

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

CANAVIEIRAS (BRAZIL)

Altitude: 4 m.

Latitude: 15°40'S Longitude: 38°57'W

Temperature observation period.: 1961-1990 (30)

Rainfall observation period....: 1961-1990 (30)

| (C/mm) | Ti | Mi | mi | M'i | m'i | Pi | EPI |
|--------|-------|-------|-------|-------|-------|-------|--------|
| Jan. | 25.90 | 29.50 | 20.40 | 32.10 | 14.00 | 173.0 | 141.97 |
| Feb. | 25.90 | 29.40 | 22.00 | 31.80 | 18.30 | 150.0 | 124.22 |
| Mar. | 25.70 | 29.40 | 21.90 | 32.40 | 18.70 | 145.0 | 130.05 |
| Apr. | 24.90 | 28.80 | 21.40 | 31.60 | 17.70 | 145.0 | 110.43 |
| May. | 22.10 | 28.00 | 20.10 | 30.30 | 17.70 | 147.0 | 77.33 |
| Jun. | 22.30 | 26.70 | 18.80 | 29.30 | 12.60 | 149.0 | 75.38 |
| Jul. | 21.90 | 26.10 | 18.20 | 29.40 | 13.00 | 178.0 | 74.49 |
| Aug. | 22.10 | 26.30 | 17.90 | 29.70 | 13.50 | 105.0 | 80.48 |
| Sep. | 23.20 | 26.80 | 19.10 | 29.90 | 14.30 | 127.0 | 91.23 |
| Oct. | 24.10 | 27.40 | 20.40 | 30.30 | 15.70 | 167.0 | 109.37 |
| Nov. | 24.80 | 28.10 | 21.40 | 30.70 | 16.40 | 154.0 | 119.14 |
| Dec. | 25.60 | 29.00 | 21.90 | 34.40 | 18.30 | 121.0 | 138.33 |
| Year | 24.04 | 27.96 | 20.29 | 30.99 | 15.85 | 1761 | 1272.4 |

BIOCLIMATIC INDICES AND DIAGNOSIS

| | |
|--|------|
| Thermicity index.....(It): | 683 |
| Compensated thermicity index.....(Itc): | 683 |
| Simple continentality index.....(Ic): | 4.0 |
| Diurnality index.....(Id): | 9.1 |
| Annual ombrothermic index.....(Io): | 6.10 |
| Monthly dry ombrothermic index.....(Iod1): | 4.75 |
| Bimonthly dry ombrothermic index.....(Iod2): | 5.12 |
| Three monthly dry ombrothermic index.....(Iod3): | 5.75 |
| Four monthly dry ombrothermic index.....(Iod4): | 6.32 |
| Annual ombro-evaporation index.....(Ioe): | 1.02 |
| Annual positive temperature.....(Tp): | 2885 |
| Annual negative temperature.....(Tn): | 0 |
| Dry station temperature.....(Td): | 694 |
| Positive precipitation.....(Pp): | 1761 |

| N. of | P>4T | P:2T-4T | PT-2T | P<T | T<0 |
|--------|------|---------|-------|-----|-----|
| Months | 12 | 0 | 0 | 0 | 0 |

Latitudinal Belt...: Eutropical

Continentalty.....: Hyperoceanic - Low Ultrahyperoceanic

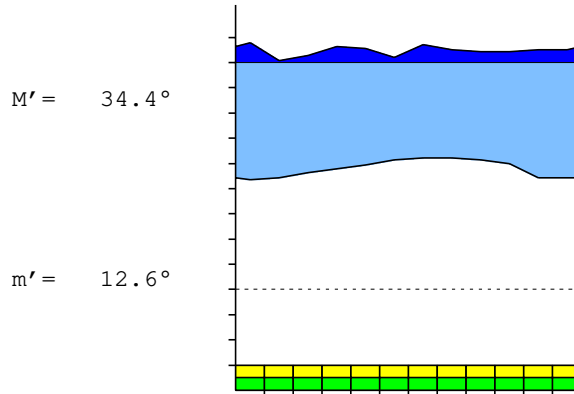
Bioclimate(Variant): TROPICAL PLUVIAL (HYGROPHYTIC)

Bioclimatic Belt...: UPPER INFRATROPICAL LOW HUMID

CANAVIEIRAS (BRAZIL)

4 m

P= 1761 15° 40' S 38° 57' W 30/30 y.
 T= 24.0° Ic= 4.0 Tp= 2885 Tn= 0
 m= 18.2° M= 26.1° Itc= 683 Io= 6.1



TROPICAL PLUVIAL (HYGROPHYTIC)
 UPPER INFRATROPICAL LOW HUMID

WATER INDEX CARD

CANAVIEIRAS (BRAZIL)

Altitude: 4 m.

