Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 14/02/2020)

TIRIOS (BRAZIL) Altitude: 325 m.

Latitude: 2°29'S Longitude: 55°59'W
Temperature observation period.: 1972-1990 (19)
Rainfall observation period....: 1972-1990 (19)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPi
Jan.	24.20	29.00	20.70	32.10	15.90	111.0	105.66
Feb.	24.10	28.80	20.80	33.40	17.20	116.0	94.26
Mar.	24.30	29.20	21.00	33.00	12.20	168.0	107.05
Apr.	24.50	31.80	21.40	32.70	15.00	227.0	106.70
May.	24.50	32.50	21.30	34.80	17.70	349.0	108.81
Jun.	24.40	32.70	21.00	36.80	17.10	231.0	104.28
Jul.	24.40	29.90	20.70	32.20	17.40	189.0	108.45
Aug.	24.70	30.80	20.60	34.20	16.10	106.0	112.74
Sep.	25.20	31.70	20.40	35.00	17.10	77.0	116.66
Oct.	25.80	32.20	20.40	36.40	18.00	38.0	129.42
Nov.	25.70	31.60	21.00	35.40	17.80	44.0	125.38
Dec.	25.00	30.30	21.00	34.40	14.80	76.0	118.26
Year	24.73	30.88	20.86	34.20	16.36	1732	1337.7

BIOCLIMATIC INDICES AND DIAGNOSIS

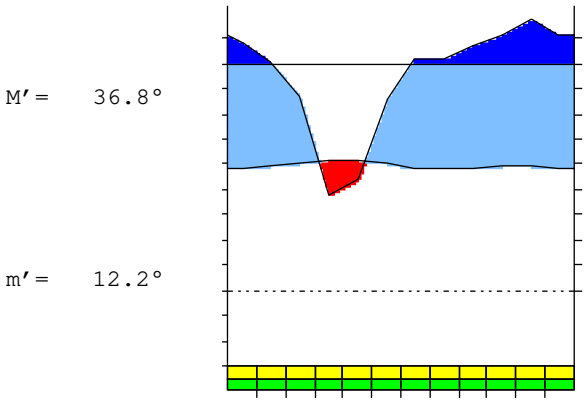
Thermicity index.....(It): 743
Compensated thermicity index.....(Itc): 743
Simple continentality index.....(Ic): 1.7
Diurnality index.....(Id): 11.8
Annual ombrothermic index.....(Io): 5.84
Monthly dry ombrothermic index.....(Iod1): 1.47
Bimonthly dry ombrothermic index.....(Iod2): 1.59
Threemonthly dry ombrothermic index.....(Iod3): 2.07
Fourmonthly dry ombrothermic index.....(Iod4): 2.31
Annual ombro-evaporation index.....(Ioe): 1.29
Annual positive temperature.....(Tp): 2968
Annual negative temperature.....(Tn): 0
Dry station temperature.....(Td): 765
Positive precipitation.....(Pp): 1732

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	8	2	2	0	0

Latitudinal Belt...: Ecuatorial
Continentality.....: Hyperoceanic - High Ultrahyperoceanic
Bioclimate(Variant): TROPICAL PLUVISEASONAL (PLUVISEROTIN,MESOPHYTIC)
Bioclimatic Belt...: UPPER INFRATROPICAL UPPER SUBHUMID

TIRIOS (BRAZIL) 325 m

P= 1732 2° 29'S 55° 59'W 19/19 y.
T= 24.7 ° Ic= 1.7 Tp= 2968 Tn= 0
m= 20.8 ° M= 28.8 ° Itc= 743 Io= 5.8



TROPICAL PLUVISEASONAL (PLUVISEROTIN)
UPPER INFRATROPICAL UPPER SUBHUMID

WATER INDEX CARD TIRIOS (BRAZIL)
Altitude: 325 m. Latitude: 2° 29'S

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	24.4	108	189	0	100	108	0	81	109	0.7
Aug.	24.7	113	106	-7	93	113	0	0	54	0.0
Sep.	25.2	117	77	-40	54	117	0	0	27	-0.3
Oct.	25.8	129	38	-54	0	92	38	0	14	-0.7
Nov.	25.7	125	44	0	0	44	81	0	7	-0.6
Dec.	25.0	118	76	0	0	76	42	0	3	-0.3
Jan.	24.2	106	111	5	5	106	0	0	2	0.0
Feb.	24.1	94	116	22	27	94	0	0	1	0.2
Mar.	24.3	107	168	61	88	107	0	0	0	0.5
Apr.	24.5	107	227	12	100	107	0	108	54	1.1
May.	24.5	109	349	0	100	109	0	240	147	2.2
Jun.	24.4	104	231	0	100	104	0	127	137	1.2
Year	24.7	1338	1732	*	*	1176	161	556	556	*

