

# Phytosociological Research Center

www.globalbioclimatics.org

## Worldwide Bioclimatic Classification System

Prof.Dr. Salvador Rivas-Martinez

(Adapted to Synoptical Table 30/08/2017)

FIGUE (ARGENTINA)

Altitude: 298 m.

Latitude: 37°38'S Longitude: 62°24'W  
 Temperature observation period.: 1941-1950 (10)  
 Rainfall observation period....: 1941-1950 (10)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPI
Jan.	21.50	30.20	13.70	39.90	1.30	49.0	126.62
Feb.	20.20	28.90	13.10	38.40	1.70	87.0	98.53
Mar.	16.20	23.80	10.70	35.40	-2.50	116.0	73.39
Apr.	13.00	19.90	7.70	30.60	-3.00	71.0	47.10
May.	9.30	15.00	4.80	28.00	-5.70	50.0	27.77
Jun.	6.60	12.40	2.30	23.40	-9.20	29.0	15.92
Jul.	6.10	11.90	1.30	20.70	-12.40	29.0	15.18
Aug.	7.10	13.70	1.70	27.20	-10.20	31.0	20.47
Sep.	9.80	16.90	4.20	29.60	-7.80	75.0	34.31
Oct.	13.00	20.70	6.70	31.00	-5.00	71.0	57.74
Nov.	16.60	24.80	9.40	36.50	-3.80	69.0	84.41
Dec.	20.50	28.90	12.40	37.50	0.00	75.0	121.43
Year	13.33	20.59	7.33	31.52	-4.72	752	722.87

### BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	265
Compensated thermicity index.....(Itc):	265
Simple continentality index.....(Ic):	15.4
Diurnality index.....(Id):	16.5
Annual ombrothermic index.....(Io):	4.70
Monthly estival ombrothermic index.....(Ios1):	2.28
Bimonthly estival ombrothermic index.....(Ios2):	3.26
Threemonthly estival ombrothermic index.....(Ios3):	3.39
Fourmonthly estival ombrothermic index.....(Ios4):	3.55
Annual ombro-evaporation index.....(Ioe):	1.64
Annual positive temperature.....(Tp):	1599
Annual negative temperature.....(Tn):	0
Estival temperature.....(Ts):	622
Positive precipitation.....(Pp):	752

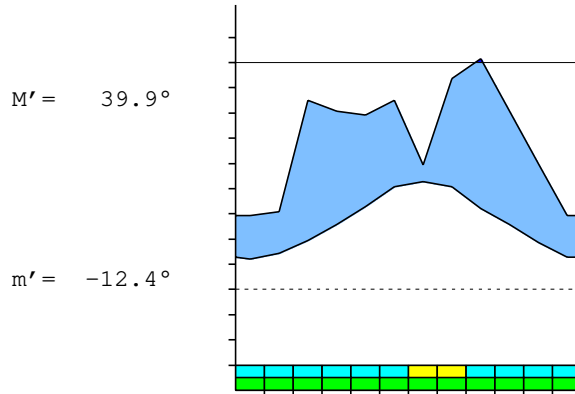
N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	10	2	0	0	0

Latitudinal Belt...: Low eutemperate  
 Continentality.....: Oceanic - Low Euoceanic  
 Bioclimate(Variant): TEMPERATE OCEANIC (SUBMEDITERRANEAN)  
 Bioclimatic Belt...: LOW MESOTEMPERATE LOW SUBHUMID

FIGUE (ARGENTINA)

298 m

P= 752      37° 38' S      62° 24' W      10/10 y.  
 T= 13.3°    Ic= 15.4      Tp= 1599      Tn= 0  
 m= 1.3°      M= 11.9°      Itc= 265      Io= 4.7



TEMPERATE OCEANIC (SUBMEDITERRANEAN)  
 LOW MESOTEMPERATE LOW SUBHUMID

WATER INDEX CARD      FIGUE (ARGENTINA)  
 Altitude: 298 m.      Latitude: 37° 38' S

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	6.1	15	29	0	100	15	0	14	7	0.9
Aug.	7.1	20	31	0	100	20	0	11	9	0.5
Sep.	9.8	34	75	0	100	34	0	41	25	1.1
Oct.	13.0	58	71	0	100	58	0	13	19	0.2
Nov.	16.6	84	69	-15	85	84	0	0	10	-0.1
Dec.	20.5	121	75	-46	38	121	0	0	5	-0.3
Jan.	21.5	127	49	-38	0	87	39	0	2	-0.6
Feb.	20.2	99	87	0	0	87	12	0	1	-0.1
Mar.	16.2	73	116	43	43	73	0	0	1	0.5
Apr.	13.0	47	71	24	67	47	0	0	0	0.5
May.	9.3	28	50	22	89	28	0	0	0	0.8
Jun.	6.6	16	29	11	100	16	0	2	1	0.8
Year	13.3	723	752	*	*	672	51	80	80	*

