

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

SANTA RITA (BRAZIL)

Altitude: 60 m.

Latitude: 7°9'S Longitude: 34°57'W

Temperature observation period.: 1963-1994 (32)

Rainfall observation period....: 1963-1994 (32)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPI
Jan.	26.39	30.56	22.22	33.89	17.22	68.6	142.30
Feb.	26.67	30.56	22.78	36.11	17.78	124.0	131.39
Mar.	26.39	30.56	22.22	34.44	17.78	188.7	138.31
Apr.	26.11	30.00	22.22	34.44	18.89	250.5	128.28
May.	25.56	29.44	21.67	32.78	17.78	274.8	121.77
Jun.	24.45	28.33	20.56	30.56	17.78	313.4	100.70
Jul.	23.89	27.78	20.00	30.56	13.89	209.1	95.97
Aug.	23.89	27.78	20.00	30.00	16.11	142.5	96.92
Sep.	24.73	28.89	20.56	31.67	17.22	58.2	106.78
Oct.	25.28	29.44	21.11	32.78	18.33	24.6	120.77
Nov.	25.84	30.00	21.67	32.78	17.22	31.5	128.81
Dec.	26.11	30.00	22.22	33.33	18.33	42.4	137.26
Year	25.44	29.44	21.44	32.78	17.36	1728	1449.2

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	732
Compensated thermicity index.....(Itc):	732
Simple continentality index.....(Ic):	2.8
Diurnality index.....(Id):	8.3
Annual ombrothermic index.....(Io):	5.66
Monthly dry ombrothermic index.....(Iod1):	0.97
Bimonthly dry ombrothermic index.....(Iod2):	1.10
Three monthly dry ombrothermic index.....(Iod3):	1.28
Four monthly dry ombrothermic index.....(Iod4):	1.54
Annual ombro-evaporation index.....(Ioe):	0.69
Annual positive temperature.....(Tp):	3053
Annual negative temperature.....(Tn):	0
Dry station temperature.....(Td):	772
Positive precipitation.....(Pp):	1728

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	7	2	2	1	0

Latitudinal Belt...: Eutropical

Continentalty.....: Hyperoceanic - Low Ultrahyperoceanic

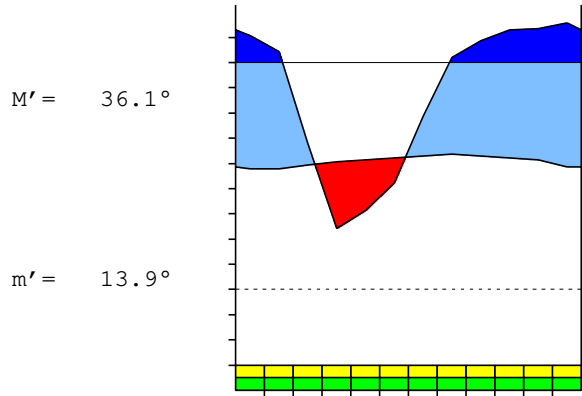
Bioclimate(Variant): TROPICAL PLUVISEASONAL (PLUVISEROTIN, SUBMESOPHYTIC)

Bioclimatic Belt...: UPPER INFRATROPICAL UPPER SUBHUMID

SANTA RITA (BRAZIL)

60 m

P= 1728 7° 9'S 34° 57'W 32/32 y.
 T= 25.4° Ic= 2.8 Tp= 3053 Tn= 0
 m= 20.0° M= 27.8° Itc= 732 Io= 5.7



TROPICAL PLUVISEASONAL (PLUVISEROTIN)
 UPPER INFRATROPICAL UPPER SUBHUMID

WATER INDEX CARD

SANTA RITA (BRAZIL)

Altitude: 60 m.

Latitude: 7° 9'S

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	23.9	96	209	0	100	96	0	113	133	1.1
Aug.	23.9	97	143	0	100	97	0	46	90	0.4
Sep.	24.7	107	58	-49	51	107	0	0	45	-0.4
Oct.	25.3	121	25	-51	0	76	45	0	22	-0.7
Nov.	25.8	129	32	0	0	32	97	0	11	-0.7
Dec.	26.1	137	42	0	0	42	95	0	6	-0.6
Jan.	26.4	142	69	0	0	69	74	0	3	-0.5
Feb.	26.7	131	124	0	0	124	7	0	1	0.0
Mar.	26.4	138	189	50	50	138	0	0	1	0.3
Apr.	26.1	128	251	50	100	128	0	73	37	0.9
May.	25.6	122	275	0	100	122	0	153	95	1.2
Jun.	24.5	101	313	0	100	101	0	213	154	2.1
Year	25.4	1449	1728	*	*	1131	318	597	597	*

