

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

JACOBINA (BRAZIL)

Altitude: 485 m.

Latitude: 11°11'S Longitude: 40°28'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.	25.40	31.30	20.20	36.40	18.10	99.0	130.47
Feb.	25.50	31.70	20.20	37.40	17.50	32.0	117.47
Mar.	25.60	31.40	20.30	36.90	18.10	120.0	128.64
Apr.	24.60	30.00	19.90	35.40	17.80	91.0	107.77
May.	23.30	28.40	18.80	33.80	15.70	48.0	92.65
Jun.	22.10	26.70	17.50	34.60	14.00	54.0	76.03
Jul.	21.20	26.20	16.80	33.40	13.30	41.0	69.30
Aug.	21.80	27.40	17.00	40.10	12.90	40.0	77.57
Sep.	23.20	29.40	17.70	34.40	15.40	31.0	91.48
Oct.	24.70	31.10	18.80	38.20	16.30	32.0	116.78
Nov.	25.30	31.60	19.80	37.80	17.70	86.0	124.22
Dec.	24.90	31.10	20.00	40.00	17.50	116.0	124.13
Year	23.97	29.69	18.92	36.53	16.19	790	1256.5

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	670
Compensated thermicity index.....(Itc):	670
Simple continentality index.....(Ic):	4.4
Diurnality index.....(Id):	12.3
Annual ombrothermic index.....(Io):	2.75
Monthly dry ombrothermic index.....(Iod1):	1.34
Bimonthly dry ombrothermic index.....(Iod2):	1.32
Three monthly dry ombrothermic index.....(Iod3):	1.48
Four monthly dry ombrothermic index.....(Iod4):	1.58
Annual ombro-evaporation index.....(Ioe):	1.59
Annual positive temperature.....(Tp):	2876
Annual negative temperature.....(Tn):	0
Dry station temperature.....(Td):	697
Positive precipitation.....(Pp):	790

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

Latitudinal Belt...: Eutropical

Continentality.....: Hyperoceanic - High Euhyperoceanic

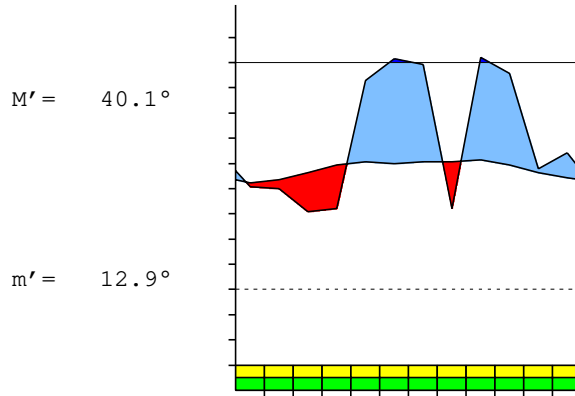
Bioclimate(Variant): TROPICAL XERIC (BIXERIC, DRY)

Bioclimatic Belt...: LOW THERMOTROPICAL LOW DRY

JACOBINA (BRAZIL)

485 m

P= 790 11° 11'S 40° 28'W 30/30 y.
 T= 24.0° Ic= 4.4 Tp= 2876 Tn= 0
 m= 16.8° M= 26.2° Itc= 670 Io= 2.7



