

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

BAILLEN (ESP JAEN)

Altitude: 343 m.

Latitude: 38°6'N Longitude: 3°46'W

Temperature observation period.: 1962-1970 (9)

Rainfall observation period....: 1962-1970 (9)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPI
Jan.	7.90	11.90	3.90	17.10	-1.00	73.0	12.04
Feb.	9.00	13.50	4.40	19.30	-1.00	71.0	15.16
Mar.	12.40	18.10	6.60	24.90	0.70	85.0	33.74
Apr.	15.20	21.20	9.20	29.90	4.40	56.0	52.64
May.	20.80	28.20	13.30	36.10	7.90	48.0	105.50
Jun.	24.40	31.80	17.10	40.60	12.20	20.0	143.15
Jul.	28.80	37.00	20.70	41.80	17.40	3.0	192.39
Aug.	28.20	36.30	20.20	41.40	16.40	5.0	174.46
Sep.	23.90	31.10	16.70	37.90	12.50	29.0	115.52
Oct.	18.80	24.70	12.90	31.50	7.50	56.0	68.22
Nov.	11.20	15.50	7.00	21.80	1.70	66.0	22.77
Dec.	6.60	10.30	2.80	15.20	-3.10	84.0	8.41
Year	17.27	23.30	11.23	29.79	6.30	596	944.00

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	304
Compensated thermicity index.....(Itc):	337
Simple continentality index.....(Ic):	22.2
Diurnality index.....(Id):	16.3
Annual ombrothermic index.....(Io):	2.88
Monthly estival ombrothermic index.....(Ios1):	0.10
Bimonthly estival ombrothermic index.....(Ios2):	0.14
Threemonthly estival ombrothermic index.....(Ios3):	0.34
Fourmonthly estival ombrothermic index.....(Ios4):	0.74
Annual ombro-evaporation index.....(Ioe):	0.37
Annual positive temperature.....(Tp):	2072
Annual negative temperature.....(Tn):	0
Estival temperature.....(Ts):	814
Positive precipitation.....(Pp):	596

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	5	3	1	3	0

Latitudinal Belt...: Low eutemperate

Continentality.....: Continental - Low Subcontinental

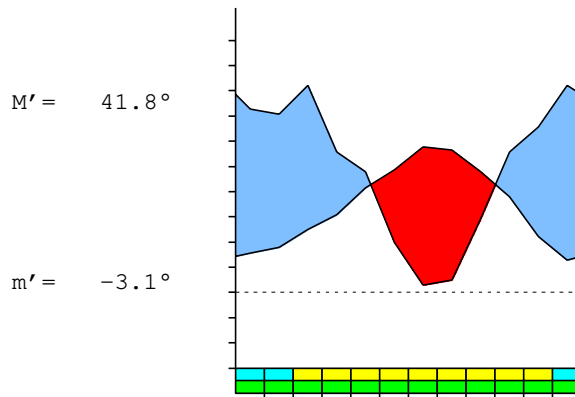
Bioclimate.....: MEDITERRANEAN PLUVISEASONAL-CONTINENTAL

Bioclimatic Belt...: LOW MESOMEDITERRANEAN UPPER DRY

BAILLEN (ESP JAEN)

343 m

P= 596 38° 6'N 3° 46'W 9/9 y.
 T= 17.3° Ic= 22.2 Tp= 2072 Tn= 0
 m= 2.8° M= 10.3° Itc= 337 Io= 2.9



MEDITERRANEAN PLUVISEASONAL-CONTINENTAL
 LOW MESOMEDITERRANEAN UPPER DRY

WATER INDEX CARD

BAILLEN (ESP JAEN)

Altitude: 343 m.

