PN-AAJ-979

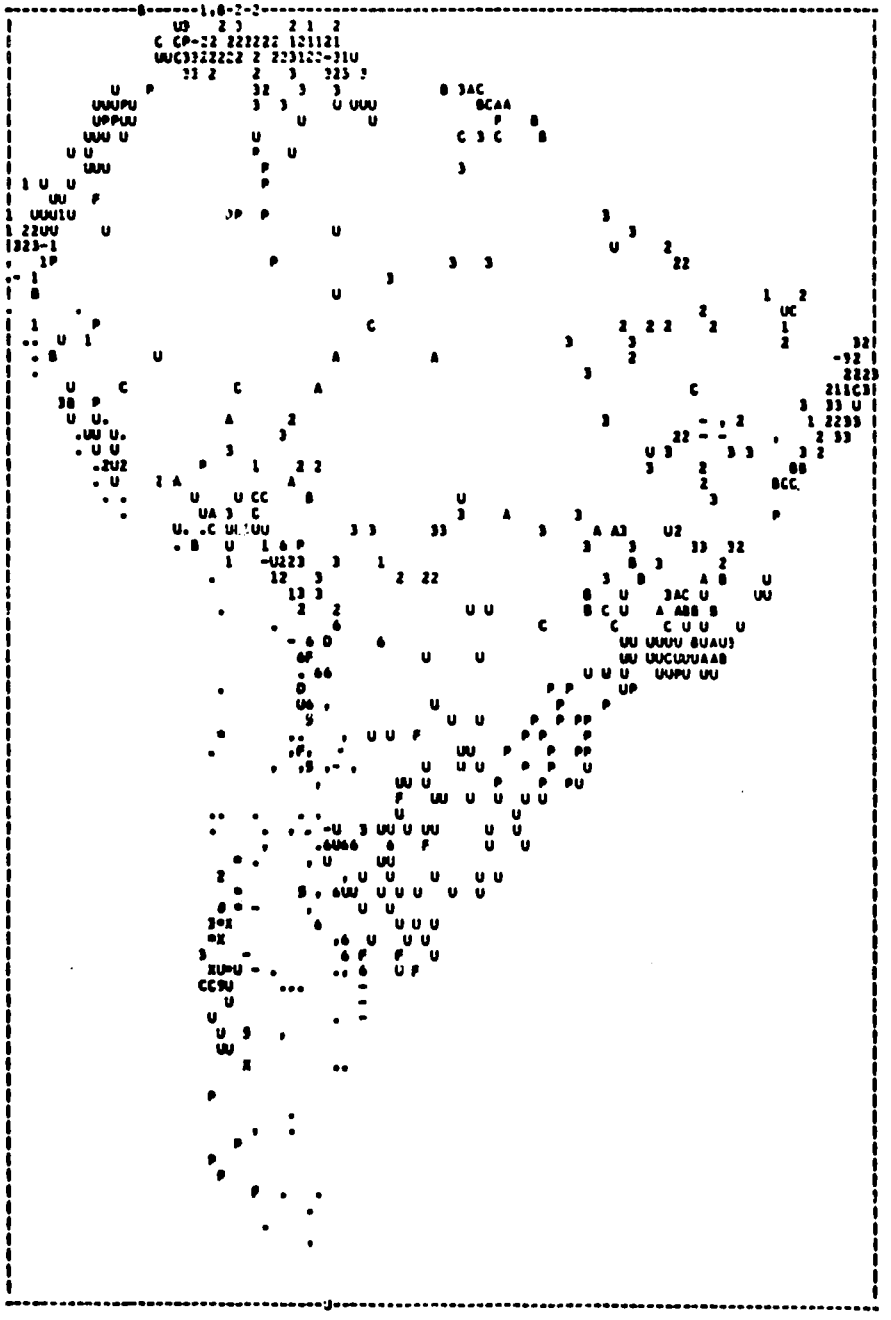
New York State College of Agriculture and Life Sciences
Cornell University
Department of Agronomy

Soil Management Support Services (SMSS)
Soil Conservation Service
U.S. Department of Agriculture

A. VAN WAMBEKE

SOUTH AMERICA

SMSS Technical Monograph # 2 (1981)



SOIL MOISTURE AND TEMPERATURE REGIMES

All reported statements are those of the author, and not those of the Agency for International Development, Cornell University, or the Soil Conservation Service of the United States Department of Agriculture.

This publication can be obtained from:

Program Leader
Soil Management Support Service
Soil Conservation Service
P.O. Box 2890
Washington, DC 20013
USA

CALCULATED

SOIL MOISTURE AND TEMPERATURE

REGIMES OF

SOUTH AMERICA

A Compilation of Soil Climatic
Regimes calculated by using a mathematical
model developed by F. Newhall
(Soil Conservation Service, USDA, 1972)

A. Van Wambeke
Professor of Soil Science

This publication has been produced
in cooperation with Soil Management Support Services (SMSS) from
funding by the Agency for International Development (AID)
under PASA No. AG/DSB-1129-5-79

Ithaca, NY

November 1981

TABLE OF CONTENTS

	Page
Information included in this publication	1
How to use this publication	1
Sources of climatic data	2
Warning	2
Acknowledgements	3
The use of soil temperature and moisture regimes in soil classification	4
Classes of soil moisture regimes	7
Aridic, torric	8
Udic	9
Ustic	10
Xeric	11
Classes of soil temperature regimes	12
Classes of tentative subdivisions of moisture regimes	14
Brief description of tentative moisture regime subdivisions	16
COUNTRY TABLES	20
Argentina	
Bolivia	
Brazil	
Chili	
Colombia	
Ecuador	
French Guiana	
Guyana	
Paraguay	
Peru	
Surinan	
Uruguay	
Venezuela	
MOISTURE REGIME TABLES:	
Aridic tropustic	
Dry tempudic	
Dry tropudic	
Dry xeric	
Extreme aridic	
Perudic	
Typic Aridic	
Typic tempustic	
Typic tropustic	
Typic udic	
Typic xeric	
Udic tropustic	
Weak aridic	
Wet tempustic	
Xeric tempustic	
Explanation of Data in the Tables	21
Country codes	24
Bibliography	25

INFORMATION INCLUDED IN THIS PUBLICATION.

This publication includes MAPS which show the distribution of soil moisture and temperature regimes in South America. The regimes have been calculated using atmospheric data as inputs of a computation model developed by F. Newhall (1972).

Several types of TABLES are also included: country tables on white paper and moisture regime tables on yellow paper.

For each country, two kinds of tables list the stations for which climatic parameters were calculated. The stations are ordered alphabetically.

In the first type of table the moisture and temperature regimes are given as they are presently defined in "Soil Taxonomy".

In the second type of table, a tentative subdivision of the moisture regime is given together with quantitative information of moisture and temperature conditions in the soil.

The moisture regime tables are subdivided sequentially according to temperature regime, country and alphabet. They allow to check similarities of soil climatic conditions throughout South America.

The other chapters give definitions of moisture and temperature regimes, and provide keys to the identification of the subdivisions as support of the table and map information.

HOW TO USE THIS PUBLICATION.

The moisture and temperature regime of a particular station can be found either on the map when its location is known or in the tables referring to country listings. The country tables provide information on climatic parameters of interest.

In order to know whether similar soil climatic regimes exist on the continent and at which stations, the yellow pages at the end of the publication should be consulted.

Explanations of the items included in the tables are given at the end of this publication.

SOURCES OF CLIMATIC DATA.

The computation of soil climatic parameters and their classification is based on very heterogeneous sources of input. Most of them came from publications and reports issued in the various countries. Some data were supplied by contributors to the soil climatic study. In most instances the data input referred to monthly averages over several years. A few stations were included where the input data related to one year only. In this case a two digit number following the station's name usually indicates the year of the observation.

For this reason the data input differs from Newhall's requirement to calculate probabilities of occurrence to determine the climatic regime of a particular soil. The model which was used in this publication assumes that the type of input would be dominant in most years. It was felt that the broad range of data input (months) and the exploratory nature of the survey did not require the statistical precision of day-by-day estimates of moisture and temperature conditions in the soil.

The bibliography gives the origin of most input data used in the computations. The acknowledgment section informs about the institutions and individuals who made climatic data available.

WARNING

The calculated moisture regime is only valid for soils which are well drained, where water can freely percolate through the profiles. No Aquic moisture regimes are indicated on the map and this publication does not provide information on poor drainage conditions which may exist in the field, and may modify the calculated moisture regime drastically.

The mathematical model considers all rainfall to be effective and to enter the soil, without considering losses by runoff or gains by run-on. In semi-arid environments with open vegetation, run-off may considerably change the moisture conditions in the soils, making them drier than the calculation would indicate.

The calculations are made for deep soils in which root penetration is not restricted by pans or contacts at shallow depth. As a rule the model uses a profile deep enough to store 200 mm of water between permanent wilting point and field capacity.

Finally the computation assumes that all months have 30 days, and that a year only has a total of 360 days.

ACKNOWLEDGEMENTS

The compilation of soil moisture regime data and the preparation of maps in this publication are the result of several short periods of activities spread over approximately 10 years. Many individuals and institutions contributed to this work which reached a state where it was considered to be of possible interest to others.

The contribution of Dr. Franklin Newhall is gratefully acknowledged for allowing to transcribe part of his moisture regime program into Fortran. The rationale of his mathematical model is the basis of this publication.

There were many institutions which helped with climatic data. We received data bases on tape from Utah State University, from the Centro Internacional de Agricultura Tropical (CIAT) and from the University of Ghent, Belgium.

Several individuals interested in the use of climate in soil classification collected information from reports and archives for inclusion in the compilation of maps and tables. Major contributors to these inputs were:

Mr. Walter Luzio, Universidad de Chile, Santiago, Chili
Dr. Anibal Rosales, Universidad Central de Venezuela, Maracay, Venezuela
Dr. Carlos Scoppa, Instituto Nacional de Technologia Agropecuaria, Castelar, Argentina

Two computer programmers worked actively in keeping track of the data files and linking the computation and mapping programs into one coherent package. We wish to thank John Lottey and Mitch Schwartz for their efforts. Many input data were also patiently keypunched on cards at the University of Ghent. Mr. B. Porreye's contribution is gratefully acknowledged.

Typing of the text was very effectively accomplished by Judi Eastburn from dictations which probably were not always easily understandable.

Maps were drawn by Kathy O'Loughlin and Mark Powell.

Finally, the U. S. Agency for International Development (AID) and the Soil Management Support Services Program (SMSS) of the Soil Conservation Service provided funds for this publication.

All are heartily thanked for their support and encouragement.

THE USE OF SOIL TEMPERATURE AND MOISTURE REGIMES IN SOIL CLASSIFICATION

The definitions of the taxa in Soil Taxonomy (1975) include a number of climatic parameters of soils which are used at different categorical levels. One of the reasons given for the use of soil climatic data is to make the taxa meaningful for interpretation purposes and to create units defined in such a way that major soil limitations for plant growth are implied in the system.

Another reason for including soil climates is that they are the causes of many other properties. Furthermore, some soil characteristics are only meaningful when they are considered in a limited area restricted to a defined soil climate. Examples are umbric epipedons which indicate certain soil conditions in tropical areas. Soil climate therefore has a powerful differentiating effectiveness and may be more suitable than other properties for creating kingdoms within the classification system.

A third advantage of introducing soil climatic data is that uniform, extensive geographic areas may be recognized on small scale maps. They facilitate the preparation of generalized soil maps that can be easily interpreted, particularly for crops which are climatically restricted to certain areas.

In spite of the advantages and reasons to introduce soil climatic properties in the system, many disadvantages exist. The difficulties are mainly operational and relate to the limited amount of information on climate usually available to soil surveyors. Field observations on soil conditions as related to temperature and moisture are often lacking and many criteria depend on seasonally changing variables which need observations for extended periods of time.

The lack of precision and accuracy in the data related to soil moisture regimes in the tropics should not be a barrier for existing information, although sketchy, to reach users who have to make decisions on land use. The purpose of using incomplete data is to reduce the risks of decisions, not to eliminate them completely. Information for which the limitations are known may perhaps lead to better decisions than those arrived at with no information at all. The objective of this study is to extract from climatic observations what is useful for predicting soil moisture regimes and to delineate the areas where comparable soil climatic conditions may occur.

One of these methods is based on mathematical models which simulate the water movement in soils under changing weather conditions.

Franklin Newhall's Methods of Computation of Soil Moisture Regime

The model which is used to compute moisture regimes according to Soil Taxonomy is comparable to the model developed by Franklin Newhall (1972). It considers an hydrological profile retaining 200 ml of available water divided into 8 layers. Layers two and three form what is called the moisture control section.

Franklin Newhall's system is designed to serve the preliminary identification of moisture regimes in areas where climatic data are limited and where information on temperature and rainfall are only available on a monthly basis. Potential evapotranspiration is introduced in the model following Thornthwaite's method for its calculation.

The low degree of detail of the input data does not allow accurate estimates of soil potential for crop production. The program cannot predict crop growth during its various development stages in one season. These prediction models need almost daily or hourly inputs.

Franklin Newhall's model nevertheless provides a rough method to estimate moisture regimes, especially for areas where only approximate estimates are needed. It should be pointed out that the criteria and the soil moisture regime classes are only intended to be used for subdividing soil taxa at different levels of Soil Taxonomy, and not to create a new climatic classification.

The model used in this study differs from Newhall's 1972 method in that it does not calculate probabilities.

Definitions of Soil Moisture Regimes

The definitions of the soil moisture regimes which are used in this publication are those of the original text of Soil Taxonomy (1975). The computation does not consider soils that have restricted drainage and, therefore, the aquic moisture regime is not included in this study.

Limitations of the Model

The present computations used the temperature and rainfall data obtained from various sources. The monthly data are usually averages over many years. This type of input tends to reduce intensity of the extremes which occur when data of individual years are used in the computation. Therefore conclusions from these calculations should only be taken with care, after checking probabilities of occurrence for stations where monthly rainfall data in each year are available.

In the present computation, Thornthwaite's potential evapotranspiration was taken for estimating the removal of water from the soil. In all instances the air/soil temperature was calculated by adding 2.5 degrees celcius to the mean annual air temperature and the amplitude of temperature variation at 50 cm depth between winter and summer was reduced by 33% of the difference between air temperatures for the same seasons. The season months were December, January, and February or June, July, and August for winter or summer depending on the hemisphere.

Moisture regimes are defined usually on the basis of conditions existing in the moisture control section which occurs below the surface horizons in the profile. The topsoil is not considered. For this reason immediate interpretation on the availability of water for plants at a certain time of the year is not recommended without additional information on the moisture conditions prevailing in the upper part of the profiles. The same is true for deep horizons from which crops may extract water.

Moisture Regimes of South America

The computation was made for 1100 stations. The sources of the observations were very heterogeneous, but appeared to be adequate for the level of accuracy to be obtained.

The output data are summarized in tables which list the stations alphabetically for each country.

Tentative Subdivision of the Moisture Regimes

Claims have been made that the five classes recognized for moisture regimes are not sufficiently uniform for interpretation purposes.

A tentative system of subdividing moisture regimes was developed in 1976 and included into the computer program. A map showing the distribution of these subdivisions is included. It provides a means to examine new critical limits and test the definitions on the basis of possible correlations with vegetation or cropping areas.

The tentative key for the subdivisions accepts without any changes the criteria used for defining the five highest level classes. No attempt has been made to change the present definitions of the five moisture regimes: aridic, xeric, ustic, udic and perudic. The subdivisions, therefore, are to be evaluated keeping this restriction in mind. They are perhaps not the best that could be developed when major modifications to Soil Taxonomy would be considered.

The key leading to subdivisions of the existing moisture regimes is given in this publication on a tentative basis. The criteria that are used are assumed to occur in most years, at least six out of ten.

The ustic and udic moisture regimes have been separated into two subclasses on the basis of iso or non-iso conditions for temperature, thus recognizing tropustic and tempustic regimes. The tempustic and tropustic regimes are subdivided following different systems in each case. In the tempustic subclass the concentration of rainfall in summer or winter is taken into account.

The udic moisture regime is only separated into tempudic and tropudic when the period of dryness in the moisture control section exceeds one month. All other udic regimes, except perudic, are called typic udic.

CLASSES OF SOIL MOISTURE REGIMES

The moisture regimes are defined in terms of the ground-water level and in terms of the presence or absence of water held at a tension <15 bars in the moisture control section by periods of the year. It is assumed in the definitions that the soil supports whatever vegetation it is capable of supporting. In other words, it is in crops, grass, or native vegetation; it is not being fallowed to increase the amount of stored moisture, nor is it being irrigated by man. These cultural practices affect the soil moisture condition as long as they are continued.

It has been conventional to think in terms of three soil moisture regimes. In one, the soil is saturated. In another, the amount of water is enough to cause leaching and, in the third, no leaching occurs. In the leaching regime some water moves through the soil at some time during the year and moves on down to the moist substratum. In the nonleaching regime, water moves into the soil but is withdrawn by evapotranspiration, leaving precipitated carbonates and more soluble salts. Between these two regimes there is another possible one in which there is alternation from year to year; leaching occurs in some years but not in all. For consideration of the losses of soluble materials or their accumulation in ca, cs, or sa horizons, these concepts are adequate. For the understanding of biological processes, they leave much to be desired. A soil can be subject to leaching in the winter when it is too cold for optimum biologic activity, and it can be too dry in most of the summer for significant biologic activity. The result is a relatively wide carbon–nitrogen ratio.

The soil moisture regime, as the term is used here, refers to the presence or absence either of ground water or of water held at a tension <15 bars in the soil or in specific horizons by periods of the year. Water held at a tension of 15 bars or more is not available to keep most mesophytic plants alive. The availability of water also is affected by dissolved salts. A soil may be saturated with water that is too salty to be available to most plants, but it would seem better to call such a soil salty rather than dry. Consequently, we consider a horizon to be dry when the moisture tension is 15 bars or more. If water is held at a tension of <15 bars but more than zero, we consider the horizon to be moist. A soil may be continuously moist in some or all horizons throughout the year or for some part of the year. It may be moist in winter and dry in summer or the reverse. In the northern hemisphere, summer refers to the months of June, July, and August, and winter means December, January, and February. A soil or a horizon is considered to be saturated with water when water stands in an unlined borehole close enough to the soil surface or to the horizon in question that the capillary fringe [17] reaches the surface or the top of the horizon.

Aridic

Torric

-These terms are used for the same moisture regime but in different categories of the taxonomy.

In the aridic (torric) moisture regime, the moisture control section in most years is

1. Dry in all parts more than half the time (cumulative) that the soil temperature at a depth of 50 cm is above 5° C; and
2. Never moist in some or all parts for as long as 90 consecutive days when the soil temperature at a depth of 50 cm is above 8° C.

Soils that have an aridic or a torric moisture regime are normally in arid climates. A few are in semiarid climates and either have physical properties that keep them dry, such as a crusty surface that virtually precludes infiltration of water, or they are very shallow over bedrock. There is little or no leaching in these moisture regimes, and soluble salts accumulate in the soil if there is a source of them. Figure 9 illustrates climatic data in a region where the soils have aridic or torric moisture regimes.

The limits of soil temperature exclude from these moisture regimes the very cold and dry regions of Greenland and adjacent islands. Such fragmentary data are available on the soils of those regions that no provision is made for their moisture regimes in this taxonomy.

Udic

—The udic (L. *udus*, humid) moisture regime implies that in most years the soil moisture control section is not dry in any part for as long as 90 days (cumulative). If the mean annual soil temperature is lower than 22° C and if the mean winter and mean summer soil temperatures at a depth of 50 cm differ by 5° C or more, the soil moisture control section is not dry in all parts for as long as 45 consecutive days in the 4 months that follow the summer solstice in 6 or more years out of 10. In addition, the udic moisture regime requires, except for short periods, a three-phase system, solid-liquid-gas, in part, but not necessarily in all, of the soil when the soil temperature is above 5° C.

The udic moisture regime is common to the soils of humid climates that have well-distributed rainfall or that have enough rain in summer that the amount of stored moisture plus rainfall is approximately equal to or exceeds the amount of evapotranspiration. Water moves down through the soil at some time in most years.

If precipitation exceeds evapotranspiration in all months of most years, there are occasional brief periods when some stored moisture is used, but the moisture tension rarely becomes as great as 1 bar in the soil moisture control section. The water moves through the soil in all months that it is not frozen. This extremely wet moisture regime is called "perudic" (L. *per*, throughout in time, L. *udus*, moist). The formative element *ud* is used in the names of most taxa to indicate either a udic or a perudic regime. The term "perudic" is not used in names of taxa, but is used in the text if it is relevant to the genesis of the soils.

Figures 10 and 11 illustrate climatic data in regions where soils have udic and perudic moisture regimes, respectively. Note that on the monthly basis, the perudic regime shows a surplus every month of the year. Obviously, if calculations were made on a daily basis, there would be short periods of withdrawal.

Ustic

The ustic (L. *ustus*, burnt, implying dryness) moisture regime is intermediate between the aridic and the udic regime. The concept is one of limited moisture, but the moisture is present at a time when conditions are suitable for plant growth. The ustic moisture regime is not applied to soils that have cryic or pergelic temperature regimes, which are defined later.

If the mean annual soil temperature is 22° C or higher or if the mean summer and winter soil temperatures differ by <5° C at a depth of 50 cm, the soil moisture control section in the ustic moisture regime is dry in some or all parts for 90 or more cumulative days in most years. But the moisture control section is moist in some part for more than 180 cumulative days, or it is continuously moist in some part for at least 90 consecutive days.

If the mean annual soil temperature is lower than 22° C and if the mean summer and winter soil temperatures differ by 5° C or more at a depth of 50 cm, the soil moisture control section in the ustic regime is dry in some or all parts for 90 or more cumulative days in most years. But it is not dry in all parts for more than half the time that the soil temperature is higher than 5° C at a depth of 50 cm (the aridic and torric regimes). Also, it is not dry in all parts for as long as 45 consecutive days in the 4 months that follow the summer solstice in 6 or more years out of 10 if the moisture control section is moist in all parts for 45 or more consecutive days in the 4 months that follow the winter solstice in 6 or more years out of 10 (xeric regime). Figure 12 illustrates climatic data in a region where the soils have ustic moisture regimes.

In tropical and subtropical regions that have either one or two dry seasons, summer and winter have little meaning. In those regions, the ustic regime is that typified in a monsoon climate that has at least one rainy season of 3 months or more. In temperate regions of subhumid or semiarid climates, the rainy seasons are usually spring and summer or spring and fall, but never winter. Native plants are mostly annuals or they have a dormant period while the soil is dry.

Xeric

—The xeric moisture regime (Gr. *xeros*, dry) is that typified in Mediterranean climates, where winters are moist and cool and summers are warm and dry. The moisture, coming in winter when potential evapotranspiration is at a minimum, is particularly effective for leaching. In a xeric moisture regime, the soil moisture control section is dry in all parts for 45 or more consecutive days within the 4 months that follow the summer solstice in 6 or more years out of 10. It is moist in all parts for 45 or more consecutive days within the 4 months that follow the winter solstice in 6 or more years out of 10. The moisture control section is moist in some part more than half the time, cumulative, that the soil temperature at a depth of 50 cm is higher than 5° C, or in 6 or more years out of 10 it is moist in some part for at least 90 consecutive days when the soil temperature at a depth of 50 cm is continuously higher than 8° C. In addition, the mean annual soil temperature is lower than 22° C, and mean summer and mean winter soil temperatures differ by 5° C or more at a depth of 50 cm or at a lithic or paralithic contact, whichever is shallower. Figure 13 gives climatic data that typify the xeric moisture regime.

CLASSES OF SOIL TEMPERATURE REGIMES

The following soil temperature regimes are used in defining classes at various categoric levels in the taxonomy.

Pergelic (L. *per*, throughout in time and space, and L. *gelare*, to freeze; connoting permanent frost).—Soils with a pergelic temperature regime have mean annual temperature lower than 0° C. These are soils that have permafrost if they are moist or dry frost if excess water is not present. It seems likely that the moist and the dry pergelic regimes should be defined separately, but at present we have only fragmentary data on the dry soils of very high latitudes. Plate 8A shows a soil that has a pergelic temperature regime. Ice wedges and lenses are normal in such soils in the United States.

Cryic (Gr. *kryos*, coldness; connoting very cold soils).—In this regime soils have a mean annual temperature higher than 0° C (32° F) but lower than 8° C (47° F).

1. In mineral soils, the mean summer temperature for June, July, and August at a depth of 50 cm or at a lithic or paralithic contact, whichever is shallower, is as follows:
   a. If the soil is not saturated with water during some part of the summer and
      (1) There is no O horizon, lower than 15° C (59° F);
      (2) There is an O horizon, lower than 8° C (47° F);
   b. If the soil is saturated with water during some part of the summer and
      (1) There is no O horizon, lower than 13° C (55° F);
      (2) There is an O horizon or a histic epipedon, lower than 6° C (43° F).
2. In organic soils, either
   a. The soil is frozen in some layer within the control section in most years about 2 months after the summer solstice; that is, the soil is very cold in winter but warms up slightly in summer; or
   b. The soil is not frozen in most years below a depth of 5 cm; that is, the soil is cold throughout the year but, because of marine influence does not freeze in most years.

Cryic soils that have an aquic moisture regime commonly are churned by frost. Plate 8B shows the characteristic churning of the epipedon by frost. Figure 22 shows characteristic mounds in an organic soil.

Most isofrigid soils with a mean annual soil temperature above 0° C have a cryic temperature regime. A few with organic materials in the upper part are exceptions. Throughout this text all isofrigid soils without permafrost are considered to have a cryic temperature regime.

Frigid.—The frigid regime and some of the others that follow are used chiefly in defining classes of soils in the low categories. In the frigid regime the soil is warmer in summer than one in the cryic regime, but its mean annual temperature is lower than 8° C (47° F), and the difference between mean winter and mean summer soil temperature is more than 5° C (9° F) at a depth of 50 cm or at a lithic or paralithic contact, whichever is shallower.

Mesic.—The mean annual soil temperature is 8° C or higher but lower than 15° C (59° F), and the difference between mean summer and mean winter soil temperature is more than 5° C at a depth of 50 cm or at a lithic or paralithic contact, whichever is shallower.

Thermic.—The mean annual soil temperature is 15° C (59° F) or higher but lower than 22° C (72° F), and the difference between mean summer and mean winter soil temperature is more than 5° C at a depth of 50 cm or at a lithic or paralithic contact, whichever is shallower.

Hyperthermic.—The mean annual soil temperature is 22° C (72° F) or higher, and the difference between mean summer and mean winter soil temperature is more than 5° C at a depth of 50 cm or at a lithic or paralithic contact, whichever is shallower.

If the name of a soil temperature regime has the prefix iso, the mean summer and winter soil temperatures for June, July, and August and for December, January, and February differ by less than 5° C at a depth of 50 cm or at a lithic or paralithic contact, whichever is shallower.

Isofrigid.—The mean annual soil temperature is lower than 8° C (47° F).

Isomesic.—The mean annual soil temperature is 8° C or higher but lower than 15° C (59° F).

Isothermic.—The mean annual soil temperature is 15° C or higher but lower than 22° C (72° F).

Isohyperthermic.—The mean annual soil temperature is 22 °C or higher.

The limit between isofrigid and isomesic cannot be tested in the United States and is tentative.

CLASSES OF TENTATIVE SUBDIVISIONS OF MOISTURE REGIMES

A. Key to Subdivision of ARIDIC

1) Soils in which the moisture control section (MCS) is completely dry during the whole year

EXTREME ARIDIC

2) Other soils in which the MCS is moist in some or all parts for 45 consecutive days or less during the period that the soil temperature at 50 cm depth is more than 8°C

TYPIC ARIDIC

3) Other soils with aridic moisture regime

WEAK ARIDIC

B. Key to Subdivision of XERIC

1) Soils in which the MCS is dry in all parts for more than 90 consecutive days during the four months following the summer solstice

DRY XERIC

2) Other soils with xeric moisture regime

TYPIC XERIC

C. Key to Subdivision of USTIC

1) Soils with an iso-temperature regime in which the number of consecutive days that the MCS is completely or partly moist when the soil temperature at 50 cm depth is more than 8°C, is as follows:

a) less than 180 — ARIDIC TROPUSTIC

b) 180 or more but less than 270 — TYPIC TROPUSTIC

c) 270 or more — UDIC TROPUSTIC

2) Other soils with a non-iso-temperature regime

a) soils in which the MCS is dry in all parts for more than 45 consecutive days during 4 months following the summer solstice, and where the MCS is moist in all parts for more than 45 consecutive days during 4 months following the winter solstice

XERIC TEMPUSTIC

---

*All requirements are assumed to occur in most years (at least six out of ten).

b) other soils where the MCS is moist in all parts for more than 45 consecutive days during 4 months following the winter solstice, and where the MCS is not completely dry for more than 45 consecutive days during 4 months following the summer solstice.

WET TEMPUSTIC

c) other soils TYPIC TEMPUSTIC

D. Key to Subdivision of UDIC

1) Soils in which the MCS is dry in some or all parts for less than 30 cumulative days

TYPIC UDIC

2) Other soils in which the MCS is dry in some or all parts for 30 or more cumulative days

a) with an iso-temperature regime DRY TROPUDIC

b) without an iso-temperature regime DRY TEMPUDIC

BRIEF DESCRIPTION OF TENTATIVE MOISTURE REGIME SUBDIVISIONS.

Aridic Tropustic.

The aridic tropustic regime is an ustic moisture regime in which there is strong moisture stress during a long period of the year. The difference between winter and summer soil temperatures is less than 5°C. Most stations have only one rainy season. I this case, the season when water is available in the moisture control section when the soil temperature is more than 8°C, is shorter than 6 months. Crops can be grown without irrigation.

Among the stations recorded in South America, there is strong variation in the time that the moisture control section is completely moist in one year.

The temperature regimes in South America in this moisture range vary from isomesic to isohyperthermic.

Dry Tempudic.

This is a udic moisture regime and there are at least nine months in one year that the moisture control section is completely moist.

The length of the time that the moisture control section is dry in some or in all parts is at least one month. The soils with this moisture regime registered in South America never dry out completely during the summertime.

The dry tempudic moisture regimes have a seasonal temperature variation exceeding 5°C in the soil at 50 cm depth. They occur in the southern part of the continent.

Dry Tropudic.

There are at least nine months in the year that the moisture control section is completely moist. There is at least one month with some dryness.

The dry tropudic moisture regime is an udic moisture regime for which the 50 cm depth soil temperatures vary by less than 5°C. There is no season determined by low temperatures.

According to the results of the calculations for South America, the moisture control section almost never dries out completely after the summer solstice. The wet season may be bimodal and comprehend two rainy seasons. In iso hyperthermic regimes there is almost always some moisture in the control section for approximately 10 months. In isomesic regions temperatures lower than 8°C may reduce the growing season to approximately 7 months.

Dry Xeric.

These are soils with wet winters and dry summers.

The dry xeric moisture regime is a xeric moisture regime in which the moisture control section is dry in all parts for more than 3 months during summer. All stations registered in this study are located in Chili in a thermic temperature regime.

The duration of the season when the soil temperature drops below 8°C is usually less than 2 months and most soils are completely moist during the 4 months following the winter solstice.

Extreme Aridic

The extreme aridic moisture regime is an aridic moisture regime in which the moisture control section is always completely dry. They occur in the Southern part of the continent mainly on the Pacific coast and in Argentina in soils with a mesic and thermic temperature regime.

No cultivation is possible without irrigation.

Perudic

The perudic moisture regime is a moisture regime defined by properties of the atmospheric climate. For each month the rainfall exceeds the potential evapotranspiration. For this reason the moisture control section is always completely moist and crops should not suffer at any time from drought.

Typic Aridic

The typic aridic moisture regime is an aridic moisture regime in which the moisture control section is moist in some or in all parts during 45 consecutive days or less when the soil temperature at 50 cm depth is more than 8°C.

The stations grouped in this class in South America seldom have moisture for more than one month when the temperature is high enough for crop growth. Cultivation is not possible without irrigation in soils with typic aridic moisture regime.

Typic Tempustic

The typic tempustic moisture regime by definition has a seasonal variation in temperature and moisture. The growing seasons are defined by both soil climatic parameters.

The typic tempustic moisture regime does not have the characteristics of xeric moisture regimes which require the moisture control section to be completely moist during the winter time and completely dry for more than 45 days in the summertime. Therefore the typic tempustic does not have the characteristics of the Mediterranean climates.

The typic tempustic moisture regimes observed in South America occur in soils that are seldom completely moist during winter. Downward percolation of water in that season is minimal. Most of them dry out for some time during the summer but seldom for more than one month.

The typic tempustic moisture regimes is found in South America under hyperthermic and mesic temperature regimes in the southern part of the continent.

Typic tropustic

The soils with a typic tropustic moisture regime are dry in some or all parts for more than 3 months during one year. The length of the rainy season, however, is long enough to have a crop grown without supplemental irrigation. In soils with typic tropustic moisture regime the time that the moisture control section is completely or partly moist when the soil temperature is more than 8°C varies between 6 and 9 months.

There are no restrictions to plant growth due to low temperature except in the iso mesic areas of Bolivia.

A few soils with typic tropustic moisture regimes have characteristics of Mediterranean climates or xeric moisture regimes in which the rainfall is concentrated in the winter time and the summer is dry. One example is Valparaiso along the Pacific coast in Chili, where the influence of the sea reduces the difference between winter and summer temperatures. By definition the iso-temperature excludes these soils from xeric moisture regimes, and groups them with tropustic.

Typic Udic

The moisture control section in soils with a typic udic moisture regime is moist in all parts for at least 11 months in one year. The moisture control section never dries out completely. There is at least one month where the evapotranspiration is higher than the actual precipitation.

Typic Xeric

Soils with a typic xeric moisture regime are those soils in which the moisture control section is completely moist during more than 45 consecutive days during the four months following the winter solstice. The moisture control section does not dry out completely for more than 3 months in the summer.

Most of the soils with this moisture regime are located in the central valley of Chili and have a mesic or thermic temperature regime.

Udic Tropustic

The soils with a typic tropustic moisture regimes can seasonally support crops without supplemental irrigation. The season when the moisture control section is partly or completely dry is longer than 3 months. At least at one time during the year one may expect moisture stress in the soil.

In soils with this moisture regime, the number of consecutive days that the moisture control section is completely or partly moist when the soil temperature at 50 cm is more than 8° is longer than 9 months.

No stations in South America were recorded with temperature limitations to the growing season, and the soil temperature at 50 cm depth never drops below 8°C.

Weak Aridic

The soils with weak aridic moisture regimes are moist in some or all parts of the moisture control section for more than 45 consecutive days during the time that the soil temperature at 50 cm depth is more than 8°C. By the definition of aridic, however, the maximum length of time of this moisture condition is less than 3 months.

In some years some crops may be grown without supplemental irrigation primarily in the areas of temperature regimes cooler than hyperthermic and isohyperthermic. However, rainfall is very erratic and irrigation is usually required.