TROPICAL XERIC (BIXERIC)
 LOW THERMOTROPICAL LOW DRY

WATER INDEX CARD JACOBINA (BRAZIL)
 Altitude: 485 m. Latitude: 11° 11'S

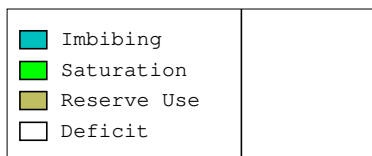
(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	21.2	69	41	0	0	41	28	0	0	-0.4
Aug.	21.8	78	40	0	0	40	38	0	0	-0.4
Sep.	23.2	91	31	0	0	31	60	0	0	-0.6
Oct.	24.7	117	32	0	0	32	85	0	0	-0.7
Nov.	25.3	124	86	0	0	86	38	0	0	-0.3
Dec.	24.9	124	116	0	0	116	8	0	0	0.0
Jan.	25.4	130	99	0	0	99	31	0	0	-0.2
Feb.	25.5	117	32	0	0	32	85	0	0	-0.7
Mar.	25.6	129	120	0	0	120	9	0	0	0.0
Apr.	24.6	108	91	0	0	91	17	0	0	-0.1
May.	23.3	93	48	0	0	48	45	0	0	-0.4
Jun.	22.1	76	54	0	0	54	22	0	0	-0.2
Year	24.0	1257	790	*	*	790	467	0	0	*

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

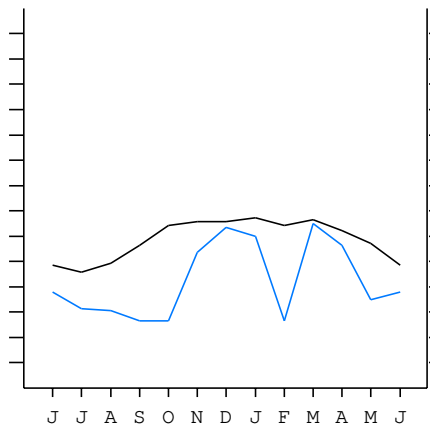
JACOBINA (BRAZIL)

11°11'S 40°28'W 485 m 30/30 y.

T= 24.0 Ic= 4.4 TROPICAL XERIC (BIXERIC)
 m= 16.8 Tp= 2876 LOW THERMOTROPICAL
 M= 26.2 Tn= 0 LOW DRY
 M' = 40.1 Itc= 670
 m' = 12.9 Io= 2.7
 P= 790 mm ———
 PE= 1257 mm ———



All over the year,
 there is hydric deficit



JACOBINA (BRAZIL)

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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [A2a]
 + Type: A. Hyperoceanic
 + Subtype: 2. Euhyperoceanic
 + Variant: a. High

Thermic types [A2.A2]
 + Latitudinal zone: A. Warm
 + Latitudinal belt: 2. Eutropical
 + Thermic type: A. Warm
 + Thermic subtype: 2. Warm

Bioclimatic types [A3c.2b.5b]
 + Macrobioclimate: A. TROPICAL
 + Bioclimate: 3. XERIC
 + Bioclimatic variant .: c. BIXERIC, DRY
 + Thermic type.....: 2. THERMOTROPICAL
 + Thermic subtype.....: b. LOW
 + Ombrothermic type ...: 5. DRY
 + Ombrothermic subtype : b. LOW
 Bioclimatic Classification: Trxe(Bix).Ttr.Dry

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 485
 Coldest semester of the year.....(Psw): 305
 Warmest four months period of the year.....(Pcm1): 367
 Following warmest four months period.....(Pcm2): 234
 Positive precipitation dryest 3 months.....(Ppd): 103
 Positive precipitation dryest 2 months.....(Ppd2): 63
 Positive precipitation dryest 1 month.....(Ppd1): 31
 Positive precipitation warmest 3 months.....(Pps): 251
 Positive precipitation warmest 2 months.....(Pps2): 152
 Positive precipitation warmest 1 month.....(Pps1): 120
 Positive precipitation coldest 3 months.....(Ppw): 135
 Positive precipitation coldest 2 months.....(Ppw2): 81
 Positive precipitation coldest 1 month.....(Ppw1): 41

Seasons	Jun+Jul+Aug Ttr3-3	Sep+Oct+Nov Ttr4-4	Dec+Jan+Feb Ttr1-1	Mar+Apr+May Ttr2-2
Rainfall	135	149	247	259

