470.9                      |  | 102.1                       |
|          | Mulling Bitter                               | .60                       | .93                       | 26.6                        | 436.3                      |  | 171.4                       |
|          | New, Green, Bitter(Bodles)                   | 1.3                       | .99                       | 11.4                        | 293.8                      |  | 61.6                        |
|          | Catch Thief, Bitter                          | .93                       | .82                       | 20.2                        | 504.3                      |  | 83.5                        |
|          | Duff House Bitter Long-Leaf                  | .88                       | .52                       | 13.0                        | 346.1                      |  | 80.7                        |
| 286/54   | Aggr. White Stick Sweet                      | 1.5                       | .65                       | 11.2                        | 152.8                      |  | 42.5                        |
|          | Yellow Stick(Ardoch Dist.)                   | 2.0                       | .46                       | 4.1                         | 130.7                      |  | 57.8                        |
|          | Blue Chambers(Sweet)                         | 1.7                       | 1.1                       | 17.5                        | 345.1                      |  | 74.2                        |
|          | Fowl Fat Sweet                               | 1.6                       | 1.0                       | 26.59                       | 267.3                      |  | 67.0                        |
|          | Govt. Bitter(Restora)                        | 1.4                       | .78                       | 20.98                       | 472.0                      |  | 67.6                        |
|          | Ulcer-Sweet (Middlesex Dist.)                | 2.0                       | 1.3                       | 8.51                        | 264.1                      |  | 36.7                        |
|          | Sweet Cassava Dumbarton                      | 1.3                       | .54                       | 17.24                       | 234.4                      |  | 60.5                        |
|          | White House Bitter -Mt. Olivet               | 1.5                       | 1.6                       | 10.28                       | 371.0                      |  | 148.0                       |
|          | Young Girl(Sweet)                            | 1.8                       | 1.6                       | 16.43                       | 359.6                      |  | 81.0                        |
|          | New Green Bitter(St. Ann)                    | 2.4                       | .87                       | 4.48                        | 193.3                      |  | 62.6                        |
|          | Ingram Bitter(St. Ann)                       | 1.3                       | .85                       | 22.17                       | 178.2                      |  | 63.2                        |
|          | Bygrave-Sweet(Alva St. An)                   | 1.4                       | 1.1                       | 24.39                       | 317.5                      |  | 63.3                        |
|          | Blue Bud Bitter(Mt. Olivet)                  | 1.4                       | .66                       | 16.61                       | 491.4                      |  | 83.2                        |
|          | White Root Brown Stick Bitter-St. Elizabeth) | 1.5                       | .47                       | 26.95                       | 509.8                      |  | 103.7                       |
|          | Hafoo Sweet                                  | 2.3                       | .93                       | 13.53                       | 190.6                      |  | 48.0                        |
|          | New Jacket, Bitter )                         |                           |                           |                             |                            |  |                             |
|          | St. Elizabeth )                              | 1.1                       | .89                       | 26.46                       | 621.0                      |  | 74.7                        |
|          |                                              | $\frac{61.43}{63} = .975$ | $\frac{62.22}{66} = .943$ | $\frac{136.77}{66} = 20.75$ | $\frac{23571.2}{66} = 433$ |  | $\frac{67544}{66} = 102.34$ |

1. Directions

- a. Plant at intervals used for present plot  
(3 feet between plants, 4 feet between rows).
- b. Plant 12 sticks of each variety
- c. Replant any failures from the present stand of plants.  
If no more sticks can be obtained for a particular variety,  
do not supply from outside sources.
- d. Use same numbers given to a variety for the field labels  
as they presently have.
- e. Keep record of name and number on planting chart.
- f. Use your own discretion as to fertilizer and cultivation  
practise. Report of soil analyses will be supplied.

Plants with yellow stems

9. Blue Top
11. Mullings
66. Marigold
72. Bull Tiger
85. Smalling
97. Sweet Cassava
101. Bitter Sweet
92. Yellow Belly Sweet
102. Red Stick Sweet
26. Yellow Stick
60. Ingram
78. Sweet Westmoreland
69. Sweet Cassava No. 1

Plants with brown stems

12. Blue Stick
83. Monsel Sweet
41. Red Stick
61. New Green
63. Anglin Bitter
70. Sweet Cassava No. 2
90. Blue Bud Sweet
91. Blue Bud Sweet
104. Blue Bud
105. Blue Bud
57. Mt. Pleasant
62. Blue Bud
13. Black Stick
16. Blue Stick
35. Bunch of Keys
36. Black Stick
40. Gordon
43. Eye Water
48. Cashew Long Leaf
49. Smalling
54. Esther
68. Damsel
75. Pusey Sweet
77. Ingram
88. Egg Yolk
50. Brown Stick

Plants with silver stems

39. Blue Top
46. Westmoreland
103. White Stick

- 106. Young Gal
- 107. Real Sweet
- 7. White Stick
- 15. Tall Leaf Cotton Tree
- 19. White House
- 22. White Cuban
- 37. White Brown Stick
- 51. White Margaret
- 79. Sugar Loaf
- 100. Damsel Sweet
- 55. Long Leaf White Tuber
- 58. Walters
- 73. Bunch of Keys
- 27. Rodney
- 1. Brown Stick
- 14. Short Leaf Cotton Tree
- 33. John Henry
- 34. White Stick, Portland
- 52. White Stick
- 53. Loura
- 56. Marlie Hill
- 59. Cotton Tree
- 76. Agricultural White Stick
- 80. Damsel
- 89. Sweet Louise
- 98. Ulcer
- 81. White Stick
- 29. Who Fe Patrick
- 84. Sweet Cassava No. 4

Plants with stems intermediate in color between silver and brown

- 44. Government
- 64. Blue Bud Bitter
- 67. Unknown - Hyde Land Settlement
- 38. Long Leaf Black Stem
- 99. Commando
- 8. White Stick
- 20. Blue Bud
- 25. Bobby Hanson
- 42. Bobby Hanson
- 30. New Green, Manchester
- 65. New Green, Hyde Land Settlement
- 32. Mullings
- 31. Duff House
- 45. New Green, St. Mary
- 47. Blue Bud Bitter.

Dept of Ag.  
Jamaica

KEY TO CASSAVA VARIETIES

A. Petioles Red, Crimson or Purple (Sometimes only in leaves of medium age)

Yankee Red  
Young Girl 1st  
Young Girl 2nd  
Ester  
Greyhound  
Catch Thief  
Bunch of Keys (R.P.)  
Blue Top  
Long Leaf (2nd)

a. Stipule lobes tinted or streaked with red, crimson or purple

Stems of young buds streaked with red along angles. Under-  
side of young leaves tinted a faint purple or crimson.  
Buds bluish, purple or crimson.  
Veins on upperside and underside of leaf sometimes slightly  
red, crimson or purple tinted. (Little or not at all evi-  
dent in old leaves.)  
Tuber tawny brown on the outside, cream inside.

.....Yankee Red

aa. Stipules pale green (occasionally slightly streaked with purple or crimson)

Stems of young buds coloured purple or crimson along angles.  
Buds bluish, purple or crimson.  
Veins on upperside of leaf often red or crimson tinted.  
Veins on underside more richly coloured red or crimson.  
(Little or not at all evident in old leaves.)

.....Blue Top (Long Leaf 2nd)

aaa. Stipules red, crimson or purple at base

Young Girl 1st  
Young Girl 2nd  
Ester  
Grey Hound  
Catch Thief  
Bunch of Keys (R.P.)

b. Buds bluish, purple or crimson

Stems of young buds faintly tinted or purple along angles.  
Veins on upperside and underside of leaf sometimes slightly  
red or crimson tinted, but less so on the underside.  
(Barely evident in old leaves).  
Tuber cream coloured on the outside, white inside.

..... Young Girl 1st (Young  
Girl 2nd).

bb. Buds a dull brownish-mauve like young mango leaves

Stems in bud stage bluish between angles.  
Older leaves sometimes slightly bluish on underside.  
Veins crimson or rose-red on upperside of leaf, pale green  
or only faintly touched with crimson on underside. (Old  
leaves have veins on both sides pale green).  
Tuber with dark brown skin, white inside.

..... Catch Thief

bbb....

- bbb. Buds usually pale green, but occasionally very faintly touched with purple, crimson or brownish-mauve.

Bunch of Keys (R.P.)  
Greyhound  
Ester

- c. Veins on upperside of leaf sometimes red, crimson or purple.

Bunch of Keys (R.P.)  
Greyhound  
Ester

- d. Tubers dark brown externally, white inside.

..... Ester (Bunch of Keys  
R.P.)

- dd. Tubers cream externally, white inside

Stems tall and straight, branching negligible  
Older parts of stem grey in colour  
Stem in bud stage sometimes has blue bloom between the angles.  
Undersides of some leaves covered with blue bloom.

..... Greyhound

- AA. Petioles green, or pale yellowish green, but with bases and/or apices red, crimson or purplish. Sometimes petiole a little touched with red between the base and apex.

Fowl Fat  
Ceshair  
Red  
Blue Chambers  
Hafoo  
Blue Beard  
Smelling  
Blue Bud  
Cotton Tree  
Long Leaf 1st  
Merlie Hill

- a. Buds purple, crimson or bluish

Red  
Hafoo  
Blue Bud

- b. Veins on both sides of leaf often somewhat red, crimson or purplish, particularly on the underside. (Little or not at all evident in old leaves)

Red  
Hafoo  
Blue Bud

- c. Tubers pale yellow or creamish externally, pale cream internally.

Stems of young buds slightly crimson along angles, with blue bloom between angles.  
Underside of some leaves covered with blue bloom.  
Stipules pale green in colour; those of young buds faintly streaked with purple.

..... Hafoo (Red)

cc.     Tubers with very dark brown skin, white internally

Stems of young buds slightly crimson or purple along angles,  
with blue bloom between angles.  
Underside of some leaves covered with blue bloom.  
Stipules usually pale green but in very young leaves slightly  
purple at base or faintly streaked with crimson or purple.  
In rare cases the stipules of the very young leaves are purple  
or crimson all over.

.....Blue Bud

a.     Buds a dull brownish-mauve (Similar to mango leaves)

Cotton Tree  
Smalling

b.     Veins pale green

Cotton Tree  
Smalling

c.     Tubers with yellow skin, pale yellow or cream internally

Stems of buds with blue bloom between angles.  
Bases and apices of petioles often covered with bluish bloom.  
Stipules green, bases often covered with bluish bloom.

..... Cotton Tree

cc.     Tubers with dark brown skin, creamy white internally

Stipules often covered with bluish bloom at the base.

.....Smalling

a.     Buds usually pale green, but occasionally very faintly  
touched with purple, or crimson or brownish-mauve.

Fowl Fat  
Cashair  
Blue Chambers  
Blue Beard  
Smalling  
Long Leaf 1st  
Marlie Hill

b.     Veins pale green, but often faintly tinted red on upper-  
side alone

Fowl Fat  
Cashair  
Long Leaf 1st

c.     Tuber brown externally, yellow internally

Stem tawny brown in older parts.  
Stipules pale green in colour.

..... Fowl Fat (Cashair)

cc.....

cc.      Tuber dark brown externally, white internally

Leaf lobes long and very narrow.  
Underside of some leaves covered with bluish bloom.  
Stipules pale green.  
Branch tip sometimes covered with blue bloom.

..... Long Leaf 1st

b.      Veins pale green

Blue Chambers  
Blue Beard  
Marlie Hill  
Smalling

c.      Tuber cream externally, white internally

Main stem of plant just above ground silvery in colour.  
Stem in bud stage with blue bloom between angles.  
Underside of older leaves covered with blue bloom.  
Stipules pale green in colour.

..... Marlie Hill

cc.      Tuber brown externally, cream internally

Stems of buds with bluish bloom between angles and  
Petioles of bud leaves with bluish bloom at bases.  
Underside of leaves usually covered with bluish bloom.  
Stipules pale green in colour, sometimes with a bluish bloom  
at the bases.

..... Blue Chambers (Blue Beard,  
Smalling)

AAA.      Petioles Green

Bobby Hanson  
Doncaster White Stick  
Bunch of Keys (G.P.)  
Silver Stick  
Fowl Fat  
Cashair  
Blue Chambers  
Blue Beard  
Smalling  
Red  
Hafoo  
Blue Bud  
Cotton Tree  
Long Leaf 1st  
Marlie Hill

a.      Buds purple, crimson or bluish

Red  
Hafoo  
Blue Bud

b.....

- b. Veins on both sides of leaf often somewhat red, crimson or purplish, particularly on the underside. (Little or not at all evident in mature leaves)

Red  
Hafoo  
Blue Bud

- c. Tubers pale yellow or creamish externally, pale cream internally

Stems of young buds slightly crimson coloured along angles, with blue bloom between angles.  
Underside of some leaves covered with blue bloom.  
Stipules pale green in colour; those of young buds faintly streaked with purple.

..... Hafoo (Red)

- cc. Tubers with very dark brown skin, white internally

Stems of young buds slightly crimson or purple along angles, with blue bloom between angles.  
Underside of some leaves covered with blue bloom.  
Stipules usually pale green but in very young leaves slightly purple at base or faintly streaked with crimson or purple.  
In rare cases the stipules of the very young leaves are purple or crimson all over.

..... Blue Bud

- a. Buds a dull brownish-mauve resembling young mango leaves

Cotton Tree  
Smalling

- b. Veins pale green

Cotton Tree  
Smalling

- c. Tubers with yellow skin, pale yellow or cream internally

Stems of buds with blue bloom between angles.  
Bases and apices of petioles often covered with bluish bloom.  
Stipules green, bases often covered with bluish bloom.

..... Cotton Tree

- cc. Tubers with dark brown skin, creamy white internally

Stipules often covered with bluish bloom at the base.

..... Smalling

a. Buds usually...

- a. Buds usually pale green, but occasionally very faintly touched with purple, or crimson or brownish-mauve

Fowl Fat  
Cashair  
Blue Chambers  
Blue Beard  
Smalling  
Long Leaf 1st  
Marlie Hill  
Bobby Hanson  
Doncaster White Stick  
Bunch of Keys (G.P.)  
Silver Stick

- b. Veins pale green or yellowish green but often faintly tinted red on upperside alone

Fowl Fat  
Cashair  
Long Leaf 1st

- c. Tuber brown externally, yellow internally

Stem tawny brown in older parts  
Stipules pale green in colour.

..... Fowl Fat (Cashair)

- cc. Tuber dark brown externally, white internally

Leaf lobes long and very narrow.  
Underside of some leaves covered with bluish bloom.  
Stipules pale green.  
Branch tips sometimes covered with bluish bloom.

..... Long Leaf 1st

- b. Veins pale green

Blue Chambers  
Blue Beard  
Smalling  
Marlie Hill  
Bobby Hanson  
Doncaster White Stick  
Bunch of Keys (G.P.)  
Silver Stick

- c. Tuber brown externally, cream internally

Stems of buds with bluish bloom between angles and  
Petioles of bud leaves with bluish bloom at bases.  
Underside of leaves usually covered with bluish bloom.  
Stipules pale green in colour, sometimes with a bluish bloom  
at the base.

.....Blue Chambers (Blue Beard,  
Smalling)

cc.....

cc. Tuber cream externally, white internally

Main stem of plant just above ground silvery in colour.  
Stem in bud stage has blue bloom between angles.  
Underside of older leaves covered with blue bloom.  
Stipules pale green in colour.

..... Merlie Hill

Main stem and older parts of branches silver in colour.  
Leaf lobes long and narrow though not quite as linear as Long Leaf 1st.  
Petioles generally green throughout.  
Stipules pale green.  
Buds invariably pale green.

.....Silver Stick

ccc. Tuber dark brown externally, white internally

Main stem a shiny, dark brown near the ground.  
Stipules pale green.

.....Bobby Hanson (Doncaster White  
Stick, Bunch of Keys G.P.)

