Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

BOM JESUS (BRAZIL) Altitude: 1048 m.

Latitude: 28°40'S Longitude: 50°26'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.	18.60	24.50	14.80	32.50	5.50	171.0	95.48
Feb.	19.10	24.70	15.40	30.60	5.50	170.0	85.09
Mar.	17.80	23.40	14.20	30.00	2.60	139.0	79.73
Apr.	14.90	20.40	11.10	29.80	0.40	113.0	55.03
May.	12.30	17.70	8.50	26.30	-3.40	129.0	40.21
Jun.	10.50	16.00	6.80	24.40	-5.80	131.0	29.80
Jul.	10.90	16.10	6.70	26.70	-6.30	143.0	33.31
Aug.	11.40	17.10	7.50	27.30	-5.20	164.0	37.53
Sep.	12.50	18.20	8.50	30.10	-3.50	166.0	44.76
Oct.	14.20	20.20	10.00	30.20	0.30	144.0	59.91
Nov.	15.70	21.70	11.50	34.00	2.00	125.0	70.69
Dec.	17.80	23.70	13.50	32.00	2.20	130.0	90.26
Year	14.64	20.31	10.71	29.49	-0.47	1725	721.82

BIOCLIMATIC INDICES AND DIAGNOSIS

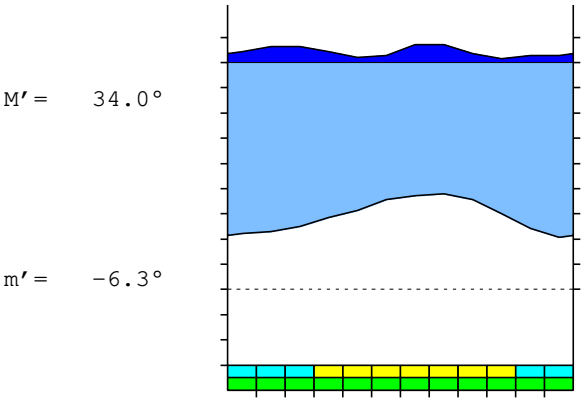
Thermicity index.....(It): 374
Compensated thermicity index.....(Itc): 374
Simple continentality index.....(Ic): 8.6
Diurnality index.....(Id): 10.2
Annual ombrothermic index.....(Io): 9.82
Monthly dry ombrothermic index.....(Iod1): 7.58
Bimonthly dry ombrothermic index.....(Iod2): 8.90
Threemonthly dry ombrothermic index.....(Iod3): 9.89
Fourmonthly dry ombrothermic index.....(Iod4): 9.23
Annual ombro-evaporation index.....(Ioe): 0.97
Annual positive temperature.....(Tp): 1757
Annual negative temperature.....(Tn): 0
Dry station temperature.....(Td): 377
Positive precipitation.....(Pp): 1725

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	12	0	0	0	0

Latitudinal Belt...: Subtropical
Continentality.....: Hyperoceanic - High Subhyperoceanic
Bioclimate(Variant): TROPICAL PLUVIAL (HYGROPHYTIC)
Bioclimatic Belt...: UPPER MESOTROPICAL UPPER HUMID

BOM JESUS (BRAZIL) 1048 m

P= 1725 28° 40'S 50° 26'W 30/30 y.
T= 14.6° Ic= 8.6 Tp= 1757 Tn= 0
m= 6.8° M= 16.0° Itc= 374 Io= 9.8



TROPICAL PLUVIAL (HYGROPHYTIC)
UPPER MESOTROPICAL UPPER HUMID

WATER INDEX CARD BOM JESUS (BRAZIL)
Altitude: 1048 m. Latitude: 28° 40'S

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	10.9	33	143	0	100	33	0	110	99	3.2
Aug.	11.4	38	164	0	100	38	0	126	113	3.3
Sep.	12.5	45	166	0	100	45	0	121	117	2.7
Oct.	14.2	60	144	0	100	60	0	84	101	1.4
Nov.	15.7	71	125	0	100	71	0	54	77	0.7
Dec.	17.8	90	130	0	100	90	0	40	59	0.4
Jan.	18.6	95	171	0	100	95	0	76	67	0.7
Feb.	19.1	85	170	0	100	85	0	85	76	0.9
Mar.	17.8	80	139	0	100	80	0	59	68	0.7
Apr.	14.9	55	113	0	100	55	0	58	63	1.0
May.	12.3	40	129	0	100	40	0	89	76	2.2
Jun.	10.5	30	131	0	100	30	0	101	88	3.3
Year	14.6	722	1725	*	*	722	0	1003	1003	*

