

Phytosociological Research Center

www.globalbioclimatics.org

Worldwide Bioclimatic Classification System

Prof.Dr. Salvador Rivas-Martinez

TACAAGLE (ARGENTINA)

Altitude: 87 m.

Latitude: 24° 58'S Longitude: 58° 49'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. | 28.70 | 36.30 | 21.20 | 42.80 | 11.50 | 118.0 | 179.14 |
| Feb. | 28.10 | 35.10 | 21.40 | 43.00 | 9.00 | 116.0 | 149.79 |
| Mar. | 25.80 | 32.60 | 19.60 | 40.10 | 9.40 | 162.0 | 131.92 |
| Apr. | 23.30 | 29.70 | 16.80 | 38.50 | 2.70 | 79.0 | 89.74 |
| May. | 20.80 | 26.70 | 14.50 | 35.50 | 0.50 | 74.0 | 63.22 |
| Jun. | 18.30 | 23.85 | 12.20 | 34.00 | -4.00 | 87.0 | 40.82 |
| Jul. | 17.70 | 23.80 | 11.50 | 34.50 | -1.40 | 38.0 | 39.16 |
| Aug. | 20.50 | 27.50 | 12.70 | 41.00 | -1.50 | 19.0 | 63.83 |
| Sep. | 21.90 | 29.20 | 14.60 | 41.00 | -1.21 | 56.0 | 78.10 |
| Oct. | 24.00 | 31.20 | 16.90 | 43.30 | 4.00 | 95.0 | 112.05 |
| Nov. | 25.80 | 33.00 | 18.30 | 42.40 | 8.30 | 144.0 | 139.46 |
| Dec. | 28.10 | 35.60 | 20.00 | 44.00 | 9.40 | 68.0 | 175.00 |
| Year | 23.58 | 30.38 | 16.64 | 40.01 | 3.89 | 1056 | 1262.2 |

BIOCLIMATIC INDICES AND DIAGNOSIS

| | |
|--|------|
| Thermicity index.....(It): | 589 |
| Compensated thermicity index.....(Itc): | 589 |
| Simple continentality index.....(Ic): | 11.0 |
| Diurnality index.....(Id): | 15.6 |
| Annual ombrothermic index.....(Io): | 3.73 |
| Monthly dry ombrothermic index.....(Iod1): | 0.93 |
| Bimonthly dry ombrothermic index.....(Iod2): | 1.49 |
| Three monthly dry ombrothermic index.....(Iod3): | 1.88 |
| Four monthly dry ombrothermic index.....(Iod4): | 2.55 |
| Annual ombro-evaporation index.....(Ioe): | 0.84 |
| Annual positive temperature.....(Tp): | 2830 |
| Annual negative temperature.....(Tn): | -0 |
| Dry station temperature.....(Td): | 601 |
| Positive precipitation.....(Pp): | 1056 |

| N. of | P>4T | P:2T-4T | PT-2T | P<T | T<0° |
|--------|------|---------|-------|-----|------|
| Months | 5 | 6 | 0 | 1 | 0 |

Latitudinal Belt...: Subtropical

Continentalty.....: Hyperoceanic - Low Subhyperoceanic

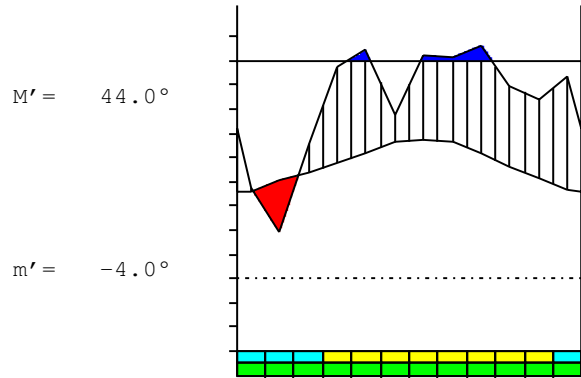
Bioclimate(Variant): TROPICAL PLUVISEASONAL (PLUVISEROTIN, MESOPHYTIC)