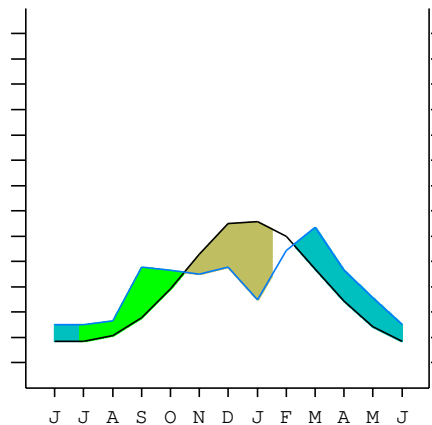
R = Reserve    VR = Variation of the reserve    RE = Real evapotranspiration  
 DR = Drainage    HC = Humidity coefficient    DF = Deficit    SP = Superavit

FIGUE (ARGENTINA)

37°38' S    62°24' W    298 m 10/10 y.

T= 13.3    Ic= 15.4    TEMPERATE OCEANIC (SUBMEDITERRANEAN)  
 m= 1.3    Tp= 1599    LOW MESOTEMPERATE  
 M= 11.9    Tn= 0    LOW SUBHUMID  
 M' = 39.9    Itc= 265  
 m' = -12.4    Io= 4.7  
 P= 752    mm    ———  
 PE= 723    mm    ———

Imbibing	7 Feb.
Saturation	26 Jun.
Reserve Use	14 Oct.
Deficit	15 Jan.



FIGUE (ARGENTINA)

Latitude: 37°38'S Longitude: 62°24'W Altitude: 298 m

SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [B2b]  
 + Type .....: B. Oceanic  
 + Subtype .....: 2. Euoceanic  
 + Variant .....: b. Low  
 Thermic types [B1.B4]  
 + Latitudinal zone ....: B. Temperate  
 + Latitudinal belt ....: 1. Low eutemperate  
 + Thermic type .....: B. Temperate  
 + Thermic subtype .....: 4. Temperate  
 Bioclimatic types [C3b.3b.6b]  
 + Macrobioclimate .....: C. TEMPERATE  
 + Bioclimate .....: 3. OCEANIC  
 + Bioclimatic variant .: b. SUBMEDITERRANEAN  
 + Thermic type.....: 3. MESOTEMPERATE  
 + Thermic subtype.....: b. LOW  
 + Ombrothermic type ...: 6. SUBHUMID  
 + Ombrothermic subtype : b. LOW  
 Bioclimatic Classification .....: Teco (Sbm) .Mte.Shu

FIGUE (ARGENTINA)

Latitude: 37°38'S Longitude: 62°24'W Altitude: 298 m

PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 467  
 Coldest semester of the year.....(Psw): 285  
 Warmest four months period of the year.....(Pcm1): 280  
 Following warmest four months period.....(Pcm2): 266  
 Positive precipitation dryest 3 months.....(Ppd): 89  
 Positive precipitation dryest 2 months.....(Ppd2): 58  
 Positive precipitation dryest 1 month.....(Ppd1): 29  
 Positive precipitation warmest 3 months.....(Pps): 211  
 Positive precipitation warmest 2 months.....(Pps2): 124  
 Positive precipitation warmest 1 month.....(Pps1): 49  
 Positive precipitation coldest 3 months.....(Ppw): 89  
 Positive precipitation coldest 2 months.....(Ppw2): 58  
 Positive precipitation coldest 1 month.....(Ppw1): 29

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	89	215	211	237

Seasonal rainfall rhythms: F > P > S > W

FIGUE (ARGENTINA)

Latitude: 37°38'S Longitude: 62°24'W Altitude: 298 m

TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 21.5  
 Average coldest month [T].....(Tmin): 6.1  
 Maximum temp. warmest month [M].....(Tmmax): 30.2  
 Minimum temp. coldest month [m].....(Tmmin): 1.3  
 Absolute Max.temp. warmest month [M'].....(Tamax): 39.9  
 Absolute Min.temp. coldest month [m'].....(Tamin): -12.4  
 First warmest contrasted month [M].....(Tcmax): 30.2 (1)  
 First coldest contrasted month [m].....(Tcmin): 13.7 (1)  
 Estival temperature.....(Ts): 622  
 Positive temperature dryest 3 months.....(Tpd): 198  
 Positive temperature dryest 2 months.....(Tpd2): 127  
 Positive temperature dryest 1 month.....(Tpd1): 66  
 Positive temperature warmest 3 months.....(Tps): 622  
 Positive temperature warmest 2 months.....(Tps2): 420  
 Positive temperature warmest 1 month.....(Tps1): 215  
 Positive temperature coldest 3 months.....(Tpw): 198  
 Positive temperature coldest 2 months.....(Tpw2): 127  
 Positive temperature coldest 1 month.....(Tpw1): 61

