



**AgEcon** SEARCH  
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search  
<http://ageconsearch.umn.edu>  
[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*



# JOINT PROCEEDINGS



TROPICAL REGION

**21st Annual Meeting  
of the Caribbean Food Crops Society  
and  
32nd Annual Meeting of the American Society for  
Horticultural Science — Tropical Region**

## **technology for agricultural development**

**Hilton Hotel, Port of Spain, Trinidad  
8 - 13 September 1985**

*Host Institutions*

- Caribbean Agricultural  
Research and Development  
Institute
- Ministry of Agriculture, Lands  
and Food Production, Trinidad  
& Tobago
- Faculty of Agriculture,  
University of the West Indies

# THE EVALUATION OF TOMATO VARIETIES IN ST. LUCIA

A. Sajjapongse and Calixte George

Caribbean Agricultural Research and Development Institute  
P.O. Box 971, Castries, St. Lucia.

## ABSTRACT

Two trials were conducted during the period October 1984 to May 1985, to identify AVRDC tomato varieties that can yield reasonably high when grown during the hot wet season (off-season) and/or cool season (in-season) of the tropical lowlands. A total of 30 varieties were evaluated. The results showed that four open pollinated varieties, i.e. CL5915 - 229D<sub>4</sub> - 1 - 1 - 0, CL5915 - 229D<sub>4</sub> - 1 - 5 - 0, CL5915 - 136D<sub>4</sub> - 1 - 0 and CL5915 - 222D<sub>4</sub> - 0 - 4 - 0; and two hybrids, i.e. PT913 and PT1600 out-yielded the Caraibe, the best of the currently grown varieties. The highest yield of 43.99 t ha<sup>-1</sup> came from CL5915 - 229D<sub>4</sub> - 1 - 5 - 0. This yield was more than double of the Caraibe (19.15 t ha<sup>-1</sup>). Yield difference was due to differences in fruit size and number of fruit plant<sup>-1</sup>.

## RESUMEN

Durante el período entre Octubre de 1984 a Mayo de 1985, dos experimentos fueron llevados a cabo con el objeto de evaluar variedades de tomate del AVRDC, de alta producción, esto cuando estuviesen plantadas o, durante la estación calurosa y húmeda (fuera de estación) o, durante la estación templada (en estación) de las zonas bajas tropicales. Un total de 30 variedades fueron evaluadas. Los resultados mostraron que habían cuatro variedades de polinización de cruce, ejemplo: CL5915 - 229D<sub>4</sub> - 1 - 1 - 0; CL5915 - 229D<sub>4</sub> - 1 - 5 - 0, CL5915 - 136D<sub>4</sub> - 1 - 0 y CL5915 - 222D<sub>4</sub> - 0 - 4 - 0 y dos variedades híbridas ejemplo: PT913 y PT1600, las cuales produjeron más que la variedad Caraibe, la cuál es considerada como la mejor entre las que se plantan actualmente. La producción más alta de la variedad CL5915 - 229D<sub>4</sub> - 1 - 5 - 0, fue de 43.99 t ha<sup>-1</sup>. Esta producción fue más del doble que la de la variedad Caraibe (19.15 t ha<sup>-1</sup>). Las diferencias de rendimiento fueron debidas a una variación en el tamaño del fruto y al número de frutos planta<sup>-1</sup>.

Keywords: Tomato varieties, St. Lucia. Hot humid tropics.

Tomato is one of the most important crops in the Eastern Caribbean. It is planted all year round in the region and demand for the crop is high. But, generally, yields are low, particularly during the hot summer season. One of the main reasons for this is that fruit setting of the crop is hindered when temperatures are high (over 24 °C). To improve the situation, high yielding varieties with heat tolerant traits are being sought.

At present, the CARDI's Farming Systems Research and Development Project, in co-operation with the Asian Vegetable Research and Development Centre (AVRDC), is evaluating some of the heat tolerant and high yielding varieties introduced from AVRDC in comparison with the local checks. The objective of this project was to identify tomato varieties that can yield reasonably high during the hot wet season (off-season) and/or cool season (in-season). The paper reported here includes two experiments, one conducted on the CARDI's Field Station and the other on farmer's field.

### Experiment I

The experiment was conducted at the field station at La Resource which is about 19km south-east of Castries. A randomised complete block design with three replications was used. Thirteen tomato varieties, i.e. TK70, TN2, TM103, PT778, PT858, PT862, PT913, PT1017, PT1599, PT3027 and three commonly grown varieties - Calypso, Caraibe and Indian River, representing treatments, were evaluated.