# Remarks made at Conference with heads of Depts, Hope, Feb 1, 1957.

5.56

Summary

8.2, 6.7

53

1. Var. represent veg. maintained units, ~~not~~ + called cultivars.
2. Stability of these probably good, but what would happen in seeds is unknown.
3. Present group found represents a good cross-section of variation found anywhere, due to past importations.
4. These cultivars contain as much capacity for experimentation + yield as any found - more useful than, to examine closely these present ones to try for any improvement through importation.
5. ~~The~~ The 4 or 5 recent imports from Cuba are duplicates of varieties already present, or at best are only small recombinations of genes which are present in any large population of cultivars.

Time now, then, to give the 49 cultivars at Bodles a chance to demonstrate their capacity.

Immediate

1. Variety trials

1. By impartial trials at several localities, both by private and departmental agencies.
2. Recommend an increase in number of plants of each cultivar at Bodles to provide the number of cuttings necessary for said trials.
3. About an acre of land available directly behind present planting.
4. Use some sort of fertilizer on new plot - how much, %s, etc., to be determined by usual methods.

## 2. Cultivation techniques

1. Distance of planting - noticeable difference in Bodles plot. varies with soil, area, etc.
2. Time of harvesting - 12-18 month tests of starch content.
3. Mulching - as in St. Elizabeth.
4. Interplanting with legumes.
5. Fertilizers - amounts + timing.
6. Suitability of different root-bearing characters.  
Close-born vs roots distantly attached.

- Long range (1) Plant breeding - establishment, % of seed viability, time of
1. ~~Inbreeding & hybridizing~~ pollen receptivity, establishment of inbred lines + hybrids.
  2. Possibility of plants as food concentrates for animal feed - testing on small animals, method of growing, harvesting,

## General remarks

1. Maintenance of the museum plot at Bodles or other station, in order to prevent redoubling the work.
2. Use of numbers existing - reference only, prevents emotional involvement of local names.

CASSAVA TUBERS  
Samples from BODLES Agricultural Station

| Lab. No.                          | Variety                    | ON WHOLE TUBER |          |         |                   |                        | ON SKIN | ON FLESH |
|-----------------------------------|----------------------------|----------------|----------|---------|-------------------|------------------------|---------|----------|
|                                   |                            | %Glucose       | %Sucrose | %Starch | %H <sub>2</sub> O | Ratio of Skin to Flesh | ppm HCN | ppm HCN  |
| 280/54<br>collected<br>on 22/9/54 | A.G.R. Sweet               | 0.29           | 1.2      | 29.3    | 63.1              | 1:4.4                  | 598     | 63       |
|                                   | White Cuban-Bitter         | 0.30           | 0.64     | 25.8    | 67.9              | 1:5.1                  | 545     | 140      |
|                                   | Bullet Tree                | 0.31           | -        | 34.9    | 61.8              | 1:5.9                  | 854     | 180      |
|                                   | Yellow Saunders            | -              | -        | 27.7    | 66.3              | 1:5.0                  | 521     | 116      |
|                                   | Catch Thief                | 0.53           | 1.1      | 20.5    | 70.9              | 1:5.2                  | 397     | 136      |
|                                   | Smalling Sweet (Red Bank)  | 1.02           | 1.3      | 3.5     | 87.4              | 1:3.2                  | 376     | 126      |
|                                   | Portland #6 (White Stick)  | 0.51           | 1.3      | 12.5    | 79.4              | 1:4.9                  | 444     | 85       |
|                                   | Richmond Stick             | 1.1            | 1.3      | 29.3    | 62.7              | 1:7.3                  | 630     | 307      |
|                                   | Sour Bammy                 | 0.72           | 1.7      | 18.8    | 72.4              | 1:3.7                  | 329     | 79       |
|                                   | New Stick #5               | 1.1            | 1.3      | 18.2    | 72.5              | 1:7.7                  | 346     | 89       |
|                                   | Bobby Hanson               | -              | -        | 23.6    | 70.5              | 1:5.2                  | 564     | 275      |
|                                   | Portland #2 (Sugar Loaf)   | 0.99           | 1.1      | 16.0    | 75.3              | 1:4.4                  | 442     | 80       |
|                                   | Marlie Hill (Big Yard)     | 1.3            | 0.83     | 21.7    | 72.7              | 1:7.6                  | 569     | 88       |
|                                   |                            | 1.2            | 1.6      | 19.9    | 71.8              | 1:7.6                  | 626     | 81       |
|                                   | Elmo Stick                 | 0.30           | 0.13     | 21.1    | 73.2              | 1:5.4                  | 508     | 90       |
|                                   | Portland #4 Cotton Tree    | 0.94           | 1.4      | 25.5    | 65.7              | 1:7.2                  | 418     | 127      |
|                                   | Portland #3 (Agricultural) | 0.69           | 1.5      | 18.8    | 71.5              | 1:7.1                  | 497     | 67       |

| Lab. No.                          | Variety                         | ON WHOLE TUBER |          |         |                   |                        | ON SKIN | ON FLESH |
|-----------------------------------|---------------------------------|----------------|----------|---------|-------------------|------------------------|---------|----------|
|                                   |                                 | %Glucose       | %Sucrose | %Starch | %H <sub>2</sub> O | Ratio of Skin to Flesh | ppm HCN | ppm HCN  |
| 280/54<br>contd.                  | Black Stick Buck-Buck           | 0.69           | 1.1      | 33.1    | 60.6              | 1:6.6                  | 886     | 92       |
|                                   | Portland#1 White Stick Bitter.  | 1.0            | 1.4      | 25.8    | 65.6              | 1:6.4                  | 582     | 151      |
|                                   | Portland#5(Blue Bud)            | 0.30           | 1.1      | 19.4    | 71.8              | 1:5.0                  | 344     | 86       |
| 282/54<br>collected<br>on 24/9/54 | Laura Bitter (Litlitz)          | 0.86           | 0.91     | 26.7    | 65.9              | 1:4.5                  | 318     | 142      |
|                                   | Bobby Hanson (Bitter)           | 0.31           | 1.1      | 23.3    | 69.6              | 1:4.6                  | 542     | 143      |
|                                   | Yellow Heart Sweet(Litlitz)     | 1.02           | 0.86     | 7.4     | 83.8              | 1:2.7                  | 307     | 41       |
|                                   | Eye Water, Bitter, Red Bark.    | 0.81           | 1.1      | 19.8    | 73.0              | 1:6.3                  | 476     | 175      |
|                                   | White Margaret Bitter           | 0.70           | 1.2      | 25.5    | 66.2              | 1:5.8                  | 727     | 218      |
|                                   | Long Leaf Black Stick Stem      | 0.37           | 0.88     | 31.2    | 62.6              | 1:6.2                  | 545     | 112      |
|                                   | Long Leaf White Tuber           | 0.56           | 1.2      | 29.8    | 63.6              | 1:6.3                  | 590     | 66       |
|                                   | Brown Stick, Bitter             | 0.31           | 0.96     | 29.4    | 63.3              | 1:5.3                  | 497     | 164      |
|                                   | Westmoreland, Bitter            | -              | -        | 19.8    | 79.4              | 1:5.9                  | 392     | 54       |
|                                   | Bunch of Keyes, Bitter (Pepper) | 0.82           | 1.0      | 25.3    | 67.0              | 1:6.4                  | 497     | 120      |
|                                   | Cashew Long Leaf                | 0.51           | 1.6      | 21.9    | 71.3              | 1:4.8                  | 328     | 80       |
|                                   | Damsel, Sweet                   | 1.2            | 1.2      | 14.6    | 77.2              | 1:6.7                  | 206     | 74       |
|                                   | White Heart, Sweet              | 1.3            | 1.4      | 11.8    | 79.1              | 1:3.1                  | 259     | 59       |
|                                   | Blue Top, Bitter                | 1.1            | 0.98     | 20.2    | 73.6              | 1:7.0                  | 521     | 40       |
|                                   | New Green (St. Mary)            | 0.35           | 0.47     | 16.9    | 69.9              | 1:4.6                  | 259     | 62       |
|                                   | White House                     | 1.2            | 1.3      | 30.9    | 61.8              | 1:6.3                  | 1098    | 213      |

| Lab. No.                               | Variety                          | ON WHOLE TUBER |          |         |                   | ON SKIN                           |         | ON FLESH |
|----------------------------------------|----------------------------------|----------------|----------|---------|-------------------|-----------------------------------|---------|----------|
|                                        |                                  | %Glucose       | %Sucrose | %Starch | %H <sub>2</sub> O | Ratio of Skin to <sup>Flesh</sup> | ppm HCN | ppm HCN  |
| 283/54<br>collected<br>on<br>27/9/54   | Yellow Belly Sweet               | 0.71           | 1.1      | 25.6    | 66.2              | 1:2.2                             | 309     | 45       |
|                                        | White Brown Stick(Bitter)        | 0.63           | 1.2      | 24.0    | 73.7              | 1:3.6                             | 307     | 132      |
|                                        | Walters, Bitter                  | 0.55           | 1.1      | 19.3    | 74.0              | 1:5.6                             | 222     | 112      |
|                                        | Smalling, Bitter                 | 0.26           | 0.23     | 30.5    | 63.6              | 1:5.0                             | 320     | 85       |
|                                        | Esther, Bitter, Santa-Cruz.      | 0.56           | 0.92     | 27.7    | 64.4              | 1:3.9                             | 410     | 104      |
|                                        | Gordon, Bitter                   | 0.71           | 0.55     | 33.7    | 58.8              | 1:7.0                             | 502     | 126      |
|                                        | Blue Bud Sweet                   | 1.0            | 1.3      | 20.4    | 68.5              | 1:5.4                             | 230     | 39       |
|                                        | John Henry Bitter                | 1.2            | 0.75     | 17.6    | 76.0              | 1:7.0                             | 365     | 130      |
|                                        | Rodney, Bitter                   | 1.1            | 0.73     | 16.2    | 77.1              | 1:5.4                             | 423     | 90       |
|                                        | Who-fe-Patrick (Bitter)          | 1.3            | 1.3      | 16.9    | 75.4              | 1:6.6                             | 471     | 102      |
|                                        | Mulling Bitter                   | 0.60           | 0.93     | 26.6    | 67.4              | 1:5.9                             | 436     | 171      |
|                                        | New Green Bitter(Bodles)         | 1.3            | 0.99     | 11.4    | 80.7              | 1:5.7                             | 294     | 62       |
|                                        | Catch Thief, Bitter              | 0.93           | 0.82     | 20.2    | 71.1              | 1:6.4                             | 504     | 84       |
|                                        | Duff House Bitter Long Leaf.     | 0.88           | 0.52     | 13.0    | 64.9              | 1:5.7                             | 346     | 81       |
|                                        | Agricultural White Stick, Sweet. | 1.5            | 0.65     | 11.2    | 81.8              | 1:5.4                             | 153     | 43       |
| 286/54<br>collect-<br>ed on<br>29/9/54 | Yellow Stick (Ardoch Dist.)      | 2.0            | 0.46     | 4.1     | 92.7              | 1:4.7                             | 131     | 58       |
|                                        | Blue Chambers (Sweet)            | 1.7            | 1.1      | 17.5    | 73.7              | 1:4.9                             | 345     | 74       |
|                                        | Fowl Fat Sweet                   | 1.6            | 1.0      | 26.6    | 77.3              | 1:4.0                             | 267     | 67       |

| Lab. No.         | Variety                                         | ON WHOLE TUBER |          |         |                   |                        | ON SKIN | ON FLESH |
|------------------|-------------------------------------------------|----------------|----------|---------|-------------------|------------------------|---------|----------|
|                  |                                                 | %Glucose       | %Sucrose | %Starch | %H <sub>2</sub> O | Ratio of Skin to Flesh | ppm HCN | ppm HCN  |
| 286/54<br>contd. | Govt. Bitter (Restora)                          | 1.4            | 0.78     | 21.0    | 70.1              | 1:5.3                  | 472     | 68       |
|                  | Ulcer-Sweet (Middle-sex Dist.)                  | 2.0            | 1.3      | 8.5     | 82.3              | 1:4.8                  | 264     | 37       |
|                  | Sweet Caddava Dumbarton                         | 1.3            | 0.54     | 17.2    | 75.7              | 1:5.2                  | 234     | 61       |
|                  | White House Bitter(Mt. Olivet).                 | 1.5            | 1.6      | 10.3    | 82.9              | 1:5.7                  | 371     | 148      |
|                  | Young Girl (Sweet)                              | 1.8            | 1.6      | 16.4    | 74.0              | 1:5.3                  | 360     | 81       |
|                  | New Green Bitter(St. Ann)                       | 2.4            | 0.87     | 4.5     | 84.3              | 1:3.6                  | 193     | 63       |
|                  | Ingram Bitter(St. Ann)                          | 1.3            | 0.85     | 22.2    | 69.8              | 1:4.9                  | 178     | 63       |
|                  | Bygrave-Sweet(Alva St. Ann).                    | 1.4            | 1.1      | 24.4    | 67.7              | 1:5.8                  | 318     | 63       |
|                  | Blue Bud Bitter(Mt. Olivet).                    | 1.4            | 0.66     | 16.6    | 76.4              | 1:5.6                  | 491     | 83       |
|                  | White Root Brown Stick) Bitter - St. Elizabeth) | 1.5            | 0.47     | 27.0    | 65.3              | 1:7.2                  | 510     | 104      |
|                  | Hafoo Sweet                                     | 2.3            | 0.93     | 13.5    | 77.6              | 1:3.7                  | 191     | 48       |
|                  | New Jacket Bitter }<br>St. Elizabeth }          | 1.1            | 0.89     | 26.5    | 65.5              | 1:5.8                  | 621     | 75       |

CASSAVA TUBERS  
Samples from GROVE PLACE.

