

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

ARROYO CANALES-SEGURA (ESP JAEN)

Altitude: 1240 m.

Latitude: 38°15'N Longitude: 2°37'W

Temperature observation period.: 1963-1970 (8)

Rainfall observation period....: 1963-1970 (8)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPI
Jan.	2.60	6.70	-1.60	14.80	-6.90	197.0	8.33
Feb.	3.60	8.50	-1.40	15.60	-7.80	186.0	11.89
Mar.	5.40	9.60	1.10	17.90	-4.80	130.0	23.06
Apr.	7.80	13.70	2.00	21.90	-3.00	101.0	37.33
May.	12.00	19.60	4.50	27.90	-0.30	57.0	67.94
Jun.	15.70	24.10	7.30	32.30	3.20	65.0	92.81
Jul.	19.80	30.20	9.50	35.60	5.70	11.0	121.63
Aug.	19.50	30.00	9.00	34.10	4.60	12.0	111.90
Sep.	15.90	25.30	6.50	31.90	2.10	53.0	78.97
Oct.	11.20	18.00	4.40	26.40	-1.00	66.0	49.04
Nov.	6.40	11.60	1.20	20.30	-4.90	135.0	22.79
Dec.	1.40	5.90	-3.20	11.80	-9.50	153.0	4.04
Year	10.11	16.93	3.28	24.21	-1.88	1166	629.73

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	128
Compensated thermicity index.....(Itc):	130
Simple continentality index.....(Ic):	18.4
Diurnality index.....(Id):	21.0
Annual ombrothermic index.....(Io):	9.61
Monthly estival ombrothermic index.....(Ios1):	0.56
Bimonthly estival ombrothermic index.....(Ios2):	0.59
Threemonthly estival ombrothermic index.....(Ios3):	1.60
Fourmonthly estival ombrothermic index.....(Ios4):	2.16
Annual ombro-evaporation index.....(Ioe):	0.29
Annual positive temperature.....(Tp):	1213
Annual negative temperature.....(Tn):	0
Estival temperature.....(Ts):	550
Positive precipitation.....(Pp):	1166

N. of	P>4T	P:2T-4T	PT-2T	P<T	T<0
Months	9	1	0	2	0

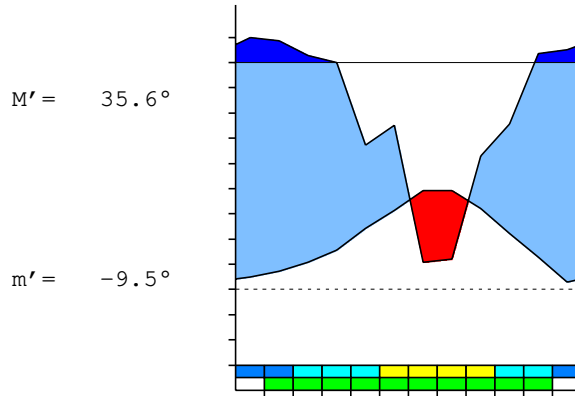
Latitudinal Belt...: Low eutemperate

Continentality.....: Oceanic - Low Semicontinental

Bioclimate.....: MEDITERRANEAN PLUVISEASONAL-OCEANIC

Bioclimatic Belt...: UPPER SUPRAMEDITERRANEAN UPPER HUMID

ARROYO CANALES-SEGURA (ESP JAEN) 1240 m
 P= 1166 38° 15'N 2° 37'W 8/8 y.
 T= 10.1° Ic= 18.4 Tp= 1213 Tn= 0
 m= -3.2° M= 5.9° Itc= 130 Io= 9.6



MEDITERRANEAN PLUVISEASONAL-OCEANIC
 UPPER SUPRAMEDITERRANEAN UPPER HUMID

WATER INDEX CARD ARROYO CANALES-SEGURA (ESP JAEN)
 Altitude: 1240 m. Latitude: 38° 15'N