### Seedling preparation

Nursery soil, enough for 13 flats, (8.0cm x 32.0cm inside dimension), was prepared by

thoroughly mixing (1: 2 ratio by volume) of Irish peat moss to moist soil with 23.4g ammonium sulphate, 39.0g of triple superphosphate and 23.4g of potassium chloride. The flats were then filled with the soil and dibbled to make 54 (6 x 9) planting holes per flat. Two seeds per hole of each variety were sown in the flats on 22 October, 1984. The flats were kept in the field and covered with nylon net. Water was given when necessary. Ten days after emergence, the seedlings were thinned to render one plant per hole. They were raised until most of them had five true leaves.

### Field Planting

Since the field was rotavated long before the seedlings could be transplanted, it was heavily covered by grasses. About two weeks before transplanting, paraquat was applied to the field to take care of the grasses. Later, raised beds of 0.7m x 11m in area and 0.4m high were constructed manually. The beds were separated by furrows of 0.5m wide. Individual beds were divided into three plots each 3m long with two 1m walkways separating the plots.

Each plot received 180g ammonium sulphate, 115g triple superphosphate and 48g potassium chloride as basal fertilizer, which was mixed into the soil three days before transplanting. Twenty-eight - day-old seedlings were transplanted onto the plots on 19 November, 1984, forming one row per plot and spaced at 0.3m within row. The plants received two additional sidedressings each of 100g of ammonium sulphate and 33g of potassium chloride per plot. Diseases and insect pests were controlled by spraying Maneb and Basudin every ten days. Weeds were controlled manually and irrigation was supplied using tap water. The crop was harvested weekly from 11 January to 22 February, 1985.

## Experiment II

This experiment was conducted on a farmer's field at Grande Riviere in the Northern part of the country. A total of 21 varieties were evaluated. This included the three highest yielders from the first experiment, i.e. PT858, PT862, and PT913 along with new heat tolerant material from AVRDC.

i.e. CL113-0-0-7-2-0-11  
 CL5915-371D4-1-2-0  
 CL5915-314D4-1-1-0  
 CL5915-153D4-3-6-0  
 CL5915-206D4-2-5-0  
 CL5915-206D4-2-1-0  
 CL5915-223D4-2-1-0  
 CL5915-229D4-1-5-0  
 CL5915-39D4-1-4-0  
 CL5915-204D4-1-2-0  
 CL5915-229D4-1-1-0  
 CL5915-223D4-3-2-0  
 CL5915-136D4-1-0  
 CL5915-223D4-3-1-0  
 CL5915-223D4-2-2-0  
 CL5915-222D4-0-4-0  
 CL5916-214D4-1-4-0

and a recommended variety Caraibe, which was the highest yielder among the recommended varieties evaluated in the first trial. The experiment was carried out in a randomised complete block design with two replications.

### Seedling preparation

Seedling preparation was the same as that of Experiment 1, except that Irish peat moss was not used. Seeds were sown in flats on 22 February 1985.

### Field planting

Four raised beds, each of 1.5m x 24.2m in size, were used. The beds were separated by furrows 34cm wide and 45cm deep. One week before transplanting, each bed received 23kg of dolomitic lime and 900g of complete fertilizer 16:8:24 as a basal application. Individual beds were then divided into 11 small plots 1.5m x 1.6m in size. The plots were separated by walkways 60cm wide.

Twenty-four day-old seedlings were transplanted onto the plots on 17 March 1985, forming two rows per plot and spaced at 40cm within row and 100cm between rows. Each plot accommodated eight plants. On 29 April, each plant received 20g of complete fertilizer 16:8:24 as a sidedressing application. Fungicide (Maneb) and insecticides (Ambush and Kelthane) were applied twice on 29 March and 14 April. Weeding was done manually, and sprinkler irrigation was administered when necessary. The crops were harvested four times on 5, 11, 16, and 21 May.

## Results and discussion

### Experiment I

Precipitation during the period of the experiment was very minimal, therefore, the soil was very dry. Although irrigation (from tap water) was administered, the plants wilted most of the time, especially in the afternoon. This resulted in stunted and unhealthy plants. The temperature during the growing period ranged from 23.5 to 30.5°C, with an average mean monthly temperature of 27.1°C.