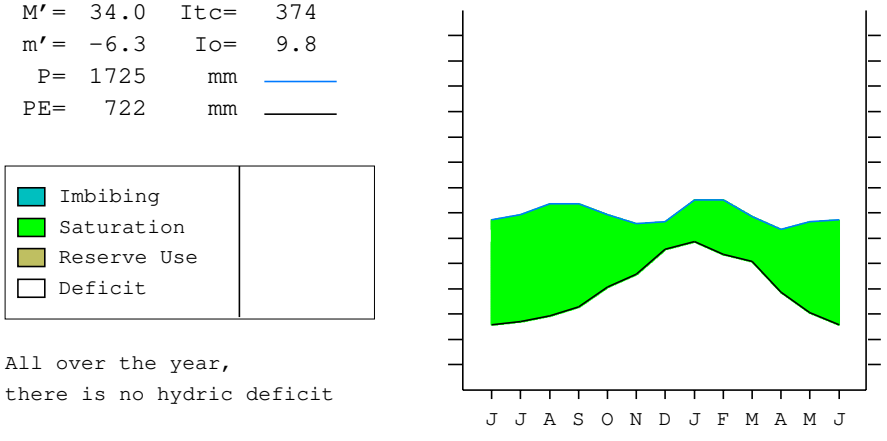
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
DR = Drainage HC = Humidity coeficient DF = Deficit SP = Superavit

BOM JESUS (BRAZIL)

28°40'S 50°26'W 1048 m 30/30 y.

T= 14.6 Ic= 8.6
m= 6.8 Tp= 1757
M= 16.0 Tn= 0
M'= 34.0 Itc= 374
m'= -6.3 Io= 9.8
P= 1725 mm
PE= 722 mm

TROPICAL PLUVIAL (HYGROPHYTIC)
UPPER MESOTROPICAL
UPPER HUMID



All over the year,
there is no hydric deficit

BOM JESUS (BRAZIL)

Latitude: 28°40'S Longitude: 50°26'W Altitude: 1048 m

SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continentality Index [A3a]
- + Type .....: A. Hyperoceanic
- + Subtype .....: 3. Subhyperoceanic
- + Variant .....: a. High

Thermic types [A3.B4]
- + Latitudinal zone ....: A. Warm
- + Latitudinal belt ....: 3. Subtropical
- + Thermic type .....: B. Temperate
- + Thermic subtype .....: 4. Temperate

Bioclimatic types [A5.3a.7a]
- + Macrobioclimate .....: A. TROPICAL
- + Bioclimate .....: 5. PLUVIAL
- + Bioclimatic variant .:
- + Thermic type.....: 3. MESOTROPICAL
- + Thermic subtype.....: a. UPPER
- + Ombrothermic type ...: 7. HUMID
- + Ombrothermic subtype : a. UPPER

Bioclimatic Classification .....: Trhd.Mtr.Hum

BOM JESUS (BRAZIL)

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 848
Coldest semester of the year.....(Psw): 877
Warmest four months period of the year.....(Pcm1): 610
Following warmest four months period.....(Pcm2): 516
Positive precipitation dryest 3 months.....(Ppd): 373
Positive precipitation dryest 2 months.....(Ppd2): 242
Positive precipitation dryest 1 month.....(Ppd1): 113
Positive precipitation warmest 3 months.....(Pps): 480
Positive precipitation warmest 2 months.....(Pps2): 341
Positive precipitation warmest 1 month.....(Pps1): 170
Positive precipitation coldest 3 months.....(Ppw): 438
Positive precipitation coldest 2 months.....(Ppw2): 274
Positive precipitation coldest 1 month.....(Ppw1): 131

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	438	435	471	381

Seasonal rainfall rhythms: S > W > P > F

BOM JESUS (BRAZIL)

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 19.1
Average coldest month [T].....(Tmin): 10.5
Maximum temp. warmest month [M].....(Tmmax): 24.7
Minimum temp. coldest month [m].....(Tmmin): 6.7
Absolute Max.temp. warmest month [M'].....(Tamax): 34.0
Absolute Min.temp. coldest month [m'].....(Tamin): -6.3
First warmest contrasted month [M].....(Tcmax): 20.2 (10)
First coldest contrasted month [m].....(Tcmin): 10.0 (10)
Dry station temperature.....(Td): 377
Positive temperature dryest 3 months.....(Tpd): 377
Positive temperature dryest 2 months.....(Tpd2): 272
Positive temperature dryest 1 month.....(Tpd1): 149
Positive temperature warmest 3 months.....(Tps): 555
Positive temperature warmest 2 months.....(Tps2): 377
Positive temperature warmest 1 month.....(Tps1): 191
Positive temperature coldest 3 months.....(Tpw): 328
Positive temperature coldest 2 months.....(Tpw2): 214
Positive temperature coldest 1 month.....(Tpw1): 105