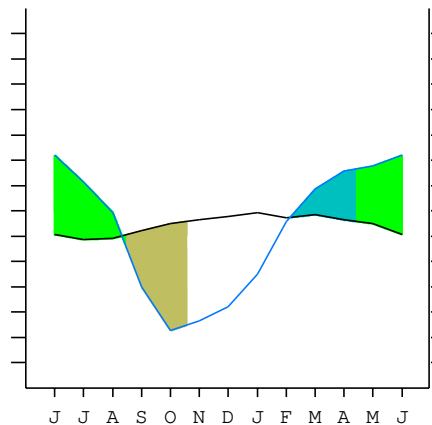
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

SANTA RITA (BRAZIL)

7°9'S 34°57'W 60 m 32/32 y.

T= 25.4 Ic= 2.8 TROPICAL PLUVISEASONAL (PLUVISEROTIN)
 m= 20.0 Tp= 3053 UPPER INFRATROPICAL
 M= 27.8 Tn= 0 UPPER SUBHUMID
 M' = 36.1 Itc= 732
 m' = 13.9 Io= 5.7
 P= 1728 mm ———
 PE= 1449 mm ———

Imbibing	4 Feb.
Saturation	13 Apr.
Reserve Use	15 Aug.
Deficit	17 Oct.



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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [A1b]
 + Type: A. Hyperoceanic
 + Subtype: 1. Ultrahyperoceanic
 + Variant: b. Low
 Thermic types [A2.A1]
 + Latitudinal zone: A. Warm
 + Latitudinal belt: 2. Eutropical
 + Thermic type: A. Warm
 + Thermic subtype: 1. Torrid
 Bioclimatic types [A4e.1a.6a]
 + Macrobioclimate: A. TROPICAL
 + Bioclimate: 4. PLUVISEASONAL
 + Bioclimatic variant .: e. PLUVISEROTIN, SUBMESOPHYTIC
 + Thermic type.....: 1. INFRATROPICAL
 + Thermic subtype.....: a. UPPER
 + Ombrothermic type ...: 6. SUBHUMID
 + Ombrothermic subtype : a. UPPER
 Bioclimatic Classification: Trde(Pse).Itr.Shu

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 706
 Coldest semester of the year.....(Psw): 1023
 Warmest four months period of the year.....(Pcm1): 632
 Following warmest four months period.....(Pcm2): 940
 Positive precipitation dryest 3 months.....(Ppd): 99
 Positive precipitation dryest 2 months.....(Ppd2): 56
 Positive precipitation dryest 1 month.....(Ppd1): 25
 Positive precipitation warmest 3 months.....(Pps): 381
 Positive precipitation warmest 2 months.....(Pps2): 193
 Positive precipitation warmest 1 month.....(Pps1): 124
 Positive precipitation coldest 3 months.....(Ppw): 665
 Positive precipitation coldest 2 months.....(Ppw2): 352
 Positive precipitation coldest 1 month.....(Ppw1): 209

Seasons	Jun+Jul+Aug Ttr3-3	Sep+Oct+Nov Ttr4-4	Dec+Jan+Feb Ttr1-1	Mar+Apr+May Ttr2-2
Rainfall	665	114	235	714

Tropical rainfall rhythms: 2 > 3 > 1 > 4

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 26.7
 Average coldest month [T].....(Tmin): 23.9
 Maximum temp. warmest month [M].....(Tmmax): 30.6
 Minimum temp. coldest month [m].....(Tmmin): 20.0
 Absolute Max.temp. warmest month [M'].....(Tamax): 36.1
 Absolute Min.temp. coldest month [m'].....(Tamin): 13.9
 First warmest contrasted month [M].....(Tcmax): 30.6 (1)
 First coldest contrasted month [m].....(Tcmin): 22.2 (1)
 Dry station temperature.....(Td): 772
 Positive temperature dryest 3 months.....(Tpd): 772
 Positive temperature dryest 2 months.....(Tpd2): 511
 Positive temperature dryest 1 month.....(Tpd1): 253
 Positive temperature warmest 3 months.....(Tps): 795
 Positive temperature warmest 2 months.....(Tps2): 531
 Positive temperature warmest 1 month.....(Tps1): 267
 Positive temperature coldest 3 months.....(Tpw): 722
 Positive temperature coldest 2 months.....(Tpw2): 478
 Positive temperature coldest 1 month.....(Tpw1): 239