Bioclimatic belt...: UPPER THERMOTROPICAL LOW SUBHUMID

TACAAGLE (ARGENTINA)

87 m

P= 1056 24° 58'S 58° 49'W 10/10 y.
 T= 23.6 ° Ic= 11.0 Tp= 2830 Tn= -0
 m= 11.5 ° M= 23.8 ° Itc= 589 Io= 3.7



**TROPICAL PLUVISEASONAL (PLUVISEROTIN)
 UPPER THERMOTROPICAL LOW SUBHUMID**

WATER INDEX CARD

TACAAGLE (ARGENTINA)

Altitude: 87 m.

Latitude: 24° 58'S

| (C/mm) | T | PE | P | VR | R | RE | DF | SP | DR | HC |
|-------------|------|------|------|-----|----|------|-----|----|----|------|
| Jul. | 17.7 | 39 | 38 | -1 | 75 | 39 | 0 | 0 | 0 | 0.0 |
| Aug. | 20.5 | 64 | 19 | -45 | 30 | 64 | 0 | 0 | 0 | -0.7 |
| Sep. | 21.9 | 78 | 56 | -22 | 8 | 78 | 0 | 0 | 0 | -0.2 |
| Oct. | 24.0 | 112 | 95 | -8 | 0 | 103 | 9 | 0 | 0 | -0.1 |
| Nov. | 25.8 | 139 | 144 | 4 | 4 | 139 | 0 | 0 | 0 | 0.0 |
| Dec. | 28.1 | 175 | 68 | -4 | 0 | 72 | 102 | 0 | 0 | -0.6 |
| Jan. | 28.7 | 179 | 118 | 0 | 0 | 118 | 61 | 0 | 0 | -0.3 |
| Feb. | 28.1 | 150 | 116 | 0 | 0 | 116 | 34 | 0 | 0 | -0.2 |
| Mar. | 25.8 | 132 | 162 | 30 | 30 | 132 | 0 | 0 | 0 | 0.2 |
| Apr. | 23.3 | 90 | 79 | -11 | 19 | 90 | 0 | 0 | 0 | -0.1 |
| May. | 20.8 | 63 | 74 | 11 | 30 | 63 | 0 | 0 | 0 | 0.1 |
| Jun. | 18.3 | 41 | 87 | 46 | 76 | 41 | 0 | 0 | 0 | 1.1 |
| Year | 23.6 | 1262 | 1056 | * | * | 1056 | 206 | 0 | 0 | * |

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

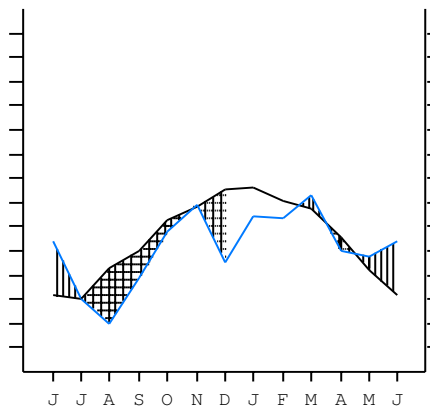
TACAAGLE (ARGENTINA)

24°58'S 58°49'W 87 m 10/10 y.

T= 23.6 Ic= 11.0
 m= 11.5 Tp= 2830
 M= 23.8 Tn= -0
 M' = 44.0 Itc= 589
 m' = -4.0 Io= 3.7
 P= 1056 mm ———
 PE= 1262 mm ———

**TROPICAL PLUVISEASONAL (PLUVISEROTIN)
 UPPER THERMOTROPICAL
 LOW SUBHUMID**

| | | |
|---|-------------|---------|
| | Imbibing | 15 Apr. |
| ■ | Saturation | |
| ▨ | Reserve Use | 23 Mar. |
| □ | Deficit | 2 Dec. |



TACAAGLE (ARGENTINA)