Wet Tempustic

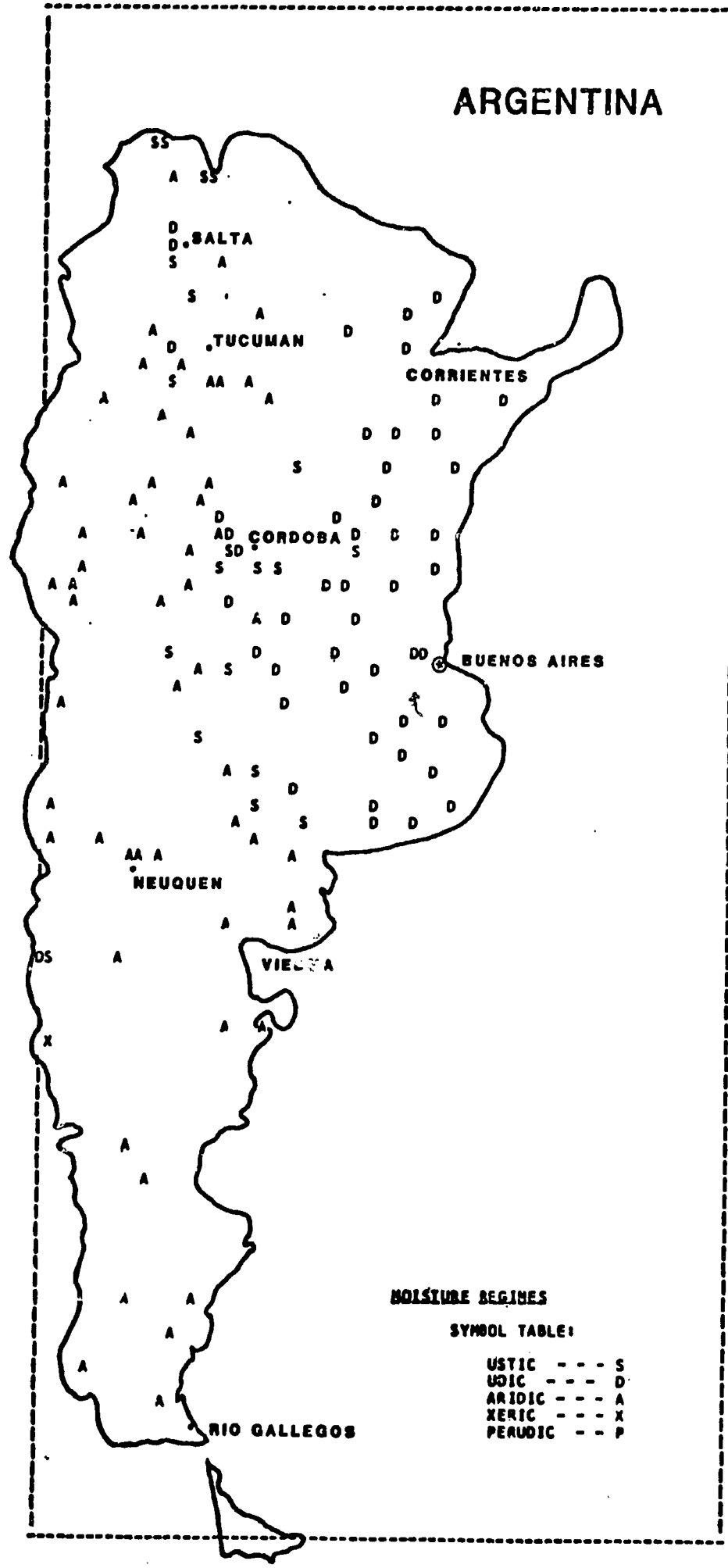
The wet tempustic moisture regime is found in soils with mesic and thermic temperature regimes with seasonal variation of temperature between winter and summer. Soils with tempustic moisture regimes suffer from moisture stress in the moisture control section for more than 3 months. They are usually completely moist for more than 2 months in winter and seldom dry out completely during the summertime. These conditions are such that leaching of salts should occur at least during the wintertime.

Xeric Tempustic

The xeric tempustic moisture regime is a moisture regime that has all the characteristics of a xeric moisture regime except for the temperature requirement which should not be hyperthermic. The only station identified as xeric tempustic in South America occurs in the central valley of Chili and probably has characteristics similar to the soils with a dry xeric moisture regime.

Country Tables

MOISTURE REGIMES 21



DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR ARGT

NAME OF STATION	MEAN SOIL TEMPERATURE ANN	SUMM	WINT	TEMPERATURE REGIME	CUMULATIVE DAYS MSC IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX.CONSECUTIVE DAYS THAT MCS IS IN ONE YEAR	MOIST IN SOME PARTS WHEN SOIL TEMP > 8	DRY AFTER SUMMER SOLST.	MOIST AFTER WINTER SOLST.	MOISTURE REGIME
ALBERDI	20.4	23.1	16.6	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
ANATUYA	23.0	26.9	18.7	HYPERTH.	269	91	0	269	91	0	29	29	16	0	ARIDIC
ANDALGALA	20.4	24.6	15.1	THERMIC	331	29	0	331	29	0	15	15	61	0	ARIDIC
ARIAS	19.4	23.8	15.1	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
ASCOCHINGA	15.7	18.9	12.7	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
AZUL ARGENTI	16.3	20.9	12.3	THERMIC	0	0	360	0	0	360	360	295	0	120	UDIC
BAHIA BLA	17.2	22.0	12.8	THERMIC	63	297	0	63	297	0	266	120	22	0	USTIC
BALCARCE	16.2	20.1	12.4	THERMIC	0	0	360	0	0	360	360	312	0	120	UDIC
BARILOCHE AR	10.8	14.5	7.5	MESIC	0	103	257	0	103	136	360	133	0	120	USTIC
BARROW	16.1	20.6	12.1	THERMIC	0	16	344	0	16	344	360	294	0	120	UDIC
BELL VILLE	19.2	23.3	14.8	THERMIC	4	356	0	4	356	0	356	356	4	0	USTIC
BERNASCONI	17.3	22.5	12.5	THERMIC	65	295	0	65	295	0	259	107	21	0	USTIC
BUENA ESPER	17.8	22.4	12.6	THERMIC	259	101	0	259	101	0	25	25	20	0	ARIDIC
BUENOS AIRES	19.4	23.4	15.6	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
CACHEUTA	18.5	23.5	13.2	THERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
CAFAYATE	20.4	23.1	16.4	THERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
CAMPO GALLO	24.2	27.6	20.4	HYPERTH.	266	94	0	266	94	0	25	25	20	0	ARIDIC
CANADON LECN	11.0	14.9	6.6	MESIC	360	0	0	236	0	0	0	0	120	0	ARIDIC
CARMEN D PAT	16.5	21.0	12.3	THERMIC	241	119	0	241	119	0	119	82	120	0	ARIDIC
CASILDA	18.9	23.1	15.0	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
CATAMARCA	22.6	26.9	17.1	HYPERTH.	329	31	0	329	31	0	12	12	63	0	ARIDIC
CERES ARGENT	21.4	25.5	17.4	THERMIC	2	358	0	2	358	0	358	358	2	0	USTIC
CERRO FITZ R	9.8	13.3	6.1	MESIC	0	16	344	0	16	199	360	176	0	120	UDIC
CHAMICAL	20.0	25.3	15.9	THERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
CHEPES	20.8	25.3	15.9	THERMIC	347	13	0	347	13	0	13	13	62	0	ARIDIC
CHIVILCOY	19.0	23.7	14.9	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
CHOS MALAL	16.2	20.7	11.8	THERMIC	211	71	78	211	71	78	149	70	120	75	ARIDIC
CIPOLLETTI	16.3	20.9	11.4	THERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
COLONIA LAS	13.4	17.3	9.0	MESIC	360	0	0	290	0	0	0	0	120	0	ARIDIC
COMODORERIVI	15.3	18.9	11.6	THERMIC	284	76	0	284	76	0	76	23	120	0	ARIDIC
COMODORD RIV	15.1	18.7	11.5	THERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
CONCEPCION	23.7	27.1	20.4	HYPERTH.	0	17	343	0	17	343	360	360	0	120	UDIC
CONCEPCION S	23.4	26.7	20.2	HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
CONCEPCION U	20.7	24.7	16.9	THERMIC	0	14	346	0	14	346	360	360	0	120	UDIC
CONCORDIA	21.1	25.3	17.2	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
CORDOBA ARGE	20.0	24.0	16.0	THERMIC	88	272	0	88	272	0	134	134	9	0	USTIC
CORONEL GOM	16.8	21.6	11.8	THERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
CORONEL MOLD	20.4	23.1	16.4	THERMIC	219	141	0	219	141	0	114	114	3	0	USTIC
CORONEL SUAR	15.9	20.7	11.6	THERMIC	0	0	360	0	0	360	360	231	0	120	UDIC
CORRIENTES A	24.1	27.7	20.8	HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
CRUZ DEL EJE	19.4	23.1	15.4	THERMIC	241	119	0	241	119	0	57	57	18	0	ARIDIC
DESEADO	11.9	14.6	9.0	MESIC	360	0	0	315	0	0	0	0	120	0	ARIDIC
DOLORES	17.4	21.4	14.0	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
EMBALSE	19.1	23.3	15.0	THERMIC	131	229	0	131	229	0	109	109	11	0	USTIC
EMBARCACION	24.9	28.0	21.2	HYPERTH.	166	81	113	166	81	113	160	160	8	0	USTIC

COMPUTED BY FORTRAN PROGRAM VWD8, APR 1981

DATE 04/16/81

22

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR ARGT

NAME OF STATION	MEAN SOIL TEMPERATURE ANN	SUMM	WINT	TEMPERATURE REGIME	CUMULATIVE DAYS MSC IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX.CONSECUTIVE DAYS THAT MCS IS MOIST IN SOME PARTS IN ONE YEAR	WHEN SOIL TEMP > 8	DRY AFTER SUMMER SOLST.	MOIST AFTER WINTER SOLST.	MOISTURE REGIME
ESCUELAAVIAC	19.5	23.7	15.1	THERMIC	188	172	0	188	172	0	58	58	15	0	ARIDIC
ESPERANZA	20.9	24.9	17.0	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
ESQUEL	9.9	11.9	6.0	MESIC	66	105	189	66	76	76	294	81	51	120	XERIC
ESQUINA	22.8	26.7	19.0	HYPERTH.	0	2	358	0	2	358	360	360	0	120	UDIC
FORMOSA ARGE	24.5	27.9	21.1	HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
FORTINMERCED	17.4	22.0	12.7	THERMIC	187	173	0	187	173	0	173	78	120	0	ARIDIC
GENERAL ACHA	17.6	22.6	12.9	THERMIC	268	92	0	268	92	0	29	29	45	0	ARIDIC
GENERALGODOY	16.5	21.6	11.3	THERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
GENERAL VILL	18.2	23.4	13.3	THERMIC	0	0	360	0	0	360	360	323	0	120	UDIC
GOYA	23.1	26.9	19.6	HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
GUALEGUAYCHU	20.0	24.4	16.0	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
GUEMES	22.2	25.2	18.0	HYPERTH.	277	83	0	277	83	0	24	24	22	0	ARIDIC
HUINCA RENAN	18.2	23.4	13.3	THERMIC	20	340	0	20	340	0	296	157	13	0	USTIC
HUMAHUACA	11.7	13.5	8.4	MESIC	360	0	0	289	0	0	0	0	120	0	ARIDIC
ISLAVICTORIA	11.2	14.8	7.9	MESIC	0	0	360	0	0	256	360	193	0	120	UDIC
JACHAL	18.8	23.7	13.8	THERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
JOAQUINVGONZ	24.2	27.6	20.0	HYPERTH.	262	98	0	262	98	0	27	27	18	0	ARIDIC
JUNIN	18.3	22.6	14.3	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
LA COCHA	21.7	25.2	17.6	THERMIC	56	126	178	56	126	178	264	264	8	73	USTIC
LA PAZ,E,RIO	22.0	25.8	18.1	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
LA QUIACA	11.7	13.5	8.4	MESIC	227	133	0	156	133	0	133	133	2	0	USTIC
LA QUIACA AR	11.9	13.7	8.6	MESIC	213	147	0	148	147	0	147	147	0	0	USTIC
LA RIOJA ARG	22.3	26.7	17.3	HYPERTH.	323	37	0	323	37	0	13	13	32	0	ARIDIC
LABOULAYE	18.7	23.2	14.2	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
LAGOARGENTIN	9.7	12.9	6.2	MESIC	360	0	0	215	0	0	0	0	120	0	ARIDIC
LAS FLORES	17.9	22.2	14.0	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
LAS LAJAS	14.3	18.8	10.0	MESIC	199	75	86	199	40	86	161	61	120	75	ARIDIC
LORETO	22.8	26.1	19.7	HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
MACACHIN	17.6	22.8	12.8	THERMIC	36	324	0	36	324	0	289	140	19	0	USTIC
MALARGUE	15.9	20.7	11.5	THERMIC	257	103	0	257	103	0	103	53	120	0	ARIDIC
MAQUINCHAO	11.8	16.7	6.8	MESIC	265	95	0	215	20	0	95	2	120	0	ARIDIC
MAR D PLATA	16.2	19.8	12.6	THERMIC	0	0	360	0	0	360	360	348	0	120	UDIC
MENDOZA ARGE	18.2	22.9	13.3	THERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
MERCEDES	22.2	26.3	18.5	HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
MISION F.TAC	25.4	28.6	22.1	HYPERTH.	11	73	276	11	73	276	321	321	9	120	UDIC
MONTE CASERO	21.9	26.0	18.3	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
NECOCHEA	16.5	20.1	13.1	THERMIC	0	2	358	0	2	358	360	360	0	120	UDIC
NUEVE D JUL	18.3	22.8	14.0	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
ORAN	24.9	28.0	21.2	HYPERTH.	84	135	141	84	135	141	215	215	4	6	USTIC
PARANA	20.3	24.4	16.5	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
PARANA ARGEN	20.5	24.5	16.8	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
PATAGONES	16.8	21.1	12.6	THERMIC	308	52	0	308	52	0	52	52	120	0	ARIDIC
PERGAMINO	18.4	22.7	14.3	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
PIGUE	15.7	20.6	11.4	THERMIC	0	7	353	0	7	353	360	276	0	120	UDIC
PILAR	19.0	22.8	15.0	THERMIC	47	313	0	47	313	0	286	286	0	0	USTIC

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 04/16/81

23

ARGENTINA

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR ARGT

NAME OF STATION	MEAN SOIL TEMPERATURE ANN	SUMM	WINT	TEMPERATURE REGIME	CUMULATIVE DAYS MSC IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX.CONSECUTIVE DAYS THAT MCS IS MOIST IN SOME PARTS IN ONE YEAR	WHEN SOIL TEMP > 8	DRY AFTER SUMMER SOLST.	MOIST AFTER WINTER SOLST.	MOISTURE REGIME
PILAR ARGENT	19.3	23.4	15.2	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
PLAZAHUINCUL	15.6	20.6	10.8	THERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
PLUMERILLO	18.5	23.7	13.0	THERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
POSADAS	23.4	26.7	20.2	HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
PRES.R.S.PEN	23.5	27.0	20.0	HYPERTH.	0	17	343	0	17	343	360	360	0	120	UDIC
PRESIDENCIA	23.7	27.2	20.2	HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
PUEBLA BRUGO	20.2	24.6	16.5	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
PUENTE INCA	9.9	14.1	5.3	MESIC	217	143	0	188	23	0	143	0	120	0	ARIDIC
PUERTO MADRY	15.8	20.2	11.2	THERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
PUERTO S.CRU	10.6	14.0	6.7	MESIC	360	0	0	239	0	0	0	0	120	0	ARIDIC
QUIACA	12.0	13.6	8.8	ISOMESIC	205	155	0	147	155	0	155	155	0	0	USTIC
QUILINO	19.9	23.6	15.8	THERMIC	260	100	0	260	100	0	23	23	22	0	ARIDIC
RECREO	22.7	26.7	17.7	HYPERTH.	293	67	0	293	67	0	16	16	29	0	ARIDIC
RIO COLORADO	17.4	22.3	12.8	THERMIC	338	22	0	338	22	0	22	22	120	0	ARIDIC
RIO CUARTO	18.4	22.5	14.0	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
RIO GALLEGOS	9.4	12.8	5.7	MESIC	246	114	0	189	20	0	114	0	120	0	ARIDIC
RIVADAVIA	24.9	28.0	21.2	HYPERTH.	245	115	0	245	115	0	29	29	16	0	ARIDIC
ROSARIO	19.2	23.4	15.2	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
ROSARIO FRON	20.4	23.1	16.4	THERMIC	14	109	237	14	109	237	329	329	0	72	USTIC
SALTA	18.7	21.5	14.9	THERMIC	14	110	236	14	110	236	346	346	0	71	USTIC
SALTA ARGENT	19.3	22.0	15.6	THERMIC	20	115	225	20	115	225	321	321	0	60	USTIC
SAN ANT.OES	17.6	21.9	13.2	THERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
SAN FRAN LAI	24.3	27.7	20.9	HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
SAN JUAN	19.8	25.2	14.0	THERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
SAN JULIAM	11.5	14.3	7.8	MESIC	360	0	0	269	0	0	0	0	120	0	ARIDIC
SAN LORENZO	23.7	27.1	20.4	HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
SAN MIGUEL T	21.2	24.6	17.1	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
SAN SALVADOR	18.8	21.5	15.3	THERMIC	0	76	284	0	76	284	360	360	0	89	UDIC
SAN LUIS ARG	19.1	23.5	14.4	THERMIC	236	124	0	236	124	0	24	24	23	0	ARIDIC
SAN ANTONIO	17.6	22.0	13.2	THERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
SANATORIO	19.9	23.6	15.8	THERMIC	92	268	0	92	268	0	166	166	7	0	USTIC
SANTA MARIA	16.7	19.5	13.9	THERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
SANTIAGO EST	22.8	26.7	18.2	HYPERTH.	267	93	0	267	93	0	26	26	19	0	ARIDIC
SANTO TOME	23.4	26.7	20.2	HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
SANTIAGO DEL	23.0	26.9	18.6	HYPERTH.	258	102	0	258	102	0	41	41	16	0	ARIDIC
SARMIENTO	13.4	17.3	9.0	MESIC	360	0	0	290	0	0	0	0	120	0	ARIDIC
SUNCHO CORR	23.0	26.9	18.7	HYPERTH.	240	120	0	240	120	0	57	57	15	0	ARIDIC
TANDIL	15.8	20.2	11.7	THERMIC	0	0	360	0	0	360	360	285	0	120	UDIC
TINOGASTA	20.0	24.4	14.8	THERMIC	340	20	0	340	20	0	11	11	64	0	ARIDIC
TRELEW	15.8	20.2	11.2	THERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
TRELEW ARGEN	16.0	20.2	11.4	THERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
TRENQUE	18.2	23.1	13.5	THERMIC	0	0	360	0	0	360	360	334	0	120	UDIC
TRES ARROYOS	16.6	20.9	12.5	THERMIC	0	0	360	0	0	360	360	310	0	120	UDIC
UNION	18.4	23.4	12.9	THERMIC	287	73	0	287	73	0	17	17	29	0	ARIDIC
USHUAIA	8.2	10.3	5.6	ISOMESIC	0	0	360	0	0	199	360	120	0	120	UDIC

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 04/16/81

24

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR ARGT

NAME OF STATION	MEAN SOIL TEMPERATURE ANN	SUMM	WINT	TEMPERATURE REGIME	CUMULATIVE DAYS MSC IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX.CONSECUTIVE DAYS THAT MCS IS MOIST IN SOME PARTS IN ONE YEAR	WHEN SOIL TEMP > 8	DRY AFTER SUMMER SOLST.	MOIST AFTER WINTER SOLST.	MOISTURE REGIME
USPALLATA	9.9	14.1	5.3	MESIC	253	107	0	194	17	0	107	0	120	0	ARIDIC
VERA	22.3	26.3	18.7	HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
VICTORICA	17.8	22.9	13.0	THERMIC	86	274	0	86	274	0	176	98	17	0	USTIC
VILLA DOLOR	20.4	24.3	15.8	THERMIC	246	114	0	246	114	0	28	28	19	0	ARIDIC
VILLAGUAY	20.5	24.5	16.7	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
VILLA MARIA	20.6	24.4	16.6	THERMIC	55	305	0	55	305	0	178	178	12	0	USTIC
VILLAVICENCI	13.0	17.0	9.7	MESIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
ZARATE	19.1	23.1	15.4	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 04/16/81

25

ARGENTINA

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR ARGT

NAME OF STATION	MOISTURE REGIME	CON.D. M/D T>8	TEMPERATURE REGIME	TENTATIVE SUBDIVISION OF MOISTURE REGIME		CONS DAYS MOIST(2+3) SUM.	CONS DAYS MOIST(2+3) WINT	CUM.DAYS MOIST(2+3) SUM.	CUM.DAYS MOIST(2+3) WINT	CONS.DAYS COMP.MOIST SUM.	CONS.DAYS COMP.MOIST WINT	CUM.DAYS COMP.MOI. SUM.	CUM.DAYS COMP.MOI. WINT
*ALBERDI	UDIC	360	THERMIC	TYPIC	UDIC					180	180	180	180
*ANATUYA	ARIDIC	29	HYPERTH.	TYPIC	ARIDIC	29	15	63	28				
*ANDALGALA	ARIDIC	15	THERMIC	TYPIC	ARIDIC	15	0	29	0				
*ARIAS	UDIC	360	THERMIC	TYPIC	UDIC					180	180	180	180
*ASCOCHINGA	UDIC	360	THERMIC	TYPIC	UDIC					180	180	180	180
*AZUL ARGENTI	UDIC	295	THERMIC	TYPIC	UDIC					180	180	180	180
*BAHIA BLA	USTIC	120	THERMIC	TYPIC	TEMPUST.	105	161	126	171				
*BALCARCE	UDIC	312	THERMIC	TYPIC	UDIC					180	180	180	180
*BARILOCHE AP	USTIC	183	MESIC	WET	TEMPUST.					47	180	77	180
*BARROW	UDIC	294	THERMIC	TYPIC	UDIC					105	180	164	180
*BELL VILLE	USTIC	356	THERMIC	TYPIC	TEMPUST.	105	180	176	180				
*BERNASCONI	USTIC	107	THERMIC	TYPIC	TEMPUST.	105	154	129	166				
*BUENA ESPER	ARIDIC	25	THERMIC	TYPIC	ARIDIC	25	20	50	51				
*BUENOS AIRES	UDIC	360	THERMIC	TYPIC	UDIC					180	180	180	180
*CACHEUTA	ARIDIC	0	THERMIC	EXTREME	ARIDIC	0	0	0	0				
*CAFAYATE	ARIDIC	0	THERMIC	EXTREME	ARIDIC	0	0	0	0				
*CAMPO GALLC	ARIDIC	25	HYPERTH.	TYPIC	ARIDIC	25	15	66	28				
*CANADON LECN	ARIDIC	0	MESIC	EXTREME	ARIDIC	0	0	0	0				
*CARMEN D PAT	ARIDIC	82	THERMIC	WEAK	ARIDIC	0	119	0	119				
*CASILDA	UDIC	360	THERMIC	TYPIC	UDIC					180	180	180	180
*CATAMARCA	ARIDIC	12	HYPERTH.	TYPIC	ARIDIC	12	8	23	8				
*CERES ARGENT	USTIC	358	THERMIC	TYPIC	TEMPUST.	135	180	178	180				
*CERRO FITZ R	UDIC	176	MESIC	TYPIC	UDIC					135	180	164	180
*CHAMICAL	ARIDIC	0	THERMIC	EXTREME	ARIDIC	0	0	0	0				
*CHEPES	ARIDIC	13	THERMIC	TYPIC	ARIDIC	13	0	13	0				
*CHIVILCOY	UDIC	360	THERMIC	TYPIC	UDIC					180	180	180	180
*CHOS MALAL	ARIDIC	70	THERMIC	WEAK	ARIDIC	15	134	15	134				
*CIPOLLETTI	ARIDIC	0	THERMIC	EXTREME	ARIDIC	0	0	0	0				
*COLONIA LAS	ARIDIC	0	MESIC	EXTREME	ARIDIC	0	0	0	0				
*COMODORERIVI	ARIDIC	23	THERMIC	TYPIC	ARIDIC	0	76	0	76				
*COMODORO RIV	ARIDIC	0	THERMIC	EXTREME	ARIDIC	0	0	0	0				
*CONCEPCION	UDIC	360	HYPERTH.	TYPIC	UDIC					135	180	163	180
*CONCEPCION S	UDIC	360	HYPERTH.	TYPIC	UDIC					180	180	180	180
*CONCEPCION U	UDIC	360	THERMIC	TYPIC	UDIC					105	180	166	180
*CONCORDIA	UDIC	360	THERMIC	TYPIC	UDIC					180	180	180	180
*CORDOBA ARGE	USTIC	134	THERMIC	TYPIC	TEMPUST.	105	59	169	103				
*CORONEL GOM	ARIDIC	0	THERMIC	EXTREME	ARIDIC	0	0	0	0				
*CORONEL MOLD	USTIC	114	THERMIC	TYPIC	TEMPUST.	114	15	126	15				
*CORONEL SUAR	UDIC	281	THERMIC	TYPIC	UDIC					180	180	180	180
*CORRIENTES A	UDIC	360	HYPERTH.	TYPIC	UDIC					180	180	180	180
*CRUZ DEL EJE	ARIDIC	57	THERMIC	WEAK	ARIDIC	57	20	84	35				
*DESEADO	ARIDIC	0	MESIC	EXTREME	ARIDIC	0	0	0	0				
*DOLORES	UDIC	360	THERMIC	TYPIC	UDIC					180	180	180	180
*EMBALSE	USTIC	109	THERMIC	TYPIC	TEMPUST.	105	59	151	78				
*EMBARCACION	USTIC	160	HYPERTH.	TYPIC	TEMPUST.	160	15	167	27				

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 04/29/81

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR ARGT

NAME OF STATION	MOISTURE REGIME	CON.D. M/D T>8	TEMPERATURE REGIME	TENTATIVE SUBDIVISION OF MOISTURE REGIME		CONS DAYS MOIST(2+3) SUM.	CONS DAYS MOIST(2+3) WINT	CUM.DAYS MOIST(2+3) SUM.	CUM.DAYS MOIST(2+3) WINT	CONS.DAYS COMP.MOIST SUM.	CONS.DAYS COMP.MOIST WINT	CUM.DAYS COMP.MCI. SUM.	CUM.DAYS COMP.MCI. WINT
ESCUELAAVIAC	ARIDIC	58	THERMIC	WEAK	ARIDIC	58	51	106	66				
ESPERANZA	UDIC	360	THERMIC	TYPIC	UDIC					180	180	180	180
ESQUEL	XERIC	81	MESIC	TYPIC	XERIC	69	180	114	180				
ESQUINA	UDIC	360	HYPERTH.	TYPIC	UDIC					105	180	178	180
FORMOSA ARGE	UDIC	360	HYPERTH.	TYPIC	UDIC					180	180	180	180
FORTINMERCED	ARIDIC	78	THERMIC	WEAK	ARIDIC	45	128	45	128				
GENERAL ACHA	ARIDIC	29	THERMIC	TYPIC	ARIDIC	23	29	38	54				
GENERALGODOY	ARIDIC	0	THERMIC	EXTREME	ARIDIC	0	0	0	0				
GENERAL VILL	UDIC	323	THERMIC	TYPIC	JDIC					180	180	180	180
GOYA	UDIC	360	HYPERTH.	TYPIC	UDIC					180	180	180	180
GUALEGUAYCHU	UDIC	360	THERMIC	TYPIC	JDIC					130	180	180	180
GUEMES	ARIDIC	24	HYPERTH.	TYPIC	ARIDIC	24	13	70	13				
HUINCA RENAN	USTIC	157	THERMIC	TYPIC	TEMPUST.	105	180	160	180				
HUMAHUACA	ARIDIC	0	MESIC	EXTREME	ARIDIC	0	0	0	0				
ISLAVICTORIA	UDIC	193	MESIC	TYPIC	UDIC					180	180	180	180
JACHAL	ARIDIC	0	THERMIC	EXTREME	ARIDIC	0	0	0	0				
JOAQUINVGONZ	ARIDIC	27	HYPERTH.	TYPIC	ARIDIC	27	13	72	26				
JUNIN	UDIC	360	THERMIC	TYPIC	UDIC					180	180	180	180
LA COCHA	USTIC	264	THERMIC	WET	TEMPUST.	165	99	172	132				
LA PAZ,E,RIO	UDIC	360	THERMIC	TYPIC	UDIC					180	180	180	180
LA QUIACA	USTIC	133	MESIC	TYPIC	TEMPUST.	118	15	118	15				
LA QUIACA AR	USTIC	147	MESIC	TYPIC	TEMPUST.	132	15	132	15				
LA RIOJA ARG	ARIDIC	13	HYPERTH.	TYPIC	ARIDIC	13	6	31	6				
LABOULAYE	UDIC	360	THERMIC	TYPIC	UDIC					180	180	180	180
LAGOARGENTIN	ARIDIC	0	MESIC	EXTREME	ARIDIC	0	0	0	0				
LAS FLORES	UDIC	360	THERMIC	TYPIC	UDIC					180	180	180	180
LAS LAJAS	ARIDIC	61	MESIC	WEAK	ARIDIC	15	146	15	146				
LORETO	UDIC	360	HYPERTH.	TYPIC	JDIC					180	180	180	180
MACACHIN	USTIC	140	THERMIC	TYPIC	TEMPUST.	105	180	144	180				
MALARGUE	ARIDIC	53	THERMIC	WEAK	ARIDIC	0	103	0	103				
MAQUINCHAO	ARIDIC	2	MESIC	TYPIC	ARIDIC	0	95	0	95				
MAR D PLATA	UDIC	348	THERMIC	TYPIC	JDIC					180	180	180	180
MENDOZA ARGE	ARIDIC	0	THERMIC	EXTREME	ARIDIC	0	0	0	0				
MERCEDES	UDIC	360	HYPERTH.	TYPIC	JDIC					180	180	180	180
MISION F.TAC	UDIC	321	HYPERTH.	DRY	TEMPUDIC	105	180	169	180				
MONTE CASERO	UDIC	360	THERMIC	TYPIC	JDIC					180	180	180	180
NECOCHEA	UDIC	360	THERMIC	TYPIC	JDIC					105	180	178	180
NUEVE D JUL	UDIC	360	THERMIC	TYPIC	UDIC					180	180	180	180
ORAN	USTIC	215	HYPERTH.	TYPIC	TEMPUST.	165	50	176	100				
PARANA	UDIC	360	THERMIC	TYPIC	JDIC					180	180	180	180
PARANA ARGEN	UDIC	360	THERMIC	TYPIC	JDIC					180	180	180	180
PATAGONES	ARIDIC	52	THERMIC	WEAK	ARIDIC	0	52	0	52				
PERGAMINO	UDIC	360	THERMIC	TYPIC	JDIC					180	180	180	180
PIGUE	UDIC	276	THERMIC	TYPIC	JDIC					135	180	173	180
PILAR	USTIC	286	THERMIC	TYPIC	TEMPUST.	180	61	180	133				

COMPUTED BY FORTRAN PROGRAM V\08, APR 1981

DATE 04/29/81

27

ARGENTINA

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR ARGT

NAME OF STATION	MOISTURE REGIME	CON.D. M/D T>8	TEMPERATURE REGIME	TENTATIVE SUBDIVISION OF MOISTURE REGIME		CONS DAYS MOIST(2+3) SUM.	CONS DAYS MOIST(2+3) WINT	CUM.DAYS MOIST(2+3) SUM.	CUM.DAYS MOIST(2+3) WINT	CONS.DAYS COMP.MOIST SUM.	CONS.DAYS COMP.MOIST WINT	CUM.DAYS COMP.MOI. SUM.	CUM.DAYS COMP.MOI. WINT
PILAR ARGENT	UDIC	360	THERMIC	TYPIC	UDIC					180	180	180	180
PLAZAHUINCUL	ARIDIC	0	THERMIC	EXTREME	ARIDIC	0	0	0	0				
PLUMERILLO	ARIDIC	0	THERMIC	EXTREME	ARIDIC	0	0	0	0				
POSADAS	UDIC	360	HYPERTH.	TYPIC	UDIC					180	180	180	180
PRES.R.S.PEN	UDIC	360	HYPERTH.	TYPIC	UDIC					135	180	163	180
PRESIDENCIA	UDIC	360	HYPERTH.	TYPIC	UDIC					180	180	180	180
PUEBLA BRUGO	UDIC	360	THERMIC	TYPIC	UDIC					180	180	180	180
PUENTE INCA	ARIDIC	0	MESIC	TYPIC	ARIDIC	15	128	15	128				
PUERTO MADRY	ARIDIC	0	THERMIC	EXTREME	ARIDIC	0	0	0	0				
PUERTO S.CRU	ARIDIC	0	MESIC	EXTREME	ARIDIC	0	0	0	0				
QUIACA	USTIC	155	ISOMESIC	ARIDIC	TROPUST.	140	15	140	15				
QUILINO	ARIDIC	23	THERMIC	TYPIC	ARIDIC	23	18	67	33				
RECREO	ARIDIC	16	HYPERTH.	TYPIC	ARIDIC	16	12	46	21				
RIO COLORADO	ARIDIC	22	THERMIC	TYPIC	ARIDIC	0	22	0	22				
RIO CUARTO	UDIC	360	THERMIC	TYPIC	UDIC					180	180	180	180
RIO GALLEGOS	ARIDIC	0	MESIC	TYPIC	ARIDIC	0	114	0	114				
RIVADAVIA	ARIDIC	29	HYPERTH.	TYPIC	ARIDIC	29	15	87	28				
ROSARIO	UDIC	360	THERMIC	TYPIC	UDIC					180	180	180	180
ROSARIO FRON	USTIC	329	THERMIC	WET	TEMPUST.	180	134	180	166				
SALTA	USTIC	346	THERMIC	WET	TEMPUST.	180	151	180	166				
SALTA ARGENT	USTIC	321	THERMIC	WET	TEMPUST.	180	126	180	160				
SAN ANT.OES	ARIDIC	0	THERMIC	EXTREME	ARIDIC	0	0	0	0				
SAN FRAN LAI	UDIC	360	HYPERTH.	TYPIC	UDIC					180	180	180	180
SAN JUAN	ARIDIC	0	THERMIC	EXTREME	ARIDIC	0	0	0	0				
SAN JULIAM	ARIDIC	0	MESIC	EXTREME	ARIDIC	0	0	0	0				
SAN LORENZO	UDIC	360	HYPERTH.	TYPIC	UDIC					180	180	180	180
SAN MIGUEL T	UDIC	360	THERMIC	TYPIC	UDIC					180	180	180	180
SAN SALVADOR	UDIC	360	THERMIC	DRY	TEMPUDIC					180	89	180	104
SAN LUIS ARC	ARIDIC	24	THERMIC	TYPIC	ARIDIC	22	19	71	53				
SAN ANTONIO	ARIDIC	0	THERMIC	EXTREME	ARIDIC	0	0	0	0				
SANATORIO	USTIC	166	THERMIC	TYPIC	TEMPUST.	135	31	171	97				
SANTA MARIA	ARIDIC	0	THERMIC	EXTREME	ARIDIC	0	0	0	0				
SANTIAGO EST	ARIDIC	26	HYPERTH.	TYPIC	ARIDIC	26	15	66	27				
SANTO TOME	UDIC	360	HYPERTH.	TYPIC	UDIC					180	180	180	180
SANTIAGO DEL	ARIDIC	41	HYPERTH.	TYPIC	ARIDIC	41	12	78	24				
SARMIENTO	ARIDIC	0	MESIC	EXTREME	ARIDIC	0	0	0	0				
SUNCHO CORR	ARIDIC	57	HYPERTH.	WEAK	ARIDIC	57	13	95	25				
TANDIL	UDIC	285	THERMIC	TYPIC	UDIC					180	180	180	180
TINOGASTA	ARIDIC	11	THERMIC	TYPIC	ARIDIC	11	0	20	0				
TRELEW	ARIDIC	0	THERMIC	EXTREME	ARIDIC	0	0	0	0				
TRELEW ARGEN	ARIDIC	0	THERMIC	EXTREME	ARIDIC	0	0	0	0				
TRENQUE	UDIC	334	THERMIC	TYPIC	UDIC					180	180	180	180
TRES ARROYOS	UDIC	310	THERMIC	TYPIC	UDIC					180	180	180	180
UNION	ARIDIC	17	THERMIC	TYPIC	ARIDIC	16	17	42	31				
USHUAIA	UDIC	120	ISOMESIC	TYPIC	UDIC					180	180	180	180