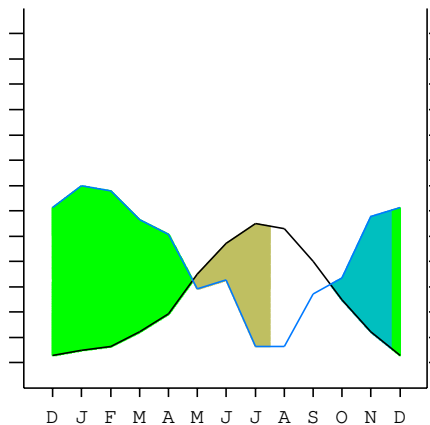
(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jan.	2.6	8	197	0	100	8	0	189	135	22.6
Feb.	3.6	12	186	0	100	12	0	174	155	14.6
Mar.	5.4	23	130	0	100	23	0	107	131	4.6
Apr.	7.8	37	101	0	100	37	0	64	97	1.7
May.	12.0	68	57	-11	89	68	0	0	49	-0.1
Jun.	15.7	93	65	-28	61	93	0	0	24	-0.2
Jul.	19.8	122	11	-61	0	72	49	0	12	-0.9
Aug.	19.5	112	12	0	0	12	100	0	6	-0.8
Sep.	15.9	79	53	0	0	53	26	0	3	-0.3
Oct.	11.2	49	66	17	17	49	0	0	2	0.3
Nov.	6.4	23	135	83	100	23	0	29	15	4.9
Dec.	1.4	4	153	0	100	4	0	149	82	36.8
Year	10.1	630	1166	*	*	454	175	712	712	*

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

ARROYO CANALES-SEGURA (ESP JAEN) 38°15'N 2°37'W 1240 m 8/8 y.

T= 10.1 Ic= 18.4 MEDITERRANEAN PLUVISEASONAL-OCEANIC
 m= -3.2 Tp= 1213 UPPER SUPRAMEDITERRANEAN
 M= 5.9 Tn= 0 UPPER HUMID
 M' = 35.6 Itc= 130
 m' = -9.5 Io= 9.6
 P= 1166 mm
 PE= 630 mm

Imbibing	19 Sep.
Saturation	23 Nov.
Reserve Use	26 Apr.
Deficit	17 Jul.



ARROYO CANALES-SEGURA (ESP JAEN)

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SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [B1a]
 + Type: B. Oceanic
 + Subtype: 1. Semicontinental
 + Variant: a. Low
 Thermic types [B1.B5]
 + Latitudinal zone: B. Temperate
 + Latitudinal belt: 1. Low eutemperate
 + Thermic type: B. Temperate
 + Thermic subtype: 5. Subtemperate
 Bioclimatic types [B8.4a.7a]
 + Macrobioclimate: B. MEDITERRANEAN
 + Bioclimate: 8. PLUVISEASONAL-OCEANIC
 + Bioclimatic variant ..:
 + Thermic type.....: 4. SUPRAMEDITERRANEAN
 + Thermic subtype.....: a. UPPER
 + Ombrothermic type ...: 7. HUMID
 + Ombrothermic subtype : a. UPPER
 Bioclimatic Classification: Mehc.Sme.Hum

ARROYO CANALES-SEGURA (ESP JAEN)

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 264
 Coldest semester of the year.....(Psw): 902
 Warmest four months period of the year.....(Pcm1): 141
 Following warmest four months period.....(Pcm2): 551
 Positive precipitation dryest 3 months.....(Ppd): 76
 Positive precipitation dryest 2 months.....(Ppd2): 23
 Positive precipitation dryest 1 month.....(Ppd1): 11
 Positive precipitation warmest 3 months.....(Pps): 76
 Positive precipitation warmest 2 months.....(Pps2): 23
 Positive precipitation warmest 1 month.....(Pps1): 11
 Positive precipitation coldest 3 months.....(Ppw): 536
 Positive precipitation coldest 2 months.....(Ppw2): 350
 Positive precipitation coldest 1 month.....(Ppw1): 153

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	536	288	88	254

Seasonal rainfall rhythms: W > P > F > S

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 19.8
 Average coldest month [T].....(Tmin): 1.4
 Maximum temp. warmest month [M].....(Tmmax): 30.2
 Minimum temp. coldest month [m].....(Tmmin): -3.2
 Absolute Max.temp. warmest month [M'].....(Tamax): 35.6
 Absolute Min.temp. coldest month [m'].....(Tamin): -9.5
 First warmest contrasted month [M].....(Tcmax): 30.0 (8)
 First coldest contrasted month [m].....(Tcmin): 9.0 (8)
 Estival temperature.....(Ts): 550
 Positive temperature dryest 3 months.....(Tpd): 552
 Positive temperature dryest 2 months.....(Tpd2): 393
 Positive temperature dryest 1 month.....(Tpd1): 198
 Positive temperature warmest 3 months.....(Tps): 552
 Positive temperature warmest 2 months.....(Tps2): 393
 Positive temperature warmest 1 month.....(Tps1): 198
 Positive temperature coldest 3 months.....(Tpw): 76
 Positive temperature coldest 2 months.....(Tpw2): 40
 Positive temperature coldest 1 month.....(Tpw1): 14

