

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 14/02/2020)

GIMINELLS (ESP LERIDA) Altitude: 254 m.

Latitude: 41°40'N Longitude: 0°24'E

Temperature observation period.: 1956-1969 (14)

Rainfall observation period....: 1956-1969 (14)

(C/mm)	Ti	Mi	mi	M'i	m'i	Pi	EPI
Jan.	6.10	9.90	2.30	16.10	-4.20	24.0	8.89
Feb.	8.30	13.10	3.50	18.50	-3.40	30.0	15.07
Mar.	12.00	17.70	6.30	23.00	0.50	26.0	35.63
Apr.	15.00	21.20	8.70	28.20	2.60	29.0	56.81
May.	20.00	26.90	13.00	33.00	7.20	35.0	104.68
Jun.	24.00	30.40	17.60	37.00	11.00	35.0	144.24
Jul.	27.00	32.70	21.20	39.30	15.00	13.0	178.56
Aug.	26.30	31.40	21.20	36.70	15.10	23.0	158.13
Sep.	22.40	27.20	17.70	32.50	11.40	45.0	104.94
Oct.	16.40	20.70	12.10	26.20	5.20	67.0	56.15
Nov.	9.70	13.50	5.80	19.40	-0.90	47.0	19.69
Dec.	6.40	10.00	2.80	16.50	-3.60	33.0	9.30
Year	16.13	21.23	11.02	27.20	4.66	407	892.09

BIOCLIMATIC INDICES AND DIAGNOSIS

Thermicity index.....(It):	283
Compensated thermicity index.....(Itc):	298
Simple continentality index.....(Ic):	20.9
Diurnality index.....(Id):	13.9
Annual ombrothermic index.....(Io):	2.10
Monthly estival ombrothermic index.....(Ios1):	0.48
Bimonthly estival ombrothermic index.....(Ios2):	0.68
Threemonthly estival ombrothermic index.....(Ios3):	0.92
Fourmonthly estival ombrothermic index.....(Ios4):	1.09
Annual ombro-evaporation index.....(Ioe):	0.46
Annual positive temperature.....(Tp):	1936
Annual negative temperature.....(Tn):	0
Estival temperature.....(Ts):	773
Positive precipitation.....(Pp):	407

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

Latitudinal Belt...: Low Eutemperate

Continentalty.....: Oceanic - High Semicontinental

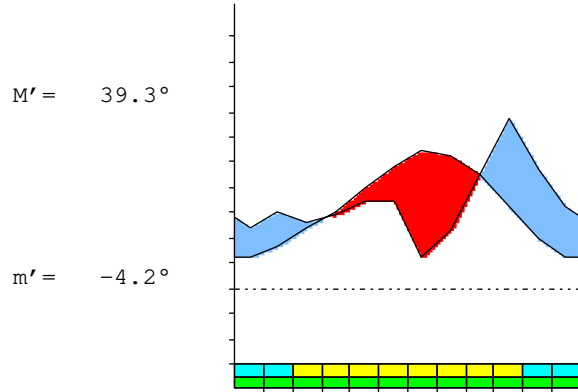
Bioclimate.....: MEDITERRANEAN PLUVISEASONAL-OCEANIC

Bioclimatic Belt...: LOW MESOMEDITERRANEAN LOW DRY

GIMINELLS (ESP LERIDA)

254 m

P= 407 41° 40'N 0° 24'E 14/14 y.
 T= 16.1 ° Ic= 20.9 Tp= 1936 Tn= 0
 m= 2.3 ° M= 9.9 ° Itc= 298 Io= 2.1