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SEASONAL PARAMETERS

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Warmest semester...(Sms)	o	o	o	o							o	o
Dryest semester....(Smd)	o	o							o	o	o	o
Warmest 4 months...(Cm1)	o	o	o	o								
Dryest 4 months....(Cmd)									o	o	o	o
Vegetation Activity(Pav)	o	o	o	o	o	o	o	o	o	o	o	o
Ultragelid...[M' <=0] (Pf)												
Hypergelid...[M <=0] (Pf)												
Gelid.....[T <=0] (Pf)												
Subgelid.....[m <=0] (Pf)												
Pregelid.....[m' <=0] (Pf)												
Agelid.....[m' > 0] (Pf)	o	o	o	o	o	o	o	o	o	o	o	o
HiperAgelid..[all>0] (Pf)	o	o	o	o	o	o	o	o	o	o	o	o

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 0.84
 Mediterranean index of January.....(Im1): No
 Mediterranean index of January & February.....(Im2): No
 Mediterranean index of December to February...(Im3): No

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	424	686	1240	1887	2505	2748	3134	2091	1425	582	246	315
Tp	261	264	267	264	261	256	245	239	239	247	253	258
Io (Iom)	1.62	2.60	4.65	7.15	9.59	10.8	12.8	8.75	5.96	2.35	0.97	1.22
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp(x10)/Tp	2350 / 792			7140 / 781			6650 / 722			1143 / 759		
Io (Iot)	2.968			9.147			9.207			1.507		
Semesters	December-May						June-November					
Pp(x10)/Tp	9490 / 1572						7793 / 1481					
Io (Iosm)	6.036						5.263					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 17283/3053=5.66 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	424	686	1240	1887	2505	2748	3134	2091	1425	582	246	315
Tp [T*10]	261	264	267	264	261	256	245	239	239	247	253	258
Iom [Pp/Tp]	162	260	465	715	959	\$\$	\$\$	875	596	235	97	122
Avm [200-Iom]	38	***	***	***	***	***	***	***	***	***	103	78
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp / Tp	2350 / 792			7140 / 781			6650 / 722			1143 / 759		
Iot [Pp/Tp]	297			915			921			151		
Avs E[Avm<200]	***			***			***			***		
Weak upper arid [1]							Weak lower semiarid [1]					
Strong upper semiarid [1]												

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin]	(Sp):	2.78
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]		17.57
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]		2.03
+ Hyperoceanic (-20<CI<20)		
CI of Currey (1974) [CI=Sp/(1+Lat/3)]		0.82
+ Oceanic (0.6<CI<1.1)		
Rainfall Index of Lang (1925) [R=P/T]		67.93
+ Temperate warm (100>R>60)		
Aridity Index of Martonne (1926) [Ia=P/(T+10)]		48.76
+ Humid (60>Ia>30)		
I of Emberger (1930) [Q=100*P/(Tmax ² -Tmin ²)]		323.70
+ Humid (Q>90)		
I of Dantin & Revenga (1940) [DR=100*T/P]		1.47
+ Humid (2>DR>0)		
Aridity Index of UNEP [I=P/PE]		1.19
+ Humid (I>0.65)		
Potential Erosion I of Fournier (1960) [K=Pi ² /P]		56.83
+ Very low (K<60)		

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)
 + Climate

- + Climate
- + Region
- + Thermic type: 1. Megathermic

Thornthwaite (1948)													
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	
P-E ratio	0.24	0.45	0.72	1.00	1.12	1.33	0.86	0.56	0.20	0.08	0.10	0.14	
T-E ratio	11.88	12.00	11.88	11.75	11.50	11.00	10.75	10.75	11.13	11.38	11.63	11.75	
Precipitation-effectiveness:	67.98						Temperature-efficiency						137.39
Moisture Index [MI=100*(P-PE)/PE]												19.26	
+ C2.Subhumid humid (0<MI<20)													
Index of dryness [DI=100*d/PE]												21.94	
+ Moderate deficit (16.7<DI<33.3)													
Index of humidity [HI=100*s/PE]												41.19	
+ Strong surplus (20<HI)													
Potential Evapotranspiration PE												1449.23	
+ Megathermic (PE>1440)													