FIGUE (ARGENTINA)

Latitude: 37°38'S Longitude: 62°24'W Altitude: 298 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)			o	o	o	o	o	o	o	o	o	o
Agelid.....[m' > 0] (Pf)	o	o										
HiperAgelid..[all>0] (Pf)	o	o										

FIGUE (ARGENTINA)

Latitude: 37°38'S Longitude: 62°24'W Altitude: 298 m

OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 0.96  
 Mediterranean index of January.....(Im1): 2.58  
 Mediterranean index of January & February.....(Im2): 1.66  
 Mediterranean index of December to February...(Im3): 1.64

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	750	490	870	1160	710	500	290	290	310	750	710	690
Tp	205	215	202	162	130	93	66	61	71	98	130	166
Io (Iom)	3.66	2.28	4.31	7.16	5.46	5.38	4.39	4.75	4.37	7.65	5.46	4.16
Seasons	Summer			Autumn			Winter			Spring		
Pp(x10)/Tp	2110 / 622			2370 / 385			890 / 198			2150 / 394		
Io (Iot)	3.392			6.156			4.495			5.457		
Semesters	December-May						June-November					
Pp(x10)/Tp	4480 / 1007						3040 / 592					
Io (Iosm)	4.449						5.135					

FIGUE (ARGENTINA)

Latitude: 37°38'S Longitude: 62°24'W Altitude: 298 m

Aridity Value Index (AVI)

[10xPP/TP=IO]: 7520/1599=4.70 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	750	490	870	1160	710	500	290	290	310	750	710	690
Tp [T*10]	205	215	202	162	130	93	66	61	71	98	130	166
Iom [Pp/Tp]	366	228	431	716	546	538	439	475	437	765	546	416
Avm [200-Iom]	***	***	***	***	***	***	***	***	***	***	***	***
Seasons	Summer			Autumn			Winter			Spring		
Pp / Tp	2110 / 622			2370 / 385			890 / 198			2150 / 394		
Iot [Pp/Tp]	339			616			449			546		
Avs E[Avm<200]	***			***			***			***		

FIGUE (ARGENTINA)

Latitude: 37°38'S Longitude: 62°24'W Altitude: 298 m

BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin] .....	(Sp):	15.40
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4] .....		22.48
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14] .....		21.43
+ Oceanic (20<CI<40)		
CI of Currey (1974) [CI=Sp/(1+Lat/3)] .....		1.14
+ Subcontinental (1.1<CI<1.7)		
Rainfall Index of Lang (1925) [R=P/T] .....		56.44
+ Semiarid (60>R>40)		
Aridity Index of Martonne (1926) [Ia=P/(T+10)] .....		32.24
+ Humid (60>Ia>30)		
I of Emberger (1930) [Q=100*P/(Tmax <sup>2</sup> -Tmin <sup>2</sup> )] .....		82.61
+ Subhumid (90>Q>50)		
I of Dantin & Revenga (1940) [DR=100*T/P] .....		1.77
+ Humid (2>DR>0)		
Aridity Index of UNEP [I=P/PE] .....		1.04
+ Humid (I>0.65)		
Potential Erosion I of Fournier (1960) [K=Pi <sup>2</sup> /P] .....		17.89
+ Very low (K<60)		

FIGUE (ARGENTINA)

Latitude: 37°38'S Longitude: 62°24'W Altitude: 298 m

BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)  
 + Climate .....

- + Climate .....
- + Region .....
- + Thermic type: 4. Mesothermic

Thornthwaite (1948)													
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	
P-E ratio	0.18	0.36	0.54	0.35	0.26	0.16	0.16	0.17	0.41	0.35	0.30	0.30	
T-E ratio	9.67	9.09	7.29	5.85	4.19	2.97	2.74	3.19	4.41	5.85	7.47	9.23	
Precipitation-effectiveness:	35.34					Temperature-efficiency .....							71.96
Moisture Index [MI=100*(P-PE)/PE] .....												4.03	
+ C2.Subhumid humid (0<MI<20)													
Index of dryness [DI=100*d/PE] .....												7.04	
+ No deficit (0<DI<16.7)													
Index of humidity [HI=100*s/PE] .....												11.08	
+ Moderate surplus (10<HI<20)													
Potential Evapotranspiration PE .....												722.87	
+ Second mesothermic (712<PE<855)													