MEDITERRANEAN PLUVISEASONAL-OCEANIC
 LOW MESOMEDITERRANEAN LOW DRY

WATER INDEX CARD GIMINELLS (ESP LERIDA)
 Altitude: 254 m. Latitude: 41° 40'N

(C/mm)	T	PE	P	VR	R	RE	DF	SP	DR	HC
Jan.	6.1	9	24	15	77	9	0	0	0	1.7
Feb.	8.3	15	30	15	92	15	0	0	0	0.9
Mar.	12.0	36	26	-10	82	36	0	0	0	-0.2
Apr.	15.0	57	29	-28	54	57	0	0	0	-0.4
May.	20.0	105	35	-54	0	89	15	0	0	-0.6
Jun.	24.0	144	35	0	0	35	109	0	0	-0.7
Jul.	27.0	179	13	0	0	13	166	0	0	-0.9
Aug.	26.3	158	23	0	0	23	135	0	0	-0.8
Sep.	22.4	105	45	0	0	45	60	0	0	-0.5
Oct.	16.4	56	67	11	11	56	0	0	0	0.1
Nov.	9.7	20	47	27	38	20	0	0	0	1.3
Dec.	6.4	9	33	24	62	9	0	0	0	2.5
Year	16.1	892	407	*	*	407	485	0	0	*

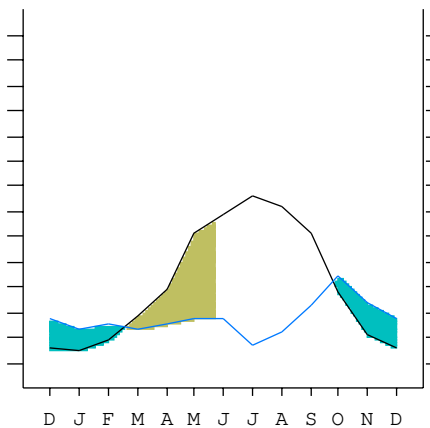
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

GIMINELLS (ESP LERIDA)

41°40'N 0°24'E 254 m 14/14 y.

T= 16.1 Ic= 20.9 MEDITERRANEAN PLUVISEASONAL-OCEANIC
 m= 2.3 Tp= 1936 LOW MESOMEDITERRANEAN
 M= 9.9 Tn= 0 LOW DRY
 M' = 39.3 Itc= 298
 m' = -4.2 Io= 2.1
 P= 407 mm ———
 PE= 892 mm ———

Imbibing	26 Sep.
Saturation	19 Feb.
Reserve Use	24 May.
Deficit	



GIMINELLS (ESP LERIDA)

Latitude: 41°40'N Longitude: 0°24'E Altitude: 254 m

SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continentality Index [B1b]
 + Type: B. Oceanic
 + Subtype: 1. Semicontinental
 + Variant: b. High
 Thermic types [B1.A3]
 + Latitudinal zone: B. Temperate
 + Latitudinal belt: 1. Low Eutemperate
 + Thermic type: A. Warm
 + Thermic subtype: 3. Subwarm
 Bioclimatic types [B8.3b.5b]
 + Macrobioclimate: B. MEDITERRANEAN
 + Bioclimate: 8. PLUVISEASONAL-OCEANIC
 + Bioclimatic variant .:
 + Thermic type.....: 3. MESOMEDITERRANEAN
 + Thermic subtype.....: b. LOW
 + Ombrothermic type ...: 5. DRY
 + Ombrothermic subtype : b. LOW
 Bioclimatic ClassificationMepo.Mme.Dry.Sec

GIMINELLS (ESP LERIDA)

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PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 218
 Coldest semester of the year.....(Psw): 189
 Warmest four months period of the year.....(Pcm1): 116
 Following warmest four months period.....(Pcm2): 171
 Positive precipitation dryest 3 months.....(Ppd): 71
 Positive precipitation dryest 2 months.....(Ppd2): 36
 Positive precipitation dryest 1 month.....(Ppd1): 13
 Positive precipitation warmest 3 months.....(Pps): 71
 Positive precipitation warmest 2 months.....(Pps2): 36
 Positive precipitation warmest 1 month.....(Pps1): 13
 Positive precipitation coldest 3 months.....(Ppw): 87
 Positive precipitation coldest 2 months.....(Ppw2): 57
 Positive precipitation coldest 1 month.....(Ppw1): 24

Seasons	Winter Tr1-W	Spring Tr2-P	Summer Tr3-S	Automn Tr4-F
Rainfall	87	90	71	159

