

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 14/02/2020)

SANTA GENOVEVA (BRAZIL)

Altitude: 747 m.

Latitude: 16°38'S Longitude: 49°13'W

Temperature observation period.: 1989-1994 (6)

Rainfall observation period....: 1989-1994 (6)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPI
Jan.	22.50	27.22	17.78	32.78	11.11	194.8	99.74
Feb.	22.78	27.78	17.78	31.11	17.22	77.0	89.36
Mar.	23.33	28.33	18.33	35.00	16.11	250.7	101.94
Apr.	23.33	29.44	17.22	32.22	13.89	56.9	94.17
May.	21.67	28.89	14.44	31.11	12.22	65.0	77.57
Jun.	20.56	28.33	12.78	31.11	7.22	8.4	64.77
Jul.	20.27	28.33	12.22	32.22	6.11	29.2	64.41
Aug.	21.95	30.56	13.33	33.89	7.22	0.0	84.36
Sep.	23.62	31.67	15.56	36.11	10.00	31.2	100.29
Oct.	23.61	30.00	17.22	35.00	11.11	135.9	109.19
Nov.	23.61	29.44	17.78	37.22	10.00	272.3	108.19
Dec.	23.33	28.33	18.33	33.89	10.00	332.2	109.70
Year	22.55	29.03	16.06	33.47	11.02	1454	1103.7

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	631
Compensated thermicity index.....(Itc):	631
Simple continentality index.....(Ic):	3.4
Diurnality index.....(Id):	17.2
Annual ombrothermic index.....(Io):	5.37
Monthly dry ombrothermic index.....(Iod1):	No
Bimonthly dry ombrothermic index.....(Iod2):	0.69
Threemonthly dry ombrothermic index.....(Iod3):	0.60
Fourmonthly dry ombrothermic index.....(Iod4):	1.21
Annual ombro-evaporation index.....(Ioe):	1.32
Annual positive temperature.....(Tp):	2706
Annual negative temperature.....(Tn):	0
Dry station temperature.....(Td):	628
Positive precipitation.....(Pp):	1454

N. of Months	P>4T	P:2T-4T	PT-2T	P<T	T<0
	5	3	2	2	0

Latitudinal Belt...: Eutropical

Continentality.....: Hyperoceanic - Low Ultrahyperoceanic

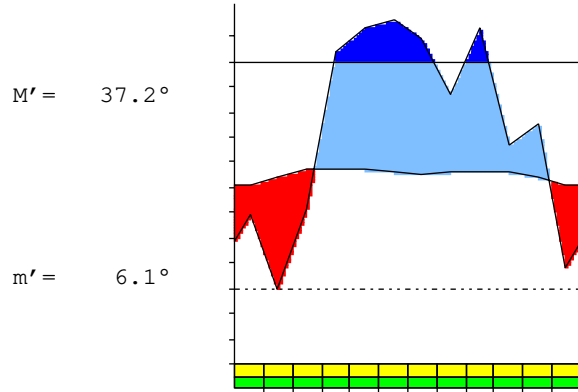
Bioclimate(Variant): TROPICAL PLUVISEASONAL (SUBMESOPHYTIC)

Bioclimatic Belt...: LOW THERMOTROPICAL UPPER SUBHUMID

SANTA GENOVEVA (BRAZIL)

747 m

P= 1454 16° 38'S 49° 13'W 6/6 y.
 T= 22.5 ° Ic= 3.4 Tp= 2706 Tn= 0
 m= 12.2 ° M= 28.3 ° Itc= 631 Io= 5.4



TROPICAL PLUVISEASONAL (SUBMESOPHYTIC)
 LOW THERMOTROPICAL UPPER SUBHUMID

WATER INDEX CARD

SANTA GENOVEVA (BRAZIL)

Altitude: 747 m.