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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	
Ultragelid...[M' <=0] (Pf)												
Hypergelid...[M <=0] (Pf)												
Gelid.....[T <=0] (Pf)												
Subgelid.....[m <=0] (Pf)	o	o										o
Pregelid.....[m' <=0] (Pf)	o	o	o	o	o					o	o	o
Agelid.....[m' > 0] (Pf)						o	o	o	o			
HiperAgelid..[all>0] (Pf)						o	o	o	o			

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 0.54
 Mediterranean index of July.[PE/P].....(Im1): 11.06
 Mediterranean index of July & August.....(Im2): 10.15
 Mediterranean index of June, July & August....(Im3): 3.71

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	1530	1970	1860	1300	1010	570	650	110	120	530	660	1350
Tp	14	26	36	54	78	120	157	198	195	159	112	64
Io (Iom)	109	75.8	51.7	24.1	12.9	4.75	4.14	0.56	0.62	3.33	5.89	21.1
Seasons	Winter			Spring			Summer			Autumn		
Pp(x10)/Tp	5360 / 76			2880 / 252			880 / 550			2540 / 335		
Io (Iot)	70.53			11.43			1.600			7.582		
Semesters	December-May						June-November					
Pp(x10)/Tp	8240 / 328						3420 / 885					
Io (Iosm)	25.12						3.864					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 11660/1213=9.61 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	1530	1970	1860	1300	1010	570	650	110	120	530	660	1350
Tp [T*10]	14	26	36	54	78	120	157	198	195	159	112	64
Iom [Pp/Tp]	\$\$	\$\$	\$\$	\$\$	\$\$	475	414	56	62	333	589	\$\$
Avm [200-Iom]	***	***	***	***	***	***	***	144	138	***	***	***
Seasons	Winter			Spring			Summer			Autumn		
Pp / Tp	5360 / 76			2880 / 252			880 / 550			2540 / 335		
Iot [Pp/Tp]	\$\$			1143			160			758		
Avs E[Avm<200]	***			***			***			***		
Weak lower arid [2]												

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin](Sp): 18.40
 CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]: 30.13
 CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]: 27.93
 + Oceanic (20<CI<40)
 CI of Currey (1974) [CI=Sp/(1+Lat/3)]: 1.34
 + Subcontinental (1.1<CI<1.7)
 Rainfall Index of Lang (1925) [R=P/T]: 115.35
 + Temperate humid (160>R>100)
 Aridity Index of Martonne (1926) [Ia=P/(T+10)]: 57.99
 + Humid (60>Ia>30)
 I of Emberger (1930) [Q=100*P/(Tmax²-Tmin²)]: 129.30
 + Humid (Q>90)
 I of Dantin & Revenga (1940) [DR=100*T/P]: 0.87
 + Humid (2>DR>0)
 Aridity Index of UNEP [I=P/PE]: 1.85
 + Humid (I>0.65)
 Potential Erosion I of Fournier (1960) [K=Pi²/P].....: 33.28
 + 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. Termoxerotheric (Mediterranean warm)
 + Thermic type: 5. Meso-microthermic

Thornthwaite (1948)												
	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
P-E ratio	1.57	1.41	0.88	0.61	0.28	0.29	0.04	0.04	0.23	0.34	0.88	1.25
T-E ratio	1.17	1.62	2.43	3.51	5.40	7.06	8.91	8.77	7.15	5.04	2.88	0.63
Precipitation-effectiveness: 78.04						Temperature-efficiency: 54.58						
Moisture Index [MI=100*(P-PE)/PE]: 85.16 + B4.Humid highest-humid (80<MI<100)												
Index of dryness [DI=100*d/PE]: 27.82 + Moderate deficit (16.7<DI<33.3)												
Index of humidity [HI=100*s/PE]: 112.99 + Strong surplus (20<HI)												
Potential Evapotranspiration PE: 629.73 + First mesothermic (570<PE<712)												