Tropical rainfall rhythms: 2 > 1 > 4 > 3

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 25.6
 Average coldest month [T].....(Tmin): 21.2
 Maximum temp. warmest month [M].....(Tmmax): 31.7
 Minimum temp. coldest month [m].....(Tmmin): 16.8
 Absolute Max.temp. warmest month [M'].....(Tamax): 40.1
 Absolute Min.temp. coldest month [m'].....(Tamin): 12.9
 First warmest contrasted month [M].....(Tcmax): 31.1 (10)
 First coldest contrasted month [m].....(Tcmin): 18.8 (10)
 Dry station temperature.....(Td): 697
 Positive temperature dryest 3 months.....(Tpd): 697
 Positive temperature dryest 2 months.....(Tpd2): 479
 Positive temperature dryest 1 month.....(Tpd1): 232
 Positive temperature warmest 3 months.....(Tps): 765
 Positive temperature warmest 2 months.....(Tps2): 511
 Positive temperature warmest 1 month.....(Tps1): 256
 Positive temperature coldest 3 months.....(Tpw): 651
 Positive temperature coldest 2 months.....(Tpw2): 430
 Positive temperature coldest 1 month.....(Tpw1): 212

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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): 1.59
 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)	1160	990	320	1200	910	480	540	410	400	310	320	860
Tp	249	254	255	256	246	233	221	212	218	232	247	253
Io (Iom)	4.66	3.90	1.25	4.69	3.70	2.06	2.44	1.93	1.83	1.34	1.30	3.40
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp(x10)/Tp	2470 / 758			2590 / 735			1350 / 651			1490 / 732		
Io (Iot)	3.259			3.524			2.074			2.036		
Semesters	December-May						June-November					
Pp(x10)/Tp	5060 / 1493						2840 / 1383					
Io (Iosm)	3.389						2.054					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 7900/2876=2.75 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	1160	990	320	1200	910	480	540	410	400	310	320	860
Tp [T*10]	249	254	255	256	246	233	221	212	218	232	247	253
Iom [Pp/Tp]	466	390	125	469	370	206	244	193	183	134	130	340
Avm [200-Iom]	***	***	75	***	***	***	***	7	17	66	70	***
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp / Tp	2470 / 758			2590 / 735			1350 / 651			1490 / 732		
Iot [Pp/Tp]	326			352			207			204		
Avs E[Avm<200]	***			***			***			***		
Weak lower semiarid [3]						Weak upper semiarid [2]						

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin]	(Sp):	4.40
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]		18.17
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]		6.70
+ Hyperoceanic (-20<CI<20)		
CI of Currey (1974) [CI=Sp/(1+Lat/3)]		0.93
+ Oceanic (0.6<CI<1.1)		
Rainfall Index of Lang (1925) [R=P/T]		32.96
+ Steppic (40>R>0)		
Aridity Index of Martonne (1926) [Ia=P/(T+10)]		23.26
+ Subhumid (30>Ia>20)		
I of Emberger (1930) [Q=100*P/(Tmax ² -Tmin ²)]		109.32
+ Humid (Q>90)		
I of Dantin & Revenga (1940) [DR=100*T/P]		3.03
+ Arid (6>DR>3)		
Aridity Index of UNEP [I=P/PE]		0.63
+ Subhumid - dry (0.65>I>0.5)		
Potential Erosion I of Fournier (1960) [K=Pi ² /P]		18.23
+ 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	0.36	0.10	0.45	0.34	0.17	0.20	0.15	0.14	0.10	0.10	0.31	0.44	
T-E ratio	11.43	11.48	11.52	11.07	10.48	9.95	9.54	9.81	10.44	11.12	11.38	11.20	
Precipitation-effectiveness:	28.64						Temperature-efficiency						129.42
Moisture Index [MI=100*(P-PE)/PE]	-37.13												
+ D.Semiarid (-66.7<MI<-33.3)													
Index of dryness [DI=100*d/PE]	37.13												
+ Strong deficit (33.3<DI)													
Index of humidity [HI=100*s/PE]	0.00												
+ No surplus (0<HI<10)													
Potential Evapotranspiration PE	1256.52												
+ Forth mesothermic (997<PE<1440)													