Latitude: 16° 38'S

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	20.3	64	29	0	0	29	35	0	6	-0.5
Aug.	22.0	84	0	0	0	0	84	0	3	-1.0
Sep.	23.6	100	31	0	0	31	69	0	2	-0.6
Oct.	23.6	109	136	27	27	109	0	0	1	0.2
Nov.	23.6	108	272	73	100	108	0	91	46	1.5
Dec.	23.3	110	332	0	100	110	0	222	134	2.0
Jan.	22.5	100	195	0	100	100	0	95	115	0.9
Feb.	22.8	89	77	-12	88	89	0	0	57	-0.1
Mar.	23.3	102	251	12	100	102	0	136	97	1.4
Apr.	23.3	94	57	-37	63	94	0	0	48	-0.3
May.	21.7	78	65	-13	50	78	0	0	24	-0.1
Jun.	20.6	65	8	-50	0	59	6	0	12	-0.8
Year	22.5	1104	1454	*	*	909	195	545	545	*

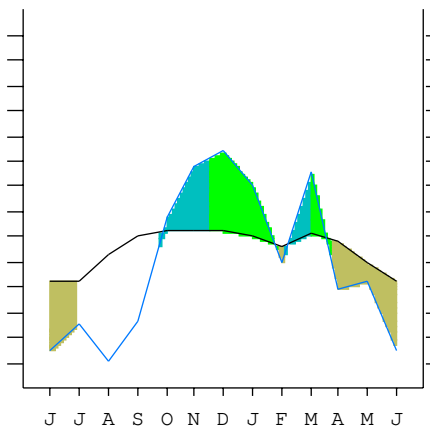
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

SANTA GENOVEVA (BRAZIL)

16°38'S 49°13'W 747 m 6/6 y.

T= 22.5 Ic= 3.4 TROPICAL PLUVISEASONAL (SUBMESOPHYTIC)
 m= 12.2 Tp= 2706 LOW THERMOTROPICAL
 M= 28.3 Tn= 0 UPPER SUBHUMID
 M' = 37.2 Itc= 631
 m' = 6.1 Io= 5.4
 P= 1454 mm ———
 PE= 1104 mm ———

Imbibing	3 Feb.
Saturation	3 Mar.
Reserve Use	24 Mar.
Deficit	27 Jun.



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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continentality Index [A1b]
 + Type: A. Hyperoceanic
 + Subtype: 1. Ultrahyperoceanic
 + Variant: b. Low
 Thermic types [A2.A2]
 + Latitudinal zone: A. Warm
 + Latitudinal belt: 2. Eutropical
 + Thermic type: A. Warm
 + Thermic subtype: 2. Warm
 Bioclimatic types [A4.2b.6a]
 + Macrobioclimate: A. TROPICAL
 + Bioclimate: 4. PLUVISEASONAL
 + Bioclimatic variant .: SUBMESOPHYTIC
 + Thermic type.....: 2. THERMOTROPICAL
 + Thermic subtype.....: b. LOW
 + Ombrothermic type ...: 6. SUBHUMID
 + Ombrothermic subtype : a. UPPER
 Bioclimatic ClassificationTrps (Smf) .Ttr.Shu.Uho

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 1043
 Coldest semester of the year.....(Psw): 410
 Warmest four months period of the year.....(Pcm1): 772
 Following warmest four months period.....(Pcm2): 579
 Positive precipitation dryest 3 months.....(Ppd): 38
 Positive precipitation dryest 2 months.....(Ppd2): 29
 Positive precipitation dryest 1 month.....(Ppd1): 0
 Positive precipitation warmest 3 months.....(Pps): 439
 Positive precipitation warmest 2 months.....(Pps2): 167
 Positive precipitation warmest 1 month.....(Pps1): 31
 Positive precipitation coldest 3 months.....(Ppw): 103
 Positive precipitation coldest 2 months.....(Ppw2): 38
 Positive precipitation coldest 1 month.....(Ppw1): 29

Seasons	Jun+Jul+Aug Ttr3-3	Sep+Oct+Nov Ttr4-4	Dec+Jan+Feb Ttr1-1	Mar+Apr+May Ttr2-2
Rainfall	37	439	604	372