Table 1 shows some horticultural characteristics, i.e. plant height and days to 50% flowering, of the different tomato varieties. PT913 and PT1017 were the tallest at early growth (three weeks after transplanting; 3 WAT) and PT1599 and Calypso the shortest. Height differential pattern during the fourth week (4 WAT) was similar to that at 3 WAT. At 5 WAT, Caraibe was as tall as PT778 and PT1017, while TK70 and TN2 were the shortest. Varieties that reached 50% flowering earliest were TM103, TK70, PT778, PT858 and PT1017. TN2, Calypso, PT1599 and PT3027 reached 50% flowering the latest.

Table 1 Horticultural characteristics of tomato of different varieties grown during the dry season at La Ressource, St. Lucia.

	Plant height (cm)			Days to 50% flowering (DAT)
	3WAT	4WAT	5WAT	
Indian River	32.6	36.2	44.7	25
Calypso	19.7	31.5	41.7	29
Caraibe	23.3	34.1	45.3	24
TK70	20.5	29.7	37.0	23
TN2	20.5	29.3	38.0	30
TM103	25.1	39.6	47.3	22
PT778	25.3	34.3	53.3	23
PT858	23.3	36.1	47.3	23
PT862	26.5	40.3	52.0	24
PT913	28.3	43.1	56.0	24
PT1017	28.0	42.4	52.7	23
PT1599	19.7	30.7	44.7	29
PT3027	21.0	30.7	42.7	29
L.S.D. (0.05)	3.2	6.9	9.7	1.6
(0.01)	4.3	9.3	13.1	2.2

WAT = Weeks after transplanting

DAT = Days after transplanting

Yield and yield attributes are shown in Table 2. Varieties which yielded higher than the best local check, Caraibe, were PT913 and PT1017. The highest yielder was PT913, which had a yield of 14.39 t.ha<sup>-1</sup>. The lowest yields of 2.93 and 3.23 t.ha<sup>-1</sup> were from Indian River and Calypso, respectively.

**Table 2** Yield and yield attributes of tomatoes of different varieties grown during the dry season at La Ressource

Varieties	Yield (t/ha)	Fruit size (g/fruit)	Fruit number /plant
TK70	6.33	39.7	5.3
TN2	4.25	34.4	4.6
Indian River	2.93	42.2	2.4
Calypso	3.28	42.3	2.8
Caraibe	7.02	43.7	5.7
TM103	7.29	34.5	8.1
PT778	8.61	38.5	8.1
PT858	9.28	50.1	6.8
PT862	10.41	44.5	8.5
PT913	14.39	27.0	19.1
PT1017	13.11	29.9	15.8
PT1599	8.44	35.1	8.7
PT3027	10.28	32.0	11.4
L.S.D. (0.05)	4.04	10.4	4.1
(0.01)	5.44	14.2	5.0

The two popular cultivars in Taiwan, TN2 and TK70, did not yield better than the local checks. Lack of a heat tolerant trait in the two cultivars may cause them to perform poorly in the tropical lowlands. Yield difference was due to differences in fruit size and number of fruits plant<sup>-1</sup>. Although PT913 and PT1017 had the smallest fruit size, they had the highest number of fruits plant<sup>-1</sup>, hence the highest yields. Large fruit sizes were from PT858, PY862, Caraibe, Calypso, and Indian River. PT858 had the largest fruit size of 50.1g fruit<sup>-1</sup>.

The results showed that Caraibe yielded better than the other two local checks, although not significantly. This is due mainly to more fruits plant<sup>-1</sup>. The results also indicated that those varieties which showed no apparent wilting like PT1017 and PT913, had the smallest fruit sizes and gave the highest yields. Based on yield performance, the following varieties were kept for further trial: PT913, PT1017, PT858, PT862 and PT3027.

#### Experiment II

The mean monthly maximum temperatures during the growing period ranged from 28.2 to 29.4°C, whereas the mean monthly minimum temperatures ranged from 21.0 to 22.7°C.

Unlike the first experiment, water was not a limiting factor of this trial, hence growth was very vigorous. The heights of the crop measured at 29 days after transplanting (DAT) are presented in Table 3. There was no statistical difference in plant height between Caraibe and most of the varieties under test. Varieties PT858, PT862, PT913, PT1600, CL5915-206D<sub>4</sub>-2-5-0, and CL5915-229D<sub>4</sub>-1-5-0, were statistically different from Caraibe in plant height. The tallest plant of 64.6cm was CL5915-206D<sub>4</sub>-2-5-0, which was the indeterminate type, and the shortest (43.8cm) was CL5915-341D<sub>4</sub>-1-1-0.