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 04/29/81

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR ARGT

NAME OF STATION	MOISTURE REGIME	CON.D. M/D T>8	TEMPERATURE REGIME	TENTATIVE SUBDIVISION OF MOISTURE REGIME		CONS DAYS MOIST(2+3) SUM.	CONS DAYS MOIST(2+3) WINT	CUM.DAYS MOIST(2+3) SUM.	CUM.DAYS MOIST(2+3) WINT	CONS.DAYS COMP.MOIST SUM.	CONS.DAYS COMP.MOIST WINT	CUM.DAYS COMP.MOI. SUM.	CUM.DAYS COMP.MOI. WINT
*USPALLATA	ARIDIC	0	MESIC	TYPIC	ARIDIC	0	107	0	107				
*VERA	UDIC	360	HYPERTH.	TYPIC	UDIC					180	180	180	180
*VICTORICA	USTIC	98	THERMIC	TYPIC	TEMPUST.	105	71	139	135				
*VILLA DOLOR	ARIDIC	28	THERMIC	TYPIC	ARIDIC	28	16	83	31				
*VILLAGUAY	UDIC	360	THERMIC	TYPIC	UDIC					180	180	180	180
*VILLA MARIA	USTIC	178	THERMIC	TYPIC	TEMPUST.	105	73	158	147				
*VILLAVICENCI	ARIDIC	0	MESIC	EXTREME	ARIDIC	0	0	0	0				
*ZARATE	UDIC	360	THERMIC	TYPIC	UDIC					180	180	180	180

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

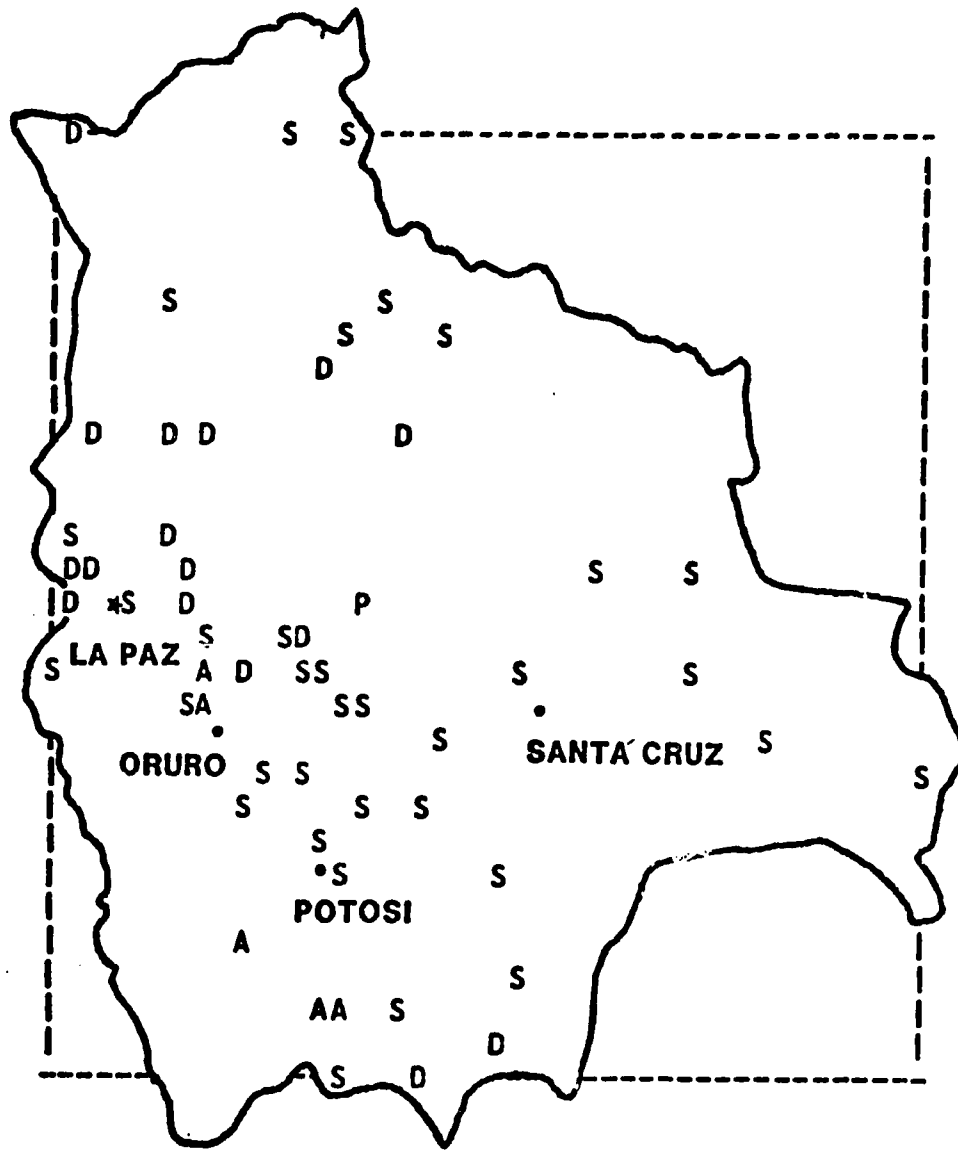
DATE 04/29/81

29

ARGENTINA

BOLIVIA

MOISTURE REGIMES



MOISTURE REGIMES

SYMBOL TABLE:

USTIC - - - S
UDIC - - - D
ARIDIC - - - A
XERIC - - - X
PERUDIC - - P

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR BOLI

NAME OF STATION	MEAN SOIL TEMPERATURE ANN	SLMM	WINT	TEMPERATURE REGIME	CUMULATIVE DAYS MSC IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX.CONSECUTIVE DAYS THAT MCS IS MOIST IN SOME PARTS IN ONE YEAR	WHEN SOIL TEMP > 8	DRY AFTER SUMMER SOLST.	MOIST AFTER WINTER SOLST.	MOISTURE REGIME
ALCOCHE	27.1	27.8	25.6	ISOHYPERTH.	0	6	354	0	6	354	360	360	0	69	UDIC
ALTO (EL)	11.2	11.4	10.2	ISOMESIC	0	97	263	0	97	263	360	268	0	68	USTIC
ANGOSTURA (L	18.4	19.2	15.8	ISOTHERMIC	118	94	148	118	94	148	242	242	0	0	USTIC
ANZALDO	18.9	18.6	17.4	ISOTHERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
APOLO	22.5	22.9	21.3	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
BELEN (EL)	9.5	10.6	7.3	ISOMESIC	0	0	360	0	0	267	360	162	0	120	UDIC
BERMEJO	25.2	28.1	21.0	HYPERTH.	0	23	337	0	23	337	360	360	0	91	UDIC
CAMIRI	25.4	27.1	22.4	ISOHYPERTH.	126	89	145	126	89	145	220	220	0	0	USTIC
CHALLAPATA	13.1	14.4	10.0	ISOMESIC	206	154	0	206	154	0	154	154	0	0	USTIC
CHAPISIRCA	10.0	10.4	8.6	ISOMESIC	0	0	360	0	0	360	360	117	0	120	UDIC
CHARANA	11.0	12.3	8.5	ISOMESIC	252	108	0	198	108	0	108	108	15	0	USTIC
CHULUMANI	22.9	23.5	21.5	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
CHUQUINA	12.8	13.4	11.1	ISOMESIC	168	192	0	168	192	0	192	172	0	0	USTIC
COBIJA	27.2	27.5	25.8	ISOHYPERTH.	0	66	294	0	66	294	360	360	0	39	UDIC
COCHABAMBA	20.7	21.1	18.5	ISOTHERMIC	171	90	99	171	90	99	189	189	0	0	USTIC
CONCEPCION	26.8	27.7	24.9	ISOHYPERTH.	14	93	253	14	93	253	326	326	0	58	USTIC
COPACABANA	13.9	14.8	12.3	ISOMESIC	0	0	360	0	0	360	360	360	0	120	UDIC
GUAQUI	10.0	11.0	8.0	ISOMESIC	0	0	360	0	0	284	360	179	0	120	UDIC
GUAYARMERIN	29.1	28.8	28.6	ISOHYPERTH.	82	70	208	82	70	208	241	241	0	0	USTIC
IRUPANA	21.6	21.9	20.4	ISOTHERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
JOYA (LA)	12.2	13.3	9.9	ISOMESIC	248	112	0	248	112	0	86	86	19	0	ARIDIC
LA PAZ	12.9	13.3	11.5	ISOMESIC	0	102	258	0	102	258	360	360	0	63	USTIC
MAGDALENA	29.4	29.2	28.6	ISOHYPERTH.	82	101	177	82	101	177	246	246	0	0	USTIC
MIZQUE	20.9	22.1	18.1	ISOTHERMIC	174	76	110	174	76	110	168	168	0	0	USTIC
MOROCHATA	18.8	20.7	15.2	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
OPLOCA	18.8	20.7	15.2	THERMIC	314	46	0	314	46	0	16	16	59	0	ARIDIC
ORURO	13.1	14.4	10.0	ISOMESIC	273	87	0	273	87	0	87	87	18	0	ARIDIC
PADILLA	21.1	22.1	18.8	ISOTHERMIC	71	117	172	71	117	172	289	289	0	7	USTIC
PAROTANI	21.5	23.4	18.2	THERMIC	116	98	146	116	98	146	244	244	0	0	USTIC
POCOATA	16.8	18.5	14.0	ISOTHERMIC	129	45	186	129	45	186	231	231	15	21	USTIC
POTOSI	11.5	12.6	9.0	ISOMESIC	125	80	155	125	80	126	235	120	15	20	USTIC
PUERTO SUARE	28.2	29.5	25.4	ISOHYPERTH.	99	127	134	99	127	134	195	195	0	0	USTIC
PUNA	14.7	15.6	12.4	ISOMESIC	101	129	130	101	129	130	259	259	0	0	USTIC
RIBERALTA	29.4	29.2	28.8	ISOHYPERTH.	61	71	228	61	71	228	290	290	0	3	USTIC
ROBORE	28.7	30.0	26.2	ISOHYPERTH.	73	90	197	73	90	197	236	236	0	32	USTIC
RURRENABAQUE	28.1	28.9	26.5	ISOHYPERTH.	0	8	352	0	8	352	360	360	0	103	UDIC
SAN BORJA	27.7	28.7	26.6	ISOHYPERTH.	0	14	346	0	14	346	360	360	0	91	UDIC
SAN IGNACIO	26.4	27.3	23.9	ISOHYPERTH.	4	87	269	4	87	269	356	356	0	64	USTIC
SAN JOQUIN	28.8	29.0	27.5	ISOHYPERTH.	33	97	230	33	97	230	327	327	0	5	USTIC
SAN JOSE	27.7	28.7	25.4	ISOHYPERTH.	129	101	130	129	101	130	177	177	2	0	USTIC
SANANDITA	23.0	25.8	19.5	HYPERTH.	0	72	288	0	72	288	360	360	0	94	UDIC
SANTA ANA	28.9	28.8	27.3	ISOHYPERTH.	25	57	278	25	57	278	321	321	0	23	UDIC
SANTA CRUZ	27.2	28.4	24.7	ISOHYPERTH.	31	102	227	31	102	227	284	284	0	62	USTIC
SORATA	19.4	19.8	19.1	ISOTHERMIC	0	115	245	0	115	245	360	360	0	50	USTIC
SUCRE	18.1	18.7	16.3	ISOTHERMIC	15	154	191	15	154	191	345	345	0	26	USTIC

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 04/29/81

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR BOLI

NAME OF STATION	MEAN SOIL TEMPERATURE ANN	SUMM	WINT	TEMPERATURE REGIME	CUMULATIVE DAYS MSC IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MCIST IN SOME PARTS IN ONE YEAR	MAX.CONSECUTIVE DAYS THAT MCS IS WHEN SOIL TEMP > 8	DRY AFTER SUMMER SOLST.	MCIST AFTER WINTER SOLST.	MOISTURE REGIME
TACAGUA	9.9	12.0	8.0	ISOMESIC	115	71	174	115	51	87	245	93	15	39	USTIC
TARIJA	20.7	22.6	17.3	THERMIC	88	119	153	88	119	153	247	247	0	0	USTIC
TIRAQUE	15.2	15.6	13.8	ISOTHERMIC	122	76	162	122	76	162	238	238	0	0	USTIC
TODOS SANTOS	27.1	28.3	24.9	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	PERUDIC
TOTORA	18.4	18.8	16.7	ISOTHERMIC	42	126	192	42	126	192	318	318	0	27	USTIC
TRINIDAD	29.0	29.5	27.5	ISOHYPERTH.	0	48	312	0	48	312	360	360	0	57	UDIC
TUPIZA	17.6	19.2	14.1	THERMIC	232	128	0	232	128	0	87	87	18	0	ARIDIC
UYUNI	12.5	14.9	7.7	MESIC	360	0	0	271	0	0	0	0	120	0	ARIDIC
VACAS	13.8	15.2	11.3	ISOMESIC	19	106	235	19	106	235	341	184	0	70	USTIC
VALLE GRANDE	18.7	20.1	16.9	ISOTHERMIC	0	109	251	0	109	251	360	360	0	56	USTIC
VILLA ARCMA	8.7	9.7	6.9	ISOMESIC	221	139	0	140	114	0	139	79	15	0	USTIC
VILLA MONTES	26.6	29.6	23.0	HYPERTH.	122	48	190	122	48	190	213	213	15	28	USTIC
VILLAZON	12.0	13.9	8.4	MESIC	226	134	0	157	134	0	108	108	4	0	USTIC
VISCACHANTI	11.6	13.2	8.9	ISOMESIC	122	93	145	122	57	145	238	154	0	0	USTIC
YACUIBA	24.9	27.4	21.2	HYPERTH.	9	56	295	9	56	295	351	351	0	70	UDIC

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 04/29/81

32

BOLIVIA

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR BOLI

NAME OF STATION	MOISTURE REGIME	CON.D. M/D T>8	TEMPERATURE REGIME	TENTATIVE SUBDIVISION OF MOISTURE REGIME		CONS DAYS MOIST(2+3) SUM.	WINT	CUM.DAYS MOIST(2+3) SUM.	WINT	CONS.DAYS COMP.MOIST SUM.	WINT	CUM.DAYS COMP.MOI. SUM.	WINT
*ALCOCHE	UDIC	360	ISOHYPERTH.	TYPIC	UDIC					180	105	180	174
*ALTO (EL)	USTIC	268	ISOMESIC	TYPIC	TROPUST.					180	68	180	83
*ANGOSTURA (L	USTIC	242	ISOTHERMIC	TYPIC	TROPUST.	180	47	180	62				
*ANZALDO	UDIC	360	ISOTHERMIC	TYPIC	UDIC					180	180	180	180
*APOLO	UDIC	360	ISOHYPERTH.	TYPIC	UDIC					180	180	180	180
*BELEN (EL)	UDIC	162	ISOMESIC	TYPIC	UDIC					180	180	180	180
*BERMEJO	UDIC	360	HYPERTH.	TYPIC	UDIC					180	91	180	157
*CAMIRI	USTIC	220	ISOHYPERTH.	TYPIC	TROPUST.	180	25	180	54				
*CHALLAPATA	USTIC	154	ISOMESIC	ARIDIC	TROPUST.	139	15	139	15				
*CHAPISIRCA	UDIC	117	ISOMESIC	TYPIC	UDIC					180	180	180	180
*CHARANA	USTIC	108	ISOMESIC	ARIDIC	TROPUST.	108	0	108	0				
*CHULUMANI	UDIC	360	ISOHYPERTH.	TYPIC	UDIC					180	180	180	180
*CHUQUINA	USTIC	172	ISOMESIC	ARIDIC	TROPUST.	177	15	177	15				
*COBIJA	UDIC	360	ISOHYPERTH.	DRY	TROPUDIC					180	75	180	114
*COCHABAMBA	USTIC	189	ISOTHERMIC	TYPIC	TROPUST.	174	15	174	15				
*CONCEPCION	USTIC	326	ISOHYPERTH.	UDIC	TROPUST.	180	101	180	166				
*COPACABANA	UDIC	360	ISOMESIC	TYPIC	UDIC					180	180	180	180
*GUAQUI	UDIC	179	ISOMESIC	TYPIC	UDIC					180	180	180	180
*GUAYARMERIN	USTIC	241	ISOHYPERTH.	TYPIC	TROPUST.	180	45	180	98				
*IRUPANA	UDIC	360	ISOTHERMIC	TYPIC	UDIC					180	180	180	180
*JOYA (LA)	ARIDIC	86	ISOMESIC	WEAK	ARIDIC	86	15	97	15				
*LA PAZ	USTIC	360	ISOMESIC	UDIC	TROPUST.					180	62	180	78
*MAGDALENA	USTIC	246	ISOHYPERTH.	TYPIC	TROPUST.	180	45	180	98				
*MIZQUE	USTIC	168	ISOTHERMIC	ARIDIC	TROPUST.	152	18	152	33				
*MOROCHATA	UDIC	360	THERMIC	TYPIC	UDIC					180	180	180	180
*OPLOCA	ARIDIC	16	THERMIC	TYPIC	ARIDIC	16	15	31	15				
*ORURO	ARIDIC	87	ISOMESIC	WEAK	ARIDIC	87	0	87	0				
*PADILLA	USTIC	289	ISOTHERMIC	UDIC	TROPUST.	180	64	180	109				
*PAROTANI	USTIC	244	THERMIC	TYPIC	TEMPUST.	180	49	180	64				
*POCOATA	USTIC	231	ISOTHERMIC	TYPIC	TROPUST.	165	66	165	66				
*POTOSI	USTIC	120	ISOMESIC	ARIDIC	TROPUST.	165	70	165	70				
*PUERTO SUARE	USTIC	195	ISOHYPERTH.	TYPIC	TROPUST.	165	30	179	82				
*PUNA	USTIC	259	ISOMESIC	TYPIC	TROPUST.	180	45	180	79				
*RIBERALTA	USTIC	290	ISOHYPERTH.	UDIC	TROPUST.	180	75	180	119				
*ROBORE	USTIC	236	ISOHYPERTH.	TYPIC	TROPUST.	180	41	180	107				
*RURRENABAQUE	UDIC	360	ISOHYPERTH.	TYPIC	UDIC					180	102	180	172
*SAN BORJA	UDIC	360	ISOHYPERTH.	TYPIC	UDIC					180	91	180	166
*SAN IGNACIO	USTIC	356	ISOHYPERTH.	UDIC	TROPUST.	180	131	180	176				
*SAN JOQUIN	USTIC	327	ISOHYPERTH.	UDIC	TROPUST.	180	105	180	147				
*SAN JOSE	USTIC	177	ISOHYPERTH.	ARIDIC	TROPUST.	165	16	178	53				
*SANANDITA	UDIC	360	HYPERTH.	DRY	TEMPUDIC					165	94	179	109
*SANTA ANA	UDIC	321	ISOHYPERTH.	DRY	TROPUDIC	180	75	180	155				
*SANTA CRUZ	USTIC	284	ISOHYPERTH.	UDIC	TROPUST.	180	89	180	149				
*SORATA	USTIC	360	ISOTHERMIC	UDIC	TROPUST.					180	50	180	65
*SUCRE	USTIC	345	ISOTHERMIC	UDIC	TROPUST.	180	120	180	165				

COMPUTED BY FORTRAN PROGRAM V#08, APR 1981

DATE 04/29/81

DETERMINATION OF SCIL MCISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR BCLI

NAME OF STATION	MOISTURE REGIME	CON.D. M/D T>8	TEMPERATURE REGIME	TENTATIVE SUBDIVISION OF MOISTURE REGIME		CONS DAYS MCIST(2+3) SUM.	CONS DAYS MCIST(2+3) WINT	CUM.DAYS MOIST(2+3) SUM.	CUM.DAYS MOIST(2+3) WINT	CONS.DAYS COMP.MOIST SUM.	CONS.DAYS COMP.MOIST WINT	CUM.DAYS COMP.MOI. SUM.	CUM.DAYS COMP.MOI. WINT
TACAGUA	LSTIC	93	ISCMESIC	ARIDIC	TROPUST.	165	80	165	80				
TARIJA	LSTIC	247	THERMIC	TYPIC	TEMPUST.	180	52	180	92				
TIRAQUE	LSTIC	238	ISCTHERMIC	TYPIC	TROPUST.	180	43	180	58				
TODOS SANTOS	PERUDIC	360	ISCHYPERTH.		PERUDIC					180	180	180	180
TOTORA	LSTIC	318	ISCTHERMIC	UDIC	TROPUST.	180	93	180	138				
TRINIDAD	UDIC	360	ISOHYPERTH.	DRY	TROPUDIC					180	75	180	132
TUPIZA	ARIDIC	87	THERMIC	WEAK	ARIDIC	87	21	87	41				
UYUNI	ARIDIC	0	MESIC	EXTREME	ARIDIC	0	0	0	0				
VACAS	LSTIC	184	ISOMESIC	TYPIC	TROPUST.	180	146	180	161				
VALLE GRANDE	LSTIC	360	ISOTHERMIC	UDIC	TROPUST.					180	56	180	71
VILLA ARCMA	LSTIC	79	ISCMESIC	ARIDIC	TROPUST.	139	0	139	0				
VILLA MONTES	LSTIC	213	HYPERTH.	TYPIC	TEMPUST.	165	48	165	73				
VILLAZCN	LSTIC	108	MESIC	TYPIC	TEMPUST.	108	15	119	15				
VISCACHANTI	USTIC	154	ISOMESIC	ARIDIC	TROPUST.	180	43	180	58				
YACUIBA	UDIC	351	HYPERTH.	DRY	TEMPUDIC	180	126	180	171				

COMPUTED BY FORTRAN PROGRAM VWC8, APR 1981

DATE 04/29/81

34

BOLIVIA

MOISTURE REGIMES
BRAZIL
MACAPA
MANAUS
TERESINA
PORTO VELHO
RIO BRANCO
SALVADOR
CUIABA
BRASILIA
RIO DE JANEIRO
CURITIBA
MOISTURE REGIMES
SYMBOL TABLE:
USTIC - - - S
UDIC - - - D
ARIDIC - - - A
XERIC - - - X
PERUDIC - - - P

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR BRAZ

NAME OF STATION	MOISTURE REGIME	CON.D. M/D T>8	TEMPERATURE REGIME	TENTATIVE SUBDIVISION OF MOISTURE REGIME	CONS DAYS MOIST(2+3) SUM.	CONS DAYS MOIST(2+3) WINT	CUM.DAYS MOIST(2+3) SUM.	CUM.DAYS MOIST(2+3) WINT	CONS.DAYS COMP.MOIST SUM.	CONS.DAYS COMP.MOIST WINT	CUM.DAYS COMP.MOI. SUM.	CUM.DAYS COMP.MOI. WINT
AGUA BRANCA	USTIC	296	ISO HYPERTH.	UDIC TROPUST.	105	180	145	180				
ALEGRETE	UDIC	360	THERMIC	TYPIC UDIC					180	180	180	180
ALFREDO CHAV	PERUDIC	360	THERMIC	PERUDIC					180	180	180	180
ALTO ITATIAI	PERUDIC	360	ISO MESIC	PERUDIC					180	180	180	180
ALTO TAPAJOS	UDIC	342	ISO HYPERTH.	DRY TROPUDIC	180	105	180	162				
ANADIA	USTIC	253	ISO HYPERTH.	TYPIC TROPUST.	75	178	109	178				
ANGRA DOS RE	PERUDIC	360	ISO HYPERTH.	PERUDIC					180	180	180	180
AQUIDAUANA	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
ARACAJU	USTIC	230	ISO HYPERTH.	TYPIC TROPUST.	75	155	107	155				
ARAQUAI	USTIC	199	ISO HYPERTH.	TYPIC TROPUST.	154	45	154	56				
ARARANGUA	UDIC	360	THERMIC	TYPIC UDIC					180	180	180	180
ARAXA	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
AREIA	USTIC	360	ISO HYPERTH.	UDIC TROPUST.					105	156	105	156
AREIA	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					135	160	135	160
AVARE	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
BAGE	UDIC	360	THERMIC	TYPIC UDIC					180	180	180	180
BANDEIRANTES	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
BANGU	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
BARBACENA	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
BARCELOS	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
BARRA	ARIDIC	82	ISO HYPERTH.	WEAK ARIDIC	37	45	97	45				
BARRA DO COR	USTIC	228	ISO HYPERTH.	TYPIC TROPUST.	180	33	180	62				
BARRA ITABAP	USTIC	286	ISO HYPERTH.	UDIC TROPUST.	180	75	180	127				
BARRADORICGR	ARIDIC	81	ISO HYPERTH.	WEAK ARIDIC	58	45	94	45				
BARREIRAS	USTIC	277	ISO HYPERTH.	UDIC TROPUST.	180	75	180	97				
BARREIRO ARA	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
BARREIROS	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
BELA VISTA	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
BELEM BRAZIL	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
BELO HORIZON	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	75	180	114
BELTERRA	USTIC	311	ISO HYPERTH.	UDIC TROPUST.	180	86	180	136				
BLUMENAU	PERUDIC	360	HYPERTH.	PERUDIC					180	180	180	180
BOA VISTA BR	USTIC	255	ISO HYPERTH.	TYPIC TROPUST.	180	75	180	116				
BOA VISTA TO	USTIC	285	ISO HYPERTH.	UDIC TROPUST.	180	60	180	127				
BONSUCESSO	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
BROSQUE	PERUDIC	360	HYPERTH.	PERUDIC					180	180	180	180
CABO FRIO	USTIC	78	ISO HYPERTH.	ARIDIC TROPUST.	75	27	141	67				
CACERES	USTIC	282	ISO HYPERTH.	UDIC TROPUST.	180	57	180	122				
CACHOEIRA DO	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
CACHOEIRO IT	USTIC	293	ISO HYPERTH.	UDIC TROPUST.	180	75	180	113				
CAETITE BRAZ	USTIC	338	ISO HYPERTH.	UDIC TROPUST.	180	83	180	158				
CAMBORIU	PERUDIC	360	HYPERTH.	PERUDIC					180	180	180	180
CAMBUQUIRA	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
CAMPINAGRAND	USTIC	221	ISO HYPERTH.	TYPIC TROPUST.	75	146	103	146				
CAMPO GRANDE	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180

COMPUTED BY FORTRAN PROGRAM VWG8, APR 1981

DATE 11/16/81

36

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR BRAZ

NAME OF STATION	MOISTURE REGIME	CON.D. M/D T>8	TEMPERATURE REGIME	TENTATIVE SUBDIVISION OF MOISTURE REGIME	CONS DAYS MOIST(2+3) SUM.	CONS DAYS MOIST(2+3) WINT	CUM.DAYS MOIST(2+3) SUM.	CUM.DAYS MOIST(2+3) WINT	CONS.DAYS COMP.MOIST SUM.	CONS.DAYS COMP.MOIST WINT	CUM.DAYS COMP.MOI. SUM.	CUM.DAYS COMP.MOI. WINT
CAMPOS	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	45	180	108
CARATINGA	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	75	180	143
CARAVELAS BR	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
CARMO	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	75	180	155
CAROLINA	USTIC	267	ISO HYPERTH.	TYPIC TROPUST.	180	75	180	87				
CASTRO	PERUDIC	360	ISO THERMIC	PERUDIC					180	180	180	180
CATALAO	USTIC	344	ISO HYPERTH.	UDIC TROPUST.	180	89	180	164				
CATU	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					105	180	130	180
CAXAMBU	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
CAXIAS	USTIC	196	ISO HYPERTH.	TYPIC TROPUST.	165	31	169	57				
CAXIAS SUL	PERUDIC	360	THERMIC	PERUDIC					180	180	180	180
CLEVELANDIA	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					110	180	125	180
COARI BRAZIL	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
CONCEICAO AR	USTIC	283	ISO HYPERTH.	UDIC TROPUST.	180	75	180	115				
CONCEICAO BA	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
CONCEICAO GO	USTIC	285	ISO HYPERTH.	UDIC TROPUST.	180	75	180	105				
CONCEICAO MA	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	100	180	175
CONCEICAO SE	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	75	180	138
CORDEIRO	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
CORRENTES	USTIC	286	ISO HYPERTH.	UDIC TROPUST.	105	180	106	180				
CORUMBA BRAZ	USTIC	238	ISO HYPERTH.	TYPIC TROPUST.	180	43	180	111				
CORURIPE	USTIC	287	ISO HYPERTH.	UDIC TROPUST.	105	180	119	180				
COXIPO	USTIC	322	ISO HYPERTH.	UDIC TROPUST.	180	75	180	151				
CRUZ ALTA	PERUDIC	360	THERMIC	PERUDIC					180	180	180	180
CRUZEIRO DO	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
CRUZETA	ARIDIC	50	ISO HYPERTH.	WEAK ARIDIC	50	0	74	0				
CUIABA BRAZI	USTIC	306	ISO HYPERTH.	UDIC TROPUST.	180	75	180	126				
CURITIBA	PERUDIC	360	ISO THERMIC	PERUDIC					180	180	180	180
CURITIBA BRA	PERUDIC	360	ISO THERMIC	PERUDIC					180	180	180	180
CURITIBANOS	PERUDIC	360	THERMIC	PERUDIC					180	180	180	180
CURVELO	USTIC	349	ISO HYPERTH.	UDIC TROPUST.	180	94	180	169				
DEODORO	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
DIAMANTINA	UDIC	360	ISO THERMIC	TYPIC UDIC					180	96	180	171
ENCRUZILHADA	UDIC	360	THERMIC	TYPIC UDIC					180	180	180	180
ENGENHO DE D	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
ESCADA	UDIC	360	ISO HYPERTH.	TYPIC UDIC					165	164	171	179
FERNANDONORO	USTIC	252	ISO HYPERTH.	TYPIC TROPUST.	135	117	135	117				
FLORIANOPOLI	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
FONTE BOA	PERUDIC	360	ISO HYPERTH.	PERUDIC					180	180	180	180
FORMOSA BRAZ	USTIC	324	ISO HYPERTH.	UDIC TROPUST.	180	75	180	144				
FORTALEZA	USTIC	246	ISO HYPERTH.	TYPIC TROPUST.	165	81	165	81				
FRANCA	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	105	180	173
FRUTAL	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	75	180	126
GAMELEIRA	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	75	180	142
GARAHUNS	USTIC	344	ISO THERMIC	UDIC TROPUST.	135	180	164	180				

COMPUTED BY FORTRAN PROGRAM V.08, APR 1981

DATE 11/16/81

37

BRAZIL

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR BRAZ

NAME OF STATION	MOISTURE REGIME	CON.D. M/D T>8	TEMPERATURE REGIME	TENTATIVE SUBDIVISION OF MOISTURE REGIME	CONS DAYS MOIST(2+3) SUM.	CONS DAYS MOIST(2+3) WINT	CUM.DAYS MOIST(2+3) SUM.	CUM.DAYS MOIST(2+3) WINT	CONS.DAYS COMP.MOIST SUM.	CONS.DAYS COMP.MOIST WINT	CUM.DAYS COMP.MOI. SUM.	CUM.DAYS COMP.MOI. WINT
GARANHUNS	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					105	175	105	175
GARGAU	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	75	180	108
GOIANA	UDIC	359	ISO HYPERTH.	DRY TROPUDIC	135	180	179	180				
GOIANA	USTIC	348	ISO HYPERTH.	UDIC TROPUST.	165	180	168	180				
GOIANIA	USTIC	343	ISO HYPERTH.	UDIC TROPUST.	180	88	180	163				
GOIAS	USTIC	306	ISO HYPERTH.	UDIC TROPUST.	180	75	180	137				
GRAJAU	USTIC	259	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	91				
GRAMINHA	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
GRAO MOGOL	USTIC	359	ISO HYPERTH.	UDIC TROPUST.	180	104	180	179				
GUARABIRA	USTIC	243	ISO HYPERTH.	TYPIC TROPUST.	105	138	130	138				
GUARAMIRANGA	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
GUARAPUAVA	PERUDIC	360	ISO THERMIC	PERUDIC					180	180	180	180
GUARATINGA	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	75	180	137
HUMAITA	UDIC	348	ISO HYPERTH.	DRY TROPUDIC	180	105	180	168				
IAUARETE	PERUDIC	360	ISO HYPERTH.	PERUDIC					180	180	180	180
IBIPETUBA	USTIC	247	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	79				
IGUAPE	PERUDIC	360	ISO HYPERTH.	PERUDIC					180	180	180	180
IGUATU	USTIC	158	ISO HYPERTH.	ARIDIC TROPUST.	135	23	148	23				
IGUATU	USTIC	183	ISO HYPERTH.	TYPIC TROPUST.	135	48	146	48				
ILHEUS	PERUDIC	360	ISO HYPERTH.	PERUDIC					180	180	180	180
IMPERATRIZ	USTIC	269	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	110				
IRAI	PERUDIC	360	THERMIC	PERUDIC					180	180	180	180
ITABAIANINHA	USTIC	277	ISO HYPERTH.	UDIC TROPUST.	75	180	138	180				
ITABIRA	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	75	180	147
ITAJUBA	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
ITAMARANDIBA	UDIC	360	ISO THERMIC	DRY TROPUDIC					180	58	180	103
ITAPERUNA	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	75	180	118
IVAI	PERUDIC	360	ISO THERMIC	PERUDIC					180	180	180	180
JACOBINA	USTIC	193	ISO HYPERTH.	TYPIC TROPUST.	105	88	151	133				
JACOBINA	USTIC	291	ISO HYPERTH.	UDIC TROPUST.	135	156	176	171				
JAGUARIAIVA	PERUDIC	360	ISO THERMIC	PERUDIC					180	180	180	180
JANUARETE	PERUDIC	360	ISO HYPERTH.	PERUDIC					180	180	180	180
JANUARIA	USTIC	236	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	65				
JARDIN BOTAN	PERUDIC	360	ISO HYPERTH.	PERUDIC					180	180	180	180
JEQUITINHONH	USTIC	190	ISO HYPERTH.	TYPIC TROPUST.	145	45	145	54				
JOAO PESSOA	USTIC	259	ISO HYPERTH.	TYPIC TROPUST.	105	154	134	154				
JOAOPESSOA	USTIC	292	ISO HYPERTH.	UDIC TROPUST.	135	157	147	157				
JUIZ DE FORA	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
LAGES	PERUDIC	360	THERMIC	PERUDIC					180	180	180	180
LAGUNA	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
LAVRAS	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
LEOPOLDINA	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	75	180	114
LUZIANIA	USTIC	341	ISO HYPERTH.	UDIC TROPUST.	180	86	180	161				
MACAE	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
MACAIBA	USTIC	244	ISO HYPERTH.	TYPIC TROPUST.	105	139	124	139				