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

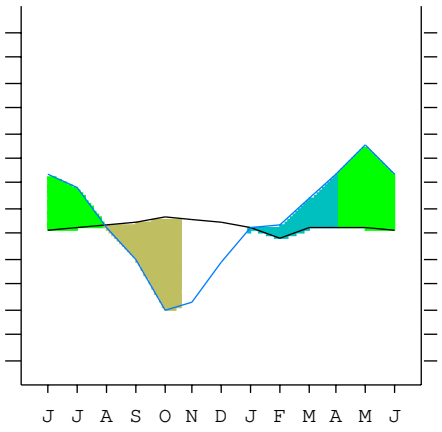
TIRIOS (BRAZIL)

2°29'S 55°59'W 325 m 19/19 y.

T= 24.7 Ic= 1.7
m= 20.8 Tp= 2968
M= 28.8 Tn= 0
M'= 36.8 Itc= 743
m'= 12.2 Io= 5.8
P= 1732 mm
PE= 1338 mm

TROPICAL PLUVISEASONAL (PLUVISEROTIN)
UPPER INFRATROPICAL
UPPER SUBHUMID

Imbibing	27 Dec.
Saturation	3 Apr.
Reserve Use	28 Jul.
Deficit	18 Oct.



TIRIOS (BRAZIL)

Latitude: 2°29'S Longitude: 55°59'W Altitude: 325 m

SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continentality Index [A1a]
- + Type .....: A. Hyperoceanic
- + Subtype .....: 1. Ultrahyperoceanic
- + Variant .....: a. High

Thermic types [A1.A1]
- + Latitudinal zone ....: A. Warm
- + Latitudinal belt ....: 1. Ecuatorial
- + Thermic type .....: A. Warm
- + Thermic subtype .....: 1. Torrid

Bioclimatic types [A4e.1a.6a]
- + Macrobioclimate .....: A. TROPICAL
- + Bioclimate .....: 4. PLUVISEASONAL
- + Bioclimatic variant .: PLUVISEROTIN,MESOPHYTIC
- + Thermic type.....: 1. INFRATROPICAL
- + Thermic subtype.....: a. UPPER
- + Ombrothermic type ...: 6. SUBHUMID
- + Ombrothermic subtype : a. UPPER

Bioclimatic Classification .....Trps(Pse).Itr.Shu.Uho

TIRIOS (BRAZIL)

Latitude: 2°29'S Longitude: 55°59'W Altitude: 325 m

PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 530
Coldest semester of the year.....(Psw): 1202
Warmest four months period of the year.....(Pcm1): 235
Following warmest four months period.....(Pcm2): 622
Positive precipitation dryest 3 months.....(Ppd): 158
Positive precipitation dryest 2 months.....(Ppd2): 82
Positive precipitation dryest 1 month.....(Ppd1): 38
Positive precipitation warmest 3 months.....(Pps): 159
Positive precipitation warmest 2 months.....(Pps2): 82
Positive precipitation warmest 1 month.....(Pps1): 38
Positive precipitation coldest 3 months.....(Ppw): 395
Positive precipitation coldest 2 months.....(Ppw2): 227
Positive precipitation coldest 1 month.....(Ppw1): 116

Seasons	Jun+Jul+Aug Ttr3-3	Sep+Oct+Nov Ttr4-4	Dec+Jan+Feb Ttr1-1	Mar+Apr+May Ttr2-2
Rainfall	526	159	303	744

Tropical rainfall rhythms: 2 > 3 > 1 > 4

TIRIOS (BRAZIL)

