

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

PONTA PORA (BRAZIL)

Altitude: 650 m.

Latitude: 22°32'S Longitude: 55°32'W

Temperature observation period.: 1961-1990 (30)

Rainfall observation period....: 1961-1990 (30)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	Epi
Jan.	20.80	28.80	19.70	35.60	12.80	173.0	90.89
Feb.	23.60	29.40	19.60	35.60	11.40	170.0	105.14
Mar.	23.10	29.30	18.30	34.40	8.10	166.0	104.17
Apr.	21.10	27.40	15.80	35.20	5.00	125.0	77.69
May.	18.30	24.80	13.80	31.40	0.00	135.0	55.81
Jun.	17.40	22.90	12.00	30.60	-8.00	85.0	46.68
Jul.	16.40	23.50	11.60	31.00	0.00	55.0	42.69
Aug.	18.50	25.70	13.20	35.60	-1.60	69.0	59.60
Sep.	19.70	26.50	14.80	35.60	0.80	105.0	69.34
Oct.	21.60	27.50	17.20	36.00	1.00	175.0	93.83
Nov.	22.80	28.90	18.00	37.80	8.40	212.0	105.97
Dec.	23.50	29.20	19.10	36.60	10.00	191.0	120.64
Year	20.57	26.99	16.09	34.62	3.99	1661	972.45

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	557
Compensated thermicity index.....(Itc):	557
Simple continentality index.....(Ic):	7.2
Diurnality index.....(Id):	12.5
Annual ombrothermic index.....(Io):	6.73
Monthly dry ombrothermic index.....(Iod1):	3.35
Bimonthly dry ombrothermic index.....(Iod2):	3.55
Three monthly dry ombrothermic index.....(Iod3):	4.00
Four monthly dry ombrothermic index.....(Iod4):	4.87
Annual ombro-evaporation index.....(Ioe):	1.89
Annual positive temperature.....(Tp):	2468
Annual negative temperature.....(Tn):	0
Dry station temperature.....(Td):	523
Positive precipitation.....(Pp):	1661

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	10	2	0	0	0

Latitudinal Belt...: Eutropical

Continentality.....: Hyperoceanic - Low Euhyperoceanic

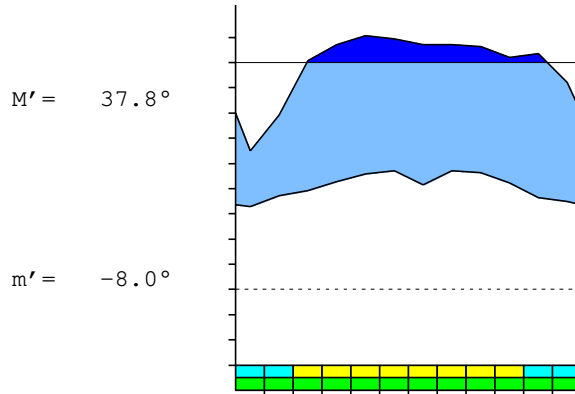
Bioclimate(Variant): TROPICAL PLUVIAL (HYGROPHYTIC)

Bioclimatic Belt...: UPPER THERMOTROPICAL LOW HUMID

PONTA PORA (BRAZIL)

650 m

P= 1661 22° 32'S 55° 32'W 30/30 y.
 T= 20.6° Ic= 7.2 Tp= 2468 Tn= 0
 m= 11.6° M= 23.5° Itc= 557 Io= 6.7



TROPICAL PLUVIAL (HYGROPHYTIC)
 UPPER THERMOTROPICAL LOW HUMID

WATER INDEX CARD

PONTA PORA (BRAZIL)

Altitude: 650 m.

