

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

Ecological Site Description

Site name: DRY HILLY  
Site number: R-271ZY019VI  
Major Land Resource Area: 271 Semiarid Mountains and Valleys  
Interstate correlation: NONE

**Physiographic features:**

This site occurs on steep mountain summits, side slopes and foot slopes in the semiarid region. Slopes range from moderately steep to very steep; near vertical slopes occur in the northernmost part of the area. It is formed in residuum and colluvium that weathered from volcanic and limestone bedrock. Elevation ranges from 150 to 1200 feet.

**Climatic features**

Frost-free period: 365 DAYS  
Freeze-free period: 365 DAYS  
Mean annual precipitation: 37.97 INCHES  
Mean annual air temperature: 79°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	2.00	5.26	76
February	1.35	3.55	76
March	1.51	3.97	77
April	2.12	5.58	78
May	3.67	9.66	80
June	2.32	2.63	81
July	2.57	6.76	82
August	4.28	11.27	82
September	4.67	12.29	81
October	5.03	13.24	81
November	5.09	13.40	79
December	3.36	8.84	77
<b>Mean annual</b>	<b>37.97</b>		<b>79°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 from August to November, and are characterized by strong winds and torrential rains.

**Associated water features:** Some intermittent creeks.

**Elevation aspect:** 5 to 2000 ft.

**Percent Slope:** 2 to 90

**Soils:** Soils on this site are shallow to moderately deep to volcanic bedrock, well drained, moderately permeable, and have loamy texture in the fine earth fraction. The areas occur on gently to very steep sloping summits and the side slopes of volcanic hills and mountains. The Southgate-Rockoutcrop complex has a high percentage per unit area of exposed volcanic bedrock.

Major Soil Taxonomic Units correlated to this site include:

Parasol, PaB, PaC  
Jealousy-Southgate Complex, JsD  
Jealousy-Southgate Complex, JsE, JsF  
Southgate-Rock outcrop complex, SrD  
Southgate-Rock outcrop complex, SrE  
Southgate-Rock outcrop complex, SrF  
Southgate-Rock outcrop complex, SrG  
Victory-Southgate Complex, VsC  
Victory-Southgate Complex, VsD  
Victory-Southgate Complex, VsE  
Victory-Southgate Complex, VsF

**Plant communities:**

Plant community is dominated by coarse perennial naturalized warm season grasses such as Guinea grass (*Urochloa maxima*), Angleton blue grass (*Dichanthium annulatum*) and Hurricane grass (*Bothriochloa pertusa*), that constitute about 96% of the vegetative composition, forbs 2%, and shrubs such as Leucaena (*Leucaena leucocephala*) and Giant milkweed (*Calotropis* sp.) 4%.

**Major plant species composition:**

Predominant plant community: Introduced grasses are adapted to the site. These highly palatable species are: Guinea and Pajon. 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
ARAD	Three awn grass	1			
ARPO3	Triple awn grass	1			
BOPE2	Hurricane grass	1			
BORE2	Slender gramagrass	1			
CEEC	Southern sandbur	1			
CHBA	Swollen fingergrass	1			
CHIN4	Mexican bluegrass	1			
DAAE	Egyptian grass	1			
DIAN	Kleberg	1			
ELIN3	Goosegrass	1			
ERCI2	Lovegrass	1			
PALA12	Coconut paspalum	1			
PARE3	Sprawling panic	1			
PECI	Buffel	1			
SELE9	bristlegrass	1			
SESE4	West indian bristlegrass	1			
SPIN4	Whorled bluegrass	1			
SPPA	Saltmedow cordgrass	1			
TRBE	Burr grass	1			
URMA4	Guinea grass	1			

### Forbs

Scientific Symbol	Common Name	Group	Pounds per Acre	Percent by Weight	Percent Allowed For group
CRRE4	Rattleweed	2			
JAGO	Tautaba	2			
SIAG	Horseweed	2			
OPUNT	Tuna	2			
MACA5	Mallow	2			
CODO	Cock's spur	2			

PORTU	Purslane	2			
CEPU5	Butterfly pes	2			
POOL	Purslane	2			
AGAM	Century plant	2			
PLAM2	Southern majoram	2			
DEVI3	Desmanthus	2			
VIFA	Broad bean	2			
CEHE3	Pipe organ	2			
CERO2	Dildo	2			
MEIN7	Pope head cactus	2			
STHA	Pencil flower	2			

### Shrubs and Trees

Scientific Symbol	Common Name	Group	Pounds per Acre	Percent by Weight	Percent Allowed For group
ACFA	Sweet acasia	4			
ACTO	Twisted acasia	4			
BOAR2	Sea oxeye	4			
BUBU	Black olive	4			
BUSI	Turpentine	4			
CAIN5	Lingam	4			
CAPR	Giant milkweed	3			
CENI	West indian cock's comb	4			
CHAR8	Jointed sandmat	3			
COAN11	Basora	4			
COUV	Seaside grape	4			
CROTA	Rattlebox	4			
CROTO	Croton, Maran	3			
DEVI	Wild tantan	3			
FICI	Wild bayantree	4			
LELE10	Leucaena	3			
MEBI	Spanish lime	4			
METOP	Papayo	4			
OPRU	Pricklypear	3			
PIAC	Fustic	4			
PLUME	Nosegay tree	4			

PRJU	Mesquite	4			
RAMI4	Christmas tree	4			
SUMA2	Bay cedar	4			
TAIN2	Tamarind	4			
TUDI	Damiana	4			

### 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									<1	1		
Grasses and grasslikes							40	98				
Forbs			<1	2								
Cryptogams												
Coarse fragments												
Bare ground												
Litter												

**Transition Pathways:** The native climax grass species are generally replaced by such introduced species as hurricane grass and angleton grass. These grasses generally dominate the site when subject to severe overgrazing. Guinea and Buffel grass may replace native species when properly managed and can provide a high level of forage yield. However if the species are severely overgrazed the site is again subject to invasion by hurricane grass and angleton grass. If abusive grazing continues angleton is replaced by a pure stand of hurricane grass.

**Total annual production:** 8,750 lb/ac normal year

#### 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:

Adelaide's Warbler  
Barn swallow  
Caribbean Elaenia  
Cattle egret  
Helmeted guinea fowl  
Heron  
Iguana iguana  
Lesser antillian pewee  
Lizards  
Mangrove cuckoo  
Mourning dove  
Northern mockingbird  
Ovenbird  
Pearly eyed thrasher  
Prairie warbler  
Puerto Rican flycatcher  
Puerto Rican nighthawk  
Red Tailed Hawk  
Sparrow Hawk  
Yellow faced grassquit

**Associated sites: LIMESTONE COASTAL HILL****Similar sites:**

Plant communities, production, and vigor of this site is similar enough to other sites in the region to cause a problem or concern mainly during the dry season.

**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:** Santa Catalina Ward, Coamo, PR

**Field Offices:** Juana Diaz, Ponce, San German

**References:**

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

**USDA, SCS.** Lajas Soil Survey, Ponce Soil Survey, Humacao Soil Survey

**Site Approval:**

This site has been reviewed and approved for use:

---

USDA NRCS Resource Conservationist

Date