Latitude: 24°58'S Longitude: 58°49'W Altitude: 87 m

SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [A3b]
 + Type: A. Hyperoceanic
 + Subtype: 3. Subhyperoceanic
 + Variant: b. Low

Thermic types [A3.A2]
 + Latitudinal zone: A. Warm
 + Latitudinal belt: 3. Subtropical
 + Thermic type: A. Warm
 + Thermic subtype: 2. Warm

Bioclimatic types [A4e.2a.6b]
 + Macrobioclimate: A. TROPICAL
 + Bioclimate: 4. PLUVISEASONAL
 + Bioclimatic variant .: e. PLUVISEROTIN, MESOPHYTIC
 + Thermic type.....: 2. THERMOTROPICAL
 + Thermic subtype.....: a. UPPER
 + Ombrothermic type ...: 6. SUBHUMID
 + Ombrothermic subtype : b. LOW

Bioclimatic Classification: Trde (Pse) .Ttr. Shu

TACAAGLE (ARGENTINA)

Latitude: 24°58'S Longitude: 58°49'W Altitude: 87 m

PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 703
 Coldest semester of the year.....(Psw): 353
 Warmest four months period of the year.....(Pcm1): 446
 Following warmest four months period.....(Pcm2): 402
 Positive precipitation dryest 3 months.....(Ppd): 113
 Positive precipitation dryest 2 months.....(Ppd2): 57
 Positive precipitation dryest 1 month.....(Ppd1): 19
 Positive precipitation warmest 3 months.....(Pps): 302
 Positive precipitation warmest 2 months.....(Pps2): 234
 Positive precipitation warmest 1 month.....(Pps1): 118
 Positive precipitation coldest 3 months.....(Ppw): 144
 Positive precipitation coldest 2 months.....(Ppw2): 125
 Positive precipitation coldest 1 month.....(Ppw1): 38

| Seasons | Winter Tr1-W | Spring Tr2-P | Summer Tr3-S | Autumn Tr4-F |
|----------|-----------------|-----------------|-----------------|-----------------|
| Rainfall | 144 | 295 | 302 | 315 |

Seasonal rainfall rhythms: F > S > P > W**TACAAGLE (ARGENTINA)**

Latitude: 24°58'S Longitude: 58°49'W Altitude: 87 m

TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 28.7
 Average coldest month [T].....(Tmin): 17.7
 Maximum temp. warmest month [M].....(Tmmax): 36.3
 Minimum temp. coldest month [m].....(Tmmin): 11.5
 Absolute Max.temp. warmest month [M'].....(Tamax): 44.0
 Absolute Min.temp. coldest month [m'].....(Tamin): -4.0
 First warmest contrasted month [M].....(Tcmax): 35.6 (12)
 First coldest contrasted month [m].....(Tcmin): 20.0 (12)
 Dry station temperature.....(Td): 601
 Positive temperature dryest 3 months.....(Tpd): 601
 Positive temperature dryest 2 months.....(Tpd2): 382
 Positive temperature dryest 1 month.....(Tpd1): 205
 Positive temperature warmest 3 months.....(Tps): 849
 Positive temperature warmest 2 months.....(Tps2): 568
 Positive temperature warmest 1 month.....(Tps1): 287
 Positive temperature coldest 3 months.....(Tpw): 565
 Positive temperature coldest 2 months.....(Tpw2): 360
 Positive temperature coldest 1 month.....(Tpwl): 177

TACAAGLE (ARGENTINA)

Latitude: 24°58'S Longitude: 58°49'W Altitude: 87 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 | | | |
| Agelid.....[m' > 0] (Pf) | o | o | o | o | o | | | | | o | o | o |
| HiperAgelid..[all>0] (Pf) | o | o | o | o | o | | | | | o | o | o |

TACAAGLE (ARGENTINA)

