

## **CARBONO PROJECT Subproject Abstract**

**TITLE:** 1004. SOIL SAMPLING PROTOCOLS FOR CARBONO PLOTS

**Task Code:** **Investigator:** David B. Clark

**Date (15/06/98):** **Contact:** David B. Clark

**Other researchers involved:** Technicians Rodolfo Vargas, Don Rigo, Ulises, José Dolores

**Key words:** soil nutrients, pH, plot characterization, topographic position

**Response variables:** soil pH, C, N, P, soil cations

**Soil Type:** All 18 Carbono plots

**Study location:** La Selva Biological Station, 10°26'N, 84°00'W, Costa Rica; all plots as mapped in the La Selva GIS. All are within Old La Selva, the unit bounded to the west by the Sarapiquí Annex and to the south by Braulio Carrillo National Park.

**Objectives:** To characterize soil nutrient status in the 18 Carbono plots.

**Experimental design/methods:**

Soil samples were taken at 0-10, 10-30, 30-50, and 50-100 cm depth in each of the CARBONO plots. The number of samples varied. For Loma and Alluvión plots, 6 samples from each depth were mixed and subsampled. For the Slope plots, 6 samples at each depth were taken along the top, middle, and bottom rows of the plots, mixed and subsampled. The sampling protocols and field instructions and map are on dbc's computer, c:\carbono\parcelas\plotmap.xls, two different tabs. Soils were taken to the lab and wet soil pH determined (by Rodolfo Vargas) on 10 g of soil mixed in 25 ml of deionized water. The raw data are in a yellow field book called Mediciones pH Carbono. Soils for nutrient analyses were air-dried and then passed through a xx-mm size sieve, packed in plastic bags, and then sent to Ed Veldkamp's lab at the University of Goettingen (September 1998).

## **CARBONO PROJECT Subproject Abstract**

**TITLE:** SOIL ANALYSIS PROCEDURES FOR CABONO PLOT SOIL SAMPLES

**Task Code:** 1006

**Investigator:** David B. Clark

**Date** (12/Aug/2002:

**Contact:** David B. Clark

**Other researchers involved:** Dr. Edzo Veldkamp, Dr. Jens Mackensen

**Key words:** methods, soils, chemical analysis

**Response variables:** Soil nutrient concentrations

**Soil Type:** All 18 CARBONO 0.5 permanent plots

**Study location:** La Selva Biological Station, 10°26'N, 84°00'W, Costa Rica; all plots as mapped in the La Selva GIS. All are within Old La Selva, the unit bounded to the west by the Sarapiquí Annex and to the south by Braulio Carrillo National Park.

**Objectives:** To chemically analyze soils from the CARBONO plots.

**Experimental design/methods:** The soil sample collection and sample preparation protocols are described in task 1004. These are the same laboratory methods, and the same laboratory and at the same time, that were used in the 1170 grid point all-Old La Selva soil sample analyses.

**Data files:** The methods used for chemical analyses are documented in 22 .jpg files, that were scanned from the original analysis manual. These files are named soils\_methods\_documentation\_XX.jpg and are in the documentation subdirectory. The original chemical analysis for CARBONO are in selva98-1.xls.

**Variables in data files:** Nutrient concentrations at different depths, as well as descriptions of the units for each variable.

Flat plot soil

Muestreo para las parcelas de Lomas (L1-L6) y Aluvion (A1 - A)

50-0	50-10	50-20	50-30	50-40	50-50	50-60	50-70	50-80	50-90	50-100
40-0	40-10	40-20	40-30	40-40	40-50	40-60	40-70	40-80	40-90	40-100
	X			X			X			
30-0	30-10	30-20	30-30	30-40	30-50	30-60	30-70	30-80	30-90	30-100
20-0	20-10	20-20	20-30	20-40	20-50	20-60	20-70	20-80	20-90	20-100
	X			X			X			
10-0	10-10	10-20	10-30	10-40	10-50	10-60	10-70	10-80	10-90	10-100
0-0	0-10	0-20	0-30	0-40	0-50	0-60	0-70	0-80	0-90	0-100

X esta en la linea entre los tubos, a la mitad, como 2 metros en la direccion indicada

Muestras a 0-10, 10-30, 30-50, y 50-100 en cada X

Se combinaran las muestras para cada profundidad, asi que habran 4 muestras por cada parcela

Las etiquetas diran la parcela y la profundidad, como A1 0-10 cm

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Muestreo para las parcelas de Pendientes (P1 - P6)

50-0 X	50-10 X	50-20	50-30 X	50-40	50-50 X	50-60	50-70 X	50-80	50-90 X	50-100
40-0	40-10	40-20	40-30	40-40	40-50	40-60	40-70	40-80	40-90	40-100
30-0 X	30-10 X	30-20	30-30 X	30-40	30-50 X	30-60	30-70 X	30-80	30-90 X	30-100
20-0	20-10	20-20	20-30	20-40	20-50	20-60	20-70	20-80	20-90	20-100
10-0 X	10-10 X	10-20	10-30 X	10-40	10-50 X	10-60	10-70 X	10-80	10-90 X	10-100
0-0	0-10	0-20	0-30	0-40	0-50	0-60	0-70	0-80	0-90	0-100

X esta en la linea entre los tubos, a la mitad, como 2 metros en la direccion indicada

Muestras a 0-10, 10-30, 30-50, y 50-100

Se combinaran las muestras para cada profundidad en cada una de las 3 filas, asi que habran 12 muestras: las filas de 0, 20, y 40 (3 filas) por 4 profundidades en cada fila

Las tres filas se llamaran cuesta, medio, y bajo

Las etiquetas llevaran la parcela, la fila, y la profundidad, como P1 cuesta, 50-100 cm

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