| Lab. No.                              | Variety                | ON WHOLE TUBER |          |         |                   |                        | ON SKIN | ON FLESH |
|---------------------------------------|------------------------|----------------|----------|---------|-------------------|------------------------|---------|----------|
|                                       |                        | %Glucose       | %Sucrose | %Starch | %H <sub>2</sub> O | Ratio of Skin to Flesh | ppm HCN | ppm HCN  |
| 193/54<br>collect-<br>ed on<br>5/7/54 | Yellow Stick           | 1.1            | 1.8      | 30.0    | 60.4              | 1:5.9                  | 1153    | 137      |
|                                       | Marigold               | 1.2            | 1.5      | 33.9    | 58.6              | 1:5.7                  | 1104    | 179      |
|                                       | Mullings-Spring Garden | 1.5            | 1.2      | 29.4    | 62.5              | 1:5.6                  | 1013    | 129      |
|                                       | Bull Tiger             | 1.4            | 1.8      | 32      | 57.7              | 1:6.0                  | 1399    | 219      |
|                                       | Ingram                 | 0.96           | 1.3      | 34.4    | 57.4              | 1:6.5                  | 845     | 159      |
|                                       | Yellow Belly Sweet     | 0.87           | 1.8      | 31.8    | 73.6              | 1:4.4                  | 699     | 64       |
|                                       | Smalling               | 0.89           | 2.4      | 28.8    | 59.9              | 1:4.3                  | 930     | 76       |
|                                       | Sweet Westmoreland.    | 0.93           | 1.4      | 32.1    | 57.9              | 1:4.0                  | 730     | 68       |
|                                       | Blue Top               | 1.3            | 1.6      | 29.6    | 61.8              | 1:6.1                  | 1298    | 248      |
| 194/54<br>collect-<br>ed on<br>6/7/54 | Blue Stick #12         | 1.5            | 1.7      | 22.2    | 68.9              | 1:6.0                  | 919     | 92       |
|                                       | Red Stick #41          | 1.1            | 1.2      | 33      | 59.8              | 1:5.9                  | 1067    | 131      |
|                                       | Smalling #49           | 1.1            | 1.5      | 33      | 58.8              | 1:5.8                  | 1266    | 116      |
|                                       | Gordon #40             | 0.91           | 2.2      | 30.8    | 57.4              | 1:5.9                  | 1185    | 225      |
|                                       | Mt. Pleasant #57       | 0.92           | 1.4      | 35.5    | 56.1              | 1:4.7                  | 1015    | 283      |
|                                       | Black Stick #36        | 0.65           | 1.4      | 34.5    | 55.3              | 1:5.6                  | 1177    | 139      |
|                                       | Sweet Cassava #97      | 1.6            | 1.8      | 25.5    | 64.2              | 1:5.4                  | 1079    | 137      |

| Lab. No.                              | Variety                    | ON WHOLE TUBER |          |         |                   |                         | ON SKIN | ON FLESH |
|---------------------------------------|----------------------------|----------------|----------|---------|-------------------|-------------------------|---------|----------|
|                                       |                            | %Glucose       | %Sucrose | %Starch | %H <sub>2</sub> O | Ratio of Skin to Flesh. | ppm HCN | ppm HCN  |
| 194/54<br>contd.                      | Red Stick Sweet            | 1.8            | 1.5      | 27.2    | 62.6              | 1:4.9                   | 1018    | 105      |
|                                       | Blue Stick #16             | 1.6            | 1.9      | 26.1    | 60.1              | 1:4.5                   | 845     | 84       |
|                                       | Esther #54                 | 0.74           | 2.2      | 36.1    | 53.7              | 1:5.8                   | 980     | 176      |
|                                       | Eye Water #43              | 1.9            | 2.4      | 24.7    | 64.3              | 1:5.8                   | 940     | 270      |
|                                       | Rodney                     | 1.5            | 1.8      | 31.7    | 59.7              | 1:7.7                   | 1185    | 60       |
|                                       | Cashew Long Leaf #48       | 0.44           | 0.93     | 39.0    | 52.1              | 1:4.7                   | 576     | 72       |
|                                       | Bitter Sweet #101          | 1.9            | 1.2      | 29.4    | 57.6              | 1:6.1                   | 238     | 46       |
| 195/54<br>collect-<br>ed on<br>7/7/54 | Pusey Sweet #75            | 1.6            | 1.4      | 25.5    | 59.9              | 1:5.9                   | 975     | 66       |
|                                       | Tall Leaf Cotton Tree #15  | 1.7            | 1.3      | 32.0    | 59.2              | 1:7.2                   | 758     | 167      |
|                                       | White Cuban #22            | 0.67           | 1.3      | 34.6    | 56.3              | 1:5.7                   | 2209    | 248      |
|                                       | White House #19            | 1.9            | 1.7      | 57.1    | 61.6              | 1:5.9                   | 1009    | 229      |
|                                       | Short Leaf Cotton Tree #14 | 1.3            | 2.3      | 32.5    | 59.4              | 1:6.9                   | 1605    | 159      |
|                                       | Ingram #77                 | 1.9            | 0.89     | 32.2    | 58.1              | 1:6.3                   | 729     | 78       |
|                                       | Blue Bud Sweet #90         | 1.6            | 2.3      | 34.6    | 55.8              | 1:6.5                   | 716     | 53       |
|                                       | White Stick #7             | 1.9            | 0.94     | 34.4    | 57.3              | 1:7.1                   | 853     | 129      |

| Lab. No.                              | Variety                      | ON WHOLE TUBER |          |         |                   |                        | ON SKIN | ON FLESH |
|---------------------------------------|------------------------------|----------------|----------|---------|-------------------|------------------------|---------|----------|
|                                       |                              | %Glucose       | %Sucrose | %Starch | %H <sub>2</sub> O | Ratio of Skin to Flesh | ppm HCN | ppm HCN  |
| 195/54<br>contd.                      | Brown Stick #1               | 1.0            | 1.1      | 35.1    | 56.7              | 1:6.4                  | 959     | 80       |
|                                       | Egg Yolk #88                 | 0.60           | 0.75     | 29.8    | 60.4              | 1:5.8                  | 367     | 68       |
|                                       | Blue Bud Sweet #91           | 0.99           | 2.6      | 24.6    | 62.4              | 1:6.4                  | 572     | 27       |
|                                       | Blue Bud #105                | 1.1            | 2.0      | 30.3    | 59.3              | 1:4.2                  | 1895    | 210      |
|                                       | Blue Bud #104                | 2.0            | 1.4      | 25.1    | 63.5              | 1:4.1                  | 1358    | 73       |
| 196/54<br>collect-<br>ed on<br>8/7/54 | Westmoreland #46             | 0.88           | 1.3      | 39.7    | 52.1              | 1:6.2                  | 701     | 62       |
|                                       | Long Leaf White<br>Tuber #55 | 1.2            | 1.8      | 35.5    | 54.5              | 1:6.4                  | 817     | 204      |
|                                       | White Stick #34              | 1.4            | 2.3      | 33.6    | 55.1              | 1:6.8                  | 343     | 170      |
|                                       | Blue Top #39                 | 2.1            | 1.3      | 21.5    | 68.6              | 1:5.3                  | 398     | 190      |
|                                       | Laura #53                    | 2.0            | 1.1      | 27.0    | 63.5              | 1:5.0                  | 783     | 257      |
|                                       | White Brown Stick<br>#37     | 1.6            | 1.3      | 34.3    | 55.2              | 1:4.7                  | 761     | 148      |
|                                       | White Stick #52              | 2.1            | 1.4      | 25.1    | 65.2              | 1:7.2                  | 564     | 221      |
|                                       | White Margaret #51           | 0.91           | 1.5      | 31.5    | 56.4              | 1:5.0                  | 755     | 134      |
|                                       | Walters #58                  | 1.2            | 1.4      | 29.5    | 56.3              | 1:6.1                  | 821     | 77       |
|                                       | Cotton Tree #59              | 1.2            | 1.7      | 34.9    | 54.1              | 1:7.1                  | 1081    | 140      |
|                                       | Bunch of Keyes #73           | 1.8            | 0.88     | 27.7    | 63.3              | 1:6.6                  | 1004    | 259      |

| Lab. No.         | Variety               | ON WHOLE TUBER |          |         |                   |                        | ON SKIN | ON FLESH |
|------------------|-----------------------|----------------|----------|---------|-------------------|------------------------|---------|----------|
|                  |                       | %Glucose       | %Sucrose | %Starch | %H <sub>2</sub> O | Ratio of Skin to Flesh | ppm HCN | ppm HCN  |
| 196/54<br>contd. | Agr. White Stick #76. | 2.0            | 1.6      | 31.4    | 58.3              | 1:6.2                  | 562     | 94       |
|                  | Marlie Hill #56       | 1.7            | 1.9      | 30.9    | 59.7              | 1:5.9                  | 1080    | 141      |
|                  | Damsel #80            | 2.1            | 1.8      | 27.8    | 55.2              | 1:5.3                  | 456     | 72       |

CASSAVA LEAF SAMPLES  
from GROVE PLACE

| Lab. No.                         | Sample                       | %Crude Protein of Leaves | %Crude Protein of Petiole & Stalk | Ratio of Petiole & Stalk to Leaves |
|----------------------------------|------------------------------|--------------------------|-----------------------------------|------------------------------------|
| 193/54<br>collected on<br>5/7/54 | Yellow Stick                 | ✓ 27.0                   | 14.0                              | 1:0.69                             |
|                                  | Marigold                     | ✓ 30.0                   | 15.9                              | 1:3.4                              |
|                                  | Mullings-Spring Garden.      | ✓ 25.8                   | 18.8                              | 1:0.93                             |
|                                  | Bull Tiger                   | ✓ 24.5                   | 9.2                               | 1:0.83                             |
|                                  | Ingram                       | ✓ 28.0                   | 7.0                               | 1:0.66                             |
|                                  | Yellow Belly Sweet.          | ✓ 27.6                   | 18.2                              | 1:2.9                              |
|                                  | Smalling                     | ✓ 25.3                   | 13.3                              | 1:2.5                              |
|                                  | Sweet Westmoreland.          | ✓ 26.7                   | 11.9                              | 1:0.98                             |
|                                  | Blue Top                     | ✓ 31.8                   | 19.6                              | 1:3.2                              |
|                                  |                              |                          |                                   |                                    |
| 194/54<br>collected on<br>6/7/54 | Blue Stick - No. 12          | ✓ 31.4                   | 16.5                              | 1:2.3                              |
|                                  | Red Stick - No. 41           | ✓ 28.7                   | 9.5                               |                                    |
|                                  | Smalling - No. 49            | ✓ 32.5                   | 17.1                              | 1:1.8                              |
|                                  | Gordon No. 40                | ✓ 30.8                   | 14.0                              |                                    |
|                                  | Mt. Pleasant No. 57          | ✓ 32.7                   | 10.8                              |                                    |
|                                  | Black Stick - No. 36         | No repeat received       | 11.9                              |                                    |
|                                  | Sweet Cassava - No. 97       | ✓ 28.2                   | 16.8                              | 1:2.7                              |
|                                  | Red Stick, Sweet.            | ✓ 25.5                   | 15.5                              | 1:2.3                              |
|                                  | Blue Stick - No. 16          | No repeat received       | 20.8                              |                                    |
|                                  | Esther No. 54                | ✓ 25.7                   | 12.5                              |                                    |
|                                  | Eye Water - No. 43           | ✓ 28.9                   | 13.6                              |                                    |
|                                  | Rodney                       | ✓ 26.4                   | 12.0                              |                                    |
|                                  | Cashew Long Leaf No. 48      | ✓ 28.6                   | 13.6                              | 1:1.7                              |
|                                  | Bitter Sweet - No. 101       | ✓ 22.1                   | Insufficient sample               |                                    |
|                                  |                              |                          |                                   |                                    |
| 195/54<br>collected on<br>7/7/54 | Pusey Sweet - No. 75         | ✓ 31.0                   | 19.1                              | 1:2.1                              |
|                                  | Tall Leaf Cotton Tree No. 15 | ✓ 32.8                   | 18.0                              | 1:2.0                              |
|                                  | White Cuban - No. 22         | ✓ 27.6                   | 16.4                              | 1:2.10                             |

| Lab. No.                     | Sample                          | %Crude Protein of leaves | %Crude Protein of Petiole & Stalk | Ratio of Petiole & Stalk to leaves |
|------------------------------|---------------------------------|--------------------------|-----------------------------------|------------------------------------|
| 195/54 contd.                | White House No.19               | ✓ 32.0                   | 22.1                              | 1:2.0                              |
|                              | Short Leaf Cotton Tree No.14    | ✓ 32.0                   | 16.8                              | 1:1.5                              |
|                              | Ingram No.77                    | ✓ 27.9                   | 14.7                              | 1:2.6                              |
|                              | Blue Bud Sweet No.90            | ✓ 26.1                   | 11.7                              | 1:1.9                              |
|                              | White Stick- No.7               | ✓ 31.4                   | 16.1                              | 1:2.3                              |
|                              | Brown Stick- No.1               | ✓ 30.8                   | 16.1                              | 1:2.5                              |
|                              | Egg Yolk, No.88                 | ✓ 26.3                   | 22.3                              | 1:2.2                              |
|                              | Blue Bud Sweet No. 91           | ✓ 30.3                   | 13.2                              | 1:2.1                              |
|                              | Blue Bud- No. 105               | ✓ 28.3                   | 17.4                              | 1:2.1                              |
|                              | Blue Bud - No. 104              | ✓ 25.8                   | 14.3                              | 1:1.0                              |
| 196/54 collect- ed on 8/7/54 | Westmoreland- No.46             | ✓ 26.7                   | 12.2                              | 1:1.2                              |
|                              | Long Leaf White Tuber- No.55    | ✓ 28.9                   | 10.8                              | 1:0.56                             |
|                              | White Stick- No.34              | ✓ 26.7                   | 11.0                              | 1:0.87                             |
|                              | Blue Top - No.39                | ✓ 32.4                   | 17.6                              | 1:2.4                              |
|                              | Laura No.53                     | ✓ 36.4                   | 12.0                              | 1:0.61                             |
|                              | White Brown Stick No.37         | No repeat received       | No repeat received                | No repeat received                 |
|                              | White Stick- No.52              | ✓ 33.3                   | 15.9                              | 1:0.95                             |
|                              | White Margaret No.51            | ✓ 25.9                   | 10.8                              | 1:0.57                             |
|                              | Walters No.58                   | ✓ 33.1                   | 12.5                              | 1:0.64                             |
|                              | Cotton Tree- No.59              | ✓ 31.0                   | 10.8                              | 1:0.91                             |
|                              | Bunch of Keyes No.73            | ✓ 28.8                   | 12.0                              | 1:0.95                             |
|                              | Agricultural White Stick- No.76 | ✓ 22.5                   | 13.1                              | 1:0.97                             |
|                              | Marlie Hill- No.56              | ✓ 30.5                   | 21.0                              | 1:0.82                             |
|                              | Damsel No.80                    | ✓ 25.9                   | 18.2                              | 1:1.6                              |

## Plants at Badley Expt. Sta.

| Date planted | Varieties                                                                                                                                                                                                                                                                                                                                                                                       | Origin                                                                                                                                                                                                                                                                                                     |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 24. 7.53     | White Joe B<br>White Cuban B<br>Bobby Hanson<br>Agricultural S<br><del>Seur Banny</del><br>Variety Unknown<br>Blue Bud                                                                                                                                                                                                                                                                          | St. Thomas<br>" "<br>" "<br>" "<br>" "<br>Portland<br>"                                                                                                                                                                                                                                                    |
| 29. 7.53     | Elmo Stick St.<br><del>Catch Thief</del><br>Yellow Saunders<br>New Stick<br>Bullet Tree "<br>Richmond Stick                                                                                                                                                                                                                                                                                     | St. Thomas<br>" "<br>" "<br>" "<br>" "<br>" "                                                                                                                                                                                                                                                              |
| 30. 7.53     | <del>White Stick B<br/>Sugar Loaf S<br/>Agricultural S<br/>Cotton Tree B<br/>Blue Bud S<br/>White Stick S</del>                                                                                                                                                                                                                                                                                 | Norsuck, Portland<br>" "<br>Hope Bay "<br>" "<br>Caenwood "<br>Windsor Castle                                                                                                                                                                                                                              |
| 1. 8.53      | Black Stick<br>Smalling S<br><del>Cuban S</del><br>Marlie Hill<br>Cashew Long Leaf<br>Long Leaf (White Tuber)<br><del>Yellow Heart S<br/>New Green<br/>White Heart S<br/>Bunch of Keys B<br/>White Margaret B<br/>Brown Stick B<br/>Lama B<br/>Westmoreland B<br/>Long Leaf (Black Stem)<br/>Damsel S<br/>Blue Bud S<br/>Eye Water B<br/>Bobby Hanson B<br/>Blue Top B<br/>Yellow Belly S</del> | St. Elizabeth<br>Red Band St. Eliz.<br>" "<br>Big Yard " "<br>Bogue " "<br>" "<br>" "<br>St. Marys " "<br>Littiz " "<br>Pepper " "<br>" " "<br>" " "<br>Littiz " "<br>Bogue " "<br>St. Elizabeth<br>Bogue " "<br>Rocky Hill " "<br>New Bank " "<br>Pepper " "<br>Rocky Hill " "<br>Port Maloni, Manchester |
|              | New Green B<br>Who Fe Partick B<br>John Henry B<br>Esther B<br>White Brown Stick<br>Mullings B<br>Walter's B<br>Blue Bud S<br>Gorden B<br>Catch Thief B<br>Smalling B<br>Agricultural White Stick S<br>Rodney B<br>Long Leaf or Duff House B<br>Government B<br>Mt. Pleasant B<br>White Stick B                                                                                                 | Ellen slit "<br>" " "<br>" " "<br>Bogue St. Eliz.<br>Rocky Hill "<br>Cleveland Canny "<br>New Forest, "<br>Ellen Slit, "<br>Rocky Hill St. Eliz.<br>Pratville, Manchester<br>Pepper, St. Elizabeth<br>Pratville, Manchester<br>" "<br>Ellen Slit "<br>Restoria "<br>Pratville "<br>Pepper St. Elizabeth    |
| 4. 8.53      | Blue Bud B<br>White House B                                                                                                                                                                                                                                                                                                                                                                     | Mt. Olivet, St. Ann<br>" " " "                                                                                                                                                                                                                                                                             |

| Date<br>Planted | Varieties    |   | Origin                   |
|-----------------|--------------|---|--------------------------|
| 4. 8.53         | None         | S | Dunbarton, St. Ann       |
|                 | Cotton Tree  | B | Mt. Olivet " "           |
|                 | Red Stick    | S | Iron Mountain, St. Ann   |
|                 | White Stick  | S | Ardock, " " "            |
|                 | Yellow Stick |   | " " "                    |
|                 | Tall Leaf    | B | Middlesex " "            |
|                 | Short Leaf   | B | " " "                    |
|                 | Blue         | B | Iron Mt. " "             |
|                 | Bygrave      | S | Alva, " "                |
|                 | Ingram       | B | " " "                    |
|                 | Blue Bud     | B | Alexandra " "            |
|                 | New Green    | B | Borough Bridge " "       |
|                 | Blue Bud     | S | Middlesex " "            |
|                 | Blue Bud     | S | Ardock, " "              |
|                 | Black Stick  | B | Middlesex " "            |
|                 | Ulcer        | S | " " "                    |
|                 | Blue Stick   | S | " " "                    |
|                 | Bitter Stick |   | " " "                    |
| 17. 8.53        | White Road   | B | Queenbury, St. Elizabeth |
|                 | New Jacker   | B | " " "                    |
| <u>SUPPLIED</u> |              |   |                          |
| 30.10.53        | Government   | B |                          |
| 2.11.53         | Cotton Tree  | B | Mt. Olivet, St. Ann      |
|                 | White Stick  | S | Ardock, " "              |
|                 | Blue Bud     | S | Middlesex " "            |
| 18.11.53        | Blue Bud     | S | Portland                 |