Latitude: 24°58'S Longitude: 58°49'W Altitude: 87 m

OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 1.20
Mediterranean index of January.....(Im1): 1.52
Mediterranean index of January & February....(Im2): 1.41
Mediterranean index of December to February...(Im3): 1.67

| Months | Dec. | Jan. | Feb. | Mar. | Apr. | May. | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. |
|------------------|---------------------|------|------|---------------|------|------|----------------------|------|------|---------------|------|------|
| Pp(x10) | 680 | 1180 | 1160 | 1620 | 790 | 740 | 870 | 380 | 190 | 560 | 950 | 1440 |
| Tp | 281 | 287 | 281 | 258 | 233 | 208 | 183 | 177 | 205 | 219 | 240 | 258 |
| Io (Iom) | 2.42 | 4.11 | 4.13 | 6.28 | 3.39 | 3.56 | 4.75 | 2.15 | 0.93 | 2.56 | 3.96 | 5.58 |
| Seasons | Summer | | | Autumn | | | Winter | | | Spring | | |
| Pp(x10)/Tp | 3020 / 849 | | | 3150 / 699 | | | 1440 / 565 | | | 2950 / 717 | | |
| Io (Iot) | 3.557 | | | 4.506 | | | 2.549 | | | 4.114 | | |
| Semesters | December-May | | | | | | June-November | | | | | |
| Pp(x10)/Tp | 6170 / 1548 | | | | | | 4390 / 1282 | | | | | |
| Io (Iosm) | 3.986 | | | | | | 3.424 | | | | | |

TACAAGLE (ARGENTINA)

Latitude: 24°58'S Longitude: 58°49'W Altitude: 87 m

BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin](Sp): 11.00
CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]: 23.90
CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]: 18.63
+ Hyperoceanic (-20<CI<20)
CI of Currey (1974) [CI=Sp/(1+Lat/3)]: 1.18
+ Subcontinental (1.1<CI<1.7)
Rainfall Index of Lang (1925) [R=P/T]: 44.78
+ Semiarid (60>R>40)
Aridity Index of Martonne (1926) [Ia=P/(T+10)]: 31.44
+ Humid (60>Ia>30)
I of Emberger (1930) [Q=100*P/(Tmmax²-Tmmin²)]: 89.08
+ Subhumid (90>Q>50)
I of Dantin & Revenga (1940) [DR=100*T/P]: 2.23
+ Semiarid (3>DR>2)
Aridity Index of UNEP [I=P/PE]: 0.84
+ Humid (I>0.65)
Potential Erosion I of Fournier (1960) [K=Pi²/P].....: 24.85
+ Very low (K<60)

TACAAGLE (ARGENTINA)

Latitude: 24°58'S Longitude: 58°49'W Altitude: 87 m

BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)

- + Climate: A. Warm and temperate warm
- + Region: 3. Termoxerotic (Mediterranean warm)
- + Thermic type: 2. Macrothermic

| Thorntthwaite (1948) | | | | | | | | | | | | |
|--|-------|-------|-------|-------|------|-------------------------------------|------|------|------|-------|-------|-------|
| | Jan. | Feb. | Mar. | Apr. | May. | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. | Dec. |
| P-E ratio | 0.41 | 0.41 | 0.62 | 0.30 | 0.29 | 0.37 | 0.15 | 0.06 | 0.21 | 0.36 | 0.54 | 0.22 |
| T-E ratio | 12.92 | 12.65 | 11.61 | 10.48 | 9.36 | 8.23 | 7.97 | 9.23 | 9.85 | 10.80 | 11.61 | 12.65 |
| Precipitation-effectiveness: 39.43 | | | | | | Temperature-efficiency: 127.35 | | | | | | |
| Moisture Index [MI=100*(P-PE)/PE]: -16.34 + Cl.Subhumid dry (-33.3<MI<0) Index of dryness [DI=100*d/PE]: 16.34 + No deficit (0<DI<16.7) Index of humidity [HI=100*s/PE]: 0.00 + No surplus (0<HI<10) Potential Evapotranspiration PE: 1262.23 + Forth mesothermic (997<PE<1440) | | | | | | | | | | | | |