BOM JESUS (BRAZIL)

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

BOM JESUS (BRAZIL)

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 0.42
Mediterranean index of January.....(Im1): 0.56
Mediterranean index of January & February.....(Im2): 0.53
Mediterranean index of December to February...(Im3): 0.58

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	1300	1710	1700	1390	1130	1290	1310	1430	1640	1660	1440	1250
Tp	178	186	191	178	149	123	105	109	114	125	142	157
Io (Iom)	7.30	9.19	8.90	7.81	7.58	10.5	12.5	13.1	14.4	13.3	10.1	7.96
Seasons	Summer			Automn			Winter			Spring		
Pp(x10)/Tp	4710 / 555			3810 / 450			4380 / 328			4350 / 424		
Io (Iot)	8.486			8.467			13.35			10.26		
Semesters	December-May						June-November					
Pp(x10)/Tp	8520 / 1005						8730 / 752					
Io (Iosm)	8.478						11.61					

BOM JESUS (BRAZIL)

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 17250/1757=9.82 There is No Yearly Aridity

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	1300	1710	1700	1390	1130	1290	1310	1430	1640	1660	1440	1250
Tp [T*10]	178	186	191	178	149	123	105	109	114	125	142	157
Iom [Pp/Tp]	730	919	890	781	758	$$	$$	$$	$$	$$	$$	796
Avm [200-Iom]	***	***	***	***	***	***	***	***	***	***	***	***
Seasons	Summer			Automn			Winter			Spring		
Pp / Tp	4710 / 555			3810 / 450			4380 / 328			4350 / 424		
Iot [Pp/Tp]	849			847			1335			1026		
Avs E[Avm<200]	***			***			***			***		

BOM JESUS (BRAZIL)

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin] .....(Sp): 8.60
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4] .....: 10.08
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14] .....: 9.40
  + Hyperoceanic (-20<CI<20)
CI of Currey (1974) [CI=Sp/(1+Lat/3)] .....: 0.81
  + Oceanic (0.6<CI<1.1)
Rainfall Index of Lang (1925) [R=P/T] .....: 117.81
  + Temperate humid (160>R>100)
Aridity Index of Martonne (1926) [Ia=P/(T+10)] .....: 70.00
  + Perhumid (Ia>60)
I of Emberger (1930) [Q=100*P/(Tmmax²-Tmmin²)] .....: 305.20
  + Humid (Q>90)
I of Dantin & Revenga (1940) [DR=100*T/P] .....: 0.85
  + Humid (2>DR>0)
Aridity Index of UNEP [I=P/PE] .....: 2.39
  + Humid (I>0.65)
Potencial Erosion I of Fournier (1960) [K=Pi²/P].....: 16.95
  + Very low (K<60)

BOM JESUS (BRAZIL)

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BIOCLIMATIC INDICES II

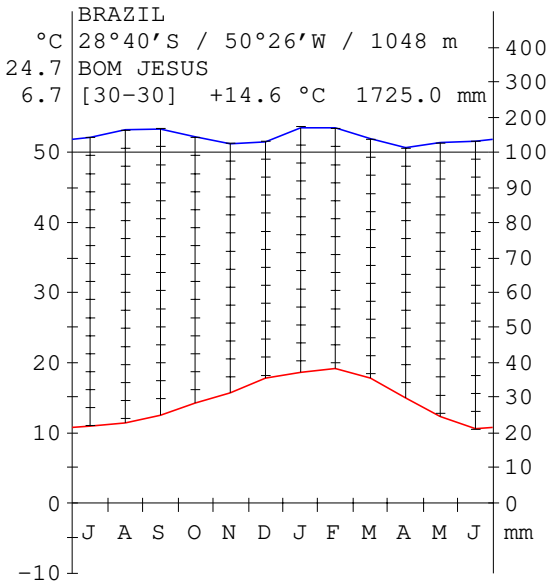
Bioclimatic classification of Gaussen & Bagnouls (1957)
  + Climate ....: A. Warm and temperate warm
  + Region .....: 7. Mesoaxeric (Axeric temperate)
  + Thermic type: 4. Mesothermic