## CASSAVA

| Date planted  | Varieties                     | Origin                  | No. sticks planted | No. sticks growing |
|---------------|-------------------------------|-------------------------|--------------------|--------------------|
| 24.7.53       | White Joe B                   | St. Thomas              | 2                  | 2                  |
|               | White Cuban B                 | " "                     | 2                  | 2                  |
|               | Bobby Hanson                  | " "                     | 2                  | 2                  |
|               | Agricultural S                | " "                     | 2                  | 2                  |
|               | Sour Bammy                    | " "                     | 2                  | 2                  |
|               | Variety Unknown               | Portland                | 2                  | -                  |
|               | Blue Bud S                    | "                       | 2                  | -                  |
| 29.7.53       | Elmo Stick St.                | St. Thomas              | 4                  | 4                  |
|               | Catch Thief                   | " "                     | 4                  | 4                  |
|               | Yellow Saunders               | " "                     | 7                  | 4                  |
|               | New Stick                     | " "                     | 4                  | 4                  |
|               | Bullet Tree "                 | " "                     | 3                  | 3                  |
|               | Richmond Stick                | " "                     | 4                  | 4                  |
| 30.7.53       | White stick B                 | Norsuck, Portland       | 9                  | 9                  |
|               | Sugar Loaf <del>Stick</del> S | " "                     | 9                  | 9                  |
|               | Agricultural S                | Hope Bay "              | 9                  | 9                  |
|               | Cotton Tree B                 | " "                     | 10                 | 10                 |
|               | Blue Bud S                    | Caenwood "              | 9                  | 9                  |
| White Stick S |                               | Windsor Castle          | 11                 | 11                 |
| 1.8.53        | Black Stick                   | St. Elizabeth           | 6                  | 6                  |
|               | Smalling S                    | Red Band St. Eliz.      | 5                  | 5                  |
|               | Cuban S                       | " "                     | 6                  | 6                  |
|               | Marlie Hill                   | Big Yard " "            | 6                  | 6                  |
|               | Cashew Long Leaf              | Bogue " "               | 9                  | 9                  |
|               | Long Leaf (White Tuber)       | " "                     | 6                  | 6                  |
|               | Yellow Heart S                | " "                     | 8                  | 8                  |
|               | New Green M                   | St. Marys " "           | 9                  | 9                  |
|               | White Heart S                 | Littiz " "              | 9                  | 9                  |
|               | Bunch of Keys B               | Pepper " "              | 16                 | 16                 |
|               | White Margaret B              | " " "                   | 11                 | 11                 |
|               | Brown Stick B                 | " " "                   | 16                 | 16                 |
|               | Lama B                        | Littiz " "              | 6                  | 6                  |
|               | Westmoreland B                | Bogue " "               | 7                  | 7                  |
|               | Long Leaf (Black Stem)        | St. Elizabeth           | 6                  | 6                  |
|               | Damsel S                      | Bogue " "               | 10                 | 10                 |
|               | Blue Budet S                  | Rocky Hill " "          | 11                 | 11                 |
|               | Eye Water B                   | New Bank " "            | 6                  | 6                  |
|               | Bobby Hanson B                | Pepper " "              | 15                 | 15                 |
|               | Blue Top B                    | Rocky Hill " "          | 7                  | 7                  |
|               | Yellow Belly S                | Port Maloni, Manchester | 12                 | 12                 |
|               | New Green B                   | Ellen slit              | 9                  | 9                  |
|               | Who Fe Patrick B              | Manchester              | 9                  | 9                  |
|               | John Henry B                  | Ellen slit              | 12                 | 12                 |
|               | Esther B                      | " "                     | 12                 | 12                 |
|               | White Brown Stick             | Bogue St. Eliz.         | 7                  | 7                  |
|               | Mullings B                    | Rocky Hill "            | 7                  | 7                  |
|               | Walter's B                    | Cleveland Canny         | 8                  | 8                  |
|               | Blue Bud S                    | Manchester              | 6                  | 6                  |
|               | Gordon B                      | New Forest, Manchester  | 9                  | 9                  |
|               | Catch Thief B                 | Ellen Slit, Manch.      | 8                  | 8                  |
|               | Smalling B                    | Rocky Hill St. Eliz.    | 8                  | 8                  |
|               | Agricultural White Stk. S     | Pratville, Manch.       | 11                 | 11                 |
|               | Rodney B                      | Pepper, St. Eliz.       | 7                  | 7                  |
|               | Long Leaf or Duff House B     | " "                     | 17                 | 17                 |
|               | Government B                  | Ellen Slit "            | 5                  | 5                  |
|               | Mt. Pleasant B                | Restoria "              | 10                 | -                  |
|               | White Stick B                 | Pratville "             | 7                  | 7                  |
|               |                               | Pepper St. Eliz.        | 10                 | 10                 |

| Date<br>planted | Varieties    | Origin                   | No. sticks<br>planted | No. sticks<br>growing |
|-----------------|--------------|--------------------------|-----------------------|-----------------------|
| 4.8.53          | Blue Bud     | B Mt. Olivet, St. Ann    | 8                     | 8                     |
|                 | White House  | B " " "                  | 6                     | 6                     |
|                 | None         | S Dunbarton, " "         | 5                     | 5                     |
|                 | Cotton Tree  | B Mt. Olivet, St. Ann    | 3                     | -                     |
|                 | Red Stick    | S Iron Mountain, " "     | 3                     | -                     |
|                 | White Stick  | S Ardock, St. Ann        | 2                     | -                     |
|                 | Yellow Stick | " " "                    | 6                     | 6                     |
|                 | Tall Leaf    | B Middlesex, " "         | 4                     | 4                     |
|                 | Short Leaf   | B " " "                  | 4                     | 4                     |
|                 | Blue         | B Iron Mt. " "           | 4                     | 4                     |
|                 | Bygrave      | S Alva, " "              | 4                     | 4                     |
|                 | Ingram       | B " " "                  | 10                    | 10                    |
|                 | Blue Bud     | B Alexandra, " "         | 9                     | 9                     |
|                 | New Green    | B Borough ridge, St. Ann | 6                     | 6                     |
|                 | Blue Bud     | S Middlesex, " "         | 2                     | -                     |
|                 | Blue Bud     | S Ardock, " "            | 5                     | 5                     |
|                 | Black Stick  | B Middlesex " "          | 3                     | 3                     |
|                 | Ulcer        | S " " "                  | 5                     | 5                     |
|                 | Blue Stick   | S " " "                  | 2                     | -                     |
|                 | Bitter Sweet | " " "                    | 3                     | -                     |
| 17.8.53         | White Road   | B Queenbury, St. Eliz.   | 7                     | 7                     |
|                 | New Jacker   | B " " "                  | 7                     | 7                     |
| <u>SUPPLIED</u> |              |                          |                       |                       |
| 30.10.53        | Government   | B                        | 12                    | 12                    |
| 2.11.53         | Cotton Tree  | B Mt. Olivet, St. Ann    | 6                     | 6                     |
|                 | White Stick  | S Ardock, " "            | 6                     | 6                     |
|                 | Blue Bud     | S Middlesex, " "         | 6                     | 6                     |
| 18.11.53        | Blue Bud     | S Portland               | 6                     | 6                     |

## Cassava

| Date Planted | Varieties              | Origin          | No. sticks Planted | No. Sticks Growing |   |
|--------------|------------------------|-----------------|--------------------|--------------------|---|
| 24-7-53      | White Toe B            | St. Thomas      | 2                  | 2                  |   |
|              | White Cuban B          | "               | 2                  | 2                  |   |
|              | Rocky Nansa            | "               | 2                  | 2                  |   |
|              | Agricultural S         | "               | 2                  | 2                  |   |
|              | Sour Bamy              | "               | 2                  | 2                  |   |
|              | Var. Umbrosa           | Portland        | 2                  | -                  |   |
|              | Blue Butt S            | "               | 2                  | -                  |   |
| 29-7-53      | Eden Stick             | St. Thomas      | 4                  | 4                  |   |
|              | Catch Thief            | "               | 4                  | 4                  |   |
|              | Yellow Saunders        | "               | 7                  | 7                  |   |
|              | New Stick              | "               | 4                  | 4                  |   |
|              | Bullet Tree            | "               | 3                  | 3                  |   |
|              | Richmond Stick         | "               | 4                  | 4                  |   |
| 30-7-53      | White Stick B          | Monuch          | Portland           | 9                  | 9 |
|              | Sugar Loaf S           | "               | 9                  | 9                  |   |
|              | Agricultural S         | Hop Bay         | 9                  | 9                  |   |
|              | Cotton Tree B          | "               | 10                 | 10                 |   |
|              | Blue Butt S            | Caenwood        | 9                  | 9                  |   |
|              | White Stick S          | Windward Castle | 11                 | 11                 |   |
| 1-8-53       | Black Stick            | St. Elizabeth   | 6                  | 6                  |   |
|              | Smalling S             | "               | 5                  | 5                  |   |
|              | Cuba S                 | "               | 6                  | 6                  |   |
|              | Marble Hill            | "               | 6                  | 6                  |   |
|              | Cashew Long Leaf       | "               | 9                  | 9                  |   |
|              | Long Leaf (Cultivated) | "               | 6                  | 6                  |   |
|              | Yellow Heart           | "               | 5                  | 5                  |   |
|              | New Green              | "               | 9                  | 9                  |   |
|              | White Heart S          | "               | 9                  | 9                  |   |
|              | Bunch of Keys B        | "               | 16                 | 16                 |   |
|              | White Margaret B       | "               | 11                 | 11                 |   |
|              | Brown Stick B          | "               | 16                 | 16                 |   |
|              | Westmoreland           | "               | 6                  | 6                  |   |
|              | Long Leaf (Blue)       | "               | 6                  | 6                  |   |

| Date Planted | Varieties               | Origin                    | No. of Sticks Planted | No. of Sticks Growing | Date Planted | Varieties    | Origin                  | No. of Sticks Planted | No. of Sticks Growing |
|--------------|-------------------------|---------------------------|-----------------------|-----------------------|--------------|--------------|-------------------------|-----------------------|-----------------------|
| 1-8-13       | Damask                  | 5 Bogue St Elizabeth      | 10                    | 10                    | 4-1-13       | Ingram       | 5 Blue St. Paul         | 10                    | 10                    |
|              | Blue Bud                | 5 Rocky Hill              | 11                    | 11                    |              | Blue Bud     | 5 Alexandria            | 9                     | 9                     |
|              | Eg. Water               | 5 New Bank                | 6                     | 6                     |              | New Bank     | 5 Bothrops              | 6                     | 6                     |
|              | Bobby Hancock           | 5 Piffen                  | 15                    | 15                    |              | Blue Bud     | 5 Middlesex             | 2                     | -                     |
|              | Blue Top                | 5 Rocky Hill              | 2                     | 7                     |              | "            | 5 Andros                | 5                     | 5                     |
|              | Yellow Kelly            | 5 Port Mahone Manchester  | 12                    | 12                    |              | Black Stick  | 5 Middlesex             | 3                     | 3                     |
|              | New Bank                | 5 Ellen St                | 9                     | 9                     |              | Wier         | 5 "                     | 5                     | 5                     |
|              | White & Patrick         | 5 "                       | 9                     | 9                     |              | Blue Stick   | 5 "                     | 2                     | +                     |
|              | John Henry              | 5 "                       | 12                    | 12                    |              | Bitter Sweet | 5 "                     | 3                     | -                     |
|              | Elder                   | 5 Bogue St Elizabeth      | 12                    | 12                    | 11-8-13      | White Road   | 5 Ouseburg St Elizabeth | 2                     | 7                     |
|              | White Iron Stick        | 5 Rocky Hill              | 7                     | 7                     |              | New Tackler  | 5 "                     | 7                     | 7                     |
|              | Mullings                | 5 Manchester              | 8                     | 8                     |              |              |                         |                       |                       |
|              | Walters                 | 5 Port Louis              | 6                     | 6                     |              |              |                         |                       |                       |
|              | Blue Bud                | 5 Ellen St                | 9                     | 9                     | 20-11-13     | Government   | 5                       | 12                    |                       |
|              | Godwin                  | 5 Rocky Hill St Elizabeth | 8                     | 8                     | 2-11-13      | Cotton Tree  | 5 Mt Olivet St Paul     | 6                     |                       |
|              | Galich Tree             | 5 Bratville Manchester    | 8                     | 8                     |              | White Stick  | 5 Drych                 | 6                     |                       |
|              | Smalling                | 5 Piffen St Elizabeth     | 11                    | 11                    |              | Blue Bud     | 5 Middlesex             | 6                     |                       |
|              | Sgt. White Stick        | 5 Bratville Manchester    | 7                     | 7                     |              | "            | 5                       | 6                     |                       |
|              | Rodney                  | 5 "                       | 17                    | 17                    |              |              |                         |                       |                       |
|              | Long Leaf or Duff House | 5 Ellen St                | 5                     | 5                     |              |              |                         |                       |                       |
|              | Government              | 5 Rodovia                 | 10                    | -                     |              |              |                         |                       |                       |
|              | Mt Pleasant             | 5 Bratville               | 7                     | 7                     |              |              |                         |                       |                       |
|              | White Stick             | 5 Piffen St Elizabeth     | 10                    | 10                    |              |              |                         |                       |                       |
| 4-8-13       | Blue Bud                | 5 Mt Olivet St Paul       | 8                     | 8                     |              |              |                         |                       |                       |
|              | White House             | 5 "                       | 6                     | 6                     |              |              |                         |                       |                       |
|              | None                    | 5 Bunkerton               | 5                     | 5                     |              |              |                         |                       |                       |
|              | Cotton Tree             | 5 Mt Olivet               | 3                     | -                     |              |              |                         |                       |                       |
|              | Red Stick               | 5 Port St.                | 3                     | -                     |              |              |                         |                       |                       |
|              | White Stick             | 5 Andros                  | 2                     | -                     |              |              |                         |                       |                       |
|              | Yellow Stick            | 5 "                       | 6                     | 6                     |              |              |                         |                       |                       |
|              | Tall Leaf               | 5 Middlesex               | 11                    | 4                     |              |              |                         |                       |                       |
|              | Short Leaf              | 5 "                       | 4                     | 4                     |              |              |                         |                       |                       |
|              | Blue                    | 5 Port St.                | 4                     | 4                     |              |              |                         |                       |                       |
|              | Ingram                  | 5 "                       | 4                     | 4                     |              |              |                         |                       |                       |