Latitude: 15° 40' S

| (C/mm) | T | PE | P | VR | R | RE | DF | SP | DR | HC |
|--------|------|------|------|-----|-----|------|----|-----|-----|------|
| Jul. | 21.9 | 74 | 178 | 0 | 100 | 74 | 0 | 104 | 82 | 1.3 |
| Aug. | 22.1 | 80 | 105 | 0 | 100 | 80 | 0 | 25 | 53 | 0.3 |
| Sep. | 23.2 | 91 | 127 | 0 | 100 | 91 | 0 | 36 | 45 | 0.3 |
| Oct. | 24.1 | 109 | 167 | 0 | 100 | 109 | 0 | 58 | 51 | 0.5 |
| Nov. | 24.8 | 119 | 154 | 0 | 100 | 119 | 0 | 35 | 43 | 0.2 |
| Dec. | 25.6 | 138 | 121 | -17 | 83 | 138 | 0 | 0 | 21 | -0.1 |
| Jan. | 25.9 | 142 | 173 | 17 | 100 | 142 | 0 | 14 | 18 | 0.2 |
| Feb. | 25.9 | 124 | 150 | 0 | 100 | 124 | 0 | 26 | 22 | 0.2 |
| Mar. | 25.7 | 130 | 145 | 0 | 100 | 130 | 0 | 15 | 18 | 0.1 |
| Apr. | 24.9 | 110 | 145 | 0 | 100 | 110 | 0 | 35 | 26 | 0.3 |
| May. | 22.1 | 77 | 147 | 0 | 100 | 77 | 0 | 70 | 48 | 0.9 |
| Jun. | 22.3 | 75 | 149 | 0 | 100 | 75 | 0 | 74 | 61 | 0.9 |
| Year | 24.0 | 1272 | 1761 | * | * | 1272 | 0 | 489 | 489 | * |

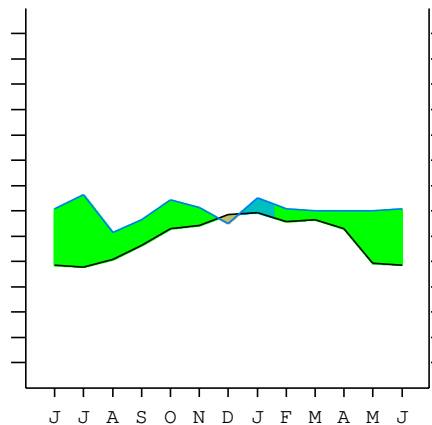
R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

CANAVIEIRAS (BRAZIL)

15°40' S 38°57' W 4 m 30/30 y.

T= 24.0 Ic= 4.0 TROPICAL PLUVIAL (HYGROPHYTIC)
 m= 18.2 Tp= 2885 UPPER INFRATROPICAL
 M= 26.1 Tn= 0 LOW HUMID
 M' = 34.4 Itc= 683
 m' = 12.6 Io= 6.1
 P= 1761 mm ———
 PE= 1272 mm ———

| | |
|-------------|---------|
| Imbibing | 11 Dec. |
| Saturation | 17 Jan. |
| Reserve Use | 21 Nov. |
| Deficit | |



CANAVIEIRAS (BRAZIL)

Latitude: 15°40'S Longitude: 38°57'W Altitude: 4 m

SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continental Index [A1b]
 + Type: A. Hyperoceanic
 + Subtype: 1. Ultrahyperoceanic
 + Variant: b. Low

Thermic types [A2.A1]
 + Latitudinal zone: A. Warm
 + Latitudinal belt: 2. Eutropical
 + Thermic type: A. Warm
 + Thermic subtype: 1. Torrid

Bioclimatic types [A5.1a.7b]
 + Macrobioclimate: A. TROPICAL
 + Bioclimate: 5. PLUVIAL
 + Bioclimatic variant ..:
 + Thermic type.....: 1. INFRATROPICAL
 + Thermic subtype.....: a. UPPER
 + Ombrothermic type ...: 7. HUMID
 + Ombrothermic subtype : b. LOW