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 11/16/81

38

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR BRAZ

NAME OF STATION	MOISTURE REGIME	CON.D. M/D T>8	TEMPERATURE REGIME	TENTATIVE SUBDIVISION OF MOISTURE REGIME	CONS DAYS MOIST(2+3) SUM.	CONS DAYS MOIST(2+3) WINT	CUM.DAYS MOIST(2+3) SUM.	CUM.DAYS MOIST(2+3) WINT	CONS.DAYS COMP.MOIST SUM.	CONS.DAYS COMP.MOIST WINT	CUM.DAYS COMP.MOI. SUM.	CUM.DAYS COMP.MOI. WINT
MACAIBA	USTIC	280	ISO HYPERTH.	UDIC TROPUST.	135	145	146	145				
MACEIO	USTIC	281	ISO HYPERTH.	UDIC TROPUST.	105	176	126	176				
MADALENA	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
MACEIO	USTIC	275	ISO HYPERTH.	UDIC TROPUST.	105	170	128	170				
MANAUS	USTIC	327	ISO HYPERTH.	UDIC TROPUST.	180	75	180	157				
MANICORE	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	105	180	167
MAR DE HESPA	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
MENDES	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
MERURI	USTIC	327	ISO HYPERTH.	UDIC TROPUST.	180	75	180	159				
MIRANTE SANT	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
MONDUBIM	USTIC	262	ISO HYPERTH.	TYPIC TROPUST.	165	97	165	97				
MONDUBIM	USTIC	262	ISO HYPERTH.	TYPIC TROPUST.	165	97	165	97				
MONTE ALEGRE	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	75	180	127
MONTE CLAROS	USTIC	274	ISO HYPERTH.	UDIC TROPUST.	180	49	180	121				
MONTE SANTO	ARIDIC	26	ISO HYPERTH.	TYPIC ARIDIC	26	24	75	54				
MONTE SERRAT	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
MONTESANTO	ARIDIC	27	ISO HYPERTH.	TYPIC ARIDIC	26	27	100	68				
MORRODOCHAPO	USTIC	326	ISO THERMIC	UDIC TROPUST.	180	101	180	146				
MORIAE	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	75	180	157
MOZAMBINHO	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
NATAL BRAZIL	USTIC	239	ISO HYPERTH.	TYPIC TROPUST.	105	134	126	134				
NAZAREDAMATA	USTIC	261	ISO HYPERTH.	TYPIC TROPUST.	105	156	143	156				
NAZARETH	USTIC	261	ISO HYPERTH.	TYPIC TROPUST.	105	156	143	156				
NITEROI	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
NOVA CRUZ	USTIC	212	ISO HYPERTH.	TYPIC TROPUST.	105	107	120	107				
NOVA FRIBURG	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
OLINDA	USTIC	280	ISO HYPERTH.	UDIC TROPUST.	135	145	135	145				
OLINDA-RECIF	USTIC	258	ISO HYPERTH.	TYPIC TROPUST.	105	153	127	153				
ONDINA	UDIC	360	ISO HYPERTH.	TYPIC UDIC					105	180	168	180
OURO FINO	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
OURO PRETO	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
PALMEIRA DOS	USTIC	201	ISO HYPERTH.	TYPIC TROPUST.	45	156	82	156				
PAO DE ACUCA	USTIC	142	ISO HYPERTH.	ARIDIC TROPUST.	45	97	65	97				
PAODEACUCAR	USTIC	141	ISO HYPERTH.	ARIDIC TROPUST.	45	96	65	96				
PAQUETA	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
PARACATU	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	75	180	127
PARANA	USTIC	324	ISO HYPERTH.	UDIC TROPUST.	180	75	180	144				
PARANAGUA	PERUDIC	360	ISO HYPERTH.	PERUDIC					180	180	180	180
PARAPEUNA	USTIC	360	ISO HYPERTH.	UDIC TROPUST.					180	45	180	86
PARATINGA	USTIC	176	ISO HYPERTH.	ARIDIC TROPUST.	131	45	131	45				
PARATINGARIO	USTIC	191	ISO HYPERTH.	TYPIC TROPUST.	146	45	146	45				
PARINTINS	USTIC	294	ISO HYPERTH.	UDIC TROPUST.	180	99	180	143				
PASSO FUNDO	PERUDIC	360	THERMIC	PERUDIC					180	180	180	180
PASSO QUATRO	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
PEDRA AZUL	USTIC	360	ISO HYPERTH.	UDIC TROPUST.					180	45	180	88

COMPUTED BY FORTRAN PROGRAM VWC8, APR 1981

DATE 11/16/81

39

BRAZIL

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR BRAZ

NAME OF STATION	MOISTURE REGIME	CON.D. M/D T>8	TEMPERATURE REGIME	TENTATIVE SUBDIVISION OF MOISTURE REGIME	CONS DAYS MOIST(2+3) SUM.	CONS DAYS MOIST(2+3) WINT	CUM.DAYS MOIST(2+3) SUM.	CUM.DAYS MOIST(2+3) WINT	CONS.DAYS COMP.MOIST SUM.	CONS.DAYS COMP.MOIST WINT	CUM.DAYS COMP.MOIST SUM.	CUM.DAYS COMP.MOIST WINT
PELOTAS	UDIC	360	THERMIC	TYPIC UDIC					180	180	180	180
PENHA	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
PESQUEIRA	USTIC	216	ISO HYPERTH.	TYPIC TROPUST.	105	111	142	111				
PETROPOLIS	PERUDIC	360	ISO THERMIC	PERUDIC					180	180	180	180
PILAR	USTIC	294	ISO HYPERTH.	UDIC TROPUST.	105	180	143	180				
PILARMANGABA	USTIC	294	ISO HYPERTH.	UDIC TROPUST.	105	180	143	180				
PINHEIROS	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	105	180	175
PIRACICABA	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
PIRAPORA	USTIC	275	ISO HYPERTH.	UDIC TROPUST.	180	50	180	115				
PIRENPOLIS	UDIC	328	ISO HYPERTH.	DRY TROPUDIC	180	75	180	148				
PITANGUI	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	51	180	96
PLIVEIRA	UDIC	360	ISO THERMIC	TYPIC UDIC					180	105	180	176
POGOS DE CAL	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
PONTA GROSSA	PERUDIC	360	ISO THERMIC	PERUDIC					180	180	180	180
PORANGABA	USTIC	246	ISO HYPERTH.	TYPIC TROPUST.	165	81	165	81				
PORCIUNCULA	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	75	180	118
PORTO ALEGRE	UDIC	360	HYPERTH.	TYPIC UDIC					180	180	180	180
PORTO DE PED	USTIC	279	ISO HYPERTH.	UDIC TROPUST.	105	174	126	174				
PORTO NACION	USTIC	272	ISO HYPERTH.	UDIC TROPUST.	180	75	180	92				
PORTO VELHO	USTIC	336	ISO HYPERTH.	UDIC TROPUST.	180	105	180	156				
PORTO VELHO	UDIC	337	ISO HYPERTH.	DRY TROPUDIC	180	105	180	157				
PORTODEPEDRA	USTIC	279	ISO HYPERTH.	UDIC TROPUST.	105	174	126	174				
PRACA 15 NOV	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	133	180	178
PRESIDENTE M	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	75	180	118
PROPRIA	USTIC	173	ISO HYPERTH.	ARIDIC TROPUST.	45	128	71	128				
QUARTEIS	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	75	180	113
QUIXADA	USTIC	168	ISO HYPERTH.	ARIDIC TROPUST.	135	33	147	33				
QUIXERAMOBIM	USTIC	158	ISO HYPERTH.	ARIDIC TROPUST.	135	23	145	23				
QUIXERAMOBIM	USTIC	108	ISO HYPERTH.	ARIDIC TROPUST.	105	3	124	3				
REMANSO BRAZ	ARIDIC	21	ISO HYPERTH.	TYPIC ARIDIC	21	15	50	28				
REZENDE	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
RIO BRANCO	USTIC	191	ISO HYPERTH.	TYPIC TROPUST.	146	45	146	45				
RIO DE JANEI	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
RIO DOURO	PERUDIC	360	ISO HYPERTH.	PERUDIC					180	180	180	180
RIO GRANDE	UDIC	360	THERMIC	TYPIC UDIC					180	180	180	180
RIO NEGRO	PERUDIC	360	THERMIC	PERUDIC					180	180	180	180
RUY BARBOSA	PERUDIC	360	THERMIC	PERUDIC					180	180	180	180
SALVADOR BRA	UDIC	360	ISO HYPERTH.	TYPIC UDIC					105	180	168	180
SAN ANTONIO	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	75	180	108
SANTA CRUZ	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
SANTA CRUZ B	USTIC	328	ISO HYPERTH.	UDIC TROPUST.	180	75	180	160				
SANTA LUZIA	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	75	180	112
SANTA MARIA	UDIC	360	THERMIC	TYPIC UDIC					180	180	180	180
SANTA RITA R	USTIC	247	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	79				

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 11/16/81

40

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR BRAZ

NAME OF STATION	MOISTURE REGIME	CON.D. M/D T>8	TEMPERATURE REGIME	TENTATIVE SUBDIVISION OF MOISTURE REGIME	CONS DAYS MOIST(2+3) SUM.	CONS DAYS MOIST(2+3) WINT	CUM.DAYS MOIST(2+3) SUM.	CUM.DAYS MOIST(2+3) WINT	CONS.DAYS COMP.MOIST SUM.	CONS.DAYS COMP.MOIST WINT	CUM.DAYS COMP.MOI. SUM.	CUM.DAYS COMP.MOI. WINT
SANTAREM BRA	USTIC	308	ISO HYPERTH.	UDIC TROPUST.	180	113	180	145				
SANTOS	PERUDIC	360	ISO HYPERTH.	PERUDIC					180	180	180	180
SANTOS DUMON	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
SAO BENTA DO	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
SAO BENTO	USTIC	247	ISO HYPERTH.	TYPIC TROPUST.	165	82	165	97				
SAO FIDELIS	USTIC	294	ISO HYPERTH.	UDIC TROPUST.	180	75	180	114				
SAO FRANCISC	USTIC	279	ISO HYPERTH.	UDIC TROPUST.	180	54	180	111				
SAO FRANCISC	PERUDIC	360	ISO HYPERTH.	PERUDIC					180	180	180	180
SAO FRANCISC	PERUDIC	360	ISO THERMIC	PERUDIC					180	180	180	180
SAO GABRIEL	PERUDIC	360	ISO HYPERTH.	PERUDIC					180	180	180	180
SAO GONCALO	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					75	180	126	180
SAO JOAO DEL	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
SAO JOAO EVA	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
SAO JOAO MAR	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
SAO LOURENCO	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
SAO LUIZ	USTIC	254	ISO HYPERTH.	TYPIC TROPUST.	165	89	165	89				
SAO LUIZ CAC	USTIC	308	ISO HYPERTH.	UDIC TROPUST.	180	83	180	154				
SAO LUIZ GON	UDIC	360	HYPERTH.	TYPIC UDIC					180	180	180	180
SAO PAULO BR	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
SAO PAULO MU	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
SAO PEDRO	PERUDIC	360	ISO HYPERTH.	PERUDIC					180	180	180	180
SAO TOME FAR	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					105	75	175	132
SAOCASTANO	USTIC	163	ISO HYPERTH.	ARIDIC TROPUST.	75	88	127	88				
SAOFRANCISCO	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
SAOGONCALODO	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					75	180	126	180
SATUBA	USTIC	325	ISO HYPERTH.	UDIC TROPUST.	135	180	154	180				
SENA MADUREI	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	105	180	176
SETA LAGOAS	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	75	180	109
SIMOESLOPES	USTIC	227	ISO HYPERTH.	TYPIC TROPUST.	45	180	61	180				
SITIO DA BAT	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
SOBRAL	USTIC	166	ISO HYPERTH.	ARIDIC TROPUST.	135	31	147	31				
SOURE	USTIC	304	ISO HYPERTH.	UDIC TROPUST.	180	109	180	124				
SUKUBIM	USTIC	137	ISO HYPERTH.	ARIDIC TROPUST.	75	62	91	62				
TAGUATINGA	USTIC	286	ISO HYPERTH.	UDIC TROPUST.	180	75	180	106				
TAPACURA	USTIC	315	ISO HYPERTH.	UDIC TROPUST.	135	180	145	180				
TAPERA	USTIC	315	ISO HYPERTH.	UDIC TROPUST.	135	180	145	180				
TAPERINHA-SA	USTIC	308	ISO HYPERTH.	UDIC TROPUST.	180	113	180	145				
TARACUA	PERUDIC	360	ISO HYPERTH.	PERUDIC					180	180	180	180
TEOFILO OTON	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	75	180	146
TERESOPOLIS	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
TEREZINA	USTIC	192	ISO HYPERTH.	TYPIC TROPUST.	165	27	173	51				
TEREZOPOLIS	PERUDIC	360	THERMIC	PERUDIC					180	180	180	180
TINGUA	PERUDIC	360	ISO HYPERTH.	PERUDIC					180	180	180	180
TRACATEUA	USTIC	304	ISO HYPERTH.	UDIC TROPUST.	165	139	165	139				
TRES CORACOE	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180

COMPUTED BY FORTRAN PROGRAM VWC8, APR 1981

DATE 11/16/81

41

BRAZIL

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR BRAZ

NAME OF STATION	MOISTURE REGIME	CON.D. M/D T>8	TEMPERATURE REGIME	TENTATIVE SUBDIVISION OF MOISTURE REGIME	CONS DAYS MOIST(2+3) SUM.	CONS DAYS MOIST(2+3) WINT	CUM.DAYS MOIST(2+3) SUM.	CUM.DAYS MOIST(2+3) WINT	CONS.DAYS COMP.MOIST SUM.	CONS.DAYS COMP.MOIST WINT	CUM.DAYS COMP.MOI. SUM.	CUM.DAYS COMP.MOI. WINT
TRES LAGOAS	UDIC	360	ISC HYPERTH.	TYPIC UDIC					180	98	180	172
TURIACU BRAZ	USTIC	268	ISO HYPERTH.	TYPIC TROPUST.	165	103	165	113				
UAPES BRAZIL	PERUDIC	360	ISC HYPERTH.	PERUDIC					180	180	180	180
UBA	UDIC	360	ISC HYPERTH.	DRY TROPUDIC					180	75	180	126
UBERABA	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	75	180	155
UMBUZEIRO	USTIC	268	ISO HYPERTH.	TYPIC TROPUST.	105	163	120	163				
URUGUAIANA	UDIC	360	HYPERTH.	TYPIC UDIC					180	180	180	180
URUSSANGA	PERUDIC	360	THERMIC	PERUDIC					180	180	180	180
VALENCIA	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
VALOES	PERUDIC	360	THERMIC	PERUDIC					180	180	180	180
VASSOURAS	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
VICOSA	UDIC	360	ISC THERMIC	TYPIC UDIC					180	180	180	180
VITORIA	UDIC	360	ISC HYPERTH.	TYPIC UDIC					180	180	180	180
XANXERE	PERUDIC	360	THERMIC	PERUDIC					180	180	180	180
XEREM	PERUDIC	360	ISC HYPERTH.	PERUDIC					180	180	180	180

COMPUTED BY FORTRAN PROGRAM VWC8, APR 1981

DATE 11/16/81

42

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR BRAZ

NAME OF STATION	MEAN SOIL TEMPERATURE ANN	SUMM	WINT	TEMPERATURE REGIME	CUMULATIVE DAYS MSC IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX.CONSECUTIVE DAYS THAT MCS IS MOIST IN SOME PARTS IN ONE YEAR	WHEN SOIL TEMP > 8	DRY AFTER SUMMER SOLST.	MOIST AFTER WINTER SOLST.	MOISTURE REGIME
AGUA BRANCA	25.3	26.4	23.2	ISO HYPERTH.	35	136	189	35	136	189	296	296	21	120	USTIC
ALEGRETE	21.1	24.8	17.7	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
ALFREDO CHAV	19.2	22.1	16.6	THERMIC	0	0	360	0	0	360	360	360	0	120	PERUDIC
ALTO ITATIAI	14.0	15.2	12.3	ISO MESIC	0	0	360	0	0	360	360	360	0	120	PERUDIC
ALTO TAPAJOS	27.8	27.7	27.5	ISO HYPERTH.	18	69	273	18	69	273	342	342	0	18	UDIC
ANADIA	25.5	26.5	24.1	ISO HYPERTH.	73	97	190	73	97	190	253	253	45	120	USTIC
ANGRA DOS RE	25.0	26.7	23.4	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	PERUDIC
AQUIDAUANA	26.5	28.0	24.2	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
ARACAJU	27.2	27.7	26.2	ISO HYPERTH.	98	95	167	98	95	167	230	230	45	120	USTIC
ARAQUAI	26.6	27.4	24.6	ISO HYPERTH.	150	45	165	150	45	165	199	199	0	0	USTIC
ARARANGUA	21.4	24.0	18.6	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
ARAXA	22.3	23.1	20.5	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
AREIA	24.1	24.8	22.8	ISO HYPERTH.	0	99	261	0	99	261	360	360	0	120	USTIC
AREIA	23.1	23.8	21.9	ISO HYPERTH.	0	65	295	0	65	295	360	360	0	120	UDIC
AVARE	22.1	23.8	20.3	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
BAGE	20.5	24.2	17.1	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
BANDEIRANTES	23.1	24.7	21.1	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
BANGU	25.7	27.6	23.8	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
BARBACENA	19.9	21.3	18.2	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
BARCELOS	28.5	28.7	28.2	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
BARRA	28.8	28.8	27.4	ISO HYPERTH.	218	142	0	218	142	0	82	82	9	0	ARIDIC
BARRA DC COR	28.5	28.2	27.5	ISO HYPERTH.	118	79	163	118	79	163	228	228	0	0	USTIC
BARRA ITABAP	25.3	26.6	23.9	ISO HYPERTH.	53	142	165	53	142	165	286	286	0	0	USTIC
BARRADORIOGR	27.6	27.6	26.4	ISO HYPERTH.	221	139	0	221	139	0	81	81	17	0	ARIDIC
BARREIRAS	25.7	25.5	24.5	ISO HYPERTH.	83	104	173	83	104	173	277	277	0	0	USTIC
BARREIRO ARA	21.4	22.5	19.2	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
BARREIROS	25.3	25.9	24.5	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
BELA VISTA	25.1	27.0	22.3	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
BELEM BRAZIL	28.4	28.3	28.5	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
BELO HORIZON	23.2	24.2	21.4	ISO HYPERTH.	0	66	294	0	66	294	360	360	0	39	UDIC
BELTERRA	30.3	30.0	30.3	ISO HYPERTH.	42	66	252	42	66	252	311	311	0	57	USTIC
BLUMENAU	22.7	25.3	20.0	HYPERTH.	0	0	360	0	0	360	360	360	0	120	PERUDIC
BOA VISTA BR	29.9	28.1	30.7	ISO HYPERTH.	64	81	215	64	81	215	255	255	0	15	USTIC
BOA VISTA TO	27.5	27.4	26.7	ISO HYPERTH.	53	92	215	53	92	215	285	285	0	20	USTIC
BONSUCESSO	21.9	23.0	20.1	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
BRUSQUE	22.2	24.8	19.4	HYPERTH.	0	0	360	0	0	360	360	360	0	120	PERUDIC
CABO FRIO	25.4	26.6	24.1	ISO HYPERTH.	152	208	0	152	208	0	78	78	13	0	USTIC
CACERES	27.6	28.3	25.7	ISO HYPERTH.	58	68	234	58	68	234	282	282	0	9	USTIC
CACHOEIRA DO	20.9	22.0	19.0	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
CACHOEIRO IT	25.6	27.3	23.8	ISO HYPERTH.	67	131	162	67	131	162	293	293	0	0	USTIC
CAETITE BRAZ	23.7	24.1	22.1	ISO HYPERTH.	22	88	250	22	88	250	338	338	0	25	USTIC
CAMBORIU	22.1	24.6	19.4	HYPERTH.	0	0	360	0	0	360	360	360	0	120	PERUDIC
CAMBUQUIRA	21.7	22.9	19.8	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
CAMPINAGRAND	23.5	24.2	22.3	ISO HYPERTH.	111	117	132	111	117	132	221	221	75	117	USTIC
CAMPO GRANDE	24.9	26.1	23.1	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 11/16/81

43

BRAZIL

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR BRAZ

NAME OF STATION	MEAN SOIL TEMPERATURE ANN	SUMM	WINT	TEMPERATURE REGIME	CUMULATIVE DAYS MSC IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX.CONSECUTIVE DAYS THAT MCS IS MOIST IN SOME PARTS IN ONE YEAR	WHEN SOIL TEMP > 8	DRY AFTER SUMMER SOLST.	MOIST AFTER WINTER SOLST.	MOISTURE REGIME
CAMPOS	25.6	27.1	23.9	ISO HYPERTH.	0	72	288	0	72	288	360	360	0	43	UDIC
CARATINGA	22.8	24.2	20.5	ISO HYPERTH.	0	37	323	0	37	323	360	360	0	68	UDIC
CARAVELAS BR	26.0	27.2	24.4	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
CARMO	24.3	25.9	22.3	ISO HYPERTH.	0	25	335	0	25	335	360	360	0	61	UDIC
CAROLINA	29.0	28.1	29.4	ISO HYPERTH.	93	59	208	93	59	208	267	267	0	0	USTIC
CASTRO	19.2	21.5	16.7	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	PERUDIC
CATALAO	23.9	24.3	22.5	ISO HYPERTH.	16	85	259	16	85	259	344	344	0	34	USTIC
CATU	25.9	26.9	24.3	ISO HYPERTH.	0	50	310	0	50	310	360	360	0	120	UDIC
CAXAMBU	21.1	22.5	18.7	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
CAXIAS	29.4	29.2	28.7	ISO HYPERTH.	134	60	166	134	60	166	196	196	11	0	USTIC
CAXIAS SUL	18.5	21.2	16.0	THERMIC	0	0	360	0	0	360	360	360	0	120	PERUDIC
CLEVELANDIA	27.4	27.2	27.1	ISO HYPERTH.	0	55	305	0	55	305	360	360	0	120	UDIC
COARI BRAZIL	28.0	27.8	28.1	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
CONCEICAO AR	28.0	27.5	27.9	ISO HYPERTH.	65	45	250	65	45	250	283	283	0	15	USTIC
CONCEICAO BA	26.3	27.5	24.8	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
CONCEICAO DO	27.7	27.4	27.5	ISO HYPERTH.	75	64	221	75	64	221	285	285	0	0	USTIC
CONCEICAO MA	22.7	24.1	20.3	ISO HYPERTH.	0	5	355	0	5	355	360	360	0	100	UDIC
CONCEICAO SE	23.1	24.4	20.9	ISO HYPERTH.	0	42	318	0	42	318	360	360	0	63	UDIC
CORDEIRO	20.4	22.3	17.9	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
CORRENTES	24.4	25.2	22.9	ISO HYPERTH.	74	98	188	74	98	188	286	286	74	120	USTIC
CORUMBA BRAZ	27.5	28.8	25.5	ISO HYPERTH.	69	121	170	69	121	170	238	238	0	5	USTIC
CORURIPE	26.9	27.6	25.8	ISO HYPERTH.	61	78	221	61	78	221	287	287	43	120	USTIC
COXIPO	27.4	28.1	25.4	ISO HYPERTH.	29	84	247	29	84	247	322	322	0	22	USTIC
CRUZ ALTA	21.1	24.2	18.2	THERMIC	0	0	360	0	0	360	360	360	0	120	PERUDIC
CRUZEIRO DO	26.9	26.8	26.1	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
CRUZETA	28.9	29.5	27.[illegible]	ISO HYPERTH.	286	74	0	286	74	0	50	50	45	0	ARIDIC
CUIABA BRAZI	28.1	28.5	26.7	ISO HYPERTH.	54	72	234	54	72	234	306	306	0	9	USTIC
CURITIBA	19.0	21.1	16.8	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	PERUDIC
CURITIBA BRA	19.0	21.1	16.9	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	PERUDIC
CURITIBANOS	17.8	20.2	15.2	THERMIC	0	0	360	0	0	360	360	360	0	120	PERUDIC
CURVELO	24.4	25.5	22.2	ISO HYPERTH.	11	95	254	11	95	254	349	349	0	29	USTIC
DEODORO	24.7	26.3	22.8	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
DIAMANTINA	20.8	21.9	19.1	ISO THERMIC	0	9	351	0	9	351	360	360	0	96	UDIC
ENCRUZILHADA	19.1	22.1	16.2	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
ENGENHO DE D	25.7	27.3	23.9	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
ESCADA	24.4	25.0	23.6	ISO HYPERTH.	0	10	350	0	10	350	360	360	0	120	UDIC
FERNANDONORO	27.1	27.3	26.6	ISO HYPERTH.	108	60	192	108	60	192	252	252	45	87	USTIC
FLORIANOPOLI	22.9	25.2	20.6	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
FONTE BOA	27.4	27.4	27.1	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	PERUDIC
FORMOSA BRAZ	23.8	24.0	22.4	ISO HYPERTH.	36	77	247	36	77	247	324	324	0	22	USTIC
FORTALEZA	27.7	28.1	27.2	ISO HYPERTH.	114	62	184	114	62	184	246	246	15	49	USTIC
FRANCA	22.5	23.3	21.0	ISO HYPERTH.	0	7	353	0	7	353	360	360	0	68	UDIC
FRUTAL	25.4	26.3	23.5	ISO HYPERTH.	0	54	306	0	54	306	360	360	0	51	UDIC
GAMELEIRA	22.2	23.4	19.7	ISO HYPERTH.	0	38	322	0	38	322	360	360	0	67	UDIC
GARAHUNS	21.9	22.8	20.3	ISO THERMIC	16	149	195	16	149	195	344	344	16	120	USTIC

COMPUTED BY FORTRAN PROGRAM VWC8, APR 1981

DATE 11/16/81

44

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR BRAZ

NAME OF STATION	MEAN SOIL TEMPERATURE ANN	SUMM	WINT	TEMPERATURE REGIME	CUMULATIVE DAYS MSC IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX.CONSECUTIVE DAYS THAT MCS IS MOIST IN SOME PARTS IN ONE YEAR	WHEN SOIL TEMP > 8	DRY AFTER SUMMER SOLST.	MOIST AFTER WINTER SOLST.	MOISTURE REGIME
GARANHUNS	22.9	23.8	21.3	ISO HYPERTH.	0	80	280	0	80	280	360	360	0	120	UDIC
GARGAU	25.3	26.6	23.9	ISO HYPERTH.	0	72	288	0	72	288	360	360	0	33	UDIC
GOIANA	27.5	28.0	26.4	ISO HYPERTH.	1	76	283	1	76	283	359	359	0	120	UDIC
GOIANA	26.3	26.8	25.3	ISO HYPERTH.	12	81	267	12	81	267	348	348	12	120	USTIC
GOIANIA	24.4	24.8	22.7	ISO HYPERTH.	17	82	261	17	82	261	343	343	0	36	USTIC
GOIAS	26.1	26.0	24.8	ISO HYPERTH.	43	91	226	43	91	226	306	306	0	0	USTIC
GRAJAU	28.3	28.0	27.8	ISO HYPERTH.	89	74	197	89	74	197	259	259	0	2	USTIC
GRAMINHA	22.2	23.4	20.0	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
GRAO MOGOL	23.4	24.4	21.6	ISO HYPERTH.	1	97	262	1	97	262	359	359	0	37	USTIC
GUARABIRA	27.0	27.8	25.8	ISO HYPERTH.	92	85	183	92	85	183	243	243	45	108	USTIC
GUARAMIRANGA	22.1	22.4	21.5	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
GUARAPUAVA	19.2	21.3	16.9	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	PERUDIC
GUARATINGA	22.4	23.4	20.1	ISO HYPERTH.	0	43	317	0	43	317	360	360	0	62	UDIC
HUMAITA	28.2	27.9	28.1	ISO HYPERTH.	12	67	281	12	67	281	348	348	0	26	UDIC
IAUARETE	27.5	26.7	27.9	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	PERUDIC
IBIPETUBA	25.9	25.9	24.5	ISO HYPERTH.	101	91	168	101	91	168	247	247	0	0	USTIC
IGUAPE	23.9	26.1	21.6	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	PERUDIC
IGUATU	29.9	30.5	29.1	ISO HYPERTH.	189	70	101	189	70	101	158	158	17	0	USTIC
IGUATU	28.1	28.8	27.2	ISO HYPERTH.	166	42	152	166	42	152	183	183	19	17	USTIC
ILHEUS	25.8	26.9	24.4	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	PERUDIC
IMPERATRIZ	27.9	27.7	27.4	ISO HYPERTH.	70	54	236	70	54	236	269	269	0	11	USTIC
IRAI	21.5	24.6	18.4	THERMIC	0	0	360	0	0	360	360	360	0	120	PERUDIC
ITABAIANINHA	25.0	26.1	23.5	ISO HYPERTH.	42	109	209	42	109	209	277	277	23	120	USTIC
ITABIRA	22.0	23.5	19.8	ISO HYPERTH.	0	33	327	0	33	327	360	360	0	72	UDIC
ITAJUBA	21.8	23.4	19.4	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
ITAMARANDIBA	21.6	22.8	19.5	ISO THERMIC	0	77	283	0	77	283	360	360	0	58	UDIC
ITAPERUNA	25.4	27.0	23.4	ISO HYPERTH.	0	62	298	0	62	298	360	360	0	43	UDIC
IVAI	20.6	22.9	18.0	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	PERUDIC
JACOBINA	26.3	27.2	24.5	ISO HYPERTH.	76	284	0	76	284	0	193	193	13	0	USTIC
JACOBINA	24.9	25.8	23.1	ISO HYPERTH.	13	158	189	13	158	189	291	291	4	114	USTIC
JAGUARIAIVA	20.1	22.3	17.6	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	PERUDIC
JANUARETE	27.3	27.4	26.8	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	PERUDIC
JANUARIA	26.9	27.1	25.5	ISO HYPERTH.	115	54	191	115	54	191	236	236	0	0	USTIC
JARDIN BOTAN	24.7	26.5	22.9	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	PERUDIC
JEQUITINHONH	27.2	28.3	25.2	ISO HYPERTH.	161	40	159	161	40	159	190	190	0	0	USTIC
JOAO PESSOA	28.0	28.6	26.9	ISO HYPERTH.	72	63	225	72	63	225	259	259	20	120	USTIC
JOAOPESSOA	26.7	27.3	25.5	ISO HYPERTH.	56	77	227	56	77	227	292	292	18	120	USTIC
JUIZ DE FORA	22.1	23.9	19.6	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
LAGES	18.3	21.0	15.5	THERMIC	0	0	360	0	0	360	360	360	0	120	PERUDIC
LAGUNA	22.1	24.5	19.8	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
LAVRAS	21.8	23.2	19.6	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
LEOPOLDINA	25.1	26.7	23.1	ISO HYPERTH.	0	66	294	0	66	294	360	360	0	39	UDIC
LUZIANIA	23.4	23.8	21.8	ISO HYPERTH.	19	86	255	19	86	255	341	341	0	30	USTIC
MACAE	25.1	26.6	23.5	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
MACAIBA	27.9	28.6	26.8	ISO HYPERTH.	97	80	183	97	80	183	244	244	45	108	USTIC

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 11/16/81

45

BRAZIL

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR BRAZ

NAME OF STATION	MEAN SOIL TEMPERATURE ANN	SUMM	WINT	TEMPERATURE REGIME	CUMULATIVE DAYS MSC IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX.CONSECUTIVE DAYS THAT MCS IS MOIST IN SOME PARTS IN ONE YEAR	WHEN SOIL TEMP > 8	DRY AFTER SUMMER SOLST.	MOIST AFTER WINTER SOLST.	MOISTURE REGIME
MACAIBA	25.7	26.3	25.0	ISO HYPERTH.	69	76	215	69	76	215	280	280	19	110	USTIC
MACEIO	27.9	28.6	26.8	ISO HYPERTH.	58	84	218	58	84	218	281	281	21	120	USTIC
MADALENA	22.0	23.6	19.9	ISO THERMIC	0	0	360	[illegible]	0	360	360	360	0	120	UDIC
MADEIO	27.0	27.6	26.0	ISO HYPERTH.	62	90	208	62	90	208	275	275	21	120	USTIC
MANAUS	29.2	28.5	29.6	ISO HYPERTH.	23	74	263	23	74	263	327	327	0	38	USTIC
MANICORE	29.1	29.0	29.0	ISO HYPERTH.	0	13	347	0	13	347	360	360	0	45	UDIC
MAR DE HESPA	23.0	24.8	20.5	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
MENDES	22.9	24.6	21.1	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
MERURI	25.7	26.1	23.6	ISO HYPERTH.	21	89	250	21	89	250	327	327	0	25	USTIC
MIRANTE SANT	20.2	21.9	18.2	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
MONDUBIM	27.9	28.3	27.3	ISO HYPERTH.	98	65	197	98	65	197	262	262	15	62	USTIC
MONDUBIM	26.9	27.3	26.3	ISO HYPERTH.	98	65	197	98	65	197	262	262	15	62	USTIC
MONTE ALEGRE	24.0	25.0	21.8	ISO HYPERTH.	0	53	307	0	53	307	360	360	0	52	UDIC
MONTE CLAROS	24.9	25.6	23.0	ISO HYPERTH.	59	88	213	59	88	213	274	274	0	0	USTIC
MONTE SANTO	25.9	27.1	23.9	ISO HYPERTH.	231	129	0	231	129	0	26	26	50	0	ARIDIC
MONTE SERRAT	20.7	22.4	18.6	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
MONTESANTO	25.1	26.1	23.1	ISO HYPERTH.	192	168	0	192	168	0	27	27	18	0	ARIDIC
MORROUDOCHAPO	20.6	21.3	18.8	ISO THERMIC	34	100	226	34	100	226	326	326	0	61	USTIC
MURIAE	25.0	26.0	22.7	ISO HYPERTH.	0	23	337	0	23	337	360	360	0	61	UDIC
MUZAMBINHO	21.1	22.4	19.0	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
NATAL BRAZIL	28.6	29.2	27.5	ISO HYPERTH.	100	47	213	100	47	213	239	239	45	108	USTIC
NAZAREDAMATA	25.9	26.7	24.7	ISO HYPERTH.	61	103	196	61	103	196	261	261	18	120	USTIC
NAZARETH	26.9	27.7	25.7	ISO HYPERTH.	61	103	196	61	103	196	261	261	18	120	USTIC
NITEROI	25.5	27.5	23.6	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
NOVA CRUZ	28.1	29.0	26.8	ISO HYPERTH.	133	66	161	133	66	161	212	212	45	86	USTIC
NOVA FRIBURG	20.4	22.3	17.9	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
OLINDA	27.5	28.1	26.5	ISO HYPERTH.	80	61	219	80	61	219	280	280	45	114	USTIC
OLINJA-RECIF	28.4	29.0	27.3	ISO HYPERTH.	80	53	227	80	53	227	258	258	45	120	USTIC
ONDINA	27.5	28.2	26.5	ISO HYPERTH.	0	12	348	0	12	348	360	360	0	120	UDIC
OURO FINO	21.5	22.7	19.5	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
OURO PRETO	19.9	21.3	17.8	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
PALMEIRA DOS	26.9	27.9	25.1	ISO HYPERTH.	122	98	140	122	98	140	201	201	75	120	USTIC
PAO DE ACUCA	28.4	29.5	26.4	ISO HYPERTH.	198	91	71	198	91	71	142	142	75	71	USTIC
PAODEACUCAR	27.4	28.5	25.4	ISO HYPERTH.	199	90	71	199	90	71	141	141	75	71	USTIC
PAQUETA	25.5	27.4	23.8	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
PARACATU	24.6	25.1	22.6	ISO HYPERTH.	0	53	307	0	53	307	360	360	0	52	UDIC
PARANA	25.6	27.2	23.1	ISO HYPERTH.	36	79	245	36	79	245	324	324	0	20	USTIC
PARANAGUA	23.5	25.7	21.3	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	PERUDIC
PARAPEUNA	23.2	24.9	21.4	ISO HYPERTH.	0	94	266	0	94	266	360	360	0	41	USTIC
PARATINGA	28.4	28.0	27.4	ISO HYPERTH.	184	42	134	184	42	134	176	176	0	0	USTIC
PARATINGARIO	27.2	27.0	26.4	ISO HYPERTH.	169	110	81	169	110	81	191	191	0	0	USTIC
PARINTINS	30.3	30.0	30.3	ISO HYPERTH.	37	56	267	37	56	267	294	294	0	65	USTIC
PASSO FUNDO	20.1	23.0	17.4	THERMIC	0	0	360	0	0	360	360	360	0	120	PERUDIC
PASSO QUATRO	20.5	22.5	17.8	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
PEDRA AZUL	24.7	25.8	22.6	ISO HYPERTH.	0	92	268	0	92	268	360	360	0	43	USTIC