LIST OF CASSAVA VARIETIESBITTER VARIETIES

- |                                               |                                                      |                              |
|-----------------------------------------------|------------------------------------------------------|------------------------------|
| 1. Brown Stick                                | 24. Bobby Brown                                      | 46. White Damsel             |
| 2. Black Stick                                | 25. Graham                                           | 47. New Jacket               |
| 3. White Stick (From Troy<br>Land Settlement) | 26. White Stick (From Free-<br>mans Hall Settlement) | 48. Blue Top                 |
| 4. New Green                                  | 27. Mullings                                         | 49. Sour Banmy               |
| 5. Black Stick (From<br>St. Ann               | 28. Short Leaf Cotton Tree                           | 50. Blue Stick               |
| 6. Blue Stick (From St. Ann<br>Middlesex)     | 29. Blue Bud                                         | 51. Tall Leaf Cotton<br>Tree |
| 7. Name Unknown (St. Thomas)                  | 30. Cotton Tree                                      | 52. White House              |
| 8. Who Fe Patrick                             | 31. White Cuban                                      | 53. Blue Bitter              |
| 9. Mullings (Manchester)                      | 32. Bobby Hanson                                     | 54. White Joe                |
| 10. Bunch of Keys                             | 33. Rodney                                           | 55. Yellow Stick             |
| 11. Long Leaf (Black Stem)                    | 34. New Green (Manchester)                           | 56. Catch Thief              |
| 12. Red Stick                                 | 35. John Henry                                       | 57. Duff House               |
| 13. Government Bitter                         | 36. Black Stick (Buck Buck)                          | 58. Portland White<br>Stick  |
| 14. Blue Bud Bitter                           | 37. Blue Top (Rocky Hill)                            | 59. White Brown Stick        |
| 15. Brown Stick                               | 38. Bobby Hanson (Pepper)                            | 60. Gordon                   |
| 16. Lura                                      | 39. New Green (St. Marys)                            | 61. Eye Water                |
| 17. Marlie Hill                               | 40. Cashew Long Leaf                                 | 62. Westmoreland             |
| 18. Cotton Tree (Portland)                    | 41. White Margaret                                   | 63. Smalling                 |
| 19. Blue Bud (Alexandria)                     | 42. Esther                                           | 64. White Stick<br>(Pepper)  |
| 20. New Green (Hyde Land<br>Settlement)       | 43. Mount Pleasant                                   | 65. Long Leaf White<br>Tuber |
| 21. Damsel                                    | 44. Ingram                                           | 66. Walters                  |
| 22. Anglin                                    | 45. Blue Bud (Bunkers Hill)                          | 67. New Green-<br>Borobridge |
| 23. Unknown (W. Land Settlement)              |                                                      | 68. Marigold.                |

## C O P Y

SWEET VARIETIESGROVE PLACE

- |                                                        |                                                      |                                                      |
|--------------------------------------------------------|------------------------------------------------------|------------------------------------------------------|
| 1. Bitter Sweet <sup>69</sup>                          | 22 14. Red Stick <sup>95</sup>                       | 27. White Stick <sup>96</sup>                        |
| 2. Blue Bud (Ardock) <sup>70</sup>                     | 23 15. Blue Bud (Middlesex) <sup>97</sup>            | 28. Prison Farm <sup>97</sup>                        |
| 3. 7 White Stick (Seaford Town) <sup>84</sup>          | 24 16. Blue Bud (St. Thomas) <sup>97</sup>           | 29. Agricultural Sweet <sup>98</sup>                 |
| 4. 72 Sweet Cassava <sup>85</sup>                      | 17. Ulcer <sup>98</sup>                              | 30. Commons <sup>99</sup>                            |
| 5. 73 Damsel Sweet <sup>86</sup>                       | 18. Blue Bud (Manchester) <sup>99</sup>              | 31. Blue Bud (Rocky Hill) <sup>100</sup>             |
| 6. 7a Yellow Belly <sup>67</sup>                       | 19. Young Gal <sup>100</sup>                         | 32. Real Sweet <sup>101</sup>                        |
| 7. 75 Smalling <sup>88</sup>                           | 20. White Heart <sup>101</sup>                       | 33. Cuban Sweet <sup>103</sup>                       |
| 8. 76 Egg Yoke <sup>27</sup>                           | 21. Sweet Louise <sup>103</sup>                      | 34. Damsel (Bogue) <sup>103</sup>                    |
| 9. 77 White Stick (Portland) <sup>90</sup>             | 22. Yellow Heart <sup>103</sup>                      | 35. Mansel <sup>104</sup>                            |
| 10. 78 Sweet Cassava <sup>91</sup>                     | 23. Agr. White Stick <sup>104</sup>                  | 36. Bygrave <sup>105</sup>                           |
| 11. 79 Sweet (Westmoreland) <sup>92</sup>              | 24. Real Sweet (New Hope) <sup>105</sup>             | 37. Pusey Sweet <sup>106</sup>                       |
| 12. 80 Bull Tiger <sup>93</sup>                        | 25. Bunch of Keys <sup>106</sup>                     | 38. Sweet No.1 (Hyde Land Settlement) <sup>106</sup> |
| 13. 81 Sweet No.2 (Hyde Land Settlement) <sup>94</sup> | 26. Sweet No.3 (Hyde Land Settlement) <sup>106</sup> |                                                      |

CROP AGRONOMY DIVISION,  
DEPARTMENT OF AGRICULTURE,  
HOPE, LIGUANEA,  
JAMAICA, B.W.I.

PLEASE QUOTE

REFERENCE No. 2959/56.

7th May, 1956.

Dr. David Rogers,  
Department of Biology and Geology,  
Allegheny College,  
Meadville,  
Pennsylvania,  
U. S. A.

Dear Dr. Rogers:

I forward herewith results of  
analyses on cassava tubers.

Yours faithfully,

  
for Chief Agricultural Officer.

WCH:jhj.

RESULTS OF ANALYSES OF CASSAVA TUBERS

| Variety No.                                                       | %H <sub>2</sub> O | % Total Solids | %Glucose | %Sucrose | %Crude Starch | ppm HCN | %Crude Fibre |
|-------------------------------------------------------------------|-------------------|----------------|----------|----------|---------------|---------|--------------|
| Group I - Yellow Stems:                                           |                   |                |          |          |               |         |              |
| 1.                                                                | 64.0              | 36.0           | 1.7      | 1.7      | 25.6          | 69.1    | 0.65         |
| 2.                                                                | 70.5              | 29.5           | 1.8      | 2.2      | 17.5          | 105.8   | 1.12         |
| 3.                                                                | 67.9              | 32.1           | 2.0      | 1.5      | 20.7          | 65.8    | 1.00         |
| 7.                                                                | 56.5              | 43.5           | 1.3      | 1.2      | 33.6          | 22.6    | 1.0          |
| 8.                                                                | 69.4              | 30.6           | 1.4      | 1.2      | 19.3          | 73.4    | 1.65         |
| 18.                                                               | 64.9              | 35.1           | 1.4      | 1.0      | 24.9          | 113.4   | 0.9          |
| 34.                                                               | 71.7              | 28.3           | 1.7      | 1.3      | 19.2          | 64.8    | 0.9          |
| Group II - Brown Stem, green bud, green petiole, 1-2 branches:    |                   |                |          |          |               |         |              |
| 11.                                                               | 53.9              | 46.1           | 0.7      | 1.2      | 35.3          | 57.2    | 1.1          |
| 14.                                                               | 55.6              | 44.4           | 1.1      | 1.1      | 35.3          | 55.0    | 0.7          |
| 30.                                                               | 62.0              | 38.0           | 1.3      | 1.7      | 25.0          | 101.5   | 1.6          |
| 31.                                                               | 69.6              | 30.4           | 1.5      | 1.0      | 21.5          | 71.2    | 1.0          |
| 39.                                                               | 55.6              | 45.4           | 1.0      | 1.1      | 35.1          | 50.7    | 1.0          |
| 43.                                                               | 63.6              | 46.4           | 1.7      | 1.4      | 26.3          | 27.0    | 0.6          |
| 57.                                                               | 58.0              | 42.0           | 1.0      | 1.3      | 32.7          | 79.9    | 0.9          |
| Group III - Brown Stem, green bud, green petiole, 3 - 6 branches: |                   |                |          |          |               |         |              |
| 17.                                                               | 71.4              | 28.6           | 1.8      | 1.1      | 17.3          | 92.8    | 1.3          |
| 22.                                                               | 64.2              | 35.8           | 1.5      | 0.9      | 25.8          | 15.1    | 1.2          |
| 42.                                                               | 75.2              | 24.8           | 2.0      | 1.0      | 14.5          | 49.0    | 0.8          |
| 46.                                                               | 56.7              | 43.3           | 1.1      | 1.3      | 34.0          | 35.0    | 0.6          |
| 52.                                                               | 59.4              | 40.6           | 1.3      | 1.3      | 30.0          | 39.0    | 1.5          |
| Group IV - Plants with brown stem, green bud, red petiole:        |                   |                |          |          |               |         |              |
| 13.                                                               | 55.7              | 44.3           | 0.9      | 1.1      | 33.4          | 45.3    | 1.0          |
| 27.                                                               | 59.0              | 41.0           | 0.9      | 1.2      | 32.1          | 41.0    | 1.3          |
| 35.                                                               | 57.5              | 42.5           | 0.6      | 1.0      | 33.4          | 19.4    | 1.3          |
| 38.                                                               | 60.5              | 39.5           | 0.9      | 0.9      | 29.4          | 32.4    | 0.8          |
| 41.                                                               | 61.1              | 38.9           | 1.4      | 0.9      | 30.2          | 77.7    | 1.4          |
| 45.                                                               | 64.4              | 35.6           | 1.6      | 1.3      | 25.7          | 30.2    | 1.2          |
| Group V - Brown Stem, blue-green bud:                             |                   |                |          |          |               |         |              |
| 12                                                                | 72.4              | 27.6           | 0.3      | 0.9      | 20.1          | 156.6   | 1.0          |
| 20                                                                | 60.7              | 39.3           | 0.3      | 0.1      | 31.1          | 97.2    | 0.9          |
| 25.                                                               | 69.4              | 30.6           | 0.3      | 0.9      | 22.5          | 35.6    | 1.0          |
| Group VI - Brown stem, red-blue bud:                              |                   |                |          |          |               |         |              |
| 16                                                                | 69.3              | 30.7           | 0.5      | 1.3      | 21.7          | 72.3    | 1.2          |
| 33.                                                               | 63.1              | 36.9           | 0.3      | 1.1      | 27.8          | 38.8    | 1.2          |
| 44.                                                               | 66.1              | 33.9           | 0.3      | 0.8      | 25.8          | 139.3   | 0.8          |
| 48.                                                               | 61.2              | 38.8           | 0.3      | 1.0      | 30.0          | 115.5   | 1.2          |

| Variety No.                                              | %H <sub>2</sub> O | %Total Solids | %Glucose | %Sucrose | %Crude Starch | ppm HCN | %Crude Fibre |
|----------------------------------------------------------|-------------------|---------------|----------|----------|---------------|---------|--------------|
| Group VII - Intermediate silver-brown stem:              |                   |               |          |          |               |         |              |
| 47.                                                      | 76.8              | 23.2          | 0.7      | 1.2      | 14.2          | 104.7   | 1.4          |
| 49.                                                      | 64.8              | 35.2          | 0.3      | 1.1      | 27.2          | 173.8   | 1.2          |
| 54.                                                      | 69.5              | 30.5          | 0.5      | 1.3      | 21.0          | 213.8   | 1.5          |
| 56.                                                      | 65.2              | 34.8          | 0.3      | 1.2      | 25.4          | 321.6   | 0.9          |
| Group VIII - Silver stem, green bud, green petiole:      |                   |               |          |          |               |         |              |
| 28.                                                      | 61.3              | 38.7          | 0.3      | 0.6      | 30.8          | 162.0   | 1.0          |
| 51.                                                      | 69.9              | 30.1          | 0.3      | 1.2      | 23.3          | 177.1   | 0.6          |
| 62.                                                      | 66.1              | 33.9          | 0.3      | 0.7      | 26.8          | 180.1   | 0.6          |
| Group IX - Silver stem, green bud, yellow-green petiole: |                   |               |          |          |               |         |              |
| 67.                                                      | 60.6              | 39.4          | 0.3      | 0.7      | 30.9          | 57.2    | 1.0          |
| 79.                                                      | 60.6              | 39.4          | 0.8      | 1.7      | 30.3          | 213.8   | 1.6          |
| Group X - Silver stem, green bud, red petiole:           |                   |               |          |          |               |         |              |
| 55.                                                      | 65.9              | 34.1          | 0.3      | 1.3      | 27.6          | 127.4   | 0.9          |
| 59.                                                      | 61.1              | 38.9          | 0.3      | 0.9      | 28.5          | 27.0    | 1.2          |
| Group XI - Silver stem, blue-green bud, green petiole:   |                   |               |          |          |               |         |              |
| 53.                                                      | 58.4              | 41.6          | 0.8      | 0.01     | 34.5          | 56.1    | 1.1          |
| 69.                                                      | 57.5              | 42.5          | 0.3      | 0.6      | 35.0          | 103.6   | 1.1          |
| 70.                                                      | 66.1              | 33.9          | 0.3      | 0.9      | 25.3          | 234.7   | 0.3          |
| 72.                                                      | 62.1              | 37.9          | 0.3      | 0.7      | 28.3          | 254.6   | 0.7          |
| Group XII - Silver stem, red-blue bud:                   |                   |               |          |          |               |         |              |
| 50.                                                      | 69.2              | 30.8          | 0.7      | 1.1      | 24.1          | 102.6   | 0.8          |
| 58.                                                      | 58.8              | 41.2          | 0.7      | 1.1      | 31.6          | 119.8   | 0.7          |

Planting scheme for Cassava, 1954,  
Kane Place, Mile Bully -

1. Directions:

- a. Plant at intervals used for present plot  
(3 feet between plants, 4 feet between rows).
- b. Plant 12 sticks of each variety.
- c. Replant any failures from the present  
stand of plants. ~~but~~ If no more  
sticks can be obtained for a particular  
variety, do not supply from outside  
sources.
- d. Use same numbers given to a variety  
for the field labels as they presently  
have.
- e. Keep record of name and number on planting  
chart.
- f. Use your <sup>own</sup> discretion as to fertilizer and  
cultivation practice. Report of soil  
analyses will be supplied.