Late blight was a serious problem for this trial, although fungicide (Maneb) was applied. This may be due to the inadequate application of the fungicide (only two applications were made throughout the growing period). The disease incidence was first

**Table 3** Heights of tomatoes of different varieties at 29 days after transplanting, Grand Rivere, St. Lucia.

Variety	Height (cm)
PT858	60.8
PT628	65.8
PT913	55.5
PT1600	58.9
CL1131-0-0-7-2-0-11	52.0
CL5915-371D <sub>4</sub> -1-2-0	53.8
CL5915-341D <sub>4</sub> -1-1-0	43.8
CL5915-153D <sub>4</sub> -3-6-0	50.0
CL5915-206D <sub>4</sub> -2-5-0	64.6
CL5915-206D <sub>4</sub> -2-1-0	54.6
CL5915-223D <sub>4</sub> -2-1-0	54.8
CL5915-229D <sub>4</sub> -1-5-0	56.8
CL5915-39D <sub>4</sub> -1-4-0	46.7
CL5915-204D <sub>4</sub> -1-2-0	49.3
CL5915-229D <sub>4</sub> -1-1-0	50.8
CL5915-136D <sub>4</sub> -1-0	54.6
CL5915-223D <sub>4</sub> -3-1-0	50.8
CL5915-223D <sub>4</sub> -2-2-0	48.4
CL5915-222D <sub>4</sub> -0-4-0	47.5
CL5916-214D <sub>4</sub> -1-4-0	51.5
Caraibe	46.5
L.S.D. (0.05)	8.9
(0.01)	12.2

observed during the first week of May and its severity was rated on 7 May, as shown in Table 4. Obviously there were differential tolerant levels among the various varieties. Those rated zero were seriously affected by the disease and some of them were dying, such as CL5915-314D<sub>4</sub>-1-1-0, CL5915-39D<sub>4</sub>-1-4-0, PT858, and PT862. The best among the moderately tolerant group (rated 3) were PT913, CL5915-229D<sub>4</sub>-1-5-0, CL5915-136D<sub>4</sub>-1-0, and CL5915-222D<sub>4</sub>-0-4-0.

Number of fruits from different harvests are presented in Table 5. All varieties, except PT913, CL5915-153D<sub>4</sub>-3-6-0, CL5915-223D<sub>4</sub>-3-1-0, CL5915-223D<sub>4</sub>-2-2-0, had their first harvest before the check - Caraibe. In general, more fruits were obtained from the third and fourth harvests than from the first two harvests. Most of the varieties gave higher numbers of fruits than Caraibe, except PT858, PT862, CL5915-371D<sub>4</sub>-1-2-0, CL5915-314D<sub>4</sub>-1-1-0, CL5915-206D<sub>4</sub>-2-5-0, CL5915-206D<sub>4</sub>-2-1-0, CL5915-223D<sub>4</sub>-2-1-0, and CL5916-214D<sub>4</sub>-1-4-0. The most prolific varieties in terms of fruit numbers were CL5915-222D<sub>4</sub>-0-4-0, CL5915-136D<sub>4</sub>-1-0, CL5915-229D<sub>4</sub>-1-5-0, CL5915-229D<sub>4</sub>-1-1-0, and PT913.

The size of the tomato fruits varied considerably with varieties and time of harvest (Table 6). Most of the varieties gave decreasing fruit sizes in succeeding harvests. The largest fruit came from the first harvest and the smallest from the fourth harvest. From every harvest, Caraibe gave the largest fruits i.e. 114.5, 125.2 and 73.8g fruit<sup>-1</sup> for the second, third and fourth harvests, respectively.

Table 4 Rating of severity of late blight infestation on tomatoes of different varieties grown at Grand Riviere, St. Lucia.