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 11/16/81

46

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR BRAZ

NAME OF STATION	MEAN SOIL TEMPERATURE ANN	SUMM	WINT	TEMPERATURE REGIME	CUMULATIVE DAYS MSC IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX.CONSECUTIVE DAYS THAT MCS IS MOIST IN SOME PARTS IN ONE YEAR	WHEN SOIL TEMP > 8	DRY AFTER SUMMER SOLST.	MOIST AFTER WINTER SOLST.	MOISTURE REGIME
PELOTAS	20.0	23.2	16.8	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
PENHA	25.1	26.0	23.7	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
PESQUEIRA	25.1	26.1	23.3	ISO HYPERTH.	107	115	138	107	115	138	216	216	21	93	USTIC
PETROPOLIS	20.4	22.1	18.7	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	PERUDIC
PILAR	26.9	27.7	25.6	ISO HYPERTH.	37	94	229	37	94	229	294	294	20	120	USTIC
PILARMANGABA	25.9	26.7	24.6	ISO HYPERTH.	37	94	229	37	94	229	294	294	20	120	USTIC
PINHEIROS	23.0	25.2	22.4	ISO HYPERTH.	0	5	355	0	5	355	360	360	0	70	UDIC
PIRACICABA	23.2	24.8	20.8	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
PIRAPORA	25.7	26.4	25.6	ISO HYPERTH.	65	74	221	65	74	221	275	275	0	0	USTIC
PIRENPOLIS	24.4	24.0	23.0	ISO HYPERTH.	32	45	283	32	45	283	328	328	0	28	UDIC
PITANGUI	23.7	24.8	21.6	ISO HYPERTH.	0	84	276	0	84	276	360	360	0	51	UDIC
PLEVEIRA	21.8	23.0	19.8	ISO THERMIC	0	4	356	0	4	356	360	360	0	71	UDIC
POSOS DE CAL	20.2	21.7	17.8	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
PONTA GROSSA	20.1	22.3	17.8	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	PERUDIC
PORANGABA	28.7	29.1	26.2	ISO HYPERTH.	114	62	184	114	62	184	246	246	15	49	USTIC
PORCIUNCULA	24.5	26.1	22.2	ISO HYPERTH.	0	62	298	0	62	298	360	360	0	43	UDIC
PORTO ALEGRE	22.0	25.1	18.9	HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
PORTO DE PED	27.7	28.3	26.8	ISO HYPERTH.	60	64	236	60	64	236	279	279	45	120	USTIC
PORTO NACION	28.3	27.9	27.8	ISO HYPERTH.	88	63	209	88	63	209	272	272	0	0	USTIC
PORTO VELHO	28.7	28.0	28.3	ISO HYPERTH.	24	68	268	24	68	268	336	336	0	15	USTIC
PORTO VELHO	27.9	27.6	27.9	ISO HYPERTH.	23	64	273	23	64	273	337	337	0	18	UDIC
PORTODEPEDRA	26.7	27.3	25.8	ISO HYPERTH.	60	64	236	60	64	236	279	279	45	120	USTIC
PRACA 15 NOV	25.7	27.2	24.3	ISO HYPERTH.	0	2	358	0	2	358	360	360	0	120	UDIC
PRESIDENTE M	24.6	25.1	22.4	ISO HYPERTH.	0	62	298	0	62	298	360	360	0	43	UDIC
PROPRIA	28.2	29.3	26.5	ISO HYPERTH.	161	45	154	161	45	154	173	173	105	109	USTIC
QUARTELS	25.3	26.9	22.8	ISO HYPERTH.	0	67	293	0	67	293	360	360	0	38	UDIC
QUIXADA	28.4	28.6	28.1	ISO HYPERTH.	180	68	112	180	68	112	168	168	18	7	USTIC
QUIXERAMOBIM	29.0	29.6	28.4	ISO HYPERTH.	192	59	109	192	59	109	158	158	20	4	USTIC
QUIXERAMOBIM	30.4	31.0	29.8	ISO HYPERTH.	233	39	88	233	39	88	108	108	45	0	USTIC
REMANSO BRAZ	29.5	29.7	28.6	ISO HYPERTH.	282	78	0	282	78	0	21	21	24	0	ARIDIC
REZENDE	23.5	25.1	21.3	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
RIO BRANCO	28.2	28.0	27.4	ISO HYPERTH.	169	110	81	169	110	81	191	191	0	0	USTIC
RIO DE JANEI	25.7	27.2	24.3	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
RIO DOURO	24.2	25.9	22.5	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	PERUDIC
RIO GRANDE	20.6	23.7	17.4	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
RIO NEGRO	18.9	21.3	16.3	THERMIC	0	0	360	0	0	360	360	360	0	120	PERUDIC
ROY BARBOSA	18.9	21.8	16.3	THERMIC	0	0	360	0	0	360	360	360	0	120	PERUDIC
SALVADOR BRA	27.5	28.2	26.5	ISO HYPERTH.	0	12	348	0	12	348	360	360	0	120	UDIC
SAN ANTONIO	25.3	26.9	22.8	ISO HYPERTH.	0	72	288	0	72	288	360	360	0	35	UDIC
SANTA CRUZ	25.4	27.1	23.9	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
SANTA CRUZ B	25.6	26.1	23.6	ISO HYPERTH.	20	88	252	20	88	252	328	328	0	27	USTIC
SANTA LUZIA	23.2	23.6	21.8	ISO HYPERTH.	0	68	292	0	68	292	360	360	0	37	UDIC
SANTA MARIA	21.8	25.2	18.8	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
SANTA RITA R	26.9	26.9	25.5	ISO HYPERTH.	101	91	168	101	91	168	247	247	0	0	USTIC

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 11/16/81

49

BRAZIL

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION
FOR BRAZ

NAME OF STATION	MEAN SOIL TEMPERATURE ANN	SUMM	WINT	TEMPERATURE REGIME	CUMULATIVE DAYS MSC IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX.CONSECUTIVE DAYS THAT MCS IS MOIST IN SOME PARTS IN ONE YEAR	WHEN SOIL TEMP > 8	DRY AFTER SUMMER SOLST.	MOIST AFTER WINTER SOLST.	MOISTURE REGIME
SANTAREM BRA	28.5	28.4	28.3	ISO HYPERTH.	35	88	237	35	88	237	308	308	0	72	USTIC
SANTOS	24.4	26.3	22.4	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	PERUDIC
SANTOS DUMON	20.9	22.5	19.1	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
SAO BENTA DO	26.6	27.5	25.3	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
SAO BENTO	28.9	28.9	28.8	ISO HYPERTH.	98	43	219	98	43	219	247	247	15	54	USTIC
SAO FIDELIS	26.0	27.7	23.8	ISO HYPERTH.	66	101	193	66	101	193	294	294	0	0	USTIC
SAO FRANCISC	25.6	26.1	23.6	ISO HYPERTH.	69	62	229	69	62	229	279	279	0	4	USTIC
SAO FRANCISC	23.1	25.3	20.9	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	PERUDIC
SAO FRANCISC	17.0	19.5	14.6	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	PERUDIC
SAO GABRIEL	27.9	28.0	27.3	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	PERUDIC
SAO GONCALO	25.7	26.8	24.0	ISO HYPERTH.	0	54	306	0	54	306	360	360	0	120	PERUDIC
SAO JOAO DEL	21.7	23.3	19.6	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
SAO JOAO EVA	21.6	23.0	19.1	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
SAO JOAO MAR	22.0	24.0	19.5	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
SAO LOURENCO	20.9	22.8	17.9	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
SAO LUIZ	29.2	29.2	29.0	ISO HYPERTH.	106	26	228	106	26	228	254	254	15	63	USTIC
SAO LUIZ CAC	26.4	27.0	24.4	ISO HYPERTH.	26	78	256	26	78	256	308	308	0	31	USTIC
SAO LUIZ GON	22.3	25.7	19.2	HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
SAO PAULO BR	21.3	23.1	19.2	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
SAO PAULO MU	24.5	26.1	22.2	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
SAO PEDRO	24.5	26.1	23.2	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
SAO TOME FAR	25.5	27.1	23.9	ISO HYPERTH.	0	53	307	0	53	307	360	360	0	57	PERUDIC
SAOCASTANO	24.0	24.9	22.5	ISO HYPERTH.	145	215	0	145	215	0	163	163	45	0	UDIC
SAOFRANCISCO	25.6	26.5	24.3	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	USTIC
SAOGONCALODO	24.7	25.8	23.0	ISO HYPERTH.	0	54	306	0	54	306	360	360	0	120	UDIC
SATUBA	26.7	27.4	25.6	ISO HYPERTH.	26	109	225	26	109	225	325	325	21	120	UDIC
SENA MADURE	27.1	27.6	26.2	ISO HYPERTH.	0	4	356	0	4	356	360	360	0	71	USTIC
SETA LAGOAS	23.3	24.3	21.0	ISO HYPERTH.	0	71	289	0	71	289	360	360	0	34	UDIC
SIMOESLOPES	25.6	26.7	23.8	ISO HYPERTH.	119	50	191	119	50	191	227	227	103	120	UDIC
SITIO DA BAT	25.0	26.9	22.9	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	USTIC
SOBRAL	29.0	29.3	28.8	ISO HYPERTH.	182	38	140	182	38	140	166	166	18	5	UDIC
SOORE	29.4	29.3	29.3	ISO HYPERTH.	56	57	247	56	57	247	304	304	0	82	USTIC
SOROBIM	25.2	25.9	23.8	ISO HYPERTH.	207	153	0	207	153	0	137	137	75	0	USTIC
TAGUATINGA	26.6	26.1	26.0	ISO HYPERTH.	74	70	216	74	70	216	286	286	0	0	USTIC
TAPACURA	26.7	27.4	25.6	ISO HYPERTH.	35	116	209	35	116	209	315	315	20	120	USTIC
TAPERA	25.7	26.4	24.6	ISO HYPERTH.	35	116	209	35	116	209	315	315	20	120	USTIC
TAPERINHA-SA	28.5	28.4	28.2	ISO HYPERTH.	35	88	237	35	88	237	308	308	0	72	USTIC
TARACUA	27.5	26.8	27.9	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	PERUDIC
TEOFILO OTON	24.7	26.0	22.5	ISO HYPERTH.	0	34	326	0	34	326	360	360	0	71	UDIC
TERESOPOLIS	20.2	22.2	17.8	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
TEREZINA	29.9	29.7	29.4	ISO HYPERTH.	136	59	165	136	59	165	192	192	7	0	USTIC
TEREZOPOLIS	20.8	23.4	18.1	THERMIC	0	0	360	0	0	360	360	360	0	120	PERUDIC
TINGUA	24.1	25.8	22.4	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	PERUDIC
TRACATEUA	27.4	27.7	27.1	ISO HYPERTH.	56	35	269	56	35	269	304	304	15	104	USTIC
TRES CORACOE	21.7	23.4	19.2	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 11/16/81

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR BRAZ

NAME OF STATION	MEAN SOIL TEMPERATURE ANN	SUMM	WINT	TEMPERATURE REGIME	CUMULATIVE DAYS MSC IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX.CONSECUTIVE DAYS THAT MCS IS MOIST IN SOME PARTS IN ONE YEAR	WHEN SOIL TEMP > 8	DRY AFTER SUMMER SOLST.	MOIST AFTER WINTER SOLST.	MOISTURE REGIME
TRES LAGOAS	25.6	27.2	23.1	ISO HYPERTH.	0	8	352	0	8	352	360	360	0	98	UDIC
TURIACU BRAZ	29.1	29.1	28.9	ISO HYPERTH.	82	64	214	82	64	214	268	268	15	79	USTIC
JAPES BRAZIL	27.7	27.8	27.2	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	PERUDIC
UBA	24.2	25.9	21.8	ISO HYPERTH.	0	54	306	0	54	306	360	360	0	51	UDIC
UBERABA	24.4	24.8	22.7	ISO HYPERTH.	0	25	335	0	25	335	360	360	0	55	UDIC
UMBUZEIRO	24.3	25.1	22.9	ISO HYPERTH.	77	113	170	77	113	170	268	268	45	120	USTIC
URUGUAIANA	22.3	26.2	18.7	HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
URUSSANGA	21.6	24.2	19.0	THERMIC	0	0	360	0	0	360	360	360	0	120	PERUDIC
VALENCIA	22.7	24.4	20.5	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
VALOES	18.7	21.5	15.6	THERMIC	0	0	360	0	0	360	360	360	0	120	PERUDIC
VASSOURAS	23.2	24.9	21.4	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
VICOSA	21.3	23.1	18.7	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
VITORIA	26.0	27.3	24.6	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
XANXERE	18.5	21.3	15.7	THERMIC	0	0	360	0	0	360	360	360	0	120	PERUDIC
XEREM	23.7	25.6	21.8	ISO HYPERTH.	0	0	360	-0	0	360	360	360	0	120	PERUDIC

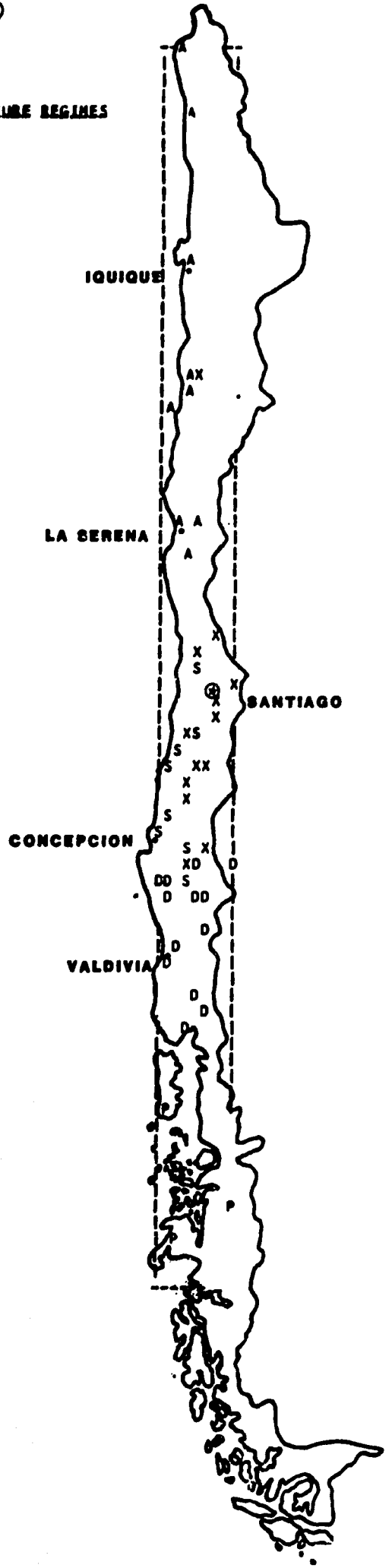
COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 11/16/81

50

MOISTURE REGIMES

CHILE



MOISTURE REGIMES

SYMBOL TABLE:

USTIC - - - S
UDIC - - - D
ARIDIC - - - A
XERIC - - - X
PERUDIC - - P

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR CHIL

NAME OF STATION	MEAN SOIL TEMPERATURE ANN	SUM	WINT	TEMPERATURE REGIME	CUMULATIVE DAYS MSC IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX.CONSECUTIVE DAYS THAT MCS IS MOIST IN SOME PARTS IN ONE YEAR	WHEN SOIL TEMP > 8	DRY AFTER SUMMER SOLST.	MOIST AFTER WINTER SOLST.	MOISTURE REGIME
ANCUD	12.6	14.7	10.6	ISOMESIC	0	0	360	0	0	360	360	257	0	120	PERUDIC
ANGOL	15.4	18.9	12.4	THERMIC	54	76	230	54	76	230	306	222	54	120	XERIC
ANTOFAGASTA	18.9	21.1	17.1	ISOTHERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
ARICA	21.0	23.0	19.2	ISOTHERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
CABILDO	17.1	19.9	13.9	THERMIC	152	86	122	152	86	122	208	208	120	105	XERIC
CABORAPER	11.5	12.9	10.1	ISOMESIC	0	0	360	0	0	360	360	225	0	120	PERUDIC
CALDERA	18.8	21.0	16.8	ISOTHERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
CATAPILCO	17.1	19.9	13.9	THERMIC	130	65	165	130	65	165	230	230	115	120	XERIC
CAUQUENES	17.3	21.4	13.8	THERMIC	116	31	213	116	31	213	244	244	101	120	XERIC
CHANARAL	18.1	20.3	16.2	ISOTHERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
CHILLAN	15.5	19.3	12.1	THERMIC	53	76	231	53	76	231	307	173	53	120	XERIC
CONCEPCION	14.9	17.6	12.6	ISOMESIC	0	98	262	0	98	262	360	360	0	120	USTIC
CONSTITUCION	15.9	18.5	13.6	ISOTHERMIC	57	75	228	57	75	228	303	303	57	120	USTIC
CONTULMO	15.5	18.2	13.2	ISOTHERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
COPIAPO	18.2	21.1	15.5	THERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
COQUIMBO	17.0	18.7	15.5	ISOTHERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
CURICO	16.2	20.3	12.6	THERMIC	114	31	215	114	31	215	246	160	99	120	XERIC
ELTENIENTE	12.6	16.1	9.1	MESIC	64	58	238	64	58	163	296	140	56	120	XERIC
FLORDELLAGO	14.0	16.9	11.4	MESIC	0	0	360	0	0	360	360	284	0	120	UDIC
FRUTILLAR	12.9	15.5	10.6	ISOMESIC	0	0	360	0	0	360	360	250	0	120	UDIC
IQUIQUE	20.3	21.9	18.7	ISOTHERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
ISANTAMARIA	15.5	17.1	13.9	ISOTHERMIC	18	98	244	18	98	244	342	342	18	120	USTIC
ISLAGUAFO	12.2	13.8	11.0	ISOMESIC	0	0	360	0	0	360	360	264	0	120	PERUDIC
ISLAMOCHA	15.2	17.2	13.6	ISOTHERMIC	0	14	346	0	14	346	360	360	0	120	UDIC
LACALERA	16.3	19.0	13.4	THERMIC	132	62	166	132	62	166	228	228	117	120	XERIC
LASERENA	16.6	18.7	14.8	ISOTHERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
LINARES	16.3	20.5	12.7	THERMIC	72	64	224	72	64	224	288	174	72	120	XERIC
LOLOL	22.1	26.5	17.7	HYPERTH.	142	24	194	142	24	194	218	218	120	120	USTIC
LONQUIMAY	10.8	14.5	6.9	MESIC	0	0	360	0	0	242	360	189	0	120	UDIC
LOSANGELES	15.8	19.7	12.5	THERMIC	9	113	238	9	113	238	351	207	9	120	USTIC
LOSANDES	18.3	22.3	14.3	THERMIC	151	51	158	151	51	158	209	209	120	120	XERIC
MAULLIN	12.2	14.3	10.4	ISOMESIC	0	0	360	0	0	360	360	249	0	120	UDIC
OVALLE	17.4	20.2	14.9	THERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
PANGUIPULLI	14.2	17.3	11.2	MESIC	0	0	360	0	0	360	360	280	0	120	UDIC
PENABLANCA	17.1	19.9	13.9	THERMIC	136	59	165	136	59	165	224	224	120	120	XERIC
PLENGUAVACA	19.3	22.1	16.6	THERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
PUERTOAYSEN	11.4	14.0	8.4	MESIC	0	0	360	0	0	282	360	209	0	120	PERUDIC
PUERTOMONTT	13.5	15.9	11.3	ISOMESIC	0	0	360	0	0	360	360	288	0	120	UDIC
PUERTOSAAVED	14.4	16.5	12.9	ISOMESIC	0	3	357	0	3	357	360	360	0	120	UDIC
PUNTAGALERA	13.6	15.1	12.3	ISOMESIC	0	0	360	0	0	360	360	360	0	120	UDIC
PUNTATUMBES	14.5	16.3	13.3	ISOMESIC	69	57	234	69	57	234	291	291	54	120	USTIC
PUNTACARRANZ	14.9	16.5	13.6	ISOMESIC	78	51	231	78	51	231	282	282	63	120	USTIC
PUQUILLAY	16.7	19.7	13.8	THERMIC	110	44	206	110	44	206	250	250	95	120	XERIC
QUELLON	12.6	14.7	10.6	ISOMESIC	0	0	360	0	0	360	360	257	0	120	UDIC
QUILPUE	15.9	18.6	13.4	THERMIC	116	68	176	116	68	176	244	244	101	120	XERIC

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 04/29/81

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR CHIL

NAME OF STATION	MEAN SOIL TEMPERATURE ANN	SLMM	WINT	TEMPERATURE REGIME	CUMULATIVE DAYS MSC IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX.CONSECUTIVE DAYS THAT MCS IS MOIST IN SOME PARTS IN ONE YEAR	WHEN SOIL TEMP > 8	DRY AFTER SUMMER SOLST.	MOIST AFTER WINTER SOLST.	MOISTURE REGIME
QUILLOTA	18.0	20.7	15.2	THERMIC	129	63	168	129	63	168	231	231	114	120	XERIC
RANCAGUA	15.5	19.4	11.7	THERMIC	121	63	176	121	63	176	239	133	106	120	XERIC
RENGO	16.6	20.4	12.7	THERMIC	118	35	207	118	35	207	242	183	103	120	XERIC
SANFERNANDO	15.9	19.7	12.3	THERMIC	110	33	217	110	33	217	250	158	95	120	XERIC
SANJOSEMAIPO	15.5	19.0	12.1	THERMIC	113	34	213	113	34	213	247	143	98	120	XERIC
SANPEDRO	11.1	13.2	9.2	ISOMESIC	0	0	360	0	0	360	360	196	0	120	PERUDIC
SANPABLO	12.4	14.9	10.0	ISOMESIC	0	0	360	0	0	360	360	239	0	120	UDIC
SANTIAGO	17.0	20.9	13.2	THERMIC	134	57	169	134	57	169	226	226	119	120	XERIC
TALCAHUANO	15.0	17.4	13.0	ISOMESIC	10	103	247	10	103	247	350	350	10	120	USTIC
TALCA	17.2	21.5	13.4	THERMIC	118	33	209	118	33	209	242	242	103	120	XERIC
TEMUCO	14.6	17.5	11.9	MESIC	0	3	357	0	3	357	360	322	0	120	UDIC
TRAIGUEN	14.9	18.2	12.1	MESIC	0	92	268	0	92	268	360	316	0	120	USTIC
VALDIVIA	14.4	17.4	11.9	MESIC	0	0	360	0	0	360	360	311	0	120	UDIC
VALPARAISO	16.9	19.0	15.2	ISOTHERMIC	117	69	174	117	69	174	243	243	102	120	USTIC
VICTORIA	12.9	15.8	10.2	MESIC	0	0	360	0	0	360	360	239	0	120	UDIC
VICUNA	18.1	20.7	15.5	THERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 04/29/81

52

CHILE

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR CHIL

NAME OF STATION	MOISTURE REGIME	CON.D. M/D T>8	TEMPERATURE REGIME	TENTATIVE SUBDIVISION OF MOISTURE REGIME		CONS DAYS MOIST(2+3) SUM.	CONS DAYS MOIST(2+3) WINT	CUM.DAYS MOIST(2+3) SUM.	CUM.DAYS MOIST(2+3) WINT	CONS.DAYS COMP.MOIST SUM.	CONS.DAYS COMP.MOIST WINT	CUM.DAYS COMP.MOI. SUM.	CUM.DAYS COMP.MOI. WINT
ANCUD	PERUDIC	257	ISOMESIC		PERUDIC					180	180	180	180
ANGOL	XERIC	222	THERMIC	TYPIC	XERIC	75	180	126	180				
ANTOFAGASTA	ARIDIC	0	ISOTHERMIC	EXTREME	ARIDIC	0	0	0	0				
ARICA	ARIDIC	0	ISOTHERMIC	EXTREME	ARIDIC	0	0	0	0				
CABILDO	XERIC	208	THERMIC	DRY	XERIC	45	163	45	163				
CABORAPER	PERUDIC	225	ISOMESIC		PERUDIC					180	180	180	180
CALDERA	ARIDIC	0	ISOTHERMIC	EXTREME	ARIDIC	0	0	0	0				
CATAPILCO	XERIC	230	THERMIC	DRY	XERIC	45	180	50	180				
CAUQUENES	XERIC	244	THERMIC	DRY	XERIC	45	180	64	180				
CHANARAL	ARIDIC	0	ISOTHERMIC	EXTREME	ARIDIC	0	0	0	0				
CHILLAN	XERIC	173	THERMIC	TYPIC	XERIC	75	180	127	180				
CONCEPCION	USTIC	360	ISOMESIC	UDIC	TROPUST.					56	180	82	180
CONSTITUCION	USTIC	303	ISOTHERMIC	UDIC	TROPUST.	75	180	123	180				
CONTULMO	UDIC	360	ISOTHERMIC	TYPIC	UDIC					180	180	180	180
COPIAPO	ARIDIC	0	THERMIC	EXTREME	ARIDIC	0	0	0	0				
COQUIMBO	ARIDIC	0	ISOTHERMIC	EXTREME	ARIDIC	0	0	0	0				
CURICO	XERIC	160	THERMIC	DRY	XERIC	45	180	66	180				
ELTENIENTE	XERIC	140	MESIC	TYPIC	XERIC	64	180	116	180				
FLORDELLAGO	UDIC	284	MESIC	TYPIC	UDIC					180	180	180	180
FRUTILLAR	UDIC	250	ISOMESIC	TYPIC	UDIC					180	180	180	180
IQUIQUE	ARIDIC	0	ISOTHERMIC	EXTREME	ARIDIC	0	0	0	0				
ISANTAMARIA	USTIC	342	ISOTHERMIC	UDIC	TROPUST.	87	180	162	180				
ISLAGUAFO	PERUDIC	264	ISOMESIC		PERUDIC					180	180	180	180
ISLAMOCHA	UDIC	360	ISOTHERMIC	TYPIC	UDIC					105	180	166	180
LACALERA	XERIC	228	THERMIC	DRY	XERIC	45	180	48	180				
LASERENA	ARIDIC	0	ISOTHERMIC	EXTREME	ARIDIC	0	0	0	0				
LINARES	XERIC	174	THERMIC	TYPIC	XERIC	75	180	108	180				
LOLOL	USTIC	218	HYPERTH.	XERIC	TEMPUST.	45	173	45	173				
LONQUIMAY	UDIC	189	MESIC	TYPIC	UDIC					180	180	180	180
LOSANGELES	USTIC	207	THERMIC	WET	TEMPUST.	105	180	171	180				
LOSANDES	XERIC	209	THERMIC	DRY	XERIC	45	164	45	164				
MAULLIN	UDIC	249	ISOMESIC	TYPIC	UDIC					180	180	180	180
OVALLE	ARIDIC	0	THERMIC	EXTREME	ARIDIC	0	0	0	0				
PANGUIPULLI	UDIC	280	MESIC	TYPIC	UDIC					180	180	180	180
PENABLANCA	XERIC	224	THERMIC	DRY	XERIC	45	179	45	179				
PLENGUAVACA	ARIDIC	0	THERMIC	EXTREME	ARIDIC	0	0	0	0				
PUERTOAYSEN	PERUDIC	209	MESIC		PERUDIC					180	180	180	180
PUERTOMONTT	UDIC	288	ISOMESIC	TYPIC	UDIC					180	180	180	180
PUERTOSAAVED	UDIC	360	ISOMESIC	TYPIC	UDIC					105	180	177	180
PUNTAGALERA	UDIC	360	ISOMESIC	TYPIC	UDIC					180	180	180	180
PUNTATUMBES	USTIC	291	ISOMESIC	UDIC	TROPUST.	66	180	111	180				
PUNTACARRANZ	USTIC	282	ISOMESIC	UDIC	TROPUST.	57	180	102	180				
PUQUILLAY	XERIC	250	THERMIC	DRY	XERIC	45	180	70	180				
QUELLON	UDIC	257	ISOMESIC	TYPIC	UDIC					180	180	180	180
QUILPUE	XERIC	244	THERMIC	DRY	XERIC	45	180	64	180				

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 04/29/81

53

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR CHIL

NAME OF STATION	MOISTURE REGIME	CON.D. M/D T>8	TEMPERATURE REGIME	TENTATIVE SUBDIVISION OF MOISTURE REGIME		CONS DAYS MOIST(2+3) SUM.	CONS DAYS MOIST(2+3) WINT	CUM.DAYS MOIST(2+3) SUM.	CUM.DAYS MOIST(2+3) WINT	CONS.DAYS COMP.MOIST SUM.	CONS.DAYS COMP.MOIST WINT	CUM.DAYS COMP.MOI. SUM.	CUM.DAYS COMP.MOI. WINT
QUILLOTA	XERIC	231	THERMIC	DRY	XERIC	45	180	51	180				
RANCAGUA	XERIC	133	THERMIC	DRY	XERIC	45	180	59	180				
RENGO	XERIC	183	THERMIC	DRY	XERIC	45	180	62	180				
SANFERNANDO	XERIC	158	THERMIC	DRY	XERIC	45	180	70	180				
SANJOSEMAIPO	XERIC	143	THERMIC	DRY	XERIC	45	180	67	180				
SANPEDRO	PERUDIC	196	ISOMESIC		PERUDIC					180	180	180	180
SANPABLO	UDIC	239	ISOMESIC	TYPIC	UDIC					180	180	180	180
SANTIAGO	XERIC	226	THERMIC	DRY	XERIC	45	180	46	180				
TALCAHUANO	USTIC	350	ISOMESIC	UDIC	TROPUST.	95	180	170	180				
TALCA	XERIC	242	THERMIC	DRY	XERIC	45	180	62	180				
TEMUCO	UDIC	322	MESIC	TYPIC	UDIC					105	180	177	180
TRAIGUEN	USTIC	316	MESIC	WET	TEMPUST.					54	180	88	180
VALDIVIA	UDIC	311	MESIC	TYPIC	UDIC					180	180	180	180
VALPARAISO	USTIC	243	ISOTHERMIC	TYPIC	TROPUST.	45	180	63	180				
VICTORIA	UDIC	239	MESIC	TYPIC	UDIC					180	180	180	180
VICUNA	ARIDIC	0	THERMIC	EXTREME	ARIDIC	0	0	0	0				

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 04/29/81

54

CHILE

MOISTURE REGIMES

SYMBOL TABLE:

USTIC - - - S
UDIC - - - D
ARIDIC - - - A
XERIC - - - X
PERUDIC - - P

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR CCLO

NAME OF STATION	MEAN SOIL TEMPERATURE ANN	SLMM	WINT	TEMPERATURE REGIME	CUMULATIVE DAYS MSC IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX.CONSECUTIVE DAYS THAT MCS IS MOIST IN SOME PARTS IN ONE YEAR	WHEN SOIL TEMP > 8	DRY AFTER SUMMER SOLST.	MOIST AFTER WINTER SOLST.	MOISTURE REGIME
ALCALA	23.3	23.8	23.2	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
ANOLAIMA	21.3	21.3	21.4	ISOTHERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
BLONAY-CHINA	22.1	22.2	21.6	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
BOGOTA	15.7	15.5	15.5	ISOTHERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
CACHIPAY	22.3	23.3	20.0	ISOHYPERTH.	0	27	333	0	27	333	360	360	0	120	UDIC
CHAPARRAL	25.2	25.7	25.1	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	PERUDIC
CHAPETON-IBA	22.5	22.6	22.3	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	PERUDIC
CHINCHINA (C	23.8	24.0	23.6	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
CHINACOTA	22.6	22.8	21.9	ISOHYPERTH.	0	31	329	0	31	329	360	360	0	120	UDIC
CONSACA	21.9	22.3	21.4	ISOTHERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
DOLORES	23.5	23.7	23.3	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
FLORIDA-POPA	19.8	19.9	19.7	ISOTHERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
GIGANTE	22.3	22.3	22.1	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
IBAGUE	23.0	23.3	22.7	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
JARDIN	21.9	22.1	21.7	ISOTHERMIC	0	0	360	0	0	360	360	360	0	120	PERUDIC
LA VIRGINIA	25.6	25.8	25.3	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
LAURELES	17.3	16.9	17.5	ISOTHERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
LIBANO	22.1	22.5	21.8	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
MANZANARES	22.8	23.2	22.2	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
MEDELLIN	24.0	24.1	23.9	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
MIRANDA	25.4	25.7	25.6	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
MONIQUIRA	21.5	21.4	21.3	ISOTHERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
PALESTINA (F	25.4	25.2	25.2	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
PALESTINA (G	25.3	25.4	25.0	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
PALMIRA	26.3	26.1	26.6	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
PASTO-CBCNUC	15.7	15.6	15.6	ISOTHERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
PIJAO	41.4	41.8	35.6	HYPERTH.	0	15	345	0	15	345	360	360	0	120	UDIC
POPAYAN	20.6	21.1	20.3	ISOTHERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
PUEBLO BELLO	23.8	24.2	23.7	ISOHYPERTH.	0	47	313	0	47	313	360	360	0	45	UDIC
RESTREPO	22.5	22.7	22.3	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
SALAZAR	24.2	24.5	23.5	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
SAN-VINCENTE	24.3	24.2	24.7	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	PERUDIC
SEVILLA	21.9	22.1	21.9	ISOTHERMIC	0	0	360	0	0	360	360	360	0	120	PERUDIC
SONSON	17.3	17.6	17.1	ISOTHERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
TIBALUY	22.2	22.3	22.0	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
TIBACUY	21.5	21.3	21.6	ISOTHERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
TRUJILLO	23.4	23.8	23.2	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
TUNGUAVITA	16.4	15.8	16.7	ISOTHERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
USME	12.5	12.2	12.3	ISOMESIC	0	0	360	0	0	360	360	360	0	120	UDIC
VENECIA	22.7	23.0	22.5	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
VILLARRICA	21.0	21.4	20.7	ISOTHERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
YACOPI	22.8	23.3	22.3	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	PERUDIC

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 04/29/81

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR COLO

NAME OF STATION	MOISTURE REGIME	CON.D. M/D T>8	TEMPERATURE REGIME	TENTATIVE SUBDIVISION OF MOISTURE REGIME		CONS DAYS MOIST(2+3) SUM.	CUM.DAYS MOIST(2+3) WINT	CONS.DAYS COMP.MOIST SUM.	CUM.DAYS COMP.MOI. WINT	CUM.DAYS COMP.MOI. SUM.	CUM.DAYS COMP.MOI. WINT
ALCALA	UDIC	360	ISOHYPERTH.	TYPIC	UDIC			180	180	180	180
ANOLAIMA	UDIC	360	ISOTHERMIC	TYPIC	UDIC			180	180	180	180
BLONAY-CHINA	UDIC	360	ISOHYPERTH.	TYPIC	UDIC			180	180	180	180
BOGOTA	UDIC	360	ISOTHERMIC	TYPIC	UDIC			180	180	180	180
CACHIPAY	UDIC	360	ISOHYPERTH.	TYPIC	UDIC			180	180	180	180
CHAPARRAL	PERUDIC	360	ISOHYPERTH.		PERUDIC			79	180	153	180
CHAPETON-IBA	PERUDIC	360	ISOHYPERTH.		PERUDIC			180	180	180	180
CHINCHINA (C	UDIC	360	ISOHYPERTH.	TYPIC	UDIC			180	180	180	180
CHINACOTA	UDIC	360	ISOHYPERTH.	DRY	TROPUDIC			180	180	180	180
CONSACA	UDIC	360	ISOTHERMIC	TYPIC	UDIC			75	180	149	180
DOLORES	UDIC	360	ISOHYPERTH.	TYPIC	UDIC			180	180	180	180
FLORIDA-POPA	UDIC	360	ISOTHERMIC	TYPIC	UDIC			180	180	180	180
GIGANTE	UDIC	360	ISOHYPERTH.	TYPIC	UDIC			180	180	180	180
IBAGUE	UDIC	360	ISOHYPERTH.	TYPIC	UDIC			180	180	180	180
JARDIN	PERUDIC	360	ISOTHERMIC		PERUDIC			180	180	180	180
LA VIRGINIA	UDIC	360	ISOHYPERTH.	TYPIC	UDIC			180	180	180	180
LAURELES	UDIC	360	ISOTHERMIC	TYPIC	UDIC			180	180	180	180
LIBANO	UDIC	360	ISOHYPERTH.	TYPIC	UDIC			180	180	180	180
MANZANARES	UDIC	360	ISOHYPERTH.	TYPIC	UDIC			180	180	180	180
MEDELLIN	UDIC	360	ISOHYPERTH.	TYPIC	UDIC			180	180	180	180
MIRANDA	UDIC	360	ISOHYPERTH.	TYPIC	UDIC			180	180	180	180
MONIQUIRA	UDIC	360	ISOTHERMIC	TYPIC	UDIC			180	180	180	180
PALESTINA (F	UDIC	360	ISOHYPERTH.	TYPIC	UDIC			180	180	180	180
PALESTINA (G	UDIC	360	ISOHYPERTH.	TYPIC	UDIC			180	180	180	180
PALMIRA	UDIC	360	ISOHYPERTH.	TYPIC	UDIC			180	180	180	180
PASTO-OBCNUC	UDIC	360	ISOTHERMIC	TYPIC	UDIC			180	180	180	180
PIJAO	UDIC	360	HYPERTH.	TYPIC	UDIC			180	180	180	180
POPAYAN	UDIC	360	ISOTHERMIC	TYPIC	UDIC			139	180	165	180
PUEBLO BELLO	UDIC	360	ISOHYPERTH.	DRY	TROPUDIC			180	180	180	180
RESTREPO	UDIC	360	ISOHYPERTH.	TYPIC	UDIC			180	105	180	133
SALAZAR	UDIC	360	ISOHYPERTH.	TYPIC	UDIC			180	180	180	180
SAN-VINCENTE	PERUDIC	360	ISOHYPERTH.		PERUDIC			180	180	180	180
SEVILLA	PERUDIC	360	ISOTHERMIC		PERUDIC			180	180	180	180
SONSON	UDIC	360	ISOTHERMIC	TYPIC	UDIC			180	180	180	180
TIBALUY	UDIC	360	ISOHYPERTH.	TYPIC	UDIC			180	180	180	180
TIBACUY	UDIC	360	ISOTHERMIC	TYPIC	UDIC			180	180	180	180
TRUJILLO	UDIC	360	ISOHYPERTH.	TYPIC	UDIC			180	180	180	180
TUNGUAVITA	UDIC	360	ISOTHERMIC	TYPIC	UDIC			180	180	180	180
USME	UDIC	360	ISOMESIC	TYPIC	UDIC			180	180	180	180
VENECIA	UDIC	360	ISOHYPERTH.	TYPIC	UDIC			180	180	180	180
VILLARRICA	UDIC	360	ISOTHERMIC	TYPIC	UDIC			180	180	180	180
YACOPI	PERUDIC	360	ISOHYPERTH.		PERUDIC			180	180	180	180

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981.