Plants with yellow stems

- 9- Blue Top
- 11 Mullings
- 66 Marigold
- 72 Bull Tiger
- 85 Smelling
- 97 Sweet Cassava

- 101 Bitter Sweet
- 92 Yellow Bell Sweet
- 102 Red Stick Sweet
- 26 Yellow Stick
- 60 Ingram
- 78 Sweet Westmeland
- 69 Sweet Cassara No 1

# # Plants with Brown Stems

- 2 Blue Stick
- ~~27 Blue~~ 83 Mousel Sweet
- 41 Red Stick
- 61 New Green
- 63 Anglin Bitter
- 70 Sweet Cassara No 2.
- 70 Blue Bud Sweet
- 91 " " "
- 104 Blue Bud
- 105 " "
- 57 Mt. Pleasant
- 62 Blue Bud
- 13 Black Stick
- 16 Blue Stick
- 35 Bunch of Keys
- 36 Black Stick
- 40 Gordon
- 43 Eye Water
- 48 Cashem Tang Leaf
- 49 Smelling

54 Esther  
68 Damsel  
75 Pacey Sweet  
77 Ingraine  
88 Egg Yolk  
50 Brown Stick

### Plants with Silver Stems

39 Blue Top  
46 Westmoreland  
103 White Stick  
106. Young Gal  
107 Real Sweet  
~~27 - Rodney~~

7 - White Stick  
15 - Tall Leaf Cotton Tree  
19 - White House  
22 - White Cuban

37 - White Brown Stick

51 - White Margaret

→ 35 - Long Leaf White Sugar 100 Damsel Sweet

58 - Walters

73 - Bunch of Keys

27 - Rodney

1 - Brown Stick

14 - Short Leaf Cotton Tree

33 - Johns Henry

34 - White Stick, Portland

- 52- White Stick
- 53 Laura
- 56 Manlie Hill
- 59 Cotton Tree
- 76 Agricultural White Stick
- 80 Dandel
- 89 Sweet Louise
- 98 Ulcer
- 81 White Stick
- 29 Who Is Patrick
- 84 Sweet cassia No. 4

Plants with stems intermediate in color between silver and brown:

- 44- Government
- 64- Blue Bud Bitter
- 67- Unknown - Hyde Land Settlement
- 38- Long Leaf Black Stem
- 99- Cammado
- 8- White Stick
- 20- Blue Bud
- 25- Bobby Hanson
- 30- New Green, Manchester
- 32- Mullings
- 42- Bobby Hanson
- 65- New Green, Hyde Land Settlement
- 31- Duff House
- 45- New Green, St. Mary

47-Blue Bud Bitter

LIST OF CASSAVA VARIETIESBITTER VARIETIES

- |                                               |                                                      |                             |
|-----------------------------------------------|------------------------------------------------------|-----------------------------|
| 1. Brown Stick                                | 24. Bobby Brown                                      | 46. White Damsel            |
| 2. Black Stick                                | 25. Graham                                           | 47. New Jacket              |
| 3. White Stick (From Troy<br>Land Settlement) | 26. White Stick (From Free-<br>mans Hall Settlement) | 48. Blue Top                |
| 4. New Green                                  | 27. Mullings                                         | 49. Sour Bammy              |
| 5. Black Stick (From<br>St. Ann)              | 28. Short Leaf Cotton Tree                           | 50. Blue Stick              |
| 6. Blue Stick (From St. Ann-<br>Middlesex)    | 29. Blue Bud                                         | 51. Tall Leaf Cotton Tree   |
| 7. Name Unknown (St. Thomas)                  | 30. Cottong Tree                                     | 52. White House             |
| 8. Who fe Patrick                             | 31. White Cuban                                      | 53. Blue Bitter             |
| 9. Mullings (Manchester)                      | 32. Bobby Hanson                                     | 54. White Joe               |
| 10. Bunch of Keys                             | 33. Rodney                                           | 55. Yellow Stick            |
| 11. Long Leaf (Black Stem)                    | 34. New Green (Manchester)                           | 56. Catch Thief             |
| 12. Red Stick                                 | 35. John Henry                                       | 57. Duff House              |
| 13. Government Bitter                         | 36. Black Stick (Buck Buck)                          | 58. Portland White<br>Stick |
| 14. Blue Bud Bitter                           | 37. Blue Top (Rocky Hill)                            | 59. White Brown Stick       |
| 15. Brown Stick                               | 38. Bobby Hanson (Pepper)                            | 60. Gordon                  |
| 16. Laura                                     | 39. New Green (St. Marys)                            | 61. Eye Water               |
| 17. Marlie Hill                               | 40. Cashew Long Leaf                                 | 62. Westmoreland            |
| 18. Cotton Tree (Portland)                    | 41. White Margaret                                   | 63. Smalling                |
| 19. Blue Bud (Alexandria)                     | 42. Esther                                           | 64. White Stick (Pepper)    |
| 20. New Green (Hyde Land<br>Settlement)       | 43. Mount Pleasant                                   | 65. Long Leaf White Tuber   |
| 21. Damsel                                    | 44. Ingram                                           | 66. Walters                 |
| 22. Anglin                                    | 45. Blue Bud (Bunkers Hill)                          | 67. New Green-Boro-bridge   |
| 23. Unknown (W. Land Settlement)              |                                                      | 68. Marigold                |

LIST OF CASSAVA VARIETIES

BITTER VARIETIES

- |                                               |                                                      |                             |
|-----------------------------------------------|------------------------------------------------------|-----------------------------|
| 1. Brown Stick                                | 24. Bobby Brown                                      | 46. White Damsel            |
| 2. Black Stick                                | 25. Graham                                           | 47. New Jacket              |
| 3. White Stick (From Troy<br>Land Settlement) | 26. White Stick (From Free-<br>mans Hall Settlement) | 48. Blue Top                |
| 4. New Green                                  | 27. Mullings                                         | 49. Sour Bammy              |
| 5. Black Stick (From<br>St. Ann)              | 28. Short Leaf Cotton Tree                           | 50. Blue Stick              |
| 6. Blue Stick (From St. Ann-<br>Middlesex)    | 29. Blue Bud                                         | 51. Tall Leaf Cotton Tree   |
| 7. Name Unknown (St. Thomas)                  | 30. Cottong Tree                                     | 52. White House             |
| 8. Who fe Patrick                             | 31. White Cuban                                      | 53. Blue Bitter             |
| 9. Mullings (Manchester)                      | 32. Bobby Hanson                                     | 54. White Joe               |
| 10. Bunch of Keys                             | 33. Rodney                                           | 55. Yellow Stick            |
| 11. Long Leaf (Black Stem)                    | 34. New Green (Manchester)                           | 56. Catch Thief             |
| 12. Red Stick                                 | 35. John Henry                                       | 57. Duff House              |
| 13. Government Bitter                         | 36. Black Stick (Buck Buck)                          | 58. Portland White<br>Stick |
| 14. Blue Bud Bitter                           | 37. Blue Top (Rocky Hill)                            | 59. White Brown Stick       |
| 15. Brown Stick                               | 38. Bobby Hanson (Pepper)                            | 60. Gordon                  |
| 16. Laura                                     | 39. New Green (St. Marys)                            | 61. Eye Water               |
| 17. Marlie Hill                               | 40. Cashew Long Leaf                                 | 62. Westmoreland            |
| 18. Cotton Tree (Portland)                    | 41. White Margaret                                   | 63. Smalling                |
| 19. Blue Bud (Alexandria)                     | 42. Esther                                           | 64. White Stick (Pepper)    |
| 20. New Green (Hyde Land<br>Settlement)       | 43. Mount Pleasant                                   | 65. Long Leaf White Tuber   |
| 21. Damsel                                    | 44. Ingram                                           | 66. Walters                 |
| 22. Anglin                                    | 45. Blue Bud (Bunkers Hill)                          | 67. New Green-Boro-bridge   |
| 23. Unknown (W. Land Settlement)              |                                                      | 68. Marigold                |

SWEET VARIETIES

- |                                        |                                        |                                        |
|----------------------------------------|----------------------------------------|----------------------------------------|
| 1. Bitter Sweet                        | 14. Red Stick                          | 27. White Stick                        |
| 2. Blue Bud (Ardock)                   | 15. Blue Bud (Middlesex)               | 28. Prison Farm                        |
| 3. White Stick (Seaford Town)          | 16. Blue Bud (St. Thomas)              | 29. Agricultural Sweet                 |
| 4. Sweet Cassava                       | 17. Ulcer                              | 30. Commons                            |
| 5. Damsel Sweet                        | 18. Blue Bud (Manchester)              | 31. Blue Bud (Rocky Hill)              |
| 6. Yellow Belly                        | 19. Young Gal                          | 32. Real Sweet                         |
| 7. Smalling                            | 20. White Heart                        | 33. Cuban Sweet                        |
| 8. Egg Yoke                            | 21. Sweet Louise                       | 34. Damsel (Bogue)                     |
| 9. White Stick (Portland)              | 22. Yellow Heart                       | 35. Mansel                             |
| 10. Sweet Cassava                      | 23. Agr. White Stick                   | 36. Bygrave                            |
| 11. Sweet (Westmoreland)               | 24. Real Sweet (New Hope)              | 37. Pusey Sweet                        |
| 12. Bull Tiger                         | 25. Bunch of Keys                      | 38. Sweet No. 1 (Hyde Land Settlement) |
| 13. Sweet No. 2 (Hyde Land Settlement) | 26. Sweet No. 3 (Hyde Land Settlement) |                                        |

C O P Y

SWEET VARIETIES

- |                                        |                                        |                                        |
|----------------------------------------|----------------------------------------|----------------------------------------|
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| 2. Blue Bud (Ardock)                   | 15. Blue Bud (Middlesex)               | 28. Prison Farm                        |
| 3. White Stick (Seaford Town)          | 16. Blue Bud (St. Thomas)              | 29. Agricultural Sweet                 |
| 4. Sweet Cassava                       | 17. Ulcer                              | 30. Commons                            |
| 5. Damsel Sweet                        | 18. Blue Bud (Manchester)              | 31. Blue Bud (Rocky Hill)              |
| 6. Yellow Belly                        | 19. Young Gal                          | 32. Real Sweet                         |
| 7. Smalling                            | 20. White Heart                        | 33. Cuban Sweet                        |
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| 13. Sweet No. 2 (Hyde Land Settlement) | 26. Sweet No. 3 (Hyde Land Settlement) |                                        |

Resume' of cassava study for Jamaica, July 12, 1954

In order that any group of plants useful to man may be most fruitful, it is essential to utilize the most productive plants of that group. Often plants are maintained merely because of some preference of an emotional nature, not for reason of most productiveness.

It is impossible to make a wise choice of plants for a particular purpose unless a thorough knowledge of all clones, varieties, or species of the group under consideration is available. It is possible, with a thorough classification, to proceed with the process of selection for any purpose, whether for studies of an agronomic nature or for hybridization to produce combinations of useful characteristics or other such studies.

To provide a basis for such activities as mentioned above, an effort is being made to classify all the variants of cassava, (Manihot utilisima). The method of classification is essentially one of morphology, comparing structures of the variants to determine relationships amongst them, but the biochemical information of carbohydrate, protein and fat content are also valuable in such work. Although stem, leaf and root colors can be useful in certain cases, it is more important to base a classification on more stable characteristics such as type of branching, height of plant, shape of leaf, number of lobes of leaf, root shape and size; size shape and number of leaf bases or scars on stems, etc. No characteristic must be overlooked, no matter how insignificant it may seem, for these structures are our best indicators of the gene complement of the plants.

Although morphological rather than color characteristics are most important in classification, it is still important to record the information as to colors of various parts. These will sometimes give some preliminary indication of relationship, and it is essential that these observations must be recorded at the time of observation in the field. If not recorded at the moment all other data are collected, but memory is relied upon to give this information at a later date, the data as to colors of parts, maturity of fruit or other part is very liable to error.

In order that permanent records of the variants be kept, a system of photography and herbarium specimens of each variant must be employed. The type of specimen made (what parts to include in the specimen) and the kind of photographs to be made must be determined by an intense study of the whole group under study. No two groups (other than closely related groups) will have the same requirements to provide the soundest data for classification. This can be accomplished best by constant observation in the field, and cannot be expected to be done in a very short period. The value of "museum" plots in such a study cannot be over-estimated; these provide a constant source of new information.

These considerations apply to my study of cassava. They are of equal value in the study of any particular group. It is a valuable technique if employed consistently and competently.

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-Bodles & Grove Place

Resume' of Cassava Project for Mr. Richardson, Ag. Chemist

Purpose of project:

1. To establish basic characteristics of cassava varieties in Jamaica.
2. To present a classification of cassava
3. To provide a basis upon which further agronomic studies of cassava may be made.

Procedure to date:

1. Museum plots were established in June, 1953 at Bodles Experiment Station and at Grove Place. These two sites were chosen to give as wide a range of environmental variation as possible.
2. The Parish Officers of several of the parishes were instructed to sample the varieties of their parishes, and to send six cuttings of each name found to both Bodles and Grove Place. The attached list of specimens is complete for each of the two plots. It is not known why there are more names for Grove Place than for Bodles.
3. Other than irrigation and inter-planting of legumes, no treatment was given the soils of either plot. Both plots had been lying fallow previous to the cassava plantings. The Grove Place plot was under pasture, with some grazing before establishment of cassava. No consistent planting or grazing was done at Bodles previous to cassava.
4. Time of planting extended over several months, but the majority of the plants were put in the ground in August, 1953, with lesser numbers arriving as late as November, 1953.
5. No particular cultivating techniques were employed other than perhaps some early weeding.

Procedure in future:

1. New plantings, with twelve cuttings of each name, are to be established at the same stations. This should give a more accurate check as to maturity date of each of the names, since all varieties will be planted simultaneously.

Procedure in future (cont.):

2. Continued sampling for establishment of basic morphological characters (specifically those most useful in classification) will be carried out.

Comments:

This study is a part of a much larger project. It is hoped that at some future date, it will be possible to extend this type of study to all areas where cassava is an important food crop. Already work is in progress in Costa Rica, and next year it will be extended to Brazil.

The two categories: "bitter" and "sweet" cassava have little significance. No sharp dividing line between these two exists. Much hearsay evidence is found to the effect that "bitter" becomes "sweet", or "sweet" becomes "bitter" upon change of soil condition or other environmental factor. It is hoped that the work now in progress will shed some light upon this condition. Certainly, the chemical analyses will be significant contributions toward answering this question. Whether the HCN content of a particular variety is genetically fixed, or is a product of environment alone is not known. It is the opinion of this worker that both factors are involved, but the extent of each in determination of HCN content is unknown. At this moment, no morphological characteristics seem to support the differentiation into distinct categories, but it is premature to state flatly that there are no "right" methods to distinguish bitter from sweet.

Lastly, but far from the least significant factor, is the question of protein content of the foliage. Whether there be significant content in this portion of the plant to warrant its use as a food for man or beast merits attention. Other workers in other parts of the world have found a significant amount of protein in the foliage, sufficiently so that cassava protein has been tested against alfalfa protein and found to be nearly the equivalent of alfalfa. It is the opinion of this worker, however, that the most useful tests of protein will be made upon foliage of young plants, not more than three to four months old. Details of such a study could probably be worked out with the mutual

consent of the ~~departments~~ of Agronomy and Agricultural Chemistry.

*Divisions.*

*David G. Rogers*

(type the name, pl.).

c.c. D/A.

C.A.O. Crop Agronomy.

S.A.O. Central Division.

# Incorp. Jam. Plants

## Planting Scheme

B. Brown + Intern. Silver Brown

J - 3034 ————— 15

2786-2

Camote Corriate } < 3 Br.

No. 1

2785-1

J - 3033

7 Meses

J - 3036

2787

Zopilote

2781

J - 3040 } < 3 Br

#2

2780

2783

Camote

2767

2887 -

LG Buds

J - 3039

J - 3056

2782

2769

< 3 Br, G Bud

J - 3060

J - 3028

Camote Blanca #1

J - 3049

3-6 Branches

G Bud

# Incorporate Jamaican plants

## Planting scheme

A. Silverstone, RB buds, less than 3 branches

Crema, } < 3 Br  
Higuerilla }

2768 }  
2767 } 3-6 Br.  
2072 }

Camote Blanca #2 - RGBuds, 3-6 Br.

J. C.R. #3048- B Buds, 3-6 Br.

2071 } < 3 Br.

Rosada }

Valencia (or Balencia) }

2069 }

2766 }

2886 }

3-6 Br.