Latitude: 38° 6'N

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jan.	7.9	12	73	0	100	12	0	61	35	5.0
Feb.	9.0	15	71	0	100	15	0	56	46	3.6
Mar.	12.4	34	85	0	100	34	0	51	48	1.5
Apr.	15.2	53	56	0	100	53	0	3	26	0.0
May.	20.8	106	48	-58	42	106	0	0	13	-0.5
Jun.	24.4	143	20	-42	0	62	81	0	6	-0.8
Jul.	28.8	192	3	0	0	3	189	0	3	-0.9
Aug.	28.2	174	5	0	0	5	169	0	2	-0.9
Sep.	23.9	116	29	0	0	29	87	0	1	-0.7
Oct.	18.8	68	56	0	0	56	12	0	0	-0.1
Nov.	11.2	23	66	43	43	23	0	0	0	1.8
Dec.	6.6	8	84	57	100	8	0	19	10	8.9
Year	17.3	944	596	*	*	406	538	190	190	*

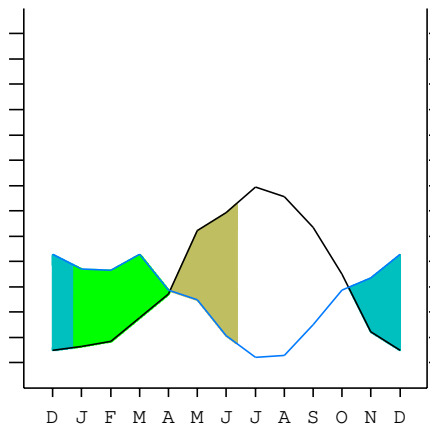
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

BAILLEN (ESP JAEN)

38°6'N 3°46'W 343 m 9/9 y.

T= 17.3 Ic= 22.2 MEDITERRANEAN PLUVISEASONAL-CONTINENTAL
 m= 2.8 Tp= 2072 LOW MESOMEDITERRANEAN
 M= 10.3 Tn= 0 UPPER DRY
 M' = 41.8 Itc= 337
 m' = -3.1 Io= 2.9
 P= 596 mm ———
 PE= 944 mm ———

Imbibing	7 Oct.
Saturation	23 Dec.
Reserve Use	2 Apr.
Deficit	11 Jun.



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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [C2a]
 + Type: C. Continental
 + Subtype: 2. Subcontinental
 + Variant: a. Low

Thermic types [B1.A3]
 + Latitudinal zone: B. Temperate
 + Latitudinal belt: 1. Low eutemperate
 + Thermic type: A. Warm
 + Thermic subtype: 3. Subwarm

Bioclimatic types [B7.3b.5a]
 + Macrobioclimate: B. MEDITERRANEAN
 + Bioclimate: 7. PLUVISEASONAL-CONTINENTAL
 + Bioclimatic variant ..:
 + Thermic type.....: 3. MESOMEDITERRANEAN
 + Thermic subtype.....: b. LOW
 + Ombrothermic type ...: 5. DRY
 + Ombrothermic subtype : a. UPPER
 Bioclimatic Classification: Mehd.Mme.Dry

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 161
 Coldest semester of the year.....(Psw): 435
 Warmest four months period of the year.....(Pcm1): 57
 Following warmest four months period.....(Pcm2): 279
 Positive precipitation dryest 3 months.....(Ppd): 28
 Positive precipitation dryest 2 months.....(Ppd2): 8
 Positive precipitation dryest 1 month.....(Ppd1): 3
 Positive precipitation warmest 3 months.....(Pps): 28
 Positive precipitation warmest 2 months.....(Pps2): 8
 Positive precipitation warmest 1 month.....(Pps1): 3
 Positive precipitation coldest 3 months.....(Ppw): 228
 Positive precipitation coldest 2 months.....(Ppw2): 157
 Positive precipitation coldest 1 month.....(Ppw1): 84