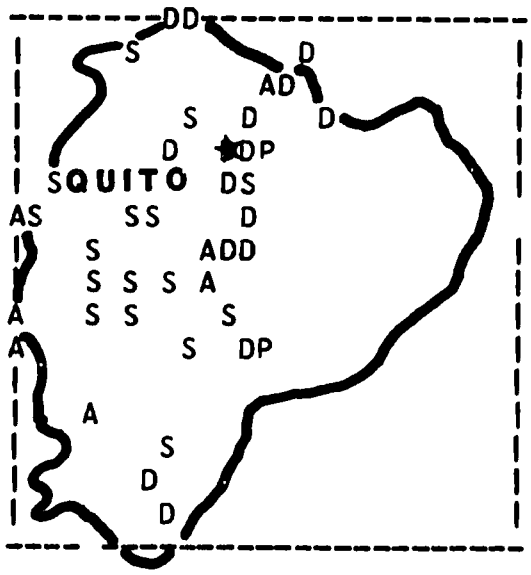
DATE 04/29/81

57

COLOMBIA

ECUADOR

MOISTURE REGIMES



SYMBOL TABLE:

USTIC - - - S
UDIC - - - D
ARIDIC - - - A
XERIC - - - X
PERUDIC - - P

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR ECUA

NAME OF STATION	MEAN SOIL TEMPERATURE ANN	SUMM	WINT	TEMPERATURE REGIME	CUMULATIVE DAYS MSC IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX.CONSECUTIVE DAYS THAT MCS IS MCIST IN SOME PARTS IN ONE YEAR	WHEN SOIL TEMP > 8	DRY AFTER SUMMER SOLST.	MCIST AFTER WINTER SOLST.	MOISTURE REGIME
AMBATO	16.4	16.7	15.6	ISOTHERMIC	245	115	0	245	115	0	86	86	75	0	ARIDIC
ANCON	26.1	27.0	24.8	ISOHYPERTH.	328	32	0	328	32	0	18	18	45	0	ARIDIC
ANGEL (EL)	14.2	13.5	14.3	ISOMESIC	0	0	360	0	0	360	360	360	0	120	UDIC
ARGELIA (LA)	17.5	17.6	17.0	ISOTHERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
ASCAZUBI	17.9	17.6	18.1	ISOTHERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
BABAHOYO	27.6	27.9	26.6	ISOHYPERTH.	127	55	178	127	55	178	219	219	13	13	USTIC
BAHIA DE CAR	27.2	27.7	26.5	ISOHYPERTH.	239	40	81	239	40	81	98	98	15	0	USTIC
BALZAR	27.8	28.1	27.1	ISOHYPERTH.	119	44	197	119	44	197	229	229	14	32	USTIC
BANOS	19.4	19.6	18.7	ISOTHERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
CALDERON	17.9	17.6	18.1	ISOTHERMIC	141	219	0	141	219	0	167	167	38	0	USTIC
CANAR	13.4	13.4	13.0	ISOMESIC	192	168	0	192	168	0	168	168	45	0	USTIC
CARIAMANGA	18.4	18.5	17.9	ISOTHERMIC	0	45	315	0	45	315	360	360	0	96	UDIC
COLIMES	27.4	27.7	26.8	ISOHYPERTH.	65	38	257	65	38	257	295	295	0	62	USTIC
COTOCOLLAO	15.3	15.7	14.7	ISOTHERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
COTOPAXI	10.1	10.3	9.8	ISOMESIC	0	0	360	0	0	360	360	33	0	120	UDIC
CUENCA	16.6	16.9	16.0	ISOTHERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
DAULE	28.3	28.6	27.6	ISOHYPERTH.	155	44	161	155	44	161	197	197	15	0	USTIC
ESMERALDAS	27.9	28.1	28.0	ISOHYPERTH.	204	53	103	204	53	103	146	146	120	75	USTIC
GUARANDA	15.6	15.7	15.4	ISOTHERMIC	0	91	269	0	91	269	360	360	0	74	USTIC
GUAYAQUIL EC	27.4	27.8	26.5	ISOHYPERTH.	163	36	161	163	36	161	197	197	15	0	USTIC
GUAYAQUIL	27.9	28.4	27.2	ISOHYPERTH.	181	35	144	181	35	144	179	179	15	0	USTIC
GUAYLLABAMBA	18.5	18.5	18.4	ISOTHERMIC	137	223	0	137	223	0	137	137	73	0	USTIC
IBARRA	18.5	18.5	18.4	ISOTHERMIC	32	210	118	32	210	118	328	328	32	15	USTIC
ISABEL MARIA	27.5	28.0	26.5	ISOHYPERTH.	144	48	168	144	48	168	206	206	14	3	USTIC
LATACUNGA	15.3	15.7	14.7	ISOTHERMIC	223	137	0	223	137	0	110	110	75	0	USTIC
LIBERTAD (LA	27.8	28.5	27.0	ISOHYPERTH.	326	34	0	326	34	0	19	19	45	0	ARIDIC
LIMONES	28.4	28.2	28.4	ISOHYPERTH.	0	31	329	0	31	329	360	360	0	120	UDIC
LOJA	18.4	18.5	17.9	ISOTHERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
MACARA	27.4	28.0	26.5	ISOHYPERTH.	243	48	69	243	48	69	117	117	45	0	USTIC
MACHALA	27.2	27.9	26.4	ISOHYPERTH.	201	53	106	201	53	106	159	159	15	0	USTIC
MANTA	27.2	27.7	26.5	ISOHYPERTH.	333	27	0	333	27	0	15	15	45	0	ARIDIC
MENDEZ	26.1	26.3	25.4	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	PERUDIC
MILAGRO	27.1	27.5	26.3	ISOHYPERTH.	145	40	175	145	40	175	215	215	15	10	USTIC
OTAVALO	16.6	16.1	16.8	ISOTHERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
PALMIRA	13.4	13.4	13.0	ISOMESIC	245	115	0	245	115	0	115	115	75	0	USTIC
PAPALLACTA	11.9	12.1	11.3	ISOMESIC	0	0	360	0	0	360	360	360	0	120	PERUDIC
PATATE	19.1	19.3	18.3	ISOTHERMIC	70	290	0	70	290	0	290	290	70	0	USTIC
PICHILINGUE	27.0	27.3	26.0	ISOHYPERTH.	97	66	197	97	66	197	263	263	0	28	USTIC
PILLARO	14.2	14.2	13.5	ISOMESIC	0	0	360	0	0	360	360	360	0	120	UDIC
PORTOVELO	25.7	25.6	25.4	ISOHYPERTH.	103	66	191	103	66	191	257	257	0	26	USTIC
PORTOVIEJO	27.4	27.7	26.8	ISOHYPERTH.	221	51	88	221	51	88	139	139	15	0	USTIC
PUERTO BOLIV	27.2	27.9	26.2	ISOHYPERTH.	261	54	45	261	54	45	86	86	17	0	ARIDIC
QUITO ECUADO	15.5	15.5	15.5	ISOTHERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
QUITO	15.5	15.5	15.5	ISOTHERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
RIOBAMBA	15.7	16.0	15.1	ISOTHERMIC	314	46	0	314	46	0	46	46	105	0	ARIDIC

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 04/09/81

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR ECUA

NAME OF STATION	MEAN SOIL TEMPERATURE ANN	SLMM	WINT	TEMPERATURE REGIME	CUMULATIVE DAYS MSC IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MCIST IN SOME PARTS IN ONE YEAR	WHEN SOIL TEMP > 8	DRY AFTER SUMMER SOLST.	MOIST AFTER WINTER SOLST.	MOISTURE REGIME
SALINAS	25.5	26.6	24.4	ISOHYPERTH.	351	9	0	351	9	0	9	9	75	0	ARIDIC
SAN GABRIEL	14.2	13.2	14.6	ISOMESIC	0	0	360	0	0	360	360	360	0	120	UDIC
SAN LORENZO	28.4	28.2	28.4	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
SANTA ISABEL	22.1	21.4	23.0	ISOHYPERTH.	266	94	0	266	94	0	94	94	75	0	USTIC
SANTO DOMING	24.5	24.4	24.3	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
TABACUNDO	15.5	15.5	15.5	ISOTHERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
TIPUTINI	27.9	28.3	27.4	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
TISALEO	13.9	14.2	13.1	ISOMESIC	0	0	360	0	0	360	360	360	0	120	UDIC
TULCAN	13.5	12.7	13.8	ISOMESIC	0	0	360	0	0	360	360	360	0	120	UDIC
UYUMBICHO	15.5	15.5	15.5	ISOTHERMIC	0	0	360	0	0	360	360	360	0	120	UDIC

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 04/09/81

60

ECUADOR

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR ECUA

NAME OF STATION	MOISTURE REGIME	CON.D. M/D T>8	TEMPERATURE REGIME	TENTATIVE SUBDIVISION OF MOISTURE REGIME		CONS DAYS MOIST(2+3) SUM.	CONS DAYS MOIST(2+3) WINT	CUM.DAYS MOIST(2+3) SUM.	CUM.DAYS MOIST(2+3) WINT	CONS.DAYS COMP.MOIST SUM.	CONS.DAYS COMP.MOIST WINT	CUM.DAYS COMP.MOI. SUM.	CUM.DAYS COMP.MOI. WINT
AMBATO	ARIDIC	86	ISOTHERMIC	WEAK	ARIDIC	75	11	104	11				
ANCON	ARIDIC	18	ISOHYPERTH.	TYPIC	ARIDIC	18	0	32	0				
ANGEL (EL)	UDIC	360	ISOMESIC	TYPIC	UDIC					180	180	180	180
ARGELIA (LA)	UDIC	360	ISOTHERMIC	TYPIC	UDIC					180	180	180	180
ASCAZUBI	UDIC	360	ISOTHERMIC	TYPIC	UDIC					180	180	180	180
BABAHOYO	USTIC	219	ISOHYPERTH.	TYPIC	TROPUST.	167	52	167	66				
BAHIA DE CAR	USTIC	98	ISOHYPERTH.	ARIDIC	TROPUST.	98	0	121	0				
BALZAR	USTIC	229	ISOHYPERTH.	TYPIC	TROPUST.	166	63	166	75				
BANOS	UDIC	360	ISOTHERMIC	TYPIC	UDIC					180	180	180	180
CALDERON	USTIC	167	ISOTHERMIC	ARIDIC	TROPUST.	135	45	142	77				
CANAR	USTIC	168	ISOMESIC	ARIDIC	TROPUST.	135	33	135	33				
CARIAMANGA	UDIC	360	ISOTHERMIC	DRY	TROPUDIC					180	96	180	135
COLIMES	USTIC	295	ISOHYPERTH.	UDIC	TROPUST.	180	100	180	115				
COTOCOLLAO	UDIC	360	ISOTHERMIC	TYPIC	UDIC					180	180	180	180
COTOPAXI	UDIC	33	ISOMESIC	TYPIC	UDIC					180	180	180	180
CUENCA	UDIC	360	ISOTHERMIC	TYPIC	UDIC					180	180	180	180
DAULE	USTIC	197	ISOHYPERTH.	TYPIC	TROPUST.	165	32	165	40				
ESMERALDAS	USTIC	146	ISOHYPERTH.	ARIDIC	TROPUST.	0	146	0	156				
GUARANDA	USTIC	360	ISOTHERMIC	UDIC	TROPUST.					180	74	180	89
GUAYAQUIL EC	USTIC	197	ISOHYPERTH.	TYPIC	TROPUST.	165	32	165	32				
GUAYAQUIL	USTIC	179	ISOHYPERTH.	ARIDIC	TROPUST.	165	14	165	14				
GUAYLLABAMBA	USTIC	137	ISOTHERMIC	ARIDIC	TROPUST.	75	105	107	116				
IBARRA	USTIC	328	ISOTHERMIC	UDIC	TROPUST.	75	180	148	180				
ISABEL MARIA	USTIC	206	ISOHYPERTH.	TYPIC	TROPUST.	166	40	166	50				
LATACUNGA	USTIC	110	ISOTHERMIC	ARIDIC	TROPUST.	105	27	105	32				
LIBERTAD (LA	ARIDIC	19	ISOHYPERTH.	TYPIC	ARIDIC	19	0	34	0				
LIMONES	UDIC	360	ISOHYPERTH.	DRY	TROPUDIC					134	180	149	180
LOJA	UDIC	360	ISOTHERMIC	TYPIC	UDIC					180	180	180	180
MACARA	USTIC	117	ISOHYPERTH.	ARIDIC	TROPUST.	117	0	117	0				
MACHALA	USTIC	159	ISOHYPERTH.	ARIDIC	TROPUST.	159	0	159	0				
MANTA	ARIDIC	15	ISOHYPERTH.	TYPIC	ARIDIC	15	0	27	0				
MENDEZ	PERUDIC	360	ISOHYPERTH.		PERUDIC					180	180	180	180
MILAGRO	USTIC	215	ISOHYPERTH.	TYPIC	TROPUST.	165	50	165	50				
OTAVALO	UDIC	360	ISOTHERMIC	TYPIC	UDIC					180	180	180	180
PALMIRA	USTIC	115	ISOMESIC	ARIDIC	TROPUST.	105	10	105	10				
PAPALLACTA	PERUDIC	360	ISOMESIC		PERUDIC					180	180	180	180
PATATE	USTIC	290	ISOTHERMIC	UDIC	TROPUST.	75	180	110	180				
PICHILINGUE	USTIC	263	ISOHYPERTH.	TYPIC	TROPUST.	180	68	180	83				
PILLARO	UDIC	360	ISOMESIC	TYPIC	UDIC					180	180	180	180
PORTOVELO	USTIC	257	ISOHYPERTH.	TYPIC	TROPUST.	180	62	180	77				
PORTOVIEJO	USTIC	139	ISOHYPERTH.	ARIDIC	TROPUST.	139	0	139	0				
PUERTO BOLIV	ARIDIC	86	ISOHYPERTH.	WEAK	ARIDIC	86	0	99	0				
QUITO ECUADC	UDIC	360	ISOTHERMIC	TYPIC	UDIC					180	180	180	180
QUITO	UDIC	360	ISOTHERMIC	TYPIC	UDIC					180	180	180	180
RIOBAMBA	ARIDIC	46	ISOTHERMIC	WEAK	ARIDIC	46	0	46	0				

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981 DATE 04/29/81

61

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR ECUA

NAME OF STATION	MOISTURE REGIME	CON.D. M/D T>8	TEMPERATURE REGIME	TENTATIVE SUBDIVISION OF MOISTURE REGIME		CONS DAYS MOIST(2+3) SUM.	CONS DAYS MOIST(2+3) WINT	CUM.DAYS MOIST(2+3) SUM.	CUM.DAYS MOIST(2+3) WINT	CONS.DAYS COMP.MOIST SUM.	CONS.DAYS COMP.MOIST WINT	CUM.DAYS COMP.MOI. SUM.	CUM.DAYS COMP.MOI. WINT
SALINAS	ARIDIC	9	ISOHYPERTH.	TYPIC	ARIDIC	9	0	9	0				
SAN GABRIEL	UDIC	360	ISOMESIC	TYPIC	UDIC					180	180	180	180
SAN LORENZO	UDIC	360	ISOHYPERTH.	TYPIC	UDIC					180	180	180	180
SANTA ISABEL	USTIC	94	ISOHYPERTH.	ARIDIC	TROPUST.	94	0	94	0				
SANTO DOMING	UDIC	360	ISOHYPERTH.	TYPIC	UDIC					180	180	180	180
TABACUNDO	UDIC	360	ISOTHERMIC	TYPIC	UDIC					180	180	180	180
TIPUTINI	UDIC	360	ISOHYPERTH.	TYPIC	UDIC					180	180	180	180
TISALEO	UDIC	360	ISOMESIC	TYPIC	UDIC					180	180	180	180
TULCAN	UDIC	360	ISOMESIC	TYPIC	UDIC					180	180	180	180
UYUMBICHO	UDIC	360	ISOTHERMIC	TYPIC	UDIC					180	180	180	180

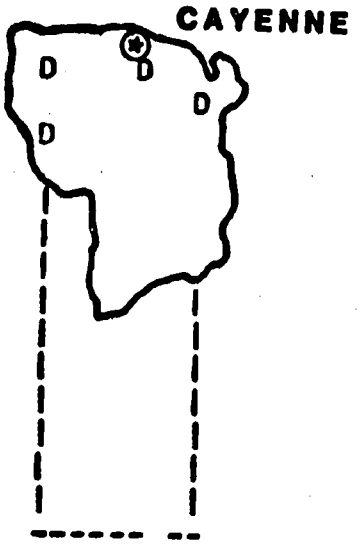
COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 04/29/81

62

ECUADOR

GUIANA (Fr.)



MOISTURE REGIMES

SYMBOL TABLE:

USTIC - - - S
UDIC - - - D
ARIDIC - - - A
XERIC - - - X
PERUDIC - - P

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR GUIA

NAME OF STATION	MEAN SOIL TEMPERATURE ANN	SUMM	WINT	TEMPERATURE REGIME	CUMULATIVE DAYS MOIST IN ONE YEAR: ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5: DRY	M/D	MOI	MAX. CONSECUTIVE DAYS THAT MOIST IN SOME PARTS IN ONE YEAR	WHEN SOIL TEMP > 8	DRY AFTER SUMMER SOLST.	MOIST AFTER WINTER SOLST.	MOISTURE REGIME
CAYENNE/ROCH	28.0	27.8	27.7	ISOHYPERTH.	0	35	325	0	35	325	360	360	0	120	UDIC
CAYENNE/ROCH	28.1	27.8	27.9	ISOHYPERTH.	0	24	336	0	24	336	360	360	0	120	UDIC
MARIPASOULA	27.6	27.4	27.3	ISOHYPERTH.	0	4	356	0	4	356	360	360	0	120	UDIC
ROCHAMBEAU	28.9	28.7	28.8	ISOHYPERTH.	0	40	320	0	40	320	360	360	0	120	UDIC
ST-GEORGES	28.4	28.3	28.0	ISOHYPERTH.	0	32	328	0	32	328	360	360	0	120	UDIC
ST-LAURENT	29.1	29.1	28.7	ISOHYPERTH.	0	16	344	0	16	344	360	360	0	120	UDIC

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 04/29/81

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR GUIA

NAME OF STATION	MOISTURE REGIME	CON.D. M/D T>8	TEMPERATURE REGIME	TENTATIVE SUBDIVISION OF MOISTURE REGIME	CONS DAYS MOIST(2+3) SUM. WINT	CUM.DAYS MOIST(2+3) SUM. WINT	CONS.DAYS COMP.MOIST SUM. WINT	CUM.DAYS COMP.MOI. SUM. WINT
CAYENNE/ROCH	UDIC	360	ISOHYPERTH.	DRY TROPUDIC				
CAYENNE/ROCH	UDIC	360	ISOHYPERTH.	TYPIC UDIC			100 180	145 180
MARIPASOULA	UDIC	360	ISOHYPERTH.	TYPIC UDIC			102 180	156 180
ROCHAMBEAU	UDIC	360	ISOHYPERTH.	DRY TROPUDIC			131 180	176 180
ST-GEORGES	UDIC	360	ISOHYPERTH.	DRY TROPUDIC			95 180	140 180
ST-LAURENT	UDIC	360	ISOHYPERTH.	TYPIC UDIC			95 180	148 180
							119 180	164 180

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 04/29/81

GUYANA

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR GUYA

NAME OF STATION	MEAN SOIL TEMPERATURE ANN	SUMM	WINT	TEMPERATURE REGIME	CUMULATIVE DAYS MSC IN ONE YEAR IS DRY M/C MOI	WHEN SOIL TEMP >5 DRY M/D MOI	MCIST IN SOME PARTS IN ONE YEAR	MAX.CONSECUTIVE DAYS THAT MCS IS WHEN SOIL TEMP > 8	DRY AFTER SUMMER SOLST.	MCIST AFTER WINTER SOLST.	MOISTURE REGIME
GEORGETOWN C	29.5	29.3	29.0	ISOHYPERTH.	0 0 360	0 0 360	360	360	0	120	UDIC

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 04/29/81

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR GUYA

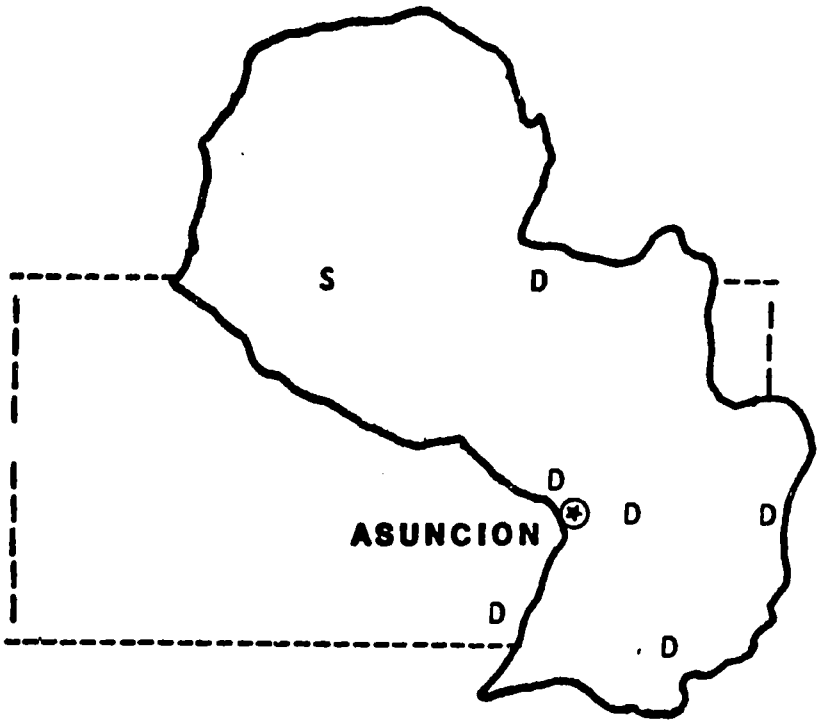
PAGE 1

NAME OF STATION	MOISTURE REGIME	CON.D. M/D T>8	TEMPERATURE REGIME	TENTATIVE SUBDIVISION OF MOISTURE REGIME	CONS DAYS MOIST(2+3) SUM. WINT	CUM.DAYS MOIST(2+3) SUM. WINT	CONS.DAYS COMP.MOIST SUM. WINT	CUM.DAYS COMP.MOI. SUM. WINT
GEORGETOWN G	UDIC	360	ISOHYPERTH.	TYPIC UDIC			180 180	180 180

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 04/29/81

PARAGUAY



MOISTURE REGIMES

SYMBOL TABLE:

USTIC - - - S
UDIC - - - D
ARIDIC - - - A
XERIC - - - X
PERUDIC - - P

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR PARA

NAME OF STATION	MEAN SOIL TEMPERATURE ANN	SUMM	WINT	TEMPERATURE REGIME	CUMULATIVE DAYS MSC IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX.CONSECUTIVE DAYS THAT MCS IS MOIST IN SOME PARTS IN ONE YEAR	WHEN SOIL TEMP > 8	DRY AFTER SUMMER SOLST.	MOIST AFTER WINTER SOLST.	MOISTURE REGIME
ASUNCION PAR	26.2	29.2	23.1	HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
ASUNCION	26.6	29.8	23.3	HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
ENCARNACION	24.2	27.[illegible]	21.1	HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
MARISCAL-EST	27.6	30.1	24.5	HYPERTH.	163	197	0	163	197	0	86	86	11	0	USTIC
PILAR	25.0	28.6	21.6	HYPERTH.	0	5	355	0	5	355	360	360	0	120	UDIC
PUERTO-CASAD	27.4	29.8	24.6	HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
PUERTO-PRESI	24.5	27.5	21.3	HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
VILLARRICA	25.0	28.1	22.1	HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 04/29/81

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR PARA

NAME OF STATION	MOISTURE REGIME	CON.D. M/D T>8	TEMPERATURE REGIME	TENTATIVE SUBDIVISION OF MOISTURE REGIME		CONS DAYS MOIST(2+3) SUM.	CONS DAYS MOIST(2+3) WINT	CUM.DAYS MOIST(2+3) SUM.	CUM.DAYS MOIST(2+3) WINT	CONS.DAYS COMP.MOIST SUM.	CONS.DAYS COMP.MOIST WINT	CUM.DAYS COMP.MOI. SUM.	CUM.DAYS COMP.MOI. WINT
ASUNCION PAR	UDIC	360	HYPERTH.	TYPIC	UDIC					180	180	180	180
ASUNCION	UDIC	360	HYPERTH.	TYPIC	UDIC					180	180	180	180
ENCARNACION	UDIC	360	HYPERTH.	TYPIC	UDIC					180	180	180	180
MARISCAL-EST	USTIC	86	HYPERTH.	TYPIC	TEMPUST.	75	16	145	52				
PILAR	UDIC	360	HYPERTH.	TYPIC	UDIC					105	180	175	180
PUERTO-CASAD	UDIC	360	HYPERTH.	TYPIC	UDIC					180	180	180	180
PUERTO-PRESI	UDIC	360	HYPERTH.	TYPIC	UDIC					180	180	180	180
VILLARRICA	UDIC	360	HYPERTH.	TYPIC	UDIC					180	180	180	180

COMPUTED BY FORTRAN PROGRAM VWC8, APR 1981

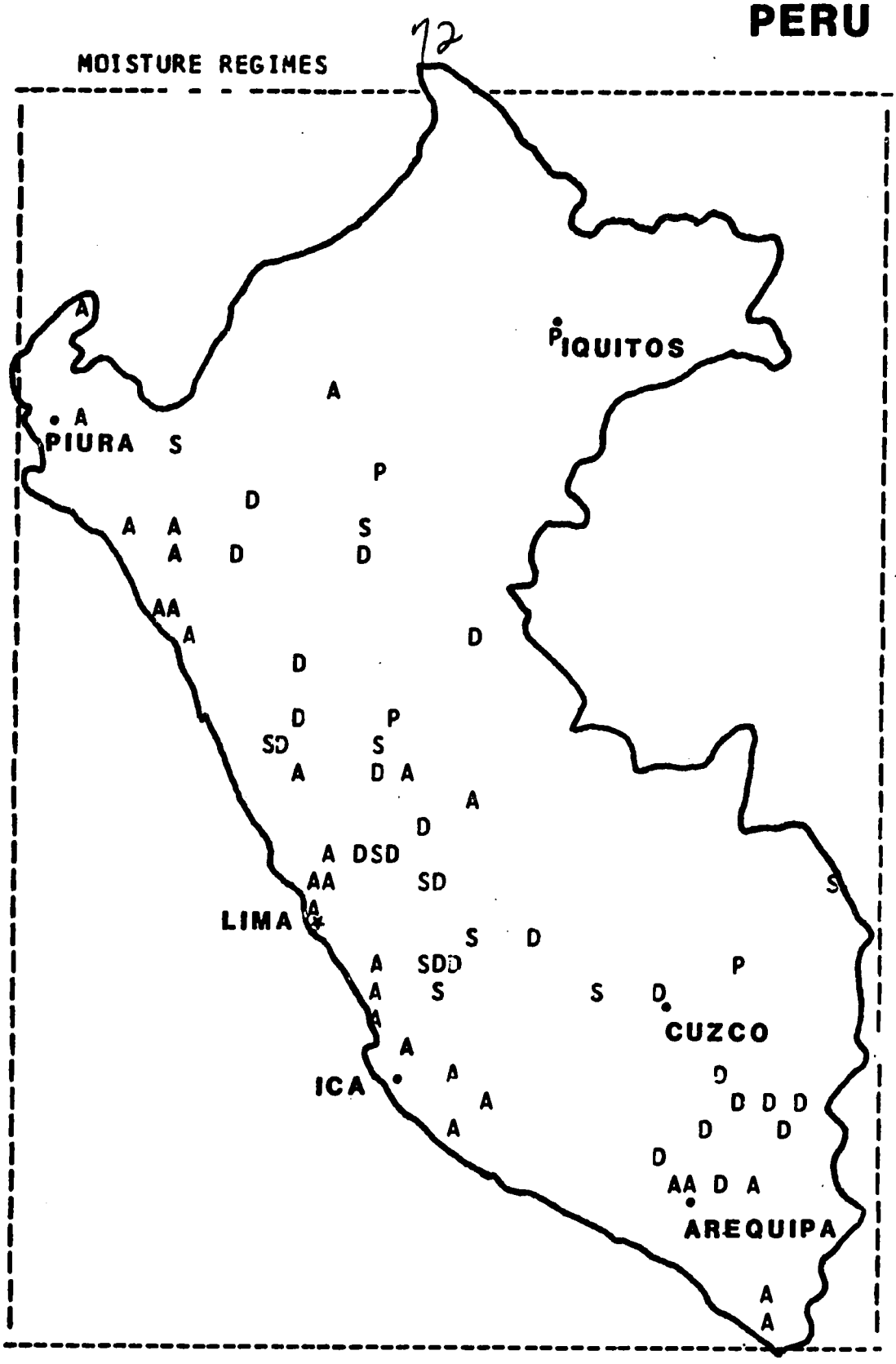
DATE 04/29/81

71

PARAGUAY

PERU

MOISTURE REGIMES



MOISTURE REGIMES

SYMBOL TABLE:

USTIC - - - S
UDIC - - - D
ARIDIC - - - A
XERIC - - - X
PERUDIC - - P

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR PERU

NAME OF STATION	MEAN SOIL TEMPERATURE ANN	SUMM	WINT	TEMPERATURE REGIME	CUMULATIVE DAYS MSC IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX.CONSECUTIVE DAYS THAT MCS IS MOIST IN SOME PARTS IN ONE YEAR	WHEN SOIL TEMP > 8	DRY AFTER SUMMER SOLST.	MOIST AFTER WINTER SOLST.	MOISTURE REGIME
ABANCAY	19.2	19.0	18.5	ISOTHERMIC	97	119	144	97	119	144	263	263	0	9	USTIC
ACORA	19.7	19.9	19.2	ISOTHERMIC	302	58	0	302	58	0	58	58	45	0	ARIDIC
AGNOCOCHA	5.3	5.7	4.4	CRYIC	0	0	360	0	0	0	360	0	0	120	UDIC
ALTO IEL	23.6	24.9	22.1	ISOHYPERTH.	360	0	0	360	0	0	0	0	120	0	ARIDIC
AREQUIPA	15.6	16.1	14.5	ISOTHERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
AREQUIPA	15.5	16.1	14.4	ISOTHERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
ARMA	12.3	12.0	12.5	ISOMESIC	98	102	160	98	102	160	262	262	15	25	USTIC
BEBEDERO	25.6	26.8	24.0	ISOHYPERTH.	360	0	0	360	0	0	0	0	120	0	ARIDIC
BELLAVISTA	16.5	16.7	16.1	ISOTHERMIC	1	159	200	1	159	200	359	359	0	35	USTIC
CAJAMARCA	16.5	16.7	16.1	ISOTHERMIC	0	36	324	0	36	324	360	360	0	69	UDIC
CAMPO DE MAR	21.0	23.0	19.2	ISOTHERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
CANETE	22.3	24.2	20.3	ISOHYPERTH.	360	0	0	360	0	0	0	0	120	0	ARIDIC
CANETE	22.6	24.5	20.7	ISOHYPERTH.	360	0	0	360	0	0	0	0	120	0	ARIDIC
CARAZ	18.1	18.3	17.6	ISOTHERMIC	280	80	0	280	80	0	80	80	45	0	ARIDIC
CARTAVIO	22.9	24.4	21.7	ISOHYPERTH.	360	0	0	360	0	0	0	0	120	0	ARIDIC
CASA GRANDE	23.5	25.2	22.0	ISOHYPERTH.	360	0	0	360	0	0	0	0	120	0	ARIDIC
CASAPALCA	5.0	5.1	4.6	CRYIC	0	0	360	0	0	0	360	0	0	120	UDIC
CASTROVIRREY	9.4	9.7	8.8	ISOMESIC	0	143	217	0	143	217	360	360	0	52	USTIC
CAYALTI	24.7	26.1	22.9	ISOHYPERTH.	360	0	0	360	0	0	0	0	120	0	ARIDIC
CAYLLONA	6.1	7.0	4.1	CRYIC	0	0	360	0	0	61	360	0	0	120	UDIC
CERRO DE PAS	5.0	5.1	4.6	CRYIC	0	0	360	0	0	0	360	0	0	120	UDIC
CHACAPOYAS	18.1	18.3	17.6	ISOTHERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
CHICLAYO	24.4	25.7	23.0	ISOHYPERTH.	360	0	0	360	0	0	0	0	120	0	ARIDIC
CHUQUIBAMBIL	9.5	10.3	7.3	ISOMESIC	0	0	360	0	0	270	360	165	0	120	UDIC
COCAS	14.1	13.9	13.9	ISOMESIC	45	142	173	45	142	173	315	315	0	35	USTIC
COPARA	22.7	24.4	19.9	ISOHYPERTH.	360	0	0	360	0	0	0	0	120	0	ARIDIC
CUENCA-RIO-V	6.6	7.8	4.4	CRYIC	0	0	360	0	0	150	360	0	0	120	UDIC
CUZCO	13.7	14.0	12.4	ISOMESIC	0	73	287	0	73	287	360	360	0	62	UDIC
DESAGUADERO	10.4	11.7	7.8	ISOMESIC	0	42	318	0	42	236	360	208	0	120	UDIC
GUADALUPE	24.4	25.8	22.5	ISOHYPERTH.	360	0	0	360	0	0	0	0	120	0	ARIDIC
HUAMANI	22.0	23.3	19.8	ISOHYPERTH.	360	0	0	360	0	0	0	0	120	0	ARIDIC
HUANCANO	23.0	23.9	21.3	ISOHYPERTH.	360	0	0	360	0	0	0	0	120	0	ARIDIC
HUANCABAMBA	22.1	22.2	21.9	ISOHYPERTH.	247	113	0	247	113	0	113	113	15	0	USTIC
HUANCAYO	13.8	14.2	12.7	ISOMESIC	0	0	360	0	0	360	360	360	0	120	UDIC
HUANUCO	22.1	22.2	21.9	ISOHYPERTH.	243	117	0	243	117	0	101	101	14	0	USTIC
HUARAZ	16.3	16.3	15.7	ISOTHERMIC	0	92	268	0	92	268	360	360	0	43	USTIC
HUAYAN	21.6	23.3	19.6	ISOTHERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
HUMANGA	17.3	17.7	16.1	ISOTHERMIC	0	66	294	0	66	294	360	360	0	39	UDIC
ICA	23.5	25.3	21.0	ISOHYPERTH.	360	0	0	360	0	0	0	0	120	0	ARIDIC
ICA (ASOC.)	22.0	24.2	19.1	THERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
IMATA	5.5	6.5	4.4	CRYIC	0	0	360	0	0	0	360	0	0	120	UDIC
IQUITOS	24.7	26.1	22.9	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	PERUDIC
JAUJA	13.3	13.5	12.5	ISOMESIC	0	142	218	0	142	218	360	360	0	53	USTIC
JUANJU	29.0	29.4	28.6	ISOHYPERTH.	0	27	333	0	27	333	360	360	0	45	UDIC
JULIACA	10.4	10.8	9.1	ISOMESIC	0	66	294	0	66	294	360	205	0	99	UDIC