Rating scale			
0	1	2	3
PT858	PT1600	CL1131-0-0-7-2-0-11	CL5915-153D <sub>4</sub> -3-6-0
PT862	CL5915-204D <sub>4</sub> -1-2-0	CL5915-206D <sub>4</sub> -2-5-0	CL5915-229D <sub>4</sub> -1-5-0
CL5915-371D <sub>4</sub> -1-2-0	CL5915-223D <sub>4</sub> -2-2-0	CL5915-223D <sub>4</sub> -2-1-0	CL5915-229D <sub>4</sub> -1-1-0
CL5915-314D <sub>4</sub> -1-1-0	Caraibe	CL5915-223D <sub>4</sub> -3-1-0	CL5915-136D <sub>4</sub> -1-0
CL5815-206D <sub>4</sub> -2-1-0			CL5915-222D <sub>4</sub> -0-4-0
CL5915-39D <sub>4</sub> -1-4-0			PT913
CL5915-214D <sub>4</sub> -1-4-0			

0 - Severely affected

5 - not affected

Table 5 Number of fruits from various harvests of tomato of different varieties grown at Grand Riviere, St. Lucia.

Variety	Harvest (no/plant)				
	1st	2nd	3rd	4th	Total
PT868	14.5	18.5	27.5	3.5	64.0
PT628	20.0	32.0	31.0	22.5	105.5
PT913	N	12.0	60.5	169.0	241.5
PT1600	9.5	32.0	38.5	99.5	179.5
CL1131-0-0-7-2-0-11	12.0	36.5	50.0	110.5	209.0
CL5915-371D <sub>4</sub> -1-2-0	17.0	9.0	22.0	60.0	108.0
CL5915-314D <sub>4</sub> -1-1-0	14.6	58.0	54.0	N	126.6
CL5915-153D <sub>4</sub> -3-6-0	N	21.3	60.6	121.3	203.2
CL5915-206D <sub>4</sub> -2-5-0	1.0	12.5	20.5	62.5	96.5
CL5915-206D <sub>4</sub> -2-1-0	3.5	15.5	28.0	40.0	87.0
CL5915-223D <sub>4</sub> -2-1-0	0.5	19.5	38.0	64.5	122.5
CL5915-229D <sub>4</sub> -1-5-0	3.0	36.0	79.5	121.0	239.5
CL5915-39D <sub>4</sub> -1-4-0	18.5	42.0	60.0	16.0	136.5
CL5915-204D <sub>4</sub> -1-2-0	14.5	23.5	54.5	96.0	187.5
CL5915-229D <sub>4</sub> -1-1-0	8.5	53.5	97.5	75.5	235.0
CL5915-136D <sub>4</sub> -1-0	18.0	56.0	78.0	131.0	283.0
CL5915-223D <sub>4</sub> -3-1-0	N	12.0	54.0	99.0	165.0
CL5915-223D <sub>4</sub> -2-2-0	N	19.4	44.0	85.4	148.8
CL5915-222D <sub>4</sub> -0-4-0	29.0	55.5	96.5	120.5	301.5
CL5916-214D <sub>4</sub> -1-4-0	16.5	22.0	36.0	20.0	94.5
Caraibe	N	3.0	20.0	36.0	59.0
L.S.D. (0.05)	8.0	15.0	30.0	57.1	72.8
L.S.D. (0.01)	11.0	20.4	42.0	77.8	99.2

N = No harvest

Table 6 Fruit sizes from various harvests of tomato of different varieties grown at Grande Riviere, St. Lucia.

Variety	Harvest (g/fruit)			
	1st	2nd	3rd	4th
PT858	122.0	81.6	56.6	78.6
PT628	72.7	67.8	53.2	45.8
PT913	N	57.2	48.2	31.2
PT1600	84.1	81.8	62.0	42.8
CL1131-0-0-7-2-0-11	52.4	49.1	33.8	25.8
CL5915-371D <sub>4</sub> -1-2-0	42.1	41.6	44.4	42.1
CL5915-314D <sub>4</sub> -1-1-0	46.7	39.2	27.8	N
CL5915-153D <sub>4</sub> -3-6-0	N	27.2	45.2	35.0
CL5915-206D <sub>4</sub> -2-5-0	125.0	108.6	84.2	53.1
CL5915-206D <sub>4</sub> -2-1-0	128.6	94.7	79.8	57.8
CL5915-223D <sub>4</sub> -2-1-0	150.0	67.6	50.4	39.0
CL5915-229D <sub>4</sub> -1-5-0	83.3	73.2	57.9	43.6
CL5915-39D <sub>4</sub> -1-4-0	61.2	54.8	34.8	25.8
CL5915-204D <sub>4</sub> -1-2-0	45.7	46.8	40.0	31.4
CL5915-229D <sub>4</sub> -1-1-0	82.2	64.6	45.0	34.8
CL5915-136D <sub>4</sub> -1-0	62.2	52.8	43.9	33.6
CL5915-223D <sub>4</sub> -3-1-0	N	64.6	53.1	36.2
CL5915-223D <sub>4</sub> -2-2-0	N	71.5	58.0	42.6
CL5915-222D <sub>4</sub> -0-4-0	49.2	44.2	35.8	31.5
CL5916-214D <sub>4</sub> -1-4-0	69.6	72.2	54.4	45.5
Caraibe	N	114.5	125.5	73.8
L.S.D. (0.05)	NS	33.9	17.5	28.9
L.S.D. (0.05)	NS	46.2	23.8	NS

