

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

SAN SALAVADOR DE JUJUY (ARGENTINA) Altitude: 1303 m.

Latitude: 24°11'S Longitude: 65°18'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.	21.00	28.00	15.20	37.60	9.50	211.0	104.91
Feb.	20.10	27.00	15.10	36.00	8.00	203.0	84.76
Mar.	18.50	24.70	13.90	34.50	4.00	167.0	76.46
Apr.	16.40	22.70	10.90	32.00	1.50	46.0	56.89
May.	14.00	21.30	7.90	34.60	-0.10	25.0	42.50
Jun.	11.50	19.40	5.30	31.00	-5.20	14.0	28.75
Jul.	10.50	19.10	3.60	35.00	-5.20	10.0	25.71
Aug.	13.10	22.40	5.10	37.50	-4.00	6.0	39.96
Sep.	16.30	24.60	8.30	36.00	-4.00	18.0	58.65
Oct.	18.30	26.20	10.40	39.60	2.50	55.0	78.63
Nov.	20.00	27.60	13.00	37.50	5.00	93.0	92.36
Dec.	21.40	28.40	14.20	37.20	3.20	153.0	110.22
Year	16.76	24.28	10.24	35.71	1.27	1001	799.80

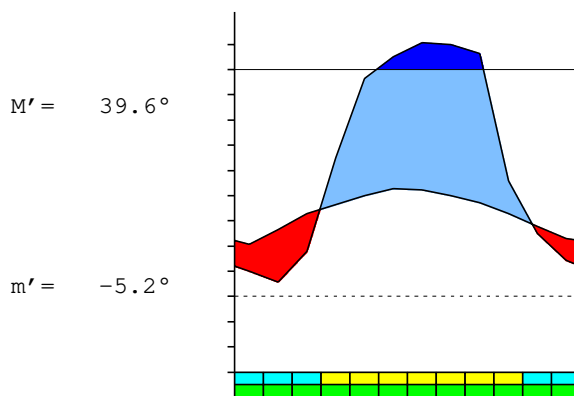
BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	395
Compensated thermicity index.....(Itc):	395
Simple continentality index.....(Ic):	10.9
Diurnality index.....(Id):	17.3
Annual ombrothermic index.....(Io):	4.98
Monthly dry ombrothermic index.....(Iod1):	0.46
Bimonthly dry ombrothermic index.....(Iod2):	0.68
Three monthly dry ombrothermic index.....(Iod3):	0.85
Four monthly dry ombrothermic index.....(Iod4):	1.12
Annual ombro-evaporation index.....(Ioe):	7.41
Annual positive temperature.....(Tp):	2011
Annual negative temperature.....(Tn):	0
Dry station temperature.....(Td):	351
Positive precipitation.....(Pp):	1001

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	5	2	3	2	0

Latitudinal Belt...: Subtropical
 Continentality.....: Hyperoceanic - Low Subhyperoceanic
 Bioclimate(Variant): TROPICAL PLUVISEASONAL (SUBMESOPHYTIC)
 Bioclimatic Belt...: LOW MESOTROPICAL UPPER SUBHUMID

SAN SALAVADOR DE JUJUY (ARGENTINA) 1303 m
 P= 1001 24° 11'S 65° 18'W 10/10 y.
 T= 16.8° Ic= 10.9 Tp= 2011 Tn= 0
 m= 3.6° M= 19.1° Itc= 395 Io= 5.0



TROPICAL PLUVISEASONAL (SUBMESOPHYTIC)
 LOW MESOTROPICAL UPPER SUBHUMID

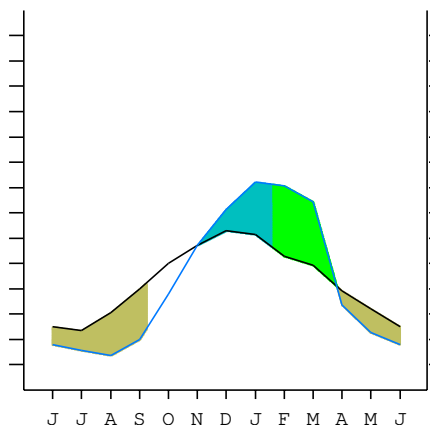
WATER INDEX CARD SAN SALAVADOR DE JUJUY (ARGENTINA)
 Altitude: 1303 m. Latitude: 24° 11'S