B G Buds

2070 - < 3 Br, LG Buds

3044

Jamaica { 3043

3047

2788

Vainilla

Jamaica - 3052

# Incorp. Jamaican Plants

Planting scheme

C Yellow Stems

Amarillo Corriente } RB Buds

2889

3029

J { 3038 } GBuds < 3 Branches

3030

| Variety                  | Color stem (ext) | Color stem (int) | Attitude of Plant | No of Branches | Bud color | Petiole Color | Root color w/ Ext | " w/ Cuticle | Root surface | " Color subepid. |                      |
|--------------------------|------------------|------------------|-------------------|----------------|-----------|---------------|-------------------|--------------|--------------|------------------|----------------------|
| 2070                     | 1                | 9                | 1                 | 2              | 7         | 1             | 3                 | 2            | 2            | 30               | 22 - 2071            |
| - 2788                   | 1                | 5                | 2                 | 3              | 4         | 1             | 7                 | 2            | 1            | 27               | 24 - Rosada Valanca  |
| Vainilla                 | 1                | 6                | 2                 | 4              | 4         | 2             | 7                 | 2            | 1            | 31               | 26 - Crema           |
| - Camote <sup>2</sup> #2 | 1                | 5                | 2                 | 3              | 2         | 3             | 7                 | 2            | 1            | 28               | 27 - 2788            |
| - 2071                   | 1                | 5                | 1                 | 2              | 3         | 2             | 3                 | 2            | 2            | 22               | 28 - 2768, Blanca #2 |
| Rosada                   | 1                | 6                | 1                 | 1              | 3         | 1             | 7                 | 2            | 1            | 24               | 2072                 |
| - Valanca                | 1                | 6                | 1                 | 3              | 3         | 1             | 3                 | 2            | 3            | 24               | 29 - 2069            |
| - 2069                   | 1                | 11               | 2                 | 3              | 3         | 1             | 3                 | 2            | 2            | 29               | 30 - 2070, 2767      |
| 2886                     | 1                | 11               | 1                 | 4              | 3         | 4             | 7                 | 2            | 1            | 36               | 31 - Vainilla        |
| 2766                     | 1                | 11               | 2                 | 3              | 3         | 2             | 7                 | 2            | 1            | 35               | 32 - Hiquerville     |
| - 2072                   | 1                | 5                | 3                 | 4              | 1         | 1             | 7                 | 2            | 2            | 28               | 35 - 2766            |
| 2767                     | 1                | 11               | 1                 | 3              | 1         | 1             | 7                 | 2            | 1            | 30               | 36 - 2886            |
| - 2768                   | 1                | 11               | 1                 | 3              | 1         | 1             | 3                 | 2            | 3            | 28               |                      |
| Hiquerville              | 1                | 5                | 1                 | 2              | 1         | 1             | 7                 | 1            | 1            | 32               |                      |
| - Crema                  | 1                | 4                | 2                 | 2              | 1         | 4             | 3                 | 5            | 2            | 26               |                      |

|                  |                  |                    |
|------------------|------------------|--------------------|
| Crema            | 3034             | Amarillo Corriente |
| Higuierilla      | 2786-2           | 2889               |
| 2768             | Camote Corriente | 3029               |
| 2767             | No. 1            | 3038               |
| 2072             | 2785-1           | 3030               |
| Camote Blanca #2 | 3033             |                    |
| 3048             | 7 Meses          |                    |
| 2071             | 3036             |                    |
| Rosada           | 2787             |                    |
| Valencia         | Zopilota         |                    |
| 2069             | 2781             |                    |
| 2766             | 3040             |                    |
| 2886             | No. 2            |                    |
| 2070             | 2780             |                    |
| 3044             | 2783             |                    |
| 3043             | Camote           |                    |
| 3047             | 2767             |                    |
| 2788             | 2887             |                    |
| Vainilla         | 3039             |                    |
| 3052             | 3056             |                    |
|                  | 2782             |                    |
|                  | 2769             |                    |
|                  | 3060             |                    |
|                  | 3028             |                    |
|                  | Camote Blanca #1 |                    |
|                  | 3049             |                    |

Inter-American Institute of Agricultural Sciences  
Turrialba, Costa Rica

PROJECT No.

Date submitted: July 1953

Project Title: Study of varieties of cassava or yuca (*Manihot* spp.)

Index Title:

Leader: David J. Rogers<sup>1</sup> and Jorge León

Cooperators: Dr. Frederick L. Wellman, FAS; Dr. W. S. Wright, Dept. of Agriculture, Kingston, Jamaica; Dr. Ramón Mejía, Jefe, Fed. Mac. Cafeteros de Colombia; Dr. Carlos A. Krug, Inst. Agron., Campinas, Brasil.

Associates: Mr. Claud L. Horn, Dr. Edgar Anderson

Location: Inter-American Institute of Agricultural Sciences, Turrialba, C.R.

Reasons for Undertaking the Study:

1. Although yuca has been one of the most fundamental food plants for the people of tropical countries, and its products utilized by peoples of the temperate climates for a very long period, very little is known about the plant. Its varieties remain unclassified, its real value and best utilization unknown. Botanists have ignored the plant for various reasons, none of them valid. Agronomists have made some studies, but without too much validity for other than local conditions. The lead has been taken by the agronomists of Brasil in present day studies, but without too much interest in the background and evolution of the plants. Knowledge of the diseases of yuca is very incomplete. The Dutch have worked on the breeding and cultivation techniques, but again on those plants transported to the East Indies, without reference to the basic entities which probably occur in South America (according to Vavilov).
2. Aside from these problems of great practical value, there exists within the study of this plant some of the best possibilities to understand basic biological problems. For example: man's influence on evolution of plants; the center of origin of and routes of migration of the plants; the genetic complement which allows for the tremendous amount of variation which exists.

Either the practical or the basic biological problems would be sufficient reason for undertaking this study. The basic reason is my interest in the plants per se, but at the same time with an eye towards its value to man.

1. Supported in part by grant from the American Philosophical Society, Philadelphia, Pa., & in part by Allegheny College, Meadville, Pa.

Review of the Literature:

1. From the standpoint of classification, there has been one single study of the varieties of Manihot utilisima: "Estudo Sobre Algumas Variedades de Mandiocaas Brasileiras" by Leo Zehntne, published by the Sociedad Nacional de Agricultura, Rio de Janeiro, 1919. As the author himself points out, this work is applicable only to some 74 varieties which he collected from three areas of Brazil. He made his keys from the varieties in cultivation, without reference to basic variations, and only for the sake of convenience. There is some value to this work, but not from the standpoint of the total picture of the basic variations.
2. It is impossible to review all of the agronomic studies done in both the Western and Eastern Hemispheres. These studies are largely devoted to techniques of planting, fertilizer trials, analyses of starch production, local variety trials, etc. It is not within the scope of the present program to make similar trials. However, after the basic data of variation has been accumulated, it is hoped that continuing studies of agronomic importance will be incorporated.
3. One physiological study of importance to the present program is a color reaction reported by Bolius, C. G. in Rev. Internat'l. de Bot. Appl. & D'Agr. Trop. 32: 559-563, 1952. This color reaction is utilized to determine the amount of HCN contained in various varieties, and seems useful in distinguishing the bitter and sweet varieties.
4. Other basic studies of importance are those of Viegas, A. P. (Inst. Agron. Campinas, Bol. Tecn. 74, 1940) on the vegetative anatomy, and Graner, E. A. (Bragantia 2: 1942) on some aspects of the genetics of yuca.
5. Work in Kenya by Dr. H. H. Storey and co-workers has been carried on for some time (10 years) with respect to both disease (virus) control through resistance, and increasing of yield. This work is being secured at this moment.

Objectives:

1. To determine the fundamental variation which exists in the species of Manihot which produce the crops called yuca, mandioca, or cassava.
2. To make this data generally available to those people for whom the crop is of basic importance.
3. To understand the evolution of the species, in order to determine the best methods of selection and breeding.

Procedures:

1. Cuttings of varieties sent to Turrialba will be placed in "museum plots"

in order to compare variations under similar environmental conditions. These cuttings to be sent from important areas of cultivation, i. e. Brasil, Colombia, Peru, Ecuador, Venezuela, Jamaica, Kenya, Malaya, India, Java, but with special emphasis on Brazilian, Colombian and Venezuelan varieties, since these areas are considered to be somewhere near the center of origin.

2. Methods of breeding will be studied.
  - a. Time of pollination
  - b. Degree of compatibility
  - c. Degree of sterility
3. Statistical methods to determine stability of characteristics of varieties under varying environmental conditions.
4. Keys to the basic variations.
5. Maps in detail of distribution of each basic variation.
6. Correlation of information of each basic variation.
  - a. Description of the morphology
  - b. Local names of various areas applied to each of the variations.
  - c. Starch yield and other properties (vitamin and protein content).
7. Disease problems and quarantine will be carefully controlled through the assistance of Dr. Wellman.

Publication Intended: Progress reports in Turrialba, or in Dept. of Agriculture Bulletins such as that of Jamaica, Brasil, or others. Probable cumulative report in Turrialba or other publication which has wide range of tropical distribution.

Date of Initiation of Work: July, 1953

Probable Duration: 3-6 years.

Estimated Annual Expenditure: Labor, 100 colones per year. Otherwise, self-supporting, or through assistance of granting agencies.

Approved:

\_\_\_\_\_ Head of Department

\_\_\_\_\_ Director of Research and Education

\_\_\_\_\_ Director of the Institute

DJR/ar.

August, 1953



INSTITUTO INTERAMERICANO DE  
CIENCIAS AGRICOLAS

EL INSTITUTO ES UN ORGANISMO ESTABLECIDO  
POR LOS GOBIERNOS DE LAS REPUBLICAS AME-  
RICANAS PARA PROMOVER EL ADELANTO DE LAS  
CIENCIAS AGRICOLAS POR LA INVESTIGACIÓN  
Y EDUCACIÓN.

TURRIALBA, COSTA RICA

5 July 1955

Dr. David J. Rogers,  
C/o. Crop Agronomy Division  
Department of Agriculture  
Hope, Liguanea P.O.,  
Jamaica, B.W.I.

Dear Dr. Rogers:

Dr. Allee tells me that though he did mention your project to the Rockefeller people, discussion of it was postponed until the last day of the meeting, but did not materialize because of Dr. Allee's entanglements as a member of the Organizations Committee to the Bogota Conference.

All is not lost, however, as Dr. Harrar will visit the Institute on his way back from South America, and at that time Dr. Allee will take up the matter. I will certainly remind him, and it may well be a more appropriate time - away from the hustle and bustle of conference activities.

I hope you are enjoying the last leg of your trip, and that the Jamaican 'Lions' leave you in peace. Dr. Schreuder collected his family and vast mounds of luggage intact, and is now happily setting up house. We miss you - you were a cheerful element at the coffee table. Max sends his regards. He is hacking away at his furniture making. Maybe he has more prospects as a carpenter than as a chemist.

Sincerely yours,

*Stella M. Taylor*

Stella M. Taylor  
Administrative Secretary

29 Junio 1955

Sr. Ing.  
Alberto Machado  
Centro Nac. de Investigaciones de Café  
Chinchiná (Caldas)  
Colombia

Estimado amigo:

El portador de la presente es el Dr. David J. Rogers, profesor del Alleheny College, de Meadville, Pennsylvania.

El Dr. Rogers está desarrollando un proyecto cooperativo de estudios sobre yuca entre el Departamento de Agricultura de los Estados Unidos, el gobierno de Jamaica, la Federación de Cafeteros de Colombia, el Instituto Agronómico de Campinas, Brasil y este Instituto de Turrialba.

Para no hacer esta carta de presentación muy extensa, quiero solicitarte el favor de ayudar al Dr. Rogers en su visita a Colombia. Como sé que tu eres el colega que más ha trabajado en asuntos de yuca en Chinchiná, te ruego atenderlo. El te explicará el alcance de su proyecto y el interés que este estudio tiene para Colombia.

Agradeciéndote de antemano la atención que dispenses al Dr. Rogers, recibe el atento saludo del amigo y servidor,

Luis C. Cruz R.

29 Junio 1955

Sr. Ing. Guillermo Ramos Núñez  
Estación Agrícola Experimental  
Palmira, Colombia

Mi estimado Ramos Núñez:

Tengo el gusto de presentarte al Dr. David J. Rogers profesor del Allegheny College, de Meadville, Pennsylvania. El Dr. Rogers se ha dedicado al estudio de la yuca y tiene actualmente un proyecto cooperativo con este Instituto y además con el Departamento de Agricultura de los Estados Unidos, con la Federación de Cafeteros de Colombia y con el Instituto Agro-nómico de Campinas, Brasil.

Cuando él y yo estuvimos hablando acerca de Colombia, le mencioné tu nombre entre los individuos que en aquel país mas atención le han prestado a la yuca. Le mencioné la existencia de una colección de variedades atendida y formada por ti, etc.

El Dr. Rogers tiene mucho adelantado ya sobre los estudios en yuca, pero está muy interesado en conocer el origen de esta planta que cultivada en los trópicos sirve en la alimentación y en la industria de las poblaciones localizadas en las regiones cálidas y medias del mundo. Quiere llevar sus estudios mucho mas adelante, hasta determinar la influencia del hombre en las variaciones morfológicas, hacer una clasificación completa y trabajar en producciones genéticas para lograr la máxima utilización de esta planta. Tu sabes cuánto representa la yuca en Colombia, no solo en las regiones pobladas por el hombre blanco, sino en la selva misma en donde nuestros indios comen solamente yuca y pescado.

El Dr. Rogers cree que el punto de origen de la yuca está entre Brasil, Colombia y Venezuela. Desde luego es interesante conocer algo mas preciso.

Lo que mas interesa al Dr. Rogers y a este Instituto es la obtención de material de propagación, con el fin de formar aquí una colección de estudio que permita observar el comportamiento de las variedades bajo iguales condiciones ambientales. Por esto es interesante que tu le ayudes al Dr. Rogers y al Instituto en el envío de cangres y que ademas colabores en el sentido de que otros colegas envíen material de otras regiones del país.

Yo sé que te estoy pidiendo mucho, pero conozco tu alto espíritu de colaboración y tu interés por estas materias.

El Dr. Rogers debe viajar de Calpuerto a Manizales para visitar Chinchiná y entrevistarse allá con Alberto Machado. El Dr. Rogers habla español aunque él cree que no.

Un saludo para tu señora e hijos y para ti el abrazo cordial de tu amigo de siempre,

Luis C. Cruz R.

29 Junio 1955

Sr. Luis Eduardo Posada  
Director, Estación Agrícola  
Experimental  
Medellín, Colombia

Mi estimado Luis Eduardo:

Te presento al Dr. David J. Rogers, profesor del Allegheny College, de Pennsylvania quien viaja por Colombia en visita de estudio. El Dr. Rogers trabaja cooperativamente con este Instituto de Turrialba y además con el Departamento de Agricultura de los Estados Unidos, el gobierno de Jamaica, la Federación de Cafeteros de Colombia y el Instituto Agronómico de Campinas en estudios de yuca.

Tu sabes la grande importancia que tiene para la población total de Colombia el consumo de la yuca como alimento y como producto para la industria. Nuestros indios en la selva, lo único que comen es yuca y pescado y solamente con este han sobrevivido a todas las fuerzas adversas de la naturaleza.

El Dr. Rogers te explicará personalmente en qué consisten sus estudios. Puedo adelantarte que son muy interesantes y que es esta la primera vez que alguien se interesa de veras por estudiar y mejorar esta planta tropical.

Uno de los intereses inmediatos del Dr. Rogers es la adquisición de material de propagación para plantar aquí en Turrialba. Se me ocurrió pensar que tu la podrías ayudar y le sugerí se detuviera en Medellín a su paso para Barranquilla.

Te ruego ayudarlo y conectarlo con la gente que además de tí, pueda ayudar en la realización del proyecto del Dr. Rogers.

Me agrada recibir noticias tuyas y si en algo te puedo ser útil desde acá, házmelo saber.

Tu amigo que te agradece altamente,

Luis C. Cruz R.

29 Junio 1955

Srs. Ings.  
Cristóbal Navarrete y  
Octavio Fernández  
Facultad de Agronomía  
Universidad de Caldas  
Manizales, Colombia

Estimados amigos:

El portador de la presente es el Dr. David J. Rogers, profesor del Allegheny College, de Meadville, Pennsylvania.

El Dr. Rogers está desarrollando un proyecto cooperativo de estudios sobre yuca entre el Departamento de Agricultura de los Estados Unidos, el gobierno de Jamaica, la Federación de Cafeteros de Colombia, el Instituto Agronómico de Campinas y este Instituto de Turrialba.