Seasonal rainfall rhythms: F > P > W > S

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 27.0
 Average coldest month [T].....(Tmin): 6.1
 Maximum temp. warmest month [M].....(Tmmax): 32.7
 Minimum temp. coldest month [m].....(Tmmin): 2.3
 Absolute Max.temp. warmest month [M'].....(Tamax): 39.3
 Absolute Min.temp. coldest month [m'].....(Tamin): -4.2
 First warmest contrasted month [M].....(Tcmax): 26.9 (5)
 First coldest contrasted month [m].....(Tcmin): 13.0 (5)
 Estival temperature.....(Ts): 773
 Positive temperature dryest 3 months.....(Tpd): 773
 Positive temperature dryest 2 months.....(Tpd2): 533
 Positive temperature dryest 1 month.....(Tpd1): 270
 Positive temperature warmest 3 months.....(Tps): 773
 Positive temperature warmest 2 months.....(Tps2): 533
 Positive temperature warmest 1 month.....(Tps1): 270
 Positive temperature coldest 3 months.....(Tpw): 208
 Positive temperature coldest 2 months.....(Tpw2): 125
 Positive temperature coldest 1 month.....(Tpw1): 61

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

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 2.19
 Mediterranean index of July.[PE/P].....(Im1): 13.74
 Mediterranean index of July & August.....(Im2): 9.35
 Mediterranean index of June, July & August....(Im3): 6.77

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp(x10)	330	240	300	260	290	350	350	130	230	450	670	470
Tp	64	61	83	120	150	200	240	270	263	224	164	97
Io (Iom)	5.16	3.93	3.61	2.17	1.93	1.75	1.46	0.48	0.87	2.01	4.09	4.85
Seasons	Winter			Spring			Summer			Autumn		
Pp(x10)/Tp	870 / 208			900 / 470			710 / 773			1590 / 485		
Io (Iot)	4.183			1.915			0.918			3.278		
Semesters	December-May						June-November					
Pp(x10)/Tp	1770 / 678						2300 / 1258					
Io (Iosm)	2.611						1.828					

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 4070/1936=2.10 **There is No Yearly Aridity**

Months	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
Pp [P*10]	330	240	300	260	290	350	350	130	230	450	670	470
Tp [T*10]	64	61	83	120	150	200	240	270	263	224	164	97
Iom [Pp/Tp]	516	393	361	217	193	175	146	48	87	201	409	485
Avm [200-Iom]	***	***	***	***	7	25	54	152	113	***	***	***
Seasons	Winter			Spring			Summer			Autumn		
Pp / Tp	870 / 208			900 / 470			710 / 773			1590 / 485		
Iot [Pp/Tp]	418			191			92			328		
Avs E[Avm<200]	***			***			319			***		
Strong lower arid [1]						Weak upper arid [2]						
Weak lower semiarid [1]						Weak upper semiarid [2]						

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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin]	(Sp): 20.90
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]	33.04
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]	31.29
+ Oceanic (20<CI<40)	
CI of Currey (1974) [CI=Sp/(1+Lat/3)]	1.40
+ Subcontinental (1.1<CI<1.7)	
Rainfall Index of Lang (1925) [R=P/T]	25.23
+ Steppic (40>R>0)	
Aridity Index of Martonne (1926) [Ia=P/(T+10)]	15.57
+ Semiarid -mediterranean- (20>Ia>15)	
I of Emberger (1930) [Q=100*P/(Tmax ² -Tmin ²)]	38.25
+ Semiarid (50>Q>30)	
I of Dantin & Revenga (1940) [DR=100*T/P]	3.96
+ Arid (6>DR>3)	
Aridity Index of UNEP [I=P/PE]	0.46
+ Semiarid (0.5>Im>0.2)	
Potencial Erosion I of Fournier (1960) [K=Pi ² /P].....	11.03
+ 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	0.13	0.16	0.12	0.12	0.13	0.12	0.04	0.07	0.16	0.29	0.24	0.18
T-E ratio	2.74	3.74	5.40	6.75	9.00	10.80	12.15	11.83	10.08	7.38	4.36	2.88
Precipitation-effectiveness: 17.61						Temperature-efficiency: 87.12						
Moisture Index [MI=100*(P-PE)/PE]												
+ D.Semiarid (-66.7<MI<-33.3)												
Index of dryness [DI=100*d/PE]												
+ Strong deficit (33.3<DI)												
Index of humidity [HI=100*s/PE]												
+ No surplus (0<HI<10)												
Potential Evapotranspiration PE												
+ Third mesothermic (855<PE<997)												