No -No harvest

Yield and yield attributes are presented in Table 7. Yields were highly significantly different among the varieties evaluated. There were five varieties which out-yielded Caraibe statistically. These varieties were PT1600, CL5915-229D<sub>4</sub>-1-5-0, CL5915-229D<sub>4</sub>-1-1-0, CL5915-136D<sub>4</sub>-1-0, and CL5915-222D<sub>4</sub>-0-4-0, which gave the yields of 34.46, 43.99, 38.74, 40.83 and 38.92 t. ha<sup>-1</sup>, respectively. Yield from Caraibe was only 19.15 t. ha<sup>-1</sup>. PT858 and PT862, which were two of the best varieties in Experiment 1, did not yield better than Caraibe. In addition, they were susceptible to Fusarium wilt, (PT858) and Blossom end rot (PT762). The small fruit size tomato, PT913, yielded reasonably well (30.54 t. ha<sup>-1</sup>), although not significantly better than Caraibe. Yield differences were due to differences in fruit size and number of fruits plant<sup>-1</sup>. All of the five best yielders and PT913 had more fruits plant<sup>-1</sup> than Caraibe, although they had smaller fruit.

Based on yield performance and disease resistance, the following varieties will be kept for further evaluation: PT913, PT1600, CL5915-229D<sub>4</sub>-1-5-0, CL5915-229D<sub>4</sub>-1-1-0, CL5915-222D<sub>4</sub>-0-4-0 and CL5915-136D<sub>4</sub>-1-0. The differential responses of varieties during different planting times indicates that these new varieties will have to be tested for several seasons in order to arrive at firm recommendations for farmers.

Table 7 Yield and yield attributes of tomato of different varieties grown at Grand Riviere, St. Lucia

	Yield (t/ha)	Yield attributes	
		Fruit size (g/fruit)	Number of fruits/ plant
PT858	18.34	81.5	8.0
PT628	21.56	59.1	13.2
PT913	30.54	36.6	30.2
PT1600	34.46	57.2	22.4
CL1131-0-0-7-2-0-11	24.04	33.5	26.1
CL5915-371D <sub>4</sub> -1-2-0	15.72	42.4	13.5
CL5915-314D <sub>4</sub> -1-1-0	15.29	35.1	11.9
CL5915-153D <sub>4</sub> -3-6-0	27.16	38.7	19.1
CL5915-206D <sub>4</sub> -2-5-0	22.21	67.8	12.1
CL5915-206D <sub>4</sub> -2-1-0	22.44	73.3	10.9
CL5915-223D <sub>4</sub> -2-1-0	20.12	42.9	15.3
CL5915-229D <sub>4</sub> -1-5-0	43.99	53.5	29.9
CL5915-39D <sub>4</sub> -1-4-0	20.48	43.6	17.1
CL5915-204D <sub>4</sub> -1-2-0	23.67	37.1	23.4
CL5915-229D <sub>4</sub> -1-1-0	38.74	47.9	29.4
CL5915-136D <sub>4</sub> -1-0	40.83	41.8	35.4
CL5915-223D <sub>4</sub> -3-1-0	25.18	44.2	20.6
CL5915-223D <sub>4</sub> -2-2-0	26.00	50.9	13.9
CL5915-222D <sub>4</sub> -0-4-0	38.92	37.0	37.7
CL5916-214D <sub>4</sub> -1-4-0	19.06	58.8	11.8
Caraibe	19.15	94.9	7.4
L.S.D. (0.05)	13.75	11.4	9.1
L.S.D. (0.01)	18.76	15.5	12.4