Latitude: 22° 32'S

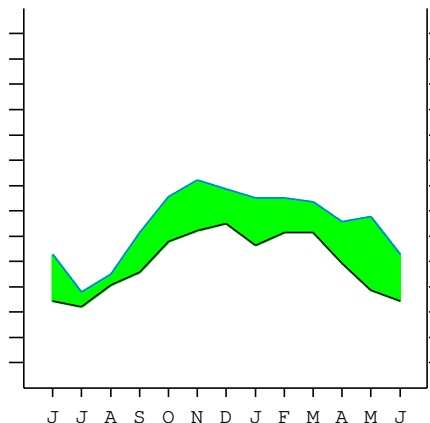
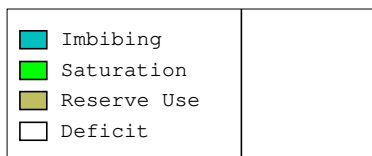
(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	16.4	43	55	0	100	43	0	12	33	0.2
Aug.	18.5	60	69	0	100	60	0	9	21	0.1
Sep.	19.7	69	105	0	100	69	0	36	28	0.5
Oct.	21.6	94	175	0	100	94	0	81	55	0.8
Nov.	22.8	106	212	0	100	106	0	106	80	1.0
Dec.	23.5	121	191	0	100	121	0	70	75	0.5
Jan.	20.8	91	173	0	100	91	0	82	79	0.9
Feb.	23.6	105	170	0	100	105	0	65	72	0.6
Mar.	23.1	104	166	0	100	104	0	62	67	0.5
Apr.	21.1	78	125	0	100	78	0	47	57	0.6
May.	18.3	56	135	0	100	56	0	79	68	1.4
Jun.	17.4	47	85	0	100	47	0	38	53	0.8
Year	20.6	972	1661	*	*	972	0	689	689	*

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

PONTA PORA (BRAZIL)

22°32'S 55°32'W 650 m 30/30 y.

T= 20.6 Ic= 7.2 TROPICAL PLUVIAL (HYGROPHYTIC)
 m= 11.6 Tp= 2468 UPPER THERMOTROPICAL
 M= 23.5 Tn= 0 LOW HUMID
 M' = 37.8 Itc= 557
 m' = -8.0 Io= 6.7
 P= 1661 mm ———
 PE= 972 mm ———



All over the year,
 there is no hydric deficit

PONTA PORA (BRAZIL)

Latitude: 22°32'S Longitude: 55°32'W Altitude: 650 m

SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [A2b]
 + Type: A. Hyperoceanic
 + Subtype: 2. Euhyperoceanic
 + 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 [A5.2a.7b]
 + Macrobioclimate: A. TROPICAL
 + Bioclimate: 5. PLUVIAL
 + Bioclimatic variant ..:
 + Thermic type.....: 2. THERMOTROPICAL
 + Thermic subtype.....: a. UPPER
 + Ombrothermic type ...: 7. HUMID
 + Ombrothermic subtype : b. LOW

Bioclimatic Classification: Trhd.Ttr.Hum

PONTA PORA (BRAZIL)

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 1087
 Coldest semester of the year.....(Psw): 574
 Warmest four months period of the year.....(Pcm1): 700
 Following warmest four months period.....(Pcm2): 400
 Positive precipitation dryest 3 months.....(Ppd): 209
 Positive precipitation dryest 2 months.....(Ppd2): 124
 Positive precipitation dryest 1 month.....(Ppd1): 55
 Positive precipitation warmest 3 months.....(Pps): 578
 Positive precipitation warmest 2 months.....(Pps2): 336
 Positive precipitation warmest 1 month.....(Pps1): 170
 Positive precipitation coldest 3 months.....(Ppw): 275
 Positive precipitation coldest 2 months.....(Ppw2): 140
 Positive precipitation coldest 1 month.....(Ppw1): 55

Seasons	Jun+Jul+Aug Ttr3-3	Sep+Oct+Nov Ttr4-4	Dec+Jan+Feb Ttr1-1	Mar+Apr+May Ttr2-2
Rainfall	209	492	534	426