Latitude: 2°29'S Longitude: 55°59'W Altitude: 325 m

TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 25.8
Average coldest month [T].....(Tmin): 24.1
Maximum temp. warmest month [M].....(Tmmax): 32.7
Minimum temp. coldest month [m].....(Tmmin): 20.4
Absolute Max.temp. warmest month [M'].....(Tamax): 36.8
Absolute Min.temp. coldest month [m'].....(Tamin): 12.2
First warmest contrasted month [M].....(Tcmax): 32.2 (10)
First coldest contrasted month [m].....(Tcmin): 20.4 (10)
Dry station temperature.....(Td): 765
Positive temperature dryest 3 months.....(Tpd): 765
Positive temperature dryest 2 months.....(Tpd2): 515
Positive temperature dryest 1 month.....(Tpd1): 258
Positive temperature warmest 3 months.....(Tps): 767
Positive temperature warmest 2 months.....(Tps2): 515
Positive temperature warmest 1 month.....(Tps1): 258
Positive temperature coldest 3 months.....(Tpw): 726
Positive temperature coldest 2 months.....(Tpw2): 483
Positive temperature coldest 1 month.....(Tpw1): 241

TIRIOS (BRAZIL)

Latitude: 2°29'S Longitude: 55°59'W Altitude: 325 m

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

TIRIOS (BRAZIL)

Latitude: 2°29'S Longitude: 55°59'W Altitude: 325 m

OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 0.77
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)	760	1110	1160	1680	2270	3490	2310	1890	1060	770	380	440
Tp	250	242	241	243	245	245	244	244	247	252	258	257
Io (Iom)	3.04	4.59	4.81	6.91	9.27	14.2	9.47	7.75	4.29	3.06	1.47	1.71
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp(x10)/Tp	3030 / 733			7440 / 733			5260 / 735			1590 / 767		
Io (Iot)	4.134			10.15			7.156			2.073		
Semesters	December-May						June-November					
Pp(x10)/Tp	10470 / 1466						6850 / 1502					
Io (Iosm)	7.142						4.561					

TIRIOS (BRAZIL)

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 17320/2968=5.84 There is No Yearly Aridity

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	760	1110	1160	1680	2270	3490	2310	1890	1060	770	380	440
Tp [T*10]	250	242	241	243	245	245	244	244	247	252	258	257
Iom [Pp/Tp]	304	459	481	691	927	$$	947	775	429	306	147	171
Avm [200-Iom]	***	***	***	***	***	***	***	***	***	***	53	29
Seasons	Dec+Jan+Feb			Mar+Apr+May			Jun+Jul+Aug			Sep+Oct+Nov		
Pp / Tp	3030 / 733			7440 / 733			5260 / 735			1590 / 767		
Iot [Pp/Tp]	413			1015			716			207		
Avs E[Avm<200]	***			***			***			***		

Weak lower semiarid [1]	Weak upper semiarid [1]

TIRIOS (BRAZIL)

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin] .....(Sp): 1.70
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4] .....: 46.30
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14] .....: -0.63
  + 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] .....: 70.03
  + Temperate warm (100>R>60)
Aridity Index of Martonne (1926) [Ia=P/(T+10)] .....: 49.87
  + Humid (60>Ia>30)
I of Emberger (1930) [Q=100*P/(Tmmax²-Tmmin²)] .....: 265.18
  + Humid (Q>90)
I of Dantin & Revenga (1940) [DR=100*T/P] .....: 1.43
  + Humid (2>DR>0)
Aridity Index of UNEP [I=P/PE] .....: 1.29
  + Humid (I>0.65)
Potencial Erosion I of Fournier (1960) [K=Pi²/P].....: 70.32
  + Low (60<K<90)

TIRIOS (BRAZIL)

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BIOCLIMATIC INDICES II

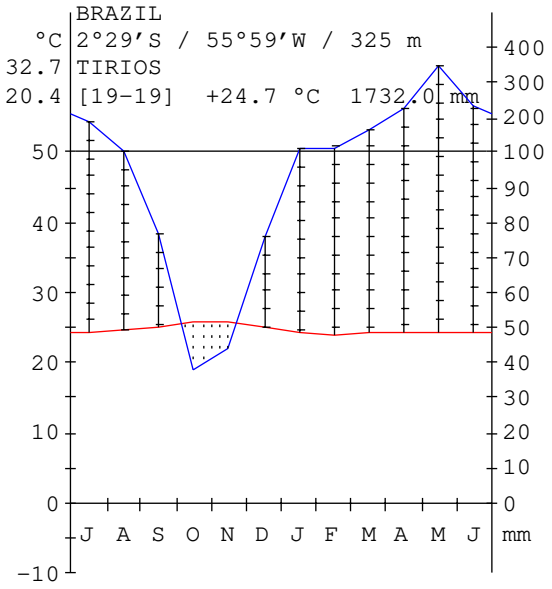
Bioclimatic classification of Gaussen & Bagnouls (1957)
  + Climate ....: A. Warm and temperate warm
  + Region .....: 3. Termoxeroteric (Mediterranean warm)
  + Thermic type: 1. Megathermic

