

**UNITED STATES DEPARTMENT OF AGRICULTURE  
NATURAL RESOURCES CONSERVATION SERVICE**

Ecological Site Description

Site name: LIMESTONE BOTTOM  
Site number: R-270ZY025PR  
Major Land Resource Area: 270 Humid Coastal Plains  
Interstate correlation: NONE

**Physiographic features:** This site occurs in areas of elevation from 700m, rising gradually from beaches on the Atlantic Ocean to the hilly karst area, having two distinct zones: the flat alluvial plains and terraces along the coast and the irregular features of the karst limestone inland. Stream generally flow to the north, but most of the drainage in the karst zone is underground.

**Climatic features**

Frost-free period: 365 DAYS  
Freeze-free period: 365 DAYS  
Mean annual precipitation: 54 INCHES  
Mean annual air temperature: 78°F  
Mean annual soil temperature:  
Monthly moisture and temperature distribution:

	<b>Mean Precipitation (inches)</b>	<b>Percent Precipitation (%)</b>	<b>Mean Temperature (°F)</b>
January	4.42	8.17	75
February	2.69	4.97	74
March	2.46	4.54	75
April	4.45	8.23	77
May	5.10	9.43	79
June	4.29	7.93	80
July	3.75	6.93	80
August	4.10	7.58	81
September	4.85	8.96	80
October	5.03	9.30	80
November	6.13	11.33	78
December	6.80	12.57	76
<b>Mean annual</b>	<b>54.07</b>		<b>78°F</b>

**Other climatic features:** A rainy season prevails from July to November and a pronounced dry season occurs during the remainder of the year. Hurricanes are most

likely to occur August through November, and are characterized by strong winds and torrential rains. There is a little difference between the temperature in summer and that in winter.

**Elevation Aspect:** 150 to 500 ft.

**Percent Slope:** 2 to 12

**Associated water features:** Small intermittent creeks and underground drainage.

**Soils:** Soils in this site are deep, well drained, and moderately alkaline to very strongly acid. They are formed in mixed origin and from sediment weathered from limestone. The soils are sloping to moderately steep on small valleys between limestone hills and on the humid coastal plains.

Major Soil Taxonomic Units correlated to this site include:

Aceitunas, AaC  
Aceitunas, AcC, AcC2, AbC2, AaB  
Almirante, AnB, AnC, AmB, AmC  
Almirante, AIB, AIC  
Almirante, AmB  
Bayamon, ByB, ByC, BmB  
Bayamon, BcB, BcC, BsB  
Bayamon, BsC  
Bejucos, BcB  
Bejucos, BeB  
Camaguey, CcB  
Cidral, CfC2  
Cotito, CtB2  
Coto, CtB, CtC, CuB2, CuC2  
Coto, CvB  
Espinosa, EbB, EbC, EcB, EcC  
Espinosa, EaB, EaC  
Islote, IsC  
Perchas, PeD2, PhC2, PhD2  
Torres, TrB  
Vega Alta, VcB, VcC2  
Vega Alta, VaB, VaC2  
Vega Alta, VeB, VeC

**Plant communities:**

This site consists primarily of sod forming grasses in nearly pure stands. The site exists in moist ravines or depressions between limestone hills and plateaus of the coastal plains. Grasses constitute approximately 92% of the plant composition, forbs make up to 6% and trees and shrubs make nearly 2%.

## Major plant species composition

Predominant plant community: Some introduced grass species are adapted to this site. These highly palatable species include guinea, star and pangola. They exist in varying levels of dominance due to past or existing grazing pressure.