No se si Octavio conoció al Dr. Rogers cuando estuvo aquí por el mes de julio de 1953. Es posible que lo haya conocido y que lo recuerde al verlo.

Para no hacer esta carta de presentación muy extensa, quiero solicitarles el favor de ayudarle al Dr. Rogers en su visita a Colombia, especialmente poniéndolo en conexión con Alberto Machado, por ser este el colega que más ha trabajado en asuntos de yuca en Chinchiná.

El Dr. Rogers les explicará a Uds. el alcance de su proyecto y el interés que este estudio tiene para Colombia.

Agradeciéndoles la atención que dispensen al Dr. Rogers, reciban el atento saludo del amigo y servidor,

Luis C. Cruz R.

Cassava Planting order for Bodó, July, 1954

Plants with yellow (reddish-yellow, or brownish) stem

1. Fort Fort
2. Smalling-Red Bank
3. ~~Imaram~~
4. Yellow Heart
5. White Heart
6. Yellow Belly
7. ~~Dumbarton~~ District Sweet Cassava
8. Long Leaf
9. Yellow Stick

Plants with brown stems

10. Blue Bud Alexandria St. Ann
11. Black Stick Buck Bush
12. Government-Restora
13. Duff House Long Leaf
14. Korden, Santa Cruz
15. Blue Bud
16. New Green-Bowbridge
17. ~~Byarawa~~
18. Yellow Saunders
19. Blue, Iron Mt. Dist.
20. Mullings
21. Catch Thief - St. Thomas
22. Blue Bud Mt. Olivet Dist.
23. Esther, Roqua, Santa Cruz
24. Bobby Hansen, Pepper, Santa Cruz
25. Eye Water

- 26 Agricultural, Portland #3  
 27 Bunch of Keys  
 28 Blue Bud, Portland #5  
 29 Blue Bud, Rockhill, Santa Cruz  
 (30) Hops (Sweet)  
 not studied 31 Newjacket Bitter  
 1954 32 Blue Bud sweet, Middlesex Dist.  
 33 Blue Bud sweet, Ardock "  
 > 34 New Green, St. Mary  
 35 Long Leaf Black Stem  
 36 New Stick  
 37 Bullet Tree  
 38 Brown Stick  
 39 Smelling Pepper, Santa Cruz  
 40 New Green  
 41 Cashew Long Leaf  
 42 White Stick, Portland #6  
 43 Elmo Stick  
 44 Catch Thief. Protville, Manchester  
 not studied 45 Mt. Pleasant Bitter  
 1954 46 Yankee Red  
 47 Ulcer sweet  
 48 Long Leaf

Plants with silver (or white, or light-green) stems.

- 49 Walters  
 50 Blue Top Rocky Hill, Santa Cruz  
 51 John Henry  
 52 Blue Chambers

- 53 Tall Leaf Cotton Tree
- 54 White Joe Patrick
- 55 Damsel
- 56 White-Brown Stick
- 57 Sour Rammy
- 58 Westmoreland
- 59 A. G. R.
- 60 Agricultural White Stick
- 61 Cuba
- 62 Rodney
- 63 White House Mt. Olivet
- 64 White Joe
- 65 Cotton Tree
- 66 White Stick Pittland #1
- 67 Laura
- 68 White Margaret
- 69 Long Leaf White Tuber
- 70 Morlie Hill Big Yard
- 71 Richmond Stick
- 72 White Cuban
- 73 Blue Bud sweet
- 74 Cotton Tree Bitter Mt Olivet
- 75 White Stick Sweet, Andock Dist.
- 76 Young Girl Sweet
- 77 White Stick Bitter, Pepper, Santa Cruz
- 78 White root Brown Stick, Quinsacany.

not  
studied  
1954

Note<sup>(1)</sup> - Numbers in brackets {, 30-33, 45-48, 73-78,

were not studied in 1954. Sticks for these will have to be taken from immature plants.

- (2) Plant 12 sticks of each variety.
- (3) Label each variety with its accompanying number. Do not include the name of the variety on the field label.
- (4) Where insufficient sticks to give 12 plants are available, use plants presently growing at Bodles to make up to 12. If there are still not enough to make 12, do not bring in any cuttings from outside sources.
- (5) Wherever possible, keep all plants of one variety in one row.

CASSAVA LEAF SAMPLES  
from BODLES

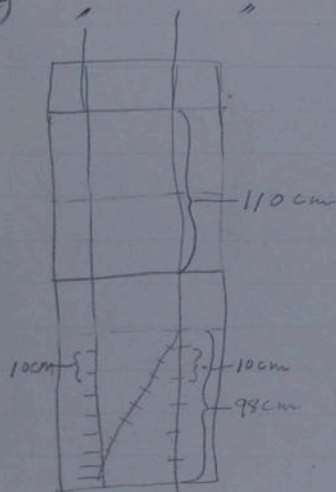
| Lab. No.                               | Sample                                     | %Crude Protein of leaves | %Crude Protein of Petiole & Stalk | Ratio of Petiole & Stalk to leaves |
|----------------------------------------|--------------------------------------------|--------------------------|-----------------------------------|------------------------------------|
| 280/54<br>collect-<br>ed on<br>22/9/54 | ✓ A.G.R. Sweet                             | ✓ 33.1                   | 11.8                              | 1:1.6                              |
|                                        | White Cuban Bitter                         | ✓ 27.7                   | 8.8                               | 1:1.0                              |
|                                        | ✓ Bullet Tree                              | ✓ 29.9                   | 12.9                              | 1:1.4                              |
|                                        | ✓ Yellow Saunders                          | ✓ 28.8                   | 7.6                               | 1:1.3                              |
|                                        | ✓ Catch Thief                              | ✓ 25.3                   | 9.2                               | 1:1.1                              |
|                                        | ✓ Smalling Sweet, Red Bank.                | ✓ 29.0                   | 10.6                              | 1:1.5                              |
|                                        | ✓ Portland-No. 6, White Stick Sweet        | ✓ 29.5                   | 12.8                              | 1:1.3                              |
|                                        | ✓ Richmond - Stick.                        | ✓ 31.5                   | 9.9                               | 1:1.3                              |
|                                        | ✓ Sour Banmy                               | ✓ 25.9                   | 8.1                               | 1:0.83                             |
|                                        | ✓ New Stick No. 5                          | ✓ 26.7                   | 8.8                               | 1:1.6                              |
|                                        | ✓ Bobby Hanson                             | ✓ 30.4                   | 12.2                              | 1:1.1                              |
|                                        | ✓ Portland No. 2 Sugar Loaf                | ✓ 28.6                   | 11.0                              | 1:1.2                              |
|                                        | ✓ Marlie Hill-Big Yard                     | ✓ 32.7                   | 13.9                              | 1:1.2                              |
|                                        |                                            | ✓ 26.0?                  | 10.5                              | 1:1.1                              |
|                                        | ✓ Elmo Stick                               | ✓ 31.6                   | 12.5                              | 1:1.4                              |
|                                        | ✓ Portland No. 4 Cotton Tree               | ✓ 30.3                   | 10.6                              | 1:1.3                              |
|                                        | ✓ Portland No. 3 Agricultural              | ✓ 28.2                   | 9.9                               | 1:1.1                              |
|                                        | ✓ Black Stick Buck-Buck - (Black River)    | ✓ 27.7                   | 10.3                              | 1:1.4                              |
|                                        | ✓ Portland No. 1 White Stick, Bitter       | ✓ 26.1                   | 9.3                               | 1:1.3                              |
|                                        | ✓ Portland No. 5 Blue Bud.                 | ✓ 27.8                   | 11.8                              | 1:1.3                              |
| 282/54<br>collect-<br>ed on<br>24/9/54 | ✓ Laura, Bitter (Litlitz)                  | ✓ 33.2                   | 12.4                              | 1:1.5                              |
|                                        | ✓ Bobby Hanson Bitter (Pepper Santa Cruz). | ✓ 25.9                   | 9.4                               | 1:1.6                              |
|                                        | ✓ Yellow Heart Sweet (Litlitz)             | ✓ 33.6                   | 15.7                              | 1:1.8                              |

| Lab. No.                            | Sample                                         | %Crude Protein of Leaves  | %Crude Protein of Petiole & Stalk | Ratio of Petiole and Stalk to Leaves |
|-------------------------------------|------------------------------------------------|---------------------------|-----------------------------------|--------------------------------------|
| 282/54 contd.                       | ✓ Eye Water, Bitter (Red Bank)                 | ✓ 32.4                    | 10.9                              | 1:1.8                                |
| ✗                                   | ✓ White Margaret, Bitter (Pepper)              | ✓ 34.4                    | 14.3                              | 1:1.7                                |
|                                     | ✓ Long Leaf, Black Stem (Black River)          | ✓ 29.5                    | 12.3                              | 1:1.8                                |
|                                     | ✓ Long Leaf, White Tuber.                      | ✓ 29.9                    | 10.5                              | 1:1.9                                |
|                                     | ✓ Brown Stick, Bitter                          | ✓ 31.1                    | 10.8                              | 1:1.6                                |
|                                     | ✓ Westmoreland-Bitter (Bogue, S.C.)            | ✓ 31.8                    | 13.0                              | 1:1.4                                |
|                                     | ✓ Bunch of Keyes, Bitter (Pepper)              | ✓ 32.6                    | 11.5                              | 1:2.2                                |
|                                     | ✓ Cashew, Long-Leaf.                           | ✓ 26.5                    | 10.1                              | 1:1.7                                |
|                                     | ✓ Damsel, Sweet Bogue (S.C.)                   | ✓ 29.1                    | 9.4                               | 1:1.5                                |
| ✗                                   | ✓ White Heart, Sweet (Litlitz)                 | ✓ 33.1                    | 16.1                              | 1:1.6                                |
|                                     | ✓ Blue Top, Bitter (Santa Cruz)                | ✓ 30.7                    | 10.2                              | 1:1.1                                |
| ✗                                   | ✓ New Green (St. Mary)                         | ✓ 33.4                    | 10.6                              | 1:1.3                                |
|                                     | White House                                    | No leaf samples received. |                                   |                                      |
| 283/54 collect-<br>ed on<br>27/9/54 | ✓ Yellow Belly B Sweet (S.C.)                  | ✓ 31.5                    | 12.1                              | 1:2.2                                |
|                                     | ✓ White Brown - Stick, Bitter (S.C.)           | ✓ 33.1                    | 13.7                              | 1:1.3                                |
| ✗                                   | ✓ Walters Bitter                               | ✓ 34.8                    | 10.8                              | 1:1.9                                |
| ✗                                   | ✓ Smalling, Bitter (S.C.)                      | ✓ 34.5                    | 13.0                              | 1:1.9                                |
|                                     | ✓ Esther, Bitter (S.C.)                        | ✓ 30.4                    | 11.2                              | 1:1.9                                |
|                                     | ✓ Gordon Bitter (Santa Cruz).                  | ✓ 29.7                    | 11.2                              | 1:1.5                                |
|                                     | ✓ Blue Bud, Sweet                              | ✓ 28.6                    | 12.2                              | 1:1.6                                |
|                                     | ✓ John Henry, Bitter                           | ✓ 32.1                    | 9.2                               | 1:1.5                                |
| ✗                                   | ✓ Rodney, Bitter                               | ✓ 36.1                    | 15.8                              | 1:1.5                                |
|                                     | ✓ Who-fe-Patrick, Bitter                       | ✓ 27.4                    | 9.4                               | 1:1.5                                |
|                                     | ✓ Mulling, Bitter                              | ✓ 32.3                    | 11.6                              | 1:1.4                                |
|                                     | ✓ New Green Bitter                             | ✓ 31.1                    | 10.7                              | 1:1.7                                |
|                                     | ✓ Catch Thief, Bitter                          | ✓ 29.2                    | 12.8                              | 1:1.0                                |
|                                     | ✓ Duff House, Long Leaf, Bitter                | ✓ 27.5                    | 9.7                               | 1:1.1                                |
|                                     | ✓ Agricultural-White Stick, Sweet (Pusey Hill) | ✓ 32.8                    | 15.1                              | 1:1.4                                |

| Lab.No.                  | Sample                                                  | %Crude Protein of Leaves | %Crude Protein of Petiole & Stalk | Ratio of Petiole and Stalk to leaves. |
|--------------------------|---------------------------------------------------------|--------------------------|-----------------------------------|---------------------------------------|
| 286/54 collect-<br>ed on | ✓ Yellow Stick -<br>(Ardock Dist.)                      | ✓ 31.1                   | 12.0                              | 1:1.20                                |
| 29/9/54                  | ✓ Blue Chambers,<br>Sweet.                              | ✓ 30.0                   | 10.8                              | 1:1.5                                 |
|                          | ✓ Fowl Fat, Sweet                                       | ✓ 31.7                   | 12.4                              | 1:2.4                                 |
|                          | ✓ Government Bitter<br>(Restora)                        | ✓ 25.7                   | 9.4                               | 1:1.6                                 |
|                          | ✓ Ulcer, Sweet, Middle-<br>sex Dist.                    | ✓ 29.5                   | 9.3                               | 1:1.2                                 |
|                          | ✓ Sweet Cassava -<br>(Dunbarton Dist.)                  | ✓ 34.7                   | 14.4                              | 1:1.2                                 |
|                          | ✓ White House, Bitter<br>Mt. Olivet.                    | ✓ 33.0                   | 13.3                              | 1:1.3                                 |
|                          | ✓ Young Girl, Sweet                                     | ✓ 28.3                   | 11.0                              | 1:1.7                                 |
|                          | ✓ New Green Bitter<br>(St. Ann)                         | ✓ 20.6                   | 6.1                               | 1:1.0                                 |
|                          | ✓ Ingram, Bitter<br>(Alva, St. Ann)                     | ✓ 23.3                   | 6.7                               | 1:1.8                                 |
|                          | ✓ Bygrave, Sweet, -<br>(Alva, St. Ann)                  | ✓ 21.1                   | 7.3                               | 1:1.7                                 |
|                          | ✓ Blue Bud, Bitter,<br>Mt. Olivet                       | ✓ 22.1                   | 5.2                               | 1:1.8                                 |
|                          | ✓ White Root, Brown<br>Stick, Bitter<br>(St. Elizabeth) | ✓ 28.2                   | 6.0                               | 1:1.5                                 |
|                          | ✓ Hafoo, Sweet                                          | ✓ 22.8                   | 7.4                               | 1:1.5                                 |
|                          | ✓ New Jacket, Bitter<br>(St. Elizabeth).                | ✓ 27.8                   | 10.0                              | 1:1.5                                 |

# DIMENSIONS OF BOARD - USED IN CASSAVA STUDY - JAMAICA.

- ① DIST. BOTTOM SEC. 98 CM
- ② " " - FIRST CROSS BLK LINE: 141 CM
- ③ " FIRST CROSS BL LINE - 2<sup>ND</sup> CROSS BL LINE 110 CM
- ④ " 2<sup>ND</sup> CROSS BL LINE - TOP OF D. 50 CM
- ⑤ TOTAL DIST. BOT. TO TOP OF D. 301 CM.
- ⑥ " WIDTH OF D. 3 FT.
- ⑦ LENGTH OF MIDDLE SEC. 1 METRE.
- ⑧ " " TOP " " "



CROP AGRONOMY DIVISION,

HOPE, LIGUANEA.

29th June, 54.

Mr. F.A. Ray,  
Farm Manager,  
Bodles Agricultural Station,  
Old Harbour.

Dear Sir,

I wish to commend the following members of  
your staff for their fine assistance to me.

Headman Vernold McDonald  
Maxie Thelmington  
Donald Denis  
Sydney Lewis

They were always ready to assist in any way, and without them it would have been impossible to have completed my work in such short order.

Please accept my thanks for making these  
men available to me.

Yours faithfully,

David J. Rogers, Ph.D.

c.c. Vernold McDonald,  
Maxie Thelmington.  
Donald Denis  
Sydney Lewis.

DJR:jhj.