Bioclimatic Classification: Trhd.Itr.Hum

CANAVIEIRAS (BRAZIL)

Latitude: 15°40'S Longitude: 38°57'W Altitude: 4 m

PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 888
 Coldest semester of the year.....(Psw): 873
 Warmest four months period of the year.....(Pcm1): 589
 Following warmest four months period.....(Pcm2): 619
 Positive precipitation dryest 3 months.....(Ppd): 399
 Positive precipitation dryest 2 months.....(Ppd2): 232
 Positive precipitation dryest 1 month.....(Ppd1): 105
 Positive precipitation warmest 3 months.....(Pps): 468
 Positive precipitation warmest 2 months.....(Pps2): 323
 Positive precipitation warmest 1 month.....(Pps1): 173
 Positive precipitation coldest 3 months.....(Ppw): 474
 Positive precipitation coldest 2 months.....(Ppw2): 283
 Positive precipitation coldest 1 month.....(Ppw1): 178

| Seasons | Jun+Jul+Aug Ttr3-3 | Sep+Oct+Nov Ttr4-4 | Dec+Jan+Feb Ttr1-1 | Mar+Apr+May Ttr2-2 |
|----------|-----------------------|-----------------------|-----------------------|-----------------------|
| Rainfall | 432 | 448 | 444 | 437 |

Tropical rainfall rhythms: 4 > 1 > 2 > 3

CANAVIEIRAS (BRAZIL)

Latitude: 15°40'S Longitude: 38°57'W Altitude: 4 m

TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): 25.9
 Average coldest month [T].....(Tmin): 21.9
 Maximum temp. warmest month [M].....(Tmmax): 29.5
 Minimum temp. coldest month [m].....(Tmmin): 17.9
 Absolute Max.temp. warmest month [M'].....(Tamax): 34.4
 Absolute Min.temp. coldest month [m'].....(Tamin): 12.6
 First warmest contrasted month [M].....(Tcmax): 29.5 (1)
 First coldest contrasted month [m].....(Tcmin): 20.4 (1)
 Dry station temperature.....(Td): 694
 Positive temperature dryest 3 months.....(Tpd): 694
 Positive temperature dryest 2 months.....(Tpd2): 453
 Positive temperature dryest 1 month.....(Tpd1): 221
 Positive temperature warmest 3 months.....(Tps): 775
 Positive temperature warmest 2 months.....(Tps2): 518
 Positive temperature warmest 1 month.....(Tps1): 259
 Positive temperature coldest 3 months.....(Tpw): 663
 Positive temperature coldest 2 months.....(Tpw2): 440
 Positive temperature coldest 1 month.....(Tpw1): 219

CANAVIEIRAS (BRAZIL)

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

CANAVIEIRAS (BRAZIL)

Latitude: 15°40'S Longitude: 38°57'W Altitude: 4 m

OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 0.72
 Mediterranean index of January.....(Im1): No
 Mediterranean index of January & February.....(Im2): No
 Mediterranean index of December to February...(Im3): No

| Months | Dec. | Jan. | Feb. | Mar. | Apr. | May. | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. |
|------------|--------------|------|------|-------------|------|------|---------------|------|------|-------------|------|------|
| Pp(x10) | 1210 | 1730 | 1500 | 1450 | 1450 | 1470 | 1490 | 1780 | 1050 | 1270 | 1670 | 1540 |
| Tp | 256 | 259 | 259 | 257 | 249 | 221 | 223 | 219 | 221 | 232 | 241 | 248 |
| Io (Iom) | 4.73 | 6.68 | 5.79 | 5.64 | 5.82 | 6.65 | 6.68 | 8.13 | 4.75 | 5.47 | 6.93 | 6.21 |
| Seasons | Dec+Jan+Feb | | | Mar+Apr+May | | | Jun+Jul+Aug | | | Sep+Oct+Nov | | |
| Pp(x10)/Tp | 4440 / 774 | | | 4370 / 727 | | | 4320 / 663 | | | 4480 / 721 | | |
| Io (Iot) | 5.736 | | | 6.011 | | | 6.516 | | | 6.214 | | |
| Semesters | December-May | | | | | | June-November | | | | | |
| Pp(x10)/Tp | 8810 / 1501 | | | | | | 8800 / 1384 | | | | | |
| Io (Iosm) | 5.869 | | | | | | 6.358 | | | | | |