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 04/29/81

73

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR PERU

NAME OF STATION	MEAN SOIL TEMPERATURE ANN	SUMM	WINT	TEMPERATURE REGIME	CUMULATIVE DAYS MSC IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX.CONSECUTIVE DAYS THAT MCS IS MOIST IN SOME PARTS IN ONE YEAR	WHEN SOIL TEMP > 8	DRY AFTER SUMMER SOLST.	MOIST AFTER WINTER SOLST.	MOISTURE REGIME
LA-OROYA	11.2	11.6	10.0	ISOMESIC	0	0	360	0	0	360	360	269	0	120	UDIC
LAMBAYEQUE	24.9	26.4	23.3	ISOHYPERTH.	360	0	0	360	0	0	0	0	120	0	ARIDIC
LAMPAS-BAJO	8.4	8.8	7.3	ISOMESIC	0	0	360	0	0	266	360	0	0	120	UDIC
LIMA	20.6	22.4	18.7	ISOTHERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
LIMATAMBO	21.3	23.1	19.4	ISOTHERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
MAJORO	23.6	25.8	20.8	ISOHYPERTH.	360	0	0	360	0	0	0	0	120	0	ARIDIC
MOLINA ILA	21.8	23.8	19.7	ISOTHERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
OCUCAJE	23.1	24.7	20.3	ISOHYPERTH.	360	0	0	360	0	0	0	0	120	0	ARIDIC
PACHACHACA	13.3	13.5	12.5	ISOMESIC	0	0	360	0	0	360	360	360	0	120	UDIC
PACOCOCHA	6.9	7.0	6.2	CRYIC	0	0	360	0	0	51	360	0	0	120	UDIC
PALPA	24.1	26.4	21.0	HYPERTH.	360	0	0	360	0	0	0	0	120	0	ARIDIC
PARAMONGA	21.2	22.7	19.9	ISOTHERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
PARON	5.5	6.5	4.4	CRYIC	0	0	360	0	0	0	360	0	0	120	UDIC
PARQUE DE RE	22.3	24.3	20.2	ISOHYPERTH.	360	0	0	360	0	0	0	0	120	0	ARIDIC
PISCO	21.2	22.9	19.5	ISOTHERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
PISCO	21.8	23.5	20.0	ISOTHERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
PIURA	27.8	29.1	26.3	ISOHYPERTH.	360	0	0	360	0	0	0	0	120	0	ARIDIC
PUCALLAPA	29.4	29.7	29.0	ISOHYPERTH.	0	27	333	0	27	333	360	360	0	39	UDIC
PUERTO CHICA	24.3	25.3	23.5	ISOHYPERTH.	360	0	0	360	0	0	0	0	120	0	ARIDIC
PUERTO MALDO	29.0	29.0	28.2	ISOHYPERTH.	12	103	245	12	103	245	322	322	0	42	USTIC
PULTOC	6.6	6.9	5.8	CRYIC	0	0	360	0	0	360	360	0	0	120	UDIC
PUNO	10.4	10.8	9.1	ISOMESIC	0	64	296	0	64	296	360	205	0	101	UDIC
PUNO-GR-SALC	10.5	11.2	9.0	ISOMESIC	0	11	349	0	11	349	360	207	0	120	UDIC
PUNTA ILA	21.9	23.4	20.2	ISOTHERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
QUILLABAMBA	26.7	26.3	26.6	ISOHYPERTH.	84	133	143	84	133	143	255	255	0	0	USTIC
QUINCEMIL	25.0	25.2	24.7	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	PERUDIC
RETES	21.4	23.1	19.5	ISOTHERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
SAN JAVIER	24.1	26.0	21.3	ISOHYPERTH.	360	0	0	360	0	0	0	0	120	0	ARIDIC
SAN JUAN	24.9	26.4	23.3	ISOHYPERTH.	360	0	0	360	0	0	0	0	120	0	ARIDIC
SAN RAMON	25.0	25.2	24.7	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
SANTA ANA	7.3	8.2	5.8	CRYIC	0	0	360	0	0	172	360	0	0	120	UDIC
TACNA	18.9	21.2	16.7	ISOTHERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
TALARA	25.8	27.1	24.5	ISOHYPERTH.	360	0	0	360	0	0	0	0	120	0	ARIDIC
TARAPOTO	29.0	29.4	28.6	ISOHYPERTH.	96	141	123	96	141	123	167	167	15	11	USTIC
TICAMPA	13.3	13.5	12.5	ISOMESIC	0	33	327	0	33	327	360	360	0	72	UDIC
TINGO MARIA	25.0	25.2	24.7	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	PERUDIC
TRUJILLO	21.8	22.9	20.9	ISOTHERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
VITOR	20.2	19.9	20.2	ISOTHERMIC	360	0	0	360	0	0	0	0	120	0	ARIDIC
YURIMAGUAS	24.7	26.1	22.9	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	PERUDIC
ZORRITOS	27.2	28.2	26.3	ISOHYPERTH.	350	10	0	350	10	0	10	10	65	0	ARIDIC

COMPUTED BY FORTRAN PROGRAM VWC8, APR 1981

DATE 04/29/81

94

PERU

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR PERU

NAME OF STATION	MOISTURE REGIME	CON.D. M/D T>8	TEMPERATURE REGIME	TENTATIVE SUBDIVISION OF MOISTURE REGIME		CONS DAYS MOIST(2+3) SUM.	CONS DAYS MOIST(2+3) WINT	CUM.DAYS MOIST(2+3) SUM.	CUM.DAYS MOIST(2+3) WINT	CONS.DAYS COMP.MOIST SUM.	CONS.DAYS COMP.MOIST WINT	CUM.DAYS COMP.MOI. SUM.	CUM.DAYS COMP.MOI. WINT
ABANCAY	USTIC	263	ISOTHERMIC	TYPIC	TROPUST.	180	68	180	83				
ACCRA	ARIDIC	58	ISOTHERMIC	WEAK	ARIDIC	58	0	58	0				
AGNOCOCHA	UDIC	0	CRYIC	TYPIC	UDIC					180	180	180	180
ALTO IEL	ARIDIC	0	ISOHYPERTH.	EXTREME	ARIDIC	0	0	0	0				
AREQUIPA	ARIDIC	0	ISOTHERMIC	EXTREME	ARIDIC	0	0	0	0				
AREQUIPA	ARIDIC	0	ISOTHERMIC	EXTREME	ARIDIC	0	0	0	0				
ARMA	USTIC	262	ISOMESIC	TYPIC	TROPUST.	165	97	165	97				
BEBEDERO	ARIDIC	0	ISOHYPERTH.	EXTREME	ARIDIC	0	0	0	0				
BELLAVISTA	USTIC	359	ISOTHERMIC	UDIC	TROPUST.	180	164	180	179				
CAJAMARCA	UDIC	360	ISOTHERMIC	DRY	TROPUDIC					180	75	180	144
CAMPO DE MAR	ARIDIC	0	ISOTHERMIC	EXTREME	ARIDIC	0	0	0	0				
CANETE	ARIDIC	0	ISOHYPERTH.	EXTREME	ARIDIC	0	0	0	0				
CANETE	ARIDIC	0	ISOHYPERTH.	EXTREME	ARIDIC	0	0	0	0				
CARAZ	ARIDIC	80	ISOTHERMIC	WEAK	ARIDIC	80	0	80	0				
CARTAVIO	ARIDIC	0	ISOHYPERTH.	EXTREME	ARIDIC	0	0	0	0				
CASA GRANDE	ARIDIC	0	ISOHYPERTH.	EXTREME	ARIDIC	0	0	0	0				
CASAPALCA	UDIC	0	CRYIC	TYPIC	UDIC					180	180	180	180
CASTROVIRREY	USTIC	360	ISOMESIC	UDIC	TROPUST.					165	52	165	52
CAYALTI	ARIDIC	0	ISOHYPERTH.	EXTREME	ARIDIC	0	0	0	0				
CAYLLOMA	UDIC	0	CRYIC	TYPIC	UDIC					180	180	180	180
CERRO DE PAS	UDIC	0	CRYIC	TYPIC	UDIC					180	180	180	180
CHACAPOYAS	UDIC	360	ISOTHERMIC	TYPIC	UDIC					180	180	180	180
CHICLAYO	ARIDIC	0	ISOHYPERTH.	EXTREME	ARIDIC	0	0	0	0				
CHUQUIBAMBIL	UDIC	165	ISOMESIC	TYPIC	UDIC					180	180	180	180
COCAS	USTIC	315	ISOMESIC	UDIC	TROPUST.	180	120	180	135				
COPARA	ARIDIC	0	ISOHYPERTH.	EXTREME	ARIDIC	0	0	0	0				
CUENCA-RIO-V	UDIC	0	CRYIC	TYPIC	UDIC					180	180	180	180
CUZCO	UDIC	360	ISOMESIC	DRY	TROPUDIC					180	62	180	107
DESAGUADERO	UDIC	208	ISOMESIC	DRY	TROPUDIC					180	123	180	138
GUADALUPE	ARIDIC	0	ISOHYPERTH.	EXTREME	ARIDIC	0	0	0	0				
HUAMANI	ARIDIC	0	ISOHYPERTH.	EXTREME	ARIDIC	0	0	0	0				
HUANCANO	ARIDIC	0	ISOHYPERTH.	EXTREME	ARIDIC	0	0	0	0				
HUANCABAMBA	USTIC	113	ISOHYPERTH.	ARIDIC	TROPUST.	113	0	113	0				
HUANCAYO	UDIC	360	ISOMESIC	TYPIC	UDIC					180	180	180	180
HUANUCO	USTIC	101	ISOHYPERTH.	ARIDIC	TROPUST.	101	15	102	15				
HUARAZ	USTIC	360	ISOTHERMIC	UDIC	TROPUST.					180	45	180	88
HUAYAN	ARIDIC	0	ISOTHERMIC	EXTREME	ARIDIC	0	0	0	0				
HUMANGA	UDIC	360	ISOTHERMIC	DRY	TROPUDIC					180	75	180	114
ICA	ARIDIC	0	ISOHYPERTH.	EXTREME	ARIDIC	0	0	0	0				
ICA (ASOC.)	ARIDIC	0	THERMIC	EXTREME	ARIDIC	0	0	0	0				
IMATA	UDIC	0	CRYIC	TYPIC	UDIC					180	180	180	180
IQUITOS	PERUDIC	360	ISOHYPERTH.		PERUDIC					180	180	180	180
JAUJA	USTIC	360	ISOMESIC	UDIC	TROPUST.					165	53	165	53
JUANJU	UDIC	360	ISOHYPERTH.	TYPIC	UDIC					135	105	173	160
JULIACA	UDIC	205	ISOMESIC	DRY	TROPUDIC					180	99	180	114

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 04/29/81

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR PERU

NAME OF STATION	MOISTURE REGIME	CON.D. M/D T>8	TEMPERATURE REGIME	TENTATIVE SUBDIVISION OF MOISTURE REGIME		CONS DAYS MOIST(2+3) SUM.	CONS DAYS MOIST(2+3) WINT	CUM.DAYS MOIST(2+3) SUM.	CUM.DAYS MOIST(2+3) WINT	CONS.DAYS COMP.MOIST SUM.	CONS.DAYS COMP.MOIST WINT	CUM.DAYS COMP.MOI. SUM.	CUM.DAYS COMP.MOI. WINT
*LA-OROYA	UDIC	269	ISOMESIC	TYPIC	UDIC					180	180	180	180
*LAMBAYEQUE	ARIDIC	0	ISOHYPERTH.	EXTREME	ARIDIC	0	0	0	0				
*LAMPAS-BAJO	UDIC	0	ISOMESIC	TYPIC	UDIC					180	180	180	180
*LIMA	ARIDIC	0	ISOTHERMIC	EXTREME	ARIDIC	0	0	0	0				
*LIMATAMBO	ARIDIC	0	ISOTHERMIC	EXTREME	ARIDIC	0	0	0	0				
*MAJORO	ARIDIC	0	ISOHYPERTH.	EXTREME	ARIDIC	0	0	0	0				
*MOLINA ILA	ARIDIC	0	ISOTHERMIC	EXTREME	ARIDIC	0	0	0	0				
*OCUCAJE	ARIDIC	0	ISOHYPERTH.	EXTREME	ARIDIC	0	0	0	0				
*PACHACHACA	UDIC	360	ISOMESIC	TYPIC	UDIC					180	180	180	180
*PACOCOCHA	UDIC	0	CRYIC	TYPIC	UDIC					180	180	180	180
*PALPA	ARIDIC	0	HYPERTH.	EXTREME	ARIDIC	0	0	0	0				
*PARAMONGA	ARIDIC	0	ISOTHERMIC	EXTREME	ARIDIC	0	0	0	0				
*PARON	UDIC	0	CRYIC	TYPIC	UDIC					180	180	180	180
*PARQUE DE RE	ARIDIC	0	ISOHYPERTH.	EXTREME	ARIDIC	0	0	0	0				
*PISCO	ARIDIC	0	ISOTHERMIC	EXTREME	ARIDIC	0	0	0	0				
*PISCO	ARIDIC	0	ISOTHERMIC	EXTREME	ARIDIC	0	0	0	0				
*PIURA	ARIDIC	0	ISOHYPERTH.	EXTREME	ARIDIC	0	0	0	0				
*PUCALLAPA	UDIC	360	ISOHYPERTH.	TYPIC	UDIC					180	75	180	153
*PUERTO CHICA	ARIDIC	0	ISOHYPERTH.	EXTREME	ARIDIC	0	0	0	0				
*PUERTO MALDO	USTIC	322	ISOHYPERTH.	UDIC	TROPUST.	180	97	180	168				
*PULTOC	UDIC	0	CRYIC	TYPIC	UDIC					180	180	180	180
*PUNO	UDIC	205	ISOMESIC	DRY	TROPUDIC					180	101	180	116
*PUNO-GR-SALC	UDIC	207	ISOMESIC	TYPIC	UDIC					180	124	180	169
*PUNTA ILA	ARIDIC	0	ISOTHERMIC	EXTREME	ARIDIC	0	0	0	0				
*QUILLABAMBA	USTIC	255	ISOHYPERTH.	TYPIC	TROPUST.	180	45	180	96				
*QUINCEMIL	PERUDIC	360	ISOHYPERTH.		PERUDIC					180	180	180	180
*RETES	ARIDIC	0	ISOTHERMIC	EXTREME	ARIDIC	0	0	0	0				
*SAN JAVIER	ARIDIC	0	ISOHYPERTH.	EXTREME	ARIDIC	0	0	0	0				
*SAN JUAN	ARIDIC	0	ISOHYPERTH.	EXTREME	ARIDIC	0	0	0	0				
*SAN RAMON	UDIC	360	ISOHYPERTH.	TYPIC	UDIC					180	180	180	180
*SANTA ANA	UDIC	0	CRYIC	TYPIC	UDIC					180	180	180	180
*TACNA	ARIDIC	0	ISOTHERMIC	EXTREME	ARIDIC	0	0	0	0				
*TALARA	ARIDIC	0	ISOHYPERTH.	EXTREME	ARIDIC	0	0	0	0				
*TARAPOTO	USTIC	167	ISOHYPERTH.	ARIDIC	TROPUST.	135	51	153	111				
*TICAMPA	UDIC	360	ISOMESIC	DRY	TROPUDIC					180	75	180	147
*TINGO MARIA	PERUDIC	360	ISOHYPERTH.		PERUDIC					180	180	180	180
*TRUJILLO	ARIDIC	0	ISOTHERMIC	EXTREME	ARIDIC	0	0	0	0				
*VITOR	ARIDIC	0	ISOTHERMIC	EXTREME	ARIDIC	0	0	0	0				
*YURIMAGUAS	PERUDIC	360	ISOHYPERTH.		PERUDIC					180	180	180	180
*ZORRITOS	ARIDIC	10	ISOHYPERTH.	TYPIC	ARIDIC	10	0	10	0				

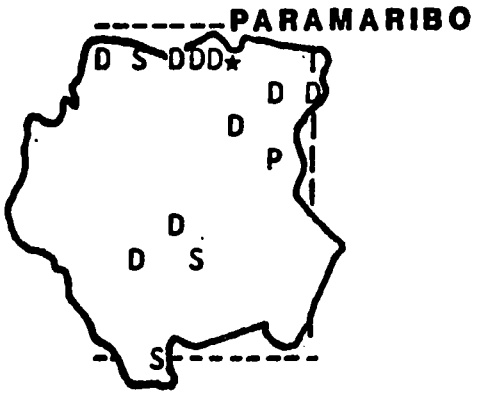
COMPUTED BY FORTRAN PROGRAM VWC8, APR 1981

DATE 04/29/81

76

PERU

SURINAM



MOISTURE REGIMES

SYMBOL TABLE:

USTIC - - - S
UDIC - - - D
ARIDIC - - - A
XERIC - - - X
PERUDIC - - P

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR SURI

NAME OF STATION	MEAN SOIL TEMPERATURE ANN	SUMM	WINT	TEMPERATURE REGIME	CUMULATIVE DAYS MSC IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX.CONSECUTIVE DAYS THAT MCS IS MOIST IN SOME PARTS IN ONE YEAR	WHEN SOIL TEMP > 8	DRY AFTER SUMMER SOLST.	MOIST AFTER WINTER SOLST.	MOISTURE REGIME
AFOBAKKA65	28.6	28.6	27.8	ISOHYPERTH.	18	27	315	18	27	315	342	342	3	120	UDIC
AFOBAKA61	28.8	28.2	27.8	ISOHYPERTH.	0	40	320	0	40	320	360	360	0	95	UDIC
ALBINA65	29.3	29.0	28.6	ISOHYPERTH.	0	38	322	0	38	322	360	360	0	120	UDIC
ALBINA73	30.0	29.8	29.6	ISOHYPERTH.	0	54	306	0	54	306	360	360	0	81	UDIC
BRCKOPONDO61	29.6	29.1	28.7	ISOHYPERTH.	0	38	322	0	38	322	360	360	0	97	UDIC
COPPENAMEP69	30.4	30.1	29.7	ISOHYPERTH.	21	48	291	21	48	291	327	327	0	83	UDIC
CORONIE65	29.6	29.5	29.1	ISOHYPERTH.	37	107	216	37	107	216	323	323	22	74	USTIC
MARIENBURG65	29.5	29.4	29.0	ISOHYPERTH.	26	90	244	26	90	244	318	318	0	83	USTIC
MARIENBURG69	29.6	29.4	29.2	ISOHYPERTH.	2	77	281	2	77	281	358	358	0	105	UDIC
MARIENBURG73	29.4	29.3	29.2	ISOHYPERTH.	0	18	342	0	18	342	360	360	0	71	UDIC
MOENGO61	29.5	29.2	28.8	ISOHYPERTH.	31	54	275	31	54	275	329	329	0	74	UDIC
MOENGO65	29.5	29.3	28.8	ISOHYPERTH.	17	65	278	17	65	278	343	343	2	120	UDIC
NICKERIE	29.9	29.8	29.5	ISOHYPERTH.	4	50	306	4	50	306	356	356	0	120	UDIC
PALOEMEU61	29.3	29.4	28.4	ISOHYPERTH.	13	59	288	13	59	288	347	347	0	120	UDIC
PALOEMEU69	30.6	30.6	30.3	ISOHYPERTH.	102	24	234	102	24	234	258	258	27	105	USTIC
PALOEMEU65	29.7	29.5	28.9	ISOHYPERTH.	58	55	247	58	55	247	302	302	13	105	USTIC
PARAMARIBO	29.7	29.5	29.2	ISOHYPERTH.	0	13	347	0	13	347	360	360	0	120	UDIC
PARANAM61	29.2	28.8	28.4	ISOHYPERTH.	38	27	295	38	27	295	322	322	0	70	UDIC
SIPALIWINI	29.3	29.1	29.0	ISOHYPERTH.	40	63	257	40	63	257	287	287	0	105	USTIC
STOELMANSE61	29.4	29.2	28.6	ISOHYPERTH.	0	16	344	0	16	344	360	360	0	119	UDIC
STOELMANSE65	29.5	29.3	28.7	ISOHYPERTH.	53	38	269	53	38	269	296	296	19	120	USTIC
STOELMANSE73	29.3	29.3	28.8	ISOHYPERTH.	0	0	360	0	0	360	360	360	0	120	PERUDIC
STONDANSI65	29.7	29.4	29.0	ISOHYPERTH.	57	27	276	57	27	276	303	303	12	120	UDIC
TAFELBERG	28.3	28.2	27.8	ISOHYPERTH.	0	22	338	0	22	338	360	360	0	120	UDIC
ZANDERIJ AIR	28.1	27.9	27.7	ISOHYPERTH.	0	8	352	0	8	352	360	360	0	120	UDIC
ZORG EN HO61	29.6	29.5	29.3	ISOHYPERTH.	68	44	248	68	44	248	292	292	0	33	USTIC
ZORG EN HO65	29.5	29.2	28.8	ISOHYPERTH.	0	37	323	0	37	323	360	360	0	102	UDIC
ZORG EN HO69	30.0	29.9	29.2	ISOHYPERTH.	47	37	276	47	37	276	313	313	2	120	UDIC
ZORG EN HO73	29.7	29.5	29.3	ISOHYPERTH.	0	25	335	0	25	335	360	360	0	65	UDIC

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 04/29/81

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR SURI

NAME OF STATION	MOISTURE REGIME	CON.D. M/D T>8	TEMPERATURE REGIME	TENTATIVE SUBDIVISION OF MOISTURE REGIME		CONS DAYS MOIST(2+3) SUM.	CONS DAYS MOIST(2+3) WINT	CUM.DAYS MOIST(2+3) SUM.	CUM.DAYS MOIST(2+3) WINT	CONS.DAYS COMP.MOIST SUM.	CONS.DAYS COMP.MOIST WINT	CUM.DAYS COMP.MOI. SUM.	CUM.DAYS COMP.MOI. WINT
AFCBAKKA65	UDIC	342	ISOHYPERTH.	DRY	TROPUDIC	117	180	162	180				
AFOBAKA61	UDIC	360	ISOHYPERTH.	DRY	TROPUDIC					180	95	180	140
ALBINA65	UDIC	360	ISOHYPERTH.	DRY	TROPUDIC					97	180	142	180
ALBINA73	UDIC	360	ISOHYPERTH.	DRY	TROPUDIC					180	81	180	126
BROKOPONDO61	UDIC	360	ISOHYPERTH.	DRY	TROPUDIC					180	97	180	142
COPPENAMEP69	UDIC	327	ISOHYPERTH.	DRY	TROPUDIC	162	165	174	165				
CORONIE65	USTIC	323	ISOHYPERTH.	UDIC	TROPUST.	98	180	143	180				
MARIENBURG65	USTIC	318	ISOHYPERTH.	UDIC	TROPUST.	123	180	154	180				
MARIENBURG69	UDIC	358	ISOHYPERTH.	DRY	TROPUDIC	163	180	178	180				
MARIENBURG73	UDIC	360	ISOHYPERTH.	TYPIC	UDIC					180	75	180	162
MOENGO61	UDIC	329	ISOHYPERTH.	DRY	TROPUDIC	180	104	180	149				
MOENGO65	UDIC	343	ISOHYPERTH.	DRY	TROPUDIC	118	180	163	180				
NICKERIE	UDIC	356	ISOHYPERTH.	DRY	TROPUDIC	161	180	176	180				
PALOEMEU61	UDIC	347	ISOHYPERTH.	DRY	TROPUDIC	122	180	167	180				
PALOEMEU69	USTIC	258	ISOHYPERTH.	TYPIC	TROPUST.	93	165	93	165				
PALOEMEU65	USTIC	302	ISOHYPERTH.	UDIC	TROPUST.	107	180	122	180				
PARAMARIBO	UDIC	360	ISOHYPERTH.	TYPIC	UDIC					123	180	167	180
PARANAM61	UDIC	322	ISOHYPERTH.	DRY	TROPUDIC	180	97	180	142				
SIPALIWINI	USTIC	287	ISOHYPERTH.	UDIC	TROPUST.	122	165	154	166				
STOELMANSE61	UDIC	360	ISOHYPERTH.	TYPIC	UDIC					180	115	180	164
STOELMANSE65	USTIC	296	ISOHYPERTH.	UDIC	TROPUST.	101	180	127	180				
STOELMANSE73	PERUDIC	360	ISOHYPERTH.		PERUDIC					180	180	180	180
STONDANSI65	UDIC	303	ISOHYPERTH.	DRY	TROPUDIC	108	180	123	180				
TAFELBERG	UDIC	360	ISOHYPERTH.	TYPIC	UDIC					113	180	158	180
ZANDERIJ AIR	UDIC	360	ISOHYPERTH.	TYPIC	UDIC					127	180	172	180
ZORG EN HO61	USTIC	292	ISOHYPERTH.	UDIC	TROPUST.	180	67	180	112				
ZORG EN HO65	UDIC	360	ISOHYPERTH.	DRY	TROPUDIC					101	102	146	177
ZORG EN HO69	UDIC	313	ISOHYPERTH.	DRY	TROPUDIC	118	180	133	180				
ZORG EN HO73	UDIC	360	ISOHYPERTH.	TYPIC	UDIC					180	75	180	155

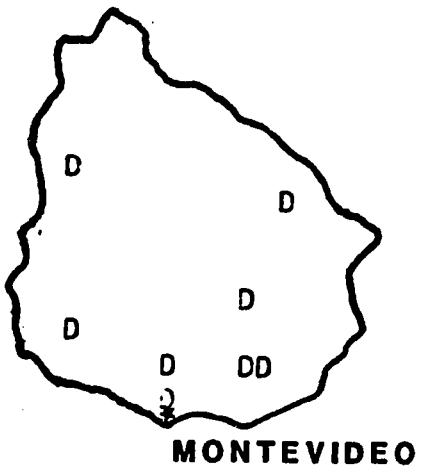
COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 04/29/81

79

SURINAM

URUGUAY



MOISTURE REGIMES

SYMBOL TABLE:

USTIC - - - S
UDIC - - - D
ARIDIC - - - A
XERIC - - - X
PERUDIC - - P

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR URUG

NAME OF STATION	MEAN SOIL TEMPERATURE ANN	SUMM	WINT	TEMPERATURE REGIME	CUMULATIVE DAYS MSC IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MOIST IN SOME PARTS IN ONE YEAR	MAX.CONSECUTIVE DAYS THAT MCS IS WHEN SOIL TEMP > 8	DRY AFTER SUMMER SOLST.	MOIST AFTER WINTER SOLST.	MOISTURE REGIME
COLONIA	20.0	23.8	16.5	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
MELO	19.3	23.2	15.8	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
MONTEVIDEO/P	18.8	22.5	15.2	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
MONTEVIDEO-P	19.0	22.7	15.5	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
PUNTA DEL ES	18.8	21.9	15.8	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
PUNTA-DEL-ES	18.7	21.7	15.7	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
ROCHA	18.4	21.9	15.2	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
SALTO URUGUA	21.4	25.7	17.6	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
SALTO	20.6	24.8	16.9	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 04/29/81

18

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR URUG

NAME OF STATION	MOISTURE REGIME	CON.D. M/D T>8	TEMPERATURE REGIME	TENTATIVE SUBDIVISION OF MOISTURE REGIME	CONS DAYS MOIST(2+3) SUM. WINT	CUM.DAYS MOIST(2+3) SUM. WINT	CONS.DAYS COMP.MOIST SUM. WINT	CUM.DAYS COMP.MOI. SUM. WINT
COLONIA	UDIC	360	THERMIC	TYPIC UDIC			180 180	180 180
MELO	UDIC	360	THERMIC	TYPIC UDIC			180 180	180 180
MONTEVIDEO/P	UDIC	360	THERMIC	TYPIC UDIC			180 180	180 180
MONTEVIDEO-P	UDIC	360	THERMIC	TYPIC UDIC			180 180	180 180
PUNTA DEL ES	UDIC	360	THERMIC	TYPIC UDIC			180 180	180 180
PUNTA-DEL-ES	UDIC	360	THERMIC	TYPIC UDIC			180 180	180 180
ROCHA	UDIC	360	THERMIC	TYPIC UDIC			180 180	180 180
SALTO URUGUA	UDIC	360	THERMIC	TYPIC UDIC			180 180	180 180
SALTO	UDIC	360	THERMIC	TYPIC UDIC			180 180	180 180

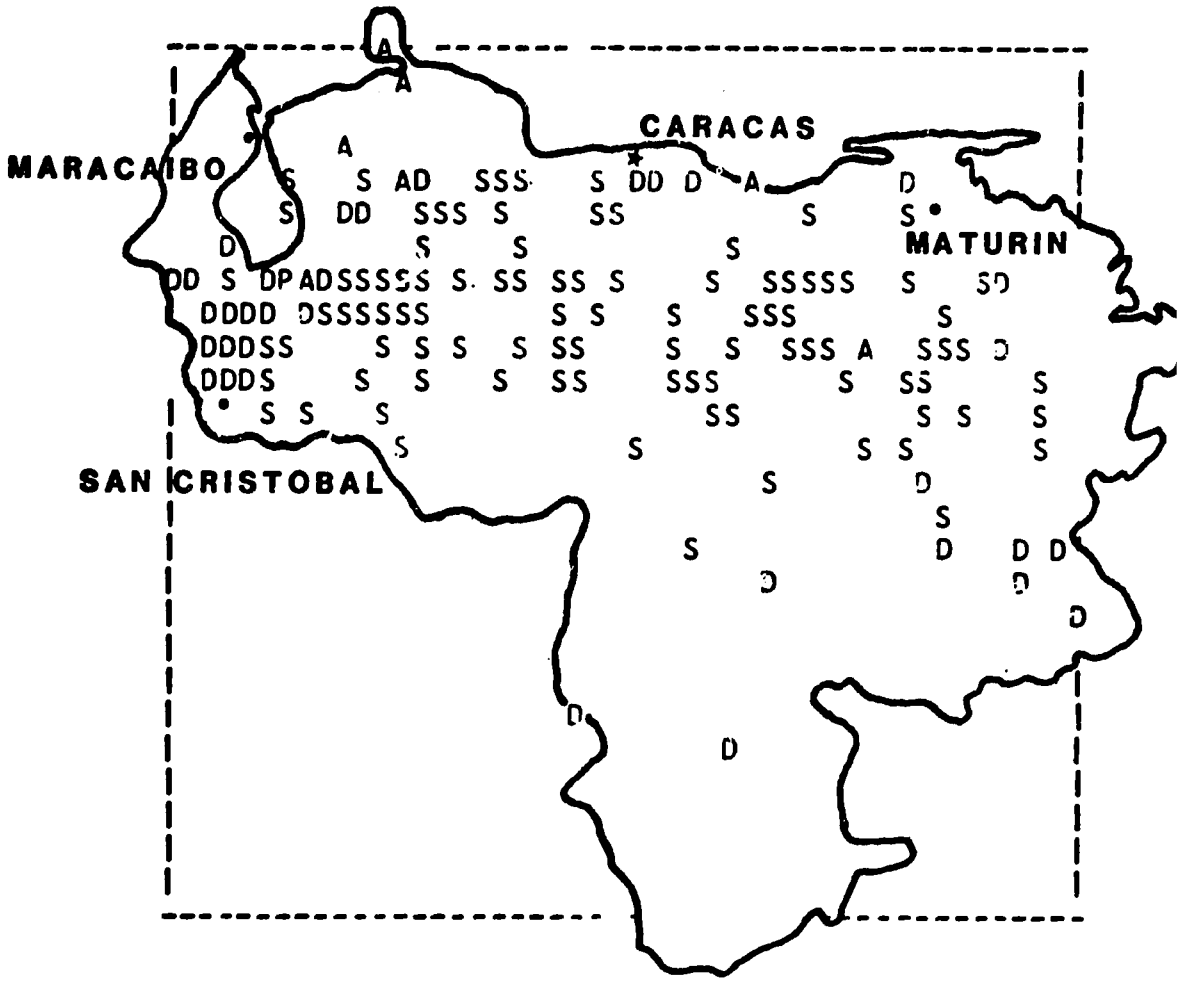
COMPUTED BY FORTRAN PROGRAM VWC8, APR 1981

DATE 04/29/81

82

URUGUAY

VENEZUELA



MOISTURE REGIMES

SYMBOL TABLE:

USTIC - - - S
UDIC - - - D
ARIDIC - - - A
XERIC - - X
PERUDIC - - P

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR VENE

NAME OF STATION	MEAN SOIL TEMPERATURE ANN	SUMM	WINT	TEMPERATURE REGIME	CUMULATIVE DAYS MSC IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX.CONSECUTIVE DAYS THAT MCS IS MOIST IN SOME PARTS IN ONE YEAR	WHEN SOIL TEMP > 8	DRY AFTER SUMMER SOLST.	MOIST AFTER WINTER SOLST.	MOISTURE REGIME
ACARIGUA	29.2	29.1	28.7	ISO HYPERTH.	86	51	223	86	51	223	254	254	0	0	USTIC
ACHAGUAS	30.1	29.8	29.7	ISO HYPERTH.	119	39	202	119	39	202	228	228	0	0	USTIC
ADICORA	30.4	30.5	29.6	ISO HYPERTH.	312	48	0	312	48	0	23	23	105	0	ARIDIC
AGUA DE	17.7	17.7	17.1	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
AGUAITA-	25.9	25.9	25.2	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
ALTAMIRA	25.1	25.0	24.7	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
ALTAMIRA	29.4	29.1	28.8	ISO HYPERTH.	152	74	134	152	74	134	167	167	4	0	USTIC
ANACO	28.7	28.5	28.0	ISO HYPERTH.	173	57	130	173	57	130	177	177	0	0	USTIC
APARTADE	29.3	29.2	28.8	ISO HYPERTH.	90	46	224	90	46	224	255	255	0	0	USTIC
APONGUAO	24.4	23.5	24.3	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
ARAURE	29.2	29.1	28.7	ISO HYPERTH.	76	55	229	76	55	229	260	260	0	4	USTIC
AREKUNA	27.7	27.1	27.5	ISO HYPERTH.	24	57	279	24	57	279	314	314	0	54	UDIC
BACHAQUE	30.5	30.6	30.1	ISO HYPERTH.	160	149	51	160	149	51	96	96	16	0	USTIC
BAILADUR	19.8	19.7	19.5	ISO THERMIC	0	87	273	0	87	273	360	360	0	91	UDIC
BANCOS D	29.7	29.5	29.2	ISO HYPERTH.	122	25	213	122	25	213	238	238	0	0	USTIC
BANCOS D	29.7	29.5	29.2	ISO HYPERTH.	121	35	204	121	35	204	232	232	0	0	USTIC
BARBACOA	29.5	29.4	28.9	ISO HYPERTH.	128	61	171	128	61	171	232	232	0	0	USTIC
BARINAS-	27.8	27.7	27.4	ISO HYPERTH.	52	64	244	52	64	244	308	308	0	19	USTIC
BARINITA	27.8	27.7	27.4	ISO HYPERTH.	0	51	309	0	51	309	360	360	0	54	UDIC
BARRANCA	29.9	29.7	29.5	ISO HYPERTH.	154	39	167	154	39	167	197	197	0	0	USTIC
BARRANCA	29.8	29.5	29.1	ISO HYPERTH.	149	105	106	149	105	106	117	117	5	0	USTIC
BOCA DE	29.8	29.5	29.2	ISO HYPERTH.	0	34	326	0	34	326	360	360	0	92	UDIC
BOROTA	22.4	22.3	22.2	ISO HYPERTH.	57	197	106	57	197	106	192	192	39	61	USTIC
BOROTA	22.4	22.3	22.2	ISO HYPERTH.	0	7	353	0	7	353	360	360	0	120	UDIC
BRAMON-E	24.1	23.9	23.9	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
BUM-BUM	29.3	29.1	29.0	ISO HYPERTH.	4	69	287	4	69	287	356	356	0	32	UDIC
CABRUTA	29.5	29.1	29.1	ISO HYPERTH.	124	35	201	124	35	201	229	229	0	0	USTIC
CACHINCH	27.9	27.9	27.3	ISO HYPERTH.	59	58	243	59	58	243	281	281	0	18	USTIC
CALABOZO	29.7	29.5	29.2	ISO HYPERTH.	129	28	203	129	28	203	231	231	0	0	USTIC
CAMATAGU	28.3	28.2	27.6	ISO HYPERTH.	112	69	179	112	69	179	248	248	0	0	USTIC
CAMPAMEN	29.4	29.1	28.9	ISO HYPERTH.	137	67	156	137	67	156	198	198	0	0	USTIC
CANAGUA	29.3	29.1	28.9	ISO HYPERTH.	0	42	318	0	42	318	360	360	0	45	UDIC
CANAIMA	27.6	26.9	27.5	ISO HYPERTH.	53	41	266	53	41	266	307	307	0	41	USTIC
CANO BEN	29.4	29.2	28.8	ISO HYPERTH.	105	39	216	105	39	216	246	246	0	0	USTIC
CAPACHO	23.1	23.0	22.9	ISO HYPERTH.	0	69	291	0	69	291	360	360	0	66	UDIC
CARACOL	30.4	30.3	30.1	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
CARIPITO	29.9	29.7	29.1	ISO HYPERTH.	0	34	326	0	34	326	360	360	0	71	UDIC
CARMEN D	28.7	28.6	28.1	ISO HYPERTH.	111	64	185	111	64	185	249	249	0	0	USTIC
CARORA	28.1	28.1	27.5	ISO HYPERTH.	247	113	0	247	113	0	74	74	75	0	ARIDIC
CASIGUA-	30.4	30.3	30.1	ISO HYPERTH.	0	44	316	0	44	316	360	360	0	61	UDIC
CENDE	12.4	12.4	11.8	ISO MESIC	0	0	360	0	0	360	360	360	0	120	UDIC
CHACANTA	18.6	18.5	18.2	ISO THERMIC	0	31	329	0	31	329	360	360	0	74	UDIC
CHIGUARA	24.6	24.5	24.3	ISO HYPERTH.	208	152	0	208	152	0	110	110	105	0	USTIC
CIUDAD B	30.1	29.7	29.3	ISO HYPERTH.	165	56	139	165	56	139	169	169	0	0	USTIC
CIUDAD B	29.8	29.5	29.3	ISO HYPERTH.	191	70	99	191	70	99	145	145	0	0	USTIC

COMPUTED BY FORTRAN PROGRAM VWG8, APR 1981

DATE 11/16/81

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR VENE

NAME OF STATION	MEAN SOIL TEMPERATURE ANN	SUMM	WINT	TEMPERATURE REGIME	CUMULATIVE DAYS MSC IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX.CONSECUTIVE DAYS THAT MCS IS MOIST IN SOME PARTS IN ONE YEAR	WHEN SOIL TEMP > 8	DRY AFTER SUMMER SOLST.	MOIST AFTER WINTER SOLST.	MOISTURE REGIME
CIUDAD P4802	27.6	27.1	27.1	ISO HYPERTH.	71	65	224	71	65	224	265	265	0	18	USTIC
CLARINES2608	30.0	29.8	29.3	ISO HYPERTH.	253	107	0	253	107	0	28	28	13	0	ARIDIC
COLON 8092	26.2	26.0	25.9	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
CONCHA 2095	30.0	30.0	29.7	ISO HYPERTH.	66	90	204	66	90	204	141	141	12	41	USTIC
CORDERO 4016	24.1	23.9	23.9	ISO HYPERTH.	0	31	329	0	31	329	360	360	0	74	UDIC
CORO 235	30.2	30.4	29.5	ISO HYPERTH.	352	8	0	352	8	0	8	8	105	0	ARIDIC
COROZO-P3454	29.9	29.7	29.5	ISO HYPERTH.	112	33	215	112	33	215	241	241	0	0	USTIC
CUICAS 2125	24.5	24.5	24.0	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
CUMAREBO 274	30.4	30.5	29.6	ISO HYPERTH.	179	135	46	179	135	46	88	88	21	31	USTIC
CUNAVICH4465	30.1	29.7	29.8	ISO HYPERTH.	142	25	193	142	25	193	218	218	0	0	USTIC
CURBATI 3165	27.9	27.7	27.5	ISO HYPERTH.	36	68	256	36	68	256	324	324	0	31	USTIC
CURBATI 3185	29.3	29.2	29.0	ISO HYPERTH.	24	56	280	24	56	280	317	317	0	25	UDIC
DOLORES 3276	30.0	29.8	29.7	ISO HYPERTH.	101	55	204	101	55	204	259	259	0	0	USTIC
DORADAS 4057	29.4	29.1	29.3	ISO HYPERTH.	24	46	290	24	46	290	326	326	0	35	UDIC
EJIDO 3043	23.4	23.3	23.0	ISO HYPERTH.	0	73	287	0	73	287	360	360	0	62	UDIC
EL AMPAR4194	29.9	29.5	29.8	ISO HYPERTH.	71	38	251	71	38	251	282	282	0	15	USTIC
EL CABAL3417	29.8	29.6	29.4	ISO HYPERTH.	125	93	142	125	93	142	228	228	0	0	USTIC
EL CEDRA4258	30.1	29.8	29.8	ISO HYPERTH.	104	50	206	104	50	206	235	235	0	0	USTIC
EL COBRE3094	19.2	19.1	18.9	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
EL COROZ3162	29.0	28.9	28.7	ISO HYPERTH.	62	63	235	62	63	235	298	298	0	10	USTIC
EL CUCHA3286	29.8	29.6	29.5	ISO HYPERTH.	111	44	205	111	44	205	231	231	0	0	USTIC
EL DORAD5924	29.1	28.4	28.7	ISO HYPERTH.	9	99	252	9	99	252	328	328	0	57	USTIC
EL GUAPO1682	29.8	29.7	29.1	ISO HYPERTH.	0	19	341	0	19	341	360	360	0	100	UDIC
EL GUAYA3033	30.5	30.5	30.3	ISO HYPERTH.	0	31	329	0	31	329	360	360	0	61	UDIC
EL GUAYA3034	30.5	30.5	30.3	ISO HYPERTH.	0	18	342	0	18	342	360	360	0	57	UDIC
EL GURI 6927	28.2	27.8	27.7	ISO HYPERTH.	39	69	252	39	69	252	312	312	0	57	USTIC
EL JUNGO4028	23.0	22.8	22.8	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
EL LIMON9423	30.0	29.3	30.1	ISO HYPERTH.	63	59	238	63	59	238	297	297	0	13	USTIC
EL MANGU3416	29.8	29.6	29.3	ISO HYPERTH.	122	37	201	122	37	201	227	227	0	0	USTIC
EL MANGU3718	28.6	28.3	28.0	ISO HYPERTH.	156	68	136	156	68	136	186	186	0	0	USTIC
EL MANTE4947	28.1	27.6	27.6	ISO HYPERTH.	35	89	236	35	89	236	307	307	0	41	USTIC
EL MESON3108	23.0	22.9	22.7	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
EL MOLIN3023	19.4	19.2	19.0	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
EL MORRO3080	19.6	19.5	19.2	ISO THERMIC	141	219	0	141	219	0	88	88	5	0	USTIC
EL OREGA4908	28.7	28.2	28.3	ISO HYPERTH.	76	132	152	76	132	152	266	266	0	0	USTIC
EL PALMA4906	28.5	28.1	27.9	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
EL PAO 3904	27.7	27.3	27.1	ISO HYPERTH.	55	71	234	55	71	234	305	305	0	39	USTIC
EL REAL 3261	29.7	29.5	29.3	ISO HYPERTH.	92	55	213	92	55	213	268	268	0	0	USTIC
EL RECRE4024	24.5	24.4	24.3	ISO HYPERTH.	0	16	344	0	16	344	360	360	0	89	UDIC
EL RON 4040	22.8	22.6	22.6	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
EL SAMAN4302	30.0	29.8	29.7	ISO HYPERTH.	113	42	205	113	42	205	232	232	0	0	USTIC
EL SOMBR2470	29.5	29.3	28.9	ISO HYPERTH.	116	29	215	116	29	215	244	244	0	0	USTIC
EL TIGRE3716	28.3	28.1	27.7	ISO HYPERTH.	117	54	189	117	54	189	226	226	0	0	USTIC
EL YAGUA4301	30.0	29.7	29.7	ISO HYPERTH.	105	55	200	105	55	200	227	227	0	0	USTIC
ESTACION3081	29.2	29.0	29.0	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 11/16/81

85

VENEZUELA

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR VENE

NAME OF STATION	MEAN SOIL TEMPERATURE ANN	SUMM	WINT	TEMPERATURE REGIME	CUMULATIVE DAYS MSC IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX.CONSECUTIVE DAYS THAT MCS IS MOIST IN SOME PARTS IN ONE YEAR	WHEN SOIL TEMP > 8	DRY AFTER SUMMER SOLST.	MOIST AFTER WINTER SOLST.	MOISTURE REGIME
ESTANQUE3054	27.9	27.8	27.6	ISO HYPERTH.	296	64	0	296	64	0	19	19	105	0	ARIDIC
GAVILAN 9422	29.9	29.2	30.1	ISO HYPERTH.	26	83	251	26	83	251	319	319	0	26	USTIC
GUANARE 2297	29.1	29.0	28.7	ISO HYPERTH.	73	62	225	73	62	225	287	287	0	0	USTIC
GUANAKIT3228	29.9	29.7	29.5	ISO HYPERTH.	107	39	214	107	39	214	241	241	0	0	USTIC
GUARAQUE3030	21.9	21.7	21.6	ISO THERMIC	0	39	321	0	39	321	360	360	0	66	UDIC
GUARINUM9412	29.7	28.5	30.4	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
GUATOPO 2505	25.9	25.8	25.2	ISO HYPERTH.	0	20	340	0	20	340	360	360	0	115	UDIC
GUAYABAL3415	30.1	29.6	29.7	ISO HYPERTH.	126	64	170	126	64	170	226	226	0	0	USTIC
HATO BUE4907	28.8	28.3	28.3	ISO HYPERTH.	40	103	217	40	103	217	296	296	0	20	USTIC
HATO CAR3155	29.5	29.4	29.2	ISO HYPERTH.	83	58	219	83	58	219	277	277	0	0	USTIC
HATO CAR5201	30.0	29.6	30.0	ISO HYPERTH.	88	56	216	88	56	216	272	272	0	0	USTIC
HDA. ALT4032	24.7	24.6	24.5	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
HDA. LA 4053	25.4	25.2	25.2	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
HDA. YUC3139	29.0	28.9	28.6	ISO HYPERTH.	66	60	234	66	60	234	294	294	0	9	USTIC
HDA.EL D4047	25.2	25.1	25.0	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
HDA.LA G9054	25.5	25.3	25.3	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
JAJI 3169	19.6	19.5	19.2	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
JOBALITO3332	29.8	29.6	29.3	ISO HYPERTH.	111	41	208	111	41	208	236	236	0	0	USTIC
KAVANAYE6933	22.7	21.9	22.6	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
LA ACEQU3190	29.1	29.0	28.8	ISO HYPERTH.	0	39	321	0	39	321	360	360	0	45	UDIC
LA CANDE3438	29.8	29.6	29.4	ISO HYPERTH.	118	65	177	118	65	177	234	234	0	0	USTIC
LA CANDE4665	29.3	28.8	29.0	ISO HYPERTH.	91	49	220	91	49	220	254	254	0	0	USTIC
LA CANOA3811	29.7	29.2	29.2	ISO HYPERTH.	182	57	121	182	57	121	166	166	0	0	USTIC
LA CAPIL3333	29.5	29.3	29.1	ISO HYPERTH.	100	43	217	100	43	217	244	244	0	0	USTIC
LA COPE 4045	28.2	28.0	28.1	ISO HYPERTH.	9	82	269	9	82	269	351	351	0	44	USTIC
LA ESMER8602	29.7	28.3	30.4	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
LA GRITA3109	21.5	21.7	20.8	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
LA HORNA4711	29.6	29.2	29.1	ISO HYPERTH.	115	69	176	115	69	176	245	245	0	0	USTIC
LA MULER4061	23.7	23.6	23.5	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
LA PARAG5887	28.3	27.7	27.9	ISO HYPERTH.	84	78	198	84	78	198	265	265	0	3	USTIC
LA PLAYA3066	21.6	21.5	21.3	ISO THERMIC	28	220	112	28	220	112	202	202	9	67	USTIC
LA PROVI4081	23.6	23.5	23.4	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	PERUDIC
LA PUNTA3045	22.6	22.5	22.3	ISO HYPERTH.	0	20	340	0	20	340	360	360	0	85	UDIC
LA RAYA 4661	29.0	28.6	28.6	ISO HYPERTH.	48	63	249	48	63	249	312	312	0	24	USTIC
LA SABAN3872	29.9	29.5	29.3	ISO HYPERTH.	230	77	53	230	77	53	88	88	15	0	ARIDIC
LA SIERR2303	24.3	24.3	23.7	ISO HYPERTH.	0	37	323	0	37	323	360	360	0	68	UDIC
LA SOLIT3000	30.6	30.6	30.3	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
LA TRINI4201	29.9	29.6	29.8	ISO HYPERTH.	94	58	208	94	58	208	266	266	0	0	USTIC
LA VERGA5883	27.3	26.8	27.0	ISO HYPERTH.	76	35	249	76	35	249	284	284	0	24	USTIC
LA VICTO4175	29.8	29.4	29.7	ISO HYPERTH.	64	30	266	64	30	266	296	296	0	15	USTIC
LA VITER4666	29.1	28.7	28.7	ISO HYPERTH.	135	51	174	135	51	174	209	209	0	0	USTIC
LAGUNILL3055	24.1	24.0	23.8	ISO HYPERTH.	314	46	0	314	46	0	28	28	105	0	ARIDIC
LAS BABA4970	28.5	28.1	28.1	ISO HYPERTH.	69	38	253	69	38	253	291	291	0	15	USTIC
LAS COLC4058	29.3	29.0	29.2	ISO HYPERTH.	30	42	288	30	42	288	323	323	0	33	UDIC
LAS DANT406[illegible]	25.4	25.2	25.2	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 11/16/81

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR VENE

NAME OF STATION	MEAN SOIL TEMPERATURE ANN	SUMM	WINT	TEMPERATURE REGIME	CUMULATIVE DAYS MSC IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX.CONSECUTIVE DAYS THAT MCS IS MOIST IN SOME PARTS IN ONE YEAR	WHEN SOIL TEMP > 8	DRY AFTER SUMMER SOLST.	MOIST AFTER WINTER SOLST.	MOISTURE REGIME
LAS DELI4051	21.1	20.9	20.9	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
LAS MARG6373	25.5	25.5	24.8	ISO HYPERTH.	85	78	197	85	78	197	258	258	0	2	USTIC
LAS TAPI3132	21.9	21.8	21.6	ISO THERMIC	40	239	81	40	239	81	206	206	6	36	USTIC
LAS [illegible]N4663	29.1	28.4	29.0	ISO HYPERTH.	68	83	209	68	83	209	280	280	0	14	USTIC
LIBERTAD5[illegible]	[illegible]	29.6	29.4	ISO HYPERTH.	95	57	208	95	57	208	265	265	0	0	USTIC
LOBATERA4014	25.2	25.0	25.0	ISO HYPERTH.	176	184	0	176	184	0	104	104	75	0	USTIC
LOMA DEL3604	29.9	29.8	29.4	ISO HYPERTH.	178	73	109	178	73	109	158	158	6	0	USTIC
LOS HICC4662	28.9	28.5	28.4	ISO HYPERTH.	97	68	195	97	68	195	263	263	0	0	USTIC
LOS LAUR4018	20.0	19.9	19.7	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
LOS NARA3403	29.7	29.6	29.2	ISO HYPERTH.	127	28	205	127	28	205	233	233	0	0	USTIC
LOS YUPA3719	28.5	28.2	27.9	ISO HYPERTH.	159	92	109	159	92	109	161	161	5	0	USTIC
LUZ 3262	29.6	29.4	29.3	ISO HYPERTH.	129	27	204	129	27	204	231	231	0	0	USTIC
MANRIQUE2324	27.6	27.6	27.1	ISO HYPERTH.	55	52	253	55	52	253	290	290	0	28	USTIC
MAPIRE 2620	29.8	29.4	29.3	ISO HYPERTH.	99	72	189	99	72	189	250	250	0	0	USTIC
MAPURALI3189	29.5	29.3	29.3	ISO HYPERTH.	67	60	233	67	60	233	293	293	0	8	USTIC
MARDA 9430	30.0	28.6	31.0	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	PERUDIC
MATURIN 2826	29.6	29.4	28.8	ISO HYPERTH.	89	46	225	89	46	225	258	258	0	30	USTIC
MERIDA 3049	20.3	20.2	19.9	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
MESA BOL3052	25.1	24.9	24.7	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
MESA DE 3042	14.6	14.5	14.1	ISO MESIC	0	0	360	0	0	360	360	360	0	120	UDIC
MESA DE 3082	27.9	27.7	27.6	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
MICHAY 3187	29.0	28.9	28.7	ISO HYPERTH.	14	62	284	14	62	284	323	323	0	29	UDIC
MICHELEN4003	23.5	23.3	23.3	ISO HYPERTH.	16	156	188	16	156	188	327	327	13	84	USTIC
MIJAGUAL3253	29.4	29.3	29.1	ISO HYPERTH.	108	43	209	108	43	209	242	242	0	0	USTIC
MIJAGUAL3254	29.8	29.6	29.4	ISO HYPERTH.	95	51	214	95	51	214	242	242	0	0	USTIC
MOITACO 3751	29.7	29.3	29.2	ISO HYPERTH.	151	40	169	151	40	169	199	199	0	0	USTIC
MOCOCHAC3133	24.7	24.6	24.4	ISO HYPERTH.	23	112	225	23	112	225	337	337	0	30	USTIC
MOCOCHIE3121	13.5	13.5	13.0	ISO MESIC	0	9	351	0	9	351	360	360	0	96	UDIC
MOCORUBA3039	16.8	16.7	16.3	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
NAVAY 4059	29.6	29.3	29.5	ISO HYPERTH.	47	30	283	47	30	283	313	313	0	28	UDIC
NUTRIAS 3295	29.9	[illegible]	29.6	ISO HYPERTH.	102	37	221	102	37	221	248	248	0	0	USTIC
OBISPOS 3159	29.5	[illegible]	29.2	ISO HYPERTH.	97	47	216	97	47	216	244	244	0	0	USTIC
PAGUEY 3154	29.1	[illegible]	28.7	ISO HYPERTH.	47	76	237	47	76	237	303	303	0	12	USTIC
PALENQUE3502	29.7	[illegible]	[illegible]	ISO HYPERTH.	138	57	165	138	57	165	222	222	0	0	USTIC
PALMARIT4139	29.9	29.7	29.7	ISO HYPERTH.	93	58	209	93	58	209	267	267	0	0	USTIC
PALMIRA 4027	24.1	23.9	23.9	ISO HYPERTH.	37	119	204	37	119	204	323	323	0	39	USTIC
PARAMO C4004	15.7	15.5	15.3	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
PARAMO E3005	17.4	17.2	17.0	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	PERUDIC
PARAMO L3027	12.0	11.9	11.5	ISO MESIC	0	0	360	0	0	360	360	360	0	120	UDIC
PARIAGUA3714	28.5	28.2	27.9	ISO HYPERTH.	99	64	197	99	64	197	261	261	0	2	USTIC
PEDRAZA 3163	29.5	29.3	29.1	ISO HYPERTH.	60	37	263	60	37	263	293	293	0	15	USTIC
PEDRAZA-3186	29.1	29.0	28.9	ISO HYPERTH.	50	78	232	50	78	232	294	294	0	7	USTIC
PIRITU 2267	29.0	28.9	28.5	ISO HYPERTH.	89	47	224	89	47	224	257	257	0	0	USTIC
PREGONER3097	23.1	22.9	22.8	ISO HYPERTH.	0	52	308	0	52	308	360	360	0	53	UDIC
PUENTE E8054	29.7	29.6	29.4	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC

COMPUTED BY FORTRAN PROGRAM VWC8, APR 1981

DATE 11/16/81

87

VENEZUELA

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR VENE

NAME OF STATION	MEAN SOIL TEMPERATURE ANN	SUMM	WINT	TEMPERATURE REGIME	CUMULATIVE DAYS MSC IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX.CONSECUTIVE DAYS THAT MCS IS MOIST IN SOME PARTS IN ONE YEAR	WHEN SOIL TEMP > 8	DRY AFTER SUMMER SOLST.	MOIST AFTER WINTER SOLST.	MOISTURE REGIME
PUENTE P8043	30.3	30.3	30.1	ISO HYPERTH.	0	13	347	0	13	347	360	360	0	45	UDIC
PUENTE S4083	26.4	25.4	26.6	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
PUENTE U405	18.7	18.5	18.5	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
PUERTO A9407	30.3	28.6	31.7	ISO HYPERTH.	67	72	221	67	72	221	282	282	0	0	USTIC
PUERTO E3871	29.9	29.5	29.4	ISO HYPERTH.	223	137	0	223	137	0	89	89	9	0	ARIDIC
PUERTO L3214	29.7	29.6	29.3	ISO HYPERTH.	102	41	217	102	41	217	244	244	0	0	USTIC
PUERTO O3813	29.7	29.1	29.5	ISO HYPERTH.	186	43	131	186	43	131	145	145	0	0	USTIC
PUNTA G03183	29.5	29.3	29.2	ISO HYPERTH.	81	59	220	81	59	220	279	279	0	0	USTIC
QUEBRADA3136	29.0	28.9	28.7	ISO HYPERTH.	56	36	268	56	36	268	304	304	0	15	USTIC
QUENIQUE4017	20.9	20.8	20.7	ISO THERMIC	0	34	326	0	34	326	360	360	0	71	UDIC
QUIBOR 2210	26.2	26.2	25.6	ISO HYPERTH.	306	54	0	306	54	0	19	19	105	0	ARIDIC
QUIU 3188	29.1	28.9	28.8	ISO HYPERTH.	35	77	248	35	77	248	312	312	0	23	USTIC
RIO CLAR2205	24.7	24.7	24.1	ISO HYPERTH.	0	44	316	0	44	316	360	360	0	61	UDIC
RUBIO 4042	24.7	24.6	24.5	ISO HYPERTH.	0	77	283	0	77	283	360	360	0	58	UDIC
RUBIO 4043	25.5	25.3	25.3	ISO HYPERTH.	0	121	239	0	121	239	360	360	0	44	UDIC
RUBIO 4084	25.7	25.6	25.5	ISO HYPERTH.	0	37	323	0	37	323	360	360	0	68	USTIC
SABANA G3073	19.0	18.8	18.6	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
SABANETA3212	29.3	29.2	28.9	ISO HYPERTH.	91	51	218	91	51	218	248	248	0	0	USTIC
SABANETA4039	26.6	26.5	26.4	ISO HYPERTH.	0	47	313	0	47	313	360	360	0	58	UDIC
SAI-SAI 3193	29.5	29.3	29.3	ISO HYPERTH.	50	72	238	50	72	238	298	298	0	13	USTIC
SAN ANTO3505	29.3	29.0	28.8	ISO HYPERTH.	134	86	140	134	86	140	198	198	0	0	USTIC
SAN ANTO4025	28.2	28.1	28.1	ISO HYPERTH.	249	111	0	249	111	0	78	78	105	0	ARIDIC
SAN CARL9409	30.1	28.5	31.3	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	PERUDIC
SAN CRIS4037	24.8	24.6	24.5	ISO HYPERTH.	0	65	295	0	65	295	360	360	0	70	UDIC
SAN DIEG3762	29.2	28.9	28.7	ISO HYPERTH.	135	49	176	135	49	176	207	207	0	0	USTIC
SAN FERN4404	29.4	27.8	29.7	ISO HYPERTH.	119	37	204	119	37	204	231	231	0	0	USTIC
SAN HIPO3222	29.3	29.2	28.9	ISO HYPERTH.	97	43	220	97	43	220	251	251	0	0	USTIC
SAN JOSE4005	22.2	22.0	21.9	ISO HYPERTH.	0	4	356	0	4	356	360	360	0	101	UDIC
SAN JUAN4406	30.0	29.7	29.7	ISO HYPERTH.	145	25	190	145	25	190	215	215	0	0	USTIC
SAN LORE2027	30.6	30.5	30.1	ISO HYPERTH.	64	65	231	64	65	231	296	296	0	9	USTIC
SAN MATE2725	29.2	29.1	28.5	ISO HYPERTH.	192	34	134	192	34	134	146	146	8	0	USTIC
SAN MIGU3840	29.3	28.9	28.7	ISO HYPERTH.	128	52	180	128	52	180	220	220	0	0	USTIC
SAN PEDR4002	26.6	26.4	26.3	ISO HYPERTH.	110	121	129	110	121	129	206	206	75	84	USTIC
SAN PEDR4800	28.4	27.9	28.1	ISO HYPERTH.	84	86	190	84	86	190	263	263	0	0	USTIC
SAN PEDR5500	30.0	29.4	29.9	ISO HYPERTH.	107	37	216	107	37	216	242	242	0	0	USTIC
SAN PEDR8056	24.2	24.0	23.8	ISO HYPERTH.	0	10	350	0	10	350	360	360	0	120	UDIC
SAN SEBA2409	28.2	28.2	27.6	ISO HYPERTH.	110	64	186	110	64	186	250	250	0	0	USTIC
SAN SILV3173	29.6	29.5	29.3	ISO HYPERTH.	113	40	207	113	40	207	233	233	0	0	USTIC
SAN VICE9006	19.7	19.5	19.5	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	PERUDIC
SANTA AN4044	25.6	25.5	25.4	ISO HYPERTH.	0	32	328	0	32	328	360	360	0	59	UDIC
SANTA CL3720	29.7	29.4	29.1	ISO HYPERTH.	178	65	117	178	65	117	170	170	0	0	USTIC
SANTA CR3065	27.3	27.1	27.0	ISO HYPERTH.	86	274	0	86	274	0	147	147	3	0	USTIC
SANTA EL7947	24.2	23.5	24.3	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
SANTA FE4082	24.9	24.8	24.7	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	PERUDIC
SANTA LU3283	30.1	29.9	29.8	ISO HYPERTH.	105	49	206	105	49	206	234	234	0	0	USTIC

COMPUTED BY FORTRAN PROGRAM VWG8, APR 1981

DATE 11/16/81

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR VENE

NAME OF STATION	MEAN SOIL TEMPERATURE ANN	SUMM	WINT	TEMPERATURE REGIME	CUMULATIVE DAYS MSC IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX.CONSECUTIVE DAYS THAT MCS IS MOIST IN SOME PARTS IN ONE YEAR	WHEN SOIL TEMP > 8	DRY AFTER SUMMER SOLST.	MOIST AFTER WINTER SOLST.	MOISTURE REGIME
SANTA LU9512	29.2	28.4	29.6	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	PERUDIC
SANTA MA6701	26.5	25.6	26.7	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
SANTA RI2413	29.4	29.1	29.0	ISO HYPERTH.	142	57	161	142	57	161	218	218	0	0	USTIC
SANTA RO3263	29.6	29.4	29.2	ISO HYPERTH.	109	39	212	109	39	212	238	238	0	0	USTIC
SANTA RO4660	29.0	28.6	28.6	ISO HYPERTH.	75	83	202	75	83	202	271	271	0	7	USTIC
SARARE 2229	28.7	28.7	28.2	ISO HYPERTH.	77	53	230	77	53	230	265	265	0	5	USTIC
SEBORJCO3085	28.2	28.0	27.9	ISO HYPERTH.	194	166	0	194	166	0	81	81	75	0	ARIDIC
SICARIGU2108	27.6	27.6	27.0	ISO HYPERTH.	156	107	97	156	107	97	147	147	45	22	USTIC
SUCRE 3305	29.8	29.6	29.3	ISO HYPERTH.	110	41	209	110	41	209	239	239	0	0	USTIC
SURIPA 3192	29.6	29.4	29.4	ISO HYPERTH.	58	67	235	58	67	235	295	295	0	10	USTIC
TABAY 3038	16.8	16.7	16.3	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
TARIBA 4034	24.7	24.5	24.5	ISO HYPERTH.	0	81	279	0	81	279	360	360	0	54	UDIC
TINACO 2336	29.4	29.3	28.9	ISO HYPERTH.	89	45	226	89	45	226	256	256	0	0	USTIC
TURENO-S3156	29.9	29.7	29.5	ISO HYPERTH.	110	41	209	110	41	209	236	236	0	0	USTIC
TORUNOS 3158	29.6	29.4	29.2	ISO HYPERTH.	87	56	217	87	56	217	246	246	0	0	USTIC
TOVAR 3069	24.4	24.2	24.0	ISO HYPERTH.	21	200	139	21	200	139	317	317	0	64	USTIC
TOVAR-AL3067	24.9	24.8	24.6	ISO HYPERTH.	0	6	354	0	6	354	360	360	0	99	UDIC
UMUQUENA8065	30.1	29.9	29.8	ISO HYPERTH.	0	19	341	0	19	341	360	360	0	120	UDIC
UPATA 3995	27.9	27.5	27.3	ISO HYPERTH.	157	104	99	157	104	99	145	145	0	0	USTIC
URENA 4012	28.6	28.5	28.4	ISO HYPERTH.	233	75	52	233	75	52	88	88	105	7	ARIDIC
URIMAN 6931	27.7	26.7	27.7	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
UVERITO 3752	29.4	29.1	28.9	ISO HYPERTH.	178	86	96	178	86	96	167	167	0	0	USTIC
VALLE DE2325	27.9	27.9	27.3	ISO HYPERTH.	70	55	235	70	55	235	281	281	0	10	USTIC
VALLE GR3024	15.2	15.1	14.7	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	PERUDIC
VILLA ME2192	21.9	21.8	21.4	ISO THERMIC	189	171	0	189	171	0	58	58	42	0	ARIDIC
WONKEN 7906	24.2	23.3	24.3	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
YUCA-CAS3137	29.0	28.9	28.6	ISO HYPERTH.	108	39	213	108	39	213	242	242	0	0	USTIC
YUTAJE 9420	29.7	28.9	29.9	ISO HYPERTH.	54	40	266	54	40	266	298	298	0	15	USTIC
ZARAZA 2677	30.1	29.9	29.5	ISO HYPERTH.	129	58	173	129	58	173	208	208	0	0	USTIC
ZEA 3063	21.8	21.7	21.5	ISO THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
ZEA-LA F3142	25.0	24.9	24.7	ISO HYPERTH.	0	0	360	0	0	360	360	360	0	120	UDIC
ZORCA 4026	25.8	25.7	25.6	ISO HYPERTH.	0	74	286	0	74	286	360	360	0	61	UDIC
ZUATA 2622	29.8	29.5	29.3	ISO HYPERTH.	171	58	131	171	58	131	179	179	0	0	USTIC

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 11/16/81

89

VENEZUELA

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR VENE

NAME OF STATION	MOISTURE REGIME	CON.D. M/D T>8	TEMPERATURE REGIME	TENTATIVE SUBDIVISION OF MOISTURE REGIME	CONS DAYS MOIST(2+3) SUM.	CONS DAYS MOIST(2+3) WINT	CUM.DAYS MOIST(2+3) SUM.	CUM.DAYS MOIST(2+3) WINT	CONS.DAYS COMP.MOIST SUM.	CONS.DAYS COMP.MOIST WINT	CUM.DAYS COMP.MOI. SUM.	CUM.DAYS COMP.MOI. WINT
ACARIGUA2255	USTIC	254	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	94				
ACHAGUAS4303	USTIC	228	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	61				
ADICORA 213	ARIDIC	23	ISO HYPERTH.	TYPIC ARIDIC	23	2	46	2				
AGUA DE 2128	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
AGUAITA-1582	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
ALTAMIRA3149	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
ALTAMIRA3602	USTIC	167	ISO HYPERTH.	ARIDIC TROPUST.	165	15	176	32				
ANACO 2757	USTIC	177	ISO HYPERTH.	ARIDIC TROPUST.	162	15	162	25				
APARTADE2332	USTIC	255	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	90				
APONGUAO6936	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
ARAURE 2248	USTIC	260	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	104				
AREKUNA 6928	UDIC	314	ISO HYPERTH.	DRY TROPUDIC	180	89	180	156				
BACHAQUE2007	USTIC	96	ISO HYPERTH.	ARIDIC TROPUST.	96	29	143	57				
BAILADOR3167	UDIC	360	ISO THERMIC	DRY TROPUDIC					105	91	107	166
BANCOS D3435	USTIC	238	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	58				
BANCOS D3436	USTIC	232	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	59				
BARBACOA2551	USTIC	232	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	52				
BARINAS-3144	USTIC	308	ISO HYPERTH.	UDIC TROPUST.	180	75	180	128				
BARINITA3126	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	75	180	129
BARRANCA2621	USTIC	197	ISO HYPERTH.	TYPIC TROPUST.	180	15	180	26				
BARRANCA3938	USTIC	117	ISO HYPERTH.	ARIDIC TROPUST.	102	24	144	67				
BOCA DE 3906	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	92	180	146
BUROTA 4015	USTIC	192	ISO HYPERTH.	TYPIC TROPUST.	105	87	141	162				
BUROTA 4071	UDIC	360	ISO HYPERTH.	TYPIC UDIC					105	180	173	180
BRAMON-E4041	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