Tropical rainfall rhythms: 1 > 4 > 2 > 3

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 23.6
 Average coldest month [T].....(Tmin): 20.3
 Maximum temp. warmest month [M].....(Tmmax): 31.7
 Minimum temp. coldest month [m].....(Tmmin): 12.2
 Absolute Max.temp. warmest month [M'].....(Tamax): 37.2
 Absolute Min.temp. coldest month [m'].....(Tamin): 6.1
 First warmest contrasted month [M].....(Tcmax): 30.6 (8)
 First coldest contrasted month [m].....(Tcmin): 13.3 (8)
 Dry station temperature.....(Td): 628
 Positive temperature dryest 3 months.....(Tpd): 628
 Positive temperature dryest 2 months.....(Tpd2): 422
 Positive temperature dryest 1 month.....(Tpd1): 220
 Positive temperature warmest 3 months.....(Tps): 708
 Positive temperature warmest 2 months.....(Tps2): 472
 Positive temperature warmest 1 month.....(Tps1): 236
 Positive temperature coldest 3 months.....(Tpw): 625
 Positive temperature coldest 2 months.....(Tpw2): 408
 Positive temperature coldest 1 month.....(Tpw1): 203

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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): 0.76
 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)	3322	1948	770	2507	569	650	84	292	0	312	1359	2723
Tp	233	225	228	233	233	217	206	203	220	236	236	236
Io (Iom)	14.2	8.66	3.38	10.7	2.44	3.00	0.41	1.44	0.00	1.32	5.76	11.5
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp (x10)/Tp	6040 / 686			3726 / 683			376 / 628			4394 / 708		
Io (Iot)	8.803			5.453			0.599			6.203		
Semesters	December-May						June-November					
Pp (x10)/Tp	9766 / 1369						4770 / 1336					
Io (Iosm)	7.132						3.570					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 14536/2706=5.37 There is No Yearly Aridity

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	3322	1948	770	2507	569	650	84	292	0	312	1359	2723
Tp [T*10]	233	225	228	233	233	217	206	203	220	236	236	236
Iom [Pp/Tp]	\$\$	866	338	\$\$	244	300	41	144	0	132	576	\$\$
Avm [200-Iom]	***	***	***	***	***	***	159	56	200	68	***	***
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp / Tp	6040 / 686			3726 / 683			376 / 628			4394 / 708		
Iot [Pp/Tp]	880			545			60			620		
Avs E [Avm<200]	***			***			415			***		
Lower ultrahyperarid [1]							Strong lower arid [1]					
Weak lower arid [1]							Weak lower semiarid [2]					

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin](Sp): 3.35
 CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]: -0.50
 CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]: -1.30
 + Hyperoceanic (-20<CI<20)
 CI of Currey (1974) [CI=Sp/(1+Lat/3)]: 0.51
 + Hyperoceanic (0<CI<0.6)
 Rainfall Index of Lang (1925) [R=P/T]: 64.47
 + Temperate warm (100>R>60)
 Aridity Index of Martonne (1926) [Ia=P/(T+10)]: 44.66
 + Humid (60>Ia>30)
 I of Emberger (1930) [Q=100*P/(Tmmax²-Tmmin²)]: 170.28
 + Humid (Q>90)
 I of Dantin & Revenga (1940) [DR=100*T/P]: 1.55
 + Humid (2>DR>0)
 Aridity Index of UNEP [I=P/PE]: 1.32
 + Humid (I>0.65)
 Potential Erosion I of Fournier (1960) [K=Pi²/P].....: 75.92
 + Low (60<K<90)

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)
 + Climate: A. Warm and temperate warm
 + Region: 3. Termoxeroteric (Mediterranean warm)
 + Thermic type: 2. Macrothermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.82	0.29	1.07	0.21	0.25	0.03	0.11	0.00	0.10	0.54	1.16	1.46
T-E ratio	10.13	10.25	10.50	10.50	9.75	9.25	9.12	9.88	10.63	10.62	10.62	10.50
Precipitation-effectiveness: 60.18						Temperature-efficiency: 121.75						
Moisture Index [MI=100*(P-PE)/PE]: 31.70 + B1.Humid low-humid (20<MI<40)												
Index of dryness [DI=100*d/PE]: 17.65 + Moderate deficit (16.7<DI<33.3)												
Index of humidity [HI=100*s/PE]: 49.35 + Strong surplus (20<HI)												
Potential Evapotranspiration PE: 1103.68 + Forth mesothermic (997<PE<1440)												