### GRASSES AND GRASSLIKES

Scientific Symbol	Common Name	Group	Pounds per Acre	Percent by Weight	Percent Allowed For Group
AXCO	Carpet grass	1			
DISA	Pendejuelo	1			
ECCO2	Jungle rice	1			
PACO14	Creeping wheatgrass	1			
PALA8	Woodland grass	1			
PANO3	Bahia grass	1			
SEGE	Knotroot bristlegrass	1			
SPIN4	Whorled dropseed	1			
STSE	St. Augustine	1			

### FORBS

Scientific Symbol	Common Name	Group	Pounds per Acre	Percent by Weight	Percent Allowed For group
ALVA2	False moneywort	2			
BICY	Black manzanilla	2			
BIPI	Sheperd's needle	2			
BLECH	Yerba de papagayo				
BOYE	Botoncillo	2			
BRVI5	Flor de conchitas	2			
CENO	Lady of night	2			
CISI2	Pinakoop	2			
COPO3	Black sage	2			
CREE4	Rattleweed	2			
DOMI3	Frijolillo	2			
EUPAT	Bitterbush	2			
INSU	Anil	2			
LAIN2	Wildsage	2			
MIPU8	Sensitive plant	2			
PHASE	Bean	2			

PSSP4	Yerba de burro	2			
SOTO4	Turkey berry	2			
STHA	Stylo	2			
URLO	Burbush	2			
VAGL4	Varronia	2			

### Shrubs and Trees

Scientific Symbol	Common Name	Group	Pounds per Acre	Percent by Weight	Percent Allowed For group
PSGU	Guava	3			

### Ground Cover and Structure

	Height Above the Ground											
	Not applicable		6 to 12 inches		12 to 24 inches		24 to 60 inches		60 to 80 inches		180 to 240 inches	
	% Ground cover	% Canopy cover	% Ground cover	% Canopy cover	% Ground cover	% Canopy cover	% Ground cover	% Canopy cover	% Ground cover	% Canopy cover	% Ground cover	% Canopy cover
Trees												
Shrubs									2	20		
Grasses and grasslikes				3	10		10	85				
Forbs												
Cryptogams												
Coarse fragments												
Bare ground												
Litter												

#### Transition Pathways:

The naturalized climax grass species such as St. Augustine, are generally replaced by introduced species such as guinea, star or pangola. When subject to overgrazing, blue grass, carpetgrass and smutgrass will dominate. This site should not be disturbed due to its environmental fragile nature and wildlife habitat value.

**Total annual production:** 11,000 lb/yr

#### Plant Growth Curves:

**Growth curve number:** PR001

**Growth curve name:** PR PLANT GROWTH CURVE

**Growth curve description:** Native and naturalized grasslands.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
6	5	4	7	12	10	9	10	11	10	9	7

### **Animal Community:**

This site is important several wildlife species. Major species using the site include native, naturalized and invasive species.

Alligator (invasive)  
Black rail  
Cattle egret  
Iguana iguana (invasive)  
Key west quail dove  
Killdeer  
Lesser golden plover  
Lizards  
Mangose (invasive)  
Northern harrier  
Other rodents  
Puerto rican lizard cuckoo  
Red jungle Fowl  
Smooth billed ani  
West indian whistling dick  
White rumped sandpiper  
Zenaida dove

### **Associated sites:**

#### **Similar sites**

Plant communities, production, and vigor of this site is not similar enough to other sites in the region to cause a problem or concern.

### **Site documentation**

**Author:** M. Montes, E. Más, C. Santiago  
**Revised:** 05/2002 E. Más, J. Lugo, S. Ríos

**Supporting data for site development:** Supporting data include clipping studies, and historical writing of the area. More documentation and study are needed to fully understand this site and the transitions that occur.

### **Sampling techniques**

SCS-Range 417

**Type locality:** Dominguito Ward, Arecibo PR

**Field Offices:** Arecibo, Corozal, San Sebastián, Bayamón

**References:**

**USDA, NRCS.** 1997. National Range and Pasture Handbook.

**USDA, SCS.** Soil Surveys of: San Juan, Arecibo, Mayaguez

**Site Approval:**

This site has been reviewed and approved for use:

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USDA NRCS Resource Conservationist

Date