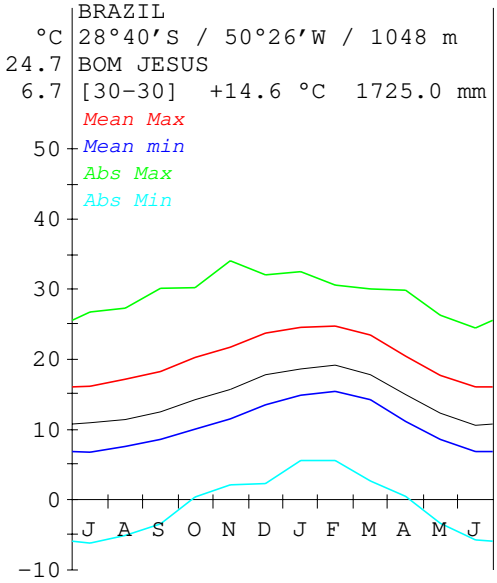
Thornthwaite (1948)

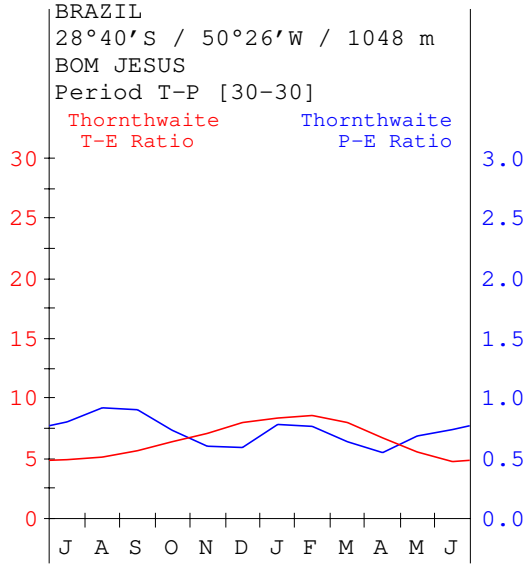
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.78	0.77	0.64	0.55	0.69	0.74	0.81	0.92	0.90	0.73	0.60	0.59
T-E ratio	8.37	8.60	8.01	6.70	5.54	4.72	4.90	5.13	5.63	6.39	7.06	8.01

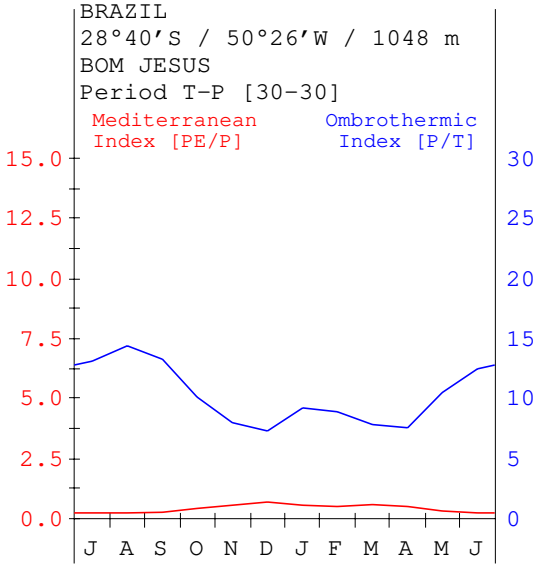
Precipitation-effectiveness: 87.20 Temperature-efficiency ....: 79.06

Moisture Index [MI=100*(P-PE)/PE] .....: 138.98
  + A.Extremely humid (MI>100)
Index of dryness [DI=100*d/PE] .....: 0.00
  + No deficit (0<DI<16.7)
Index of humidity [HI=100*s/PE] .....: 138.97
  + Strong surplus (20<HI)
Potential Evapotranspiration PE .....: 721.82
  + Second mesothermic (712<PE<855)




BRAZIL
°C 28°40'S / 50°26'W / 1048 m
24.7 BOM JESUS
6.7 [30-30] +14.6 °C 1725.0 mm
Mean Max
Mean min
Abs Max
Abs Min
50
40
30
20
10
0
-10
J A S O N D J F M A M J


BRAZIL
28°40'S / 50°26'W / 1048 m
BOM JESUS
Period T-P [30-30]
Thornthwaite T-E Ratio
Thornthwaite P-E Ratio
30
25
20
15
10
5
0
3.0
2.5
2.0
1.5
1.0
0.5
0.0
J A S O N D J F M A M J


BRAZIL
28°40'S / 50°26'W / 1048 m
BOM JESUS
Period T-P [30-30]
Mediterranean Index [PE/P]
Ombrothermic Index [P/T]
15.0
12.5
10.0
7.5
5.0
2.5
0.0
30
25
20
15
10
5
0
J A S O N D J F M A M J