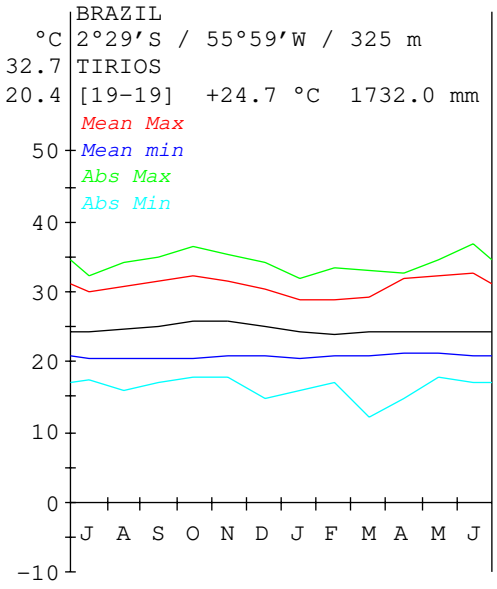
Thornthwaite (1948)

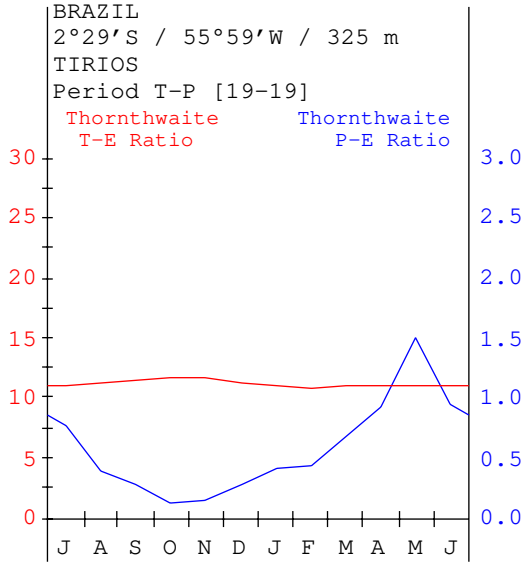
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.42	0.44	0.67	0.93	1.50	0.95	0.76	0.40	0.27	0.12	0.15	0.27
T-E ratio	10.89	10.85	10.93	11.02	11.02	10.98	10.98	11.12	11.34	11.61	11.57	11.25

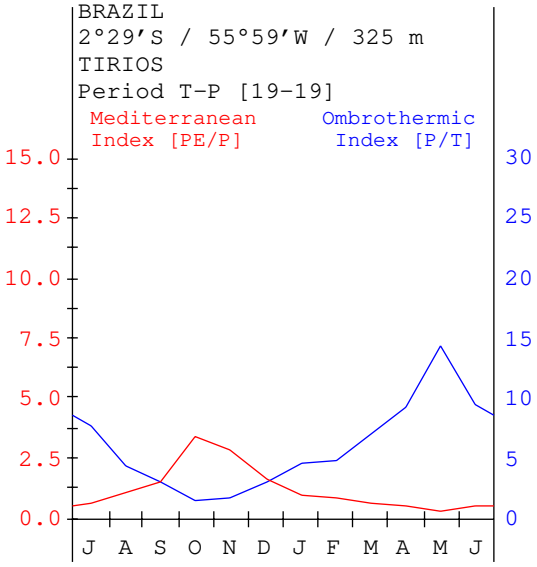
Precipitation-effectiveness: 68.78 Temperature-efficiency ....: 133.56

Moisture Index [MI=100*(P-PE)/PE] .....: 29.48
  + B1.Humid low-humid (20<MI<40)
Index of dryness [DI=100*d/PE] .....: 12.07
  + No deficit (0<DI<16.7)
Index of humidity [HI=100*s/PE] .....: 41.54
  + Strong surplus (20<HI)
Potential Evapotranspiration PE .....: 1337.69
  + Forth mesothermic (997<PE<1440)




BRAZIL
°C 2°29'S / 55°59'W / 325 m
32.7 TIRIOS
20.4 [19-19] +24.7 °C 1732.0 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
2°29'S / 55°59'W / 325 m
TIRIOS
Period T-P [19-19]
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
2°29'S / 55°59'W / 325 m
TIRIOS
Period T-P [19-19]
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