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): 16.4
 Maximum temp. warmest month [M].....(Tmmax): 29.4
 Minimum temp. coldest month [m].....(Tmmin): 11.6
 Absolute Max.temp. warmest month [M'].....(Tamax): 37.8
 Absolute Min.temp. coldest month [m'].....(Tamin): -8.0
 First warmest contrasted month [M].....(Tcmax): 25.7 (8)
 First coldest contrasted month [m].....(Tcmin): 13.2 (8)
 Dry station temperature.....(Td): 523
 Positive temperature dryest 3 months.....(Tpd): 523
 Positive temperature dryest 2 months.....(Tpd2): 349
 Positive temperature dryest 1 month.....(Tpd1): 164
 Positive temperature warmest 3 months.....(Tps): 679
 Positive temperature warmest 2 months.....(Tps2): 467
 Positive temperature warmest 1 month.....(Tps1): 236
 Positive temperature coldest 3 months.....(Tpw): 521
 Positive temperature coldest 2 months.....(Tpw2): 338
 Positive temperature coldest 1 month.....(Tpw1): 164

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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)					o	o	o	o				
Agelid.....[m' > 0] (Pf)	o	o	o	o					o	o	o	o
HiperAgelid..[all>0] (Pf)	o	o	o	o					o	o	o	o

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 0.59
 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)	1910	1730	1700	1660	1250	1350	850	550	690	1050	1750	2120
Tp	235	208	236	231	211	183	174	164	185	197	216	228
Io (Iom)	8.13	8.32	7.20	7.19	5.92	7.38	4.89	3.35	3.73	5.33	8.10	9.30
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp(x10)/Tp	5340 / 679			4260 / 625			2090 / 523			4920 / 641		
Io (Iot)	7.865			6.816			3.996			7.676		
Semesters	December-May						June-November					
Pp(x10)/Tp	9600 / 1304						7010 / 1164					
Io (Iosm)	7.362						6.022					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 16610/2468=6.73 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	1910	1730	1700	1660	1250	1350	850	550	690	1050	1750	2120
Tp [T*10]	235	208	236	231	211	183	174	164	185	197	216	228
Iom [Pp/Tp]	813	832	720	719	592	738	489	335	373	533	810	930
Avm [200-Iom]	***	***	***	***	***	***	***	***	***	***	***	***
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp / Tp	5340 / 679			4260 / 625			2090 / 523			4920 / 641		
Iot [Pp/Tp]	786			682			400			768		
Avs E [Avm<200]	***			***			***			***		

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin]	(Sp):	7.20
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]		11.54
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]		8.76
+ Hyperoceanic (-20<CI<20)		
CI of Currey (1974) [CI=Sp/(1+Lat/3)]		0.85
+ Oceanic (0.6<CI<1.1)		
Rainfall Index of Lang (1925) [R=P/T]		80.76
+ Temperate warm (100>R>60)		
Aridity Index of Martonne (1926) [Ia=P/(T+10)]		54.34
+ Humid (60>Ia>30)		
I of Emberger (1930) [Q=100*P/(Tmax ² -Tmin ²)]		227.60
+ Humid (Q>90)		
I of Dantin & Revenga (1940) [DR=100*T/P]		1.24
+ Humid (2>DR>0)		
Aridity Index of UNEP [I=P/PE]		1.71
+ Humid (I>0.65)		
Potential Erosion I of Fournier (1960) [K=Pi ² /P]		27.06
+ Very low (K<60)		

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)

- + Climate
- + Region
- + Thermic type: 2. Macrothermic

Thornthwaite (1948)													
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	
P-E ratio	0.75	0.69	0.68	0.52	0.61	0.37	0.24	0.29	0.44	0.75	0.90	0.78	
T-E ratio	9.36	10.62	10.40	9.50	8.23	7.83	7.38	8.32	8.87	9.72	10.26	10.57	
Precipitation-effectiveness:	70.06					Temperature-efficiency							111.06
Moisture Index [MI=100*(P-PE)/PE]												70.81	
+ B3.Humid high-humid (60<MI<80)													
Index of dryness [DI=100*d/PE]												0.00	
+ No deficit (0<DI<16.7)													
Index of humidity [HI=100*s/PE]												70.80	
+ Strong surplus (20<HI)													
Potential Evapotranspiration PE												972.45	
+ Third mesothermic (855<PE<997)													