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jul.	10.5	26	10	-16	41	26	0	0	5	-0.6
Aug.	13.1	40	6	-34	7	40	0	0	3	-0.8
Sep.	16.3	59	18	-7	0	25	33	0	1	-0.6
Oct.	18.3	79	55	0	0	55	24	0	1	-0.3
Nov.	20.0	92	93	1	1	92	0	0	0	0.0
Dec.	21.4	110	153	43	43	110	0	0	0	0.3
Jan.	21.0	105	211	57	100	105	0	50	25	1.0
Feb.	20.1	85	203	0	100	85	0	118	72	1.3
Mar.	18.5	76	167	0	100	76	0	91	81	1.1
Apr.	16.4	57	46	-11	89	57	0	0	41	-0.1
May.	14.0	43	25	-18	72	43	0	0	20	-0.4
Jun.	11.5	29	14	-15	57	29	0	0	10	-0.5
Year	16.8	800	1001	*	*	743	57	258	258	*

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

SAN SALAVADOR DE JUJUY (ARGENTINA) 24°11'S 65°18'W 1303 m 10/10 y.
 T= 16.8 Ic= 10.9 TROPICAL PLUVISEASONAL (SUBMESOPHYTIC)
 m= 3.6 Tp= 2011 LOW MESOTROPICAL
 M= 19.1 Tn= 0 UPPER SUBHUMID
 M' = 39.6 Itc= 395
 m' = -5.2 Io= 5.0
 P= 1001 mm
 PE= 800 mm

Imbibing	30 Oct.
Saturation	17 Jan.
Reserve Use	27 Mar.
Deficit	6 Sep.



SAN SALAVADOR DE JUJUY (ARGENTINA)

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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continentality Index [A3b]
 + Type: A. Hyperoceanic
 + Subtype: 3. Subhyperoceanic
 + Variant: b. Low
 Thermic types [A3.A3]
 + Latitudinal zone: A. Warm
 + Latitudinal belt: 3. Subtropical
 + Thermic type: A. Warm
 + Thermic subtype: 3. Subwarm
 Bioclimatic types [A4.3b.6a]
 + Macrobioclimate: A. TROPICAL
 + Bioclimate: 4. PLUVISEASONAL
 + Bioclimatic variant .:
 + Thermic type.....: 3. MESOTROPICAL
 + Thermic subtype.....: b. LOW
 + Ombrothermic type ...: 6. SUBHUMID
 + Ombrothermic subtype : a. UPPER
 Bioclimatic Classification: Trde.Mtr.Shu

SAN SALAVADOR DE JUJUY (ARGENTINA)

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 882
 Coldest semester of the year.....(Psw): 119
 Warmest four months period of the year.....(Pcm1): 660
 Following warmest four months period.....(Pcm2): 252
 Positive precipitation dryest 3 months.....(Ppd): 30
 Positive precipitation dryest 2 months.....(Ppd2): 16
 Positive precipitation dryest 1 month.....(Ppd1): 6
 Positive precipitation warmest 3 months.....(Pps): 567
 Positive precipitation warmest 2 months.....(Pps2): 364
 Positive precipitation warmest 1 month.....(Pps1): 153
 Positive precipitation coldest 3 months.....(Ppw): 30
 Positive precipitation coldest 2 months.....(Ppw2): 24
 Positive precipitation coldest 1 month.....(Ppw1): 10