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	228	189	28	151

Seasonal rainfall rhythms: W > P > F > S

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 28.8
 Average coldest month [T].....(Tmin): 6.6
 Maximum temp. warmest month [M].....(Tmmax): 37.0
 Minimum temp. coldest month [m].....(Tmmin): 2.8
 Absolute Max.temp. warmest month [M'].....(Tamax): 41.8
 Absolute Min.temp. coldest month [m'].....(Tamin): -3.1
 First warmest contrasted month [M].....(Tcmax): 37.0 (7)
 First coldest contrasted month [m].....(Tcmin): 20.7 (7)
 Estival temperature.....(Ts): 814
 Positive temperature dryest 3 months.....(Tpd): 814
 Positive temperature dryest 2 months.....(Tpd2): 570
 Positive temperature dryest 1 month.....(Tpd1): 288
 Positive temperature warmest 3 months.....(Tps): 814
 Positive temperature warmest 2 months.....(Tps2): 570
 Positive temperature warmest 1 month.....(Tps1): 288
 Positive temperature coldest 3 months.....(Tpw): 235
 Positive temperature coldest 2 months.....(Tpw2): 145
 Positive temperature coldest 1 month.....(Tpw1): 66

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

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 1.58
 Mediterranean index of July.[PE/P].....(Im1): 64.13
 Mediterranean index of July & August.....(Im2): 45.86
 Mediterranean index of June, July & August....(Im3): 18.21

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	840	730	710	850	560	480	200	30	50	290	560	660
Tp	66	79	90	124	152	208	244	288	282	239	188	112
Io (Iom)	12.7	9.24	7.89	6.85	3.68	2.31	0.82	0.10	0.18	1.21	2.98	5.89
Seasons	Winter			Spring			Summer			Autumn		
Pp(x10)/Tp	2280 / 235			1890 / 484			280 / 814			1510 / 539		
Io (Iot)	9.702			3.905			0.344			2.801		
Semesters	December-May						June-November					
Pp(x10)/Tp	4170 / 719						1790 / 1353					
Io (Iosm)	5.800						1.323					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 5960/2072=2.88 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	840	730	710	850	560	480	200	30	50	290	560	660
Tp [T*10]	66	79	90	124	152	208	244	288	282	239	188	112
Iom [Pp/Tp]	\$\$	924	789	685	368	231	82	10	18	121	298	589
Avm [200-Iom]	***	***	***	***	***	***	118	190	182	79	***	***
Seasons	Winter			Spring			Summer			Autumn		
Pp / Tp	2280 / 235			1890 / 484			280 / 814			1510 / 539		
Iot [Pp/Tp]	970			390			34			280		
Avs E[Avm<200]	***			***			490			***		
Upper ultrahyperarid [2]						Upper hyperarid [1]						
Weak upper arid [1]						Weak lower semiarid [1]						

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin](Sp): 22.20
 CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]: 40.76
 CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]: 36.70
 + Oceanic (20<CI<40)
 CI of Currey (1974) [CI=Sp/(1+Lat/3)]: 1.62
 + Subcontinental (1.1<CI<1.7)
 Rainfall Index of Lang (1925) [R=P/T]: 34.52
 + Steppic (40>R>0)
 Aridity Index of Martonne (1926) [Ia=P/(T+10)]: 21.86
 + Subhumid (30>Ia>20)
 I of Emberger (1930) [Q=100*P/(Tmax²-Tmin²)]: 43.79
 + Semiarid (50>Q>30)
 I of Dantin & Revenga (1940) [DR=100*T/P]: 2.90
 + Semiarid (3>DR>2)
 Aridity Index of UNEP [I=P/PE]: 0.63
 + Subhumid - dry (0.65>I>0.5)
 Potential Erosion I of Fournier (1960) [K=Pi²/P].....: 12.12
 + Very low (K<60)

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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: 3. Macro-mesothermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	0.42	0.39	0.43	0.25	0.18	0.06	0.01	0.01	0.10	0.23	0.34	0.52
T-E ratio	3.56	4.05	5.58	6.84	9.36	10.98	12.96	12.69	10.75	8.46	5.04	2.97
Precipitation-effectiveness: 29.36						Temperature-efficiency: 93.24						
Moisture Index [MI=100*(P-PE)/PE]: -36.86 + D.Semiarid (-66.7<MI<-33.3)												
Index of dryness [DI=100*d/PE]: 57.01 + Strong deficit (33.3<DI)												
Index of humidity [HI=100*s/PE]: 20.15 + Strong surplus (20<HI)												
Potential Evapotranspiration PE: 944.00 + Third mesothermic (855<PE<997)												