CANAVIEIRAS (BRAZIL)

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 17610/2885=6.10 **There is No Yearly Aridity**

| Months | Dec. | Jan. | Feb. | Mar. | Apr. | May. | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. |
|-----------------|-------------|------|------|-------------|------|------|-------------|------|------|-------------|------|------|
| Pp [P*10] | 1210 | 1730 | 1500 | 1450 | 1450 | 1470 | 1490 | 1780 | 1050 | 1270 | 1670 | 1540 |
| Tp [T*10] | 256 | 259 | 259 | 257 | 249 | 221 | 223 | 219 | 221 | 232 | 241 | 248 |
| Iom [Pp/Tp] | 473 | 668 | 579 | 564 | 582 | 665 | 668 | 813 | 475 | 547 | 693 | 621 |
| Avm [200-Iom] | *** | *** | *** | *** | *** | *** | *** | *** | *** | *** | *** | *** |
| Seasons | Dec+Jan+Feb | | | Mar+Apr+May | | | Jun+Jul+Aug | | | Sep+Oct+Nov | | |
| Pp / Tp | 4440 / 774 | | | 4370 / 727 | | | 4320 / 663 | | | 4480 / 721 | | |
| Iot [Pp/Tp] | 574 | | | 601 | | | 652 | | | 621 | | |
| Avs E [Avm<200] | *** | | | *** | | | *** | | | *** | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

CANAVIEIRAS (BRAZIL)

Latitude: 15°40'S Longitude: 38°57'W Altitude: 4 m

BIOCLIMATIC INDICES I

| | | |
|--|-------|--------|
| CI of Supan (1884) [Tmax-Tmin] | (Sp): | 4.00 |
| CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4] | | 4.78 |
| CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14] | | 1.70 |
| + Hyperoceanic (-20<CI<20) | | |
| CI of Currey (1974) [CI=Sp/(1+Lat/3)] | | 0.64 |
| + Oceanic (0.6<CI<1.1) | | |
| Rainfall Index of Lang (1925) [R=P/T] | | 73.25 |
| + Temperate warm (100>R>60) | | |
| Aridity Index of Martonne (1926) [Ia=P/(T+10)] | | 51.73 |
| + Humid (60>Ia>30) | | |
| I of Emberger (1930) [Q=100*P/(Tmax ² -Tmin ²)] | | 320.27 |
| + Humid (Q>90) | | |
| I of Dantin & Revenga (1940) [DR=100*T/P] | | 1.37 |
| + Humid (2>DR>0) | | |
| Aridity Index of UNEP [I=P/PE] | | 1.38 |
| + Humid (I>0.65) | | |
| Potential Erosion I of Fournier (1960) [K=Pi ² /P] | | 17.99 |
| + Very low (K<60) | | |

CANAVIEIRAS (BRAZIL)

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)

- + Climate
- + Region
- + Thermic type: 1. Megathermic

| Thornthwaite (1948) | | | | | | | | | | | | | |
|---|-------|-------|-------|-------|------|-------|------------------------------|------|-------|-------|-------|---------|--------|
| | Jan. | Feb. | Mar. | Apr. | May. | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. | Dec. | |
| P-E ratio | 0.66 | 0.57 | 0.55 | 0.56 | 0.61 | 0.61 | 0.75 | 0.42 | 0.50 | 0.67 | 0.60 | 0.45 | |
| T-E ratio | 11.65 | 11.65 | 11.57 | 11.20 | 9.95 | 10.03 | 9.85 | 9.95 | 10.44 | 10.85 | 11.16 | 11.52 | |
| Precipitation-effectiveness: | 69.46 | | | | | | Temperature-efficiency | | | | | | 129.82 |
| Moisture Index [MI=100*(P-PE)/PE] | | | | | | | | | | | | 38.40 | |
| + B1.Humid low-humid (20<MI<40) | | | | | | | | | | | | | |
| Index of dryness [DI=100*d/PE] | | | | | | | | | | | | 0.00 | |
| + No deficit (0<DI<16.7) | | | | | | | | | | | | | |
| Index of humidity [HI=100*s/PE] | | | | | | | | | | | | 38.39 | |
| + Strong surplus (20<HI) | | | | | | | | | | | | | |
| Potential Evapotranspiration PE | | | | | | | | | | | | 1272.41 | |
| + Forth mesothermic (997<PE<1440) | | | | | | | | | | | | | |