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	30	166	567	238

Seasonal rainfall rhythms: S > F > P > W

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 21.4
 Average coldest month [T].....(Tmin): 10.5
 Maximum temp. warmest month [M].....(Tmmax): 28.4
 Minimum temp. coldest month [m].....(Tmmin): 3.6
 Absolute Max.temp. warmest month [M'].....(Tamax): 39.6
 Absolute Min.temp. coldest month [m'].....(Tamin): -5.2
 First warmest contrasted month [M].....(Tcmax): 22.4 (8)
 First coldest contrasted month [m].....(Tcmin): 5.1 (8)
 Dry station temperature.....(Td): 351
 Positive temperature dryest 3 months.....(Tpd): 351
 Positive temperature dryest 2 months.....(Tpd2): 236
 Positive temperature dryest 1 month.....(Tpd1): 131
 Positive temperature warmest 3 months.....(Tps): 625
 Positive temperature warmest 2 months.....(Tps2): 424
 Positive temperature warmest 1 month.....(Tps1): 214
 Positive temperature coldest 3 months.....(Tpw): 351
 Positive temperature coldest 2 months.....(Tpw2): 220
 Positive temperature coldest 1 month.....(Tpw1): 105

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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

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 0.80
 Mediterranean index of January.....(Im1): 0.50
 Mediterranean index of January & February.....(Im2): 0.46
 Mediterranean index of December to February...(Im3): 0.53

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	1530	2110	2030	1670	460	250	140	100	60	180	550	930
Tp	214	210	201	185	164	140	115	105	131	163	183	200
Io (Iom)	7.15	10.0	10.1	9.03	2.80	1.79	1.22	0.95	0.46	1.10	3.01	4.65
Seasons	Summer			Autumn			Winter			Spring		
Pp(x10)/Tp	5670 / 625			2380 / 489			300 / 351			1660 / 546		
Io (Iot)	9.072			4.867			0.855			3.040		
Semesters	December-May						June-November					
Pp(x10)/Tp	8050 / 1114						1960 / 897					
Io (Iosm)	7.226						2.185					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 10010/2011=4.98 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	1530	2110	2030	1670	460	250	140	100	60	180	550	930
Tp [T*10]	214	210	201	185	164	140	115	105	131	163	183	200
Iom [Pp/Tp]	715	\$\$\$	\$\$\$	903	280	179	122	95	46	110	301	465
Avm [200-Iom]	***	***	***	***	***	21	78	105	154	90	***	***
Seasons	Summer			Autumn			Winter			Spring		
Pp / Tp	5670 / 625			2380 / 489			300 / 351			1660 / 546		
Iot [Pp/Tp]	907			487			85			304		
Avs E[Avm<200]	***			***			337			***		
Strong lower arid [1]						Weak upper arid [2]						
Strong lower semiarid [1]						Weak lower semiarid [1]						
Weak upper semiarid [1]												

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin]	(Sp): 10.90
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]	24.83
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]	18.98
+ Hyperoceanic (-20<CI<20)	
CI of Currey (1974) [CI=Sp/(1+Lat/3)]	1.20
+ Subcontinental (1.1<CI<1.7)	
Rainfall Index of Lang (1925) [R=P/T]	59.73
+ Semiarid (60>R>40)	
Aridity Index of Martonne (1926) [Ia=P/(T+10)]	37.41
+ Humid (60>Ia>30)	
I of Emberger (1930) [Q=100*P/(Tmax ² -Tmin ²)]	126.13
+ Humid (Q>90)	
I of Dantin & Revenga (1940) [DR=100*T/P]	1.67
+ Humid (2>DR>0)	
Aridity Index of UNEP [I=P/PE]	1.25
+ Humid (I>0.65)	
Potential Erosion I of Fournier (1960) [K=Pi ² /P]	44.48
+ Very low (K<60)	

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)
 + Climate

- + Climate
- + Region
- + Thermic type: 3. Macro-mesothermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.93	0.91	0.77	0.19	0.11	0.06	0.04	0.02	0.07	0.22	0.38	0.64
T-E ratio	9.45	9.05	8.32	7.38	6.30	5.18	4.72	5.90	7.33	8.23	9.00	9.63
Precipitation-effectiveness: 43.54						Temperature-efficiency						90.49
Moisture Index [MI=100*(P-PE)/PE]												25.16
+ B1.Humid low-humid (20<MI<40)												
Index of dryness [DI=100*d/PE]												7.13
+ No deficit (0<DI<16.7)												
Index of humidity [HI=100*s/PE]												32.28
+ Strong surplus (20<HI)												
Potential Evapotranspiration PE												799.80
+ Second mesothermic (712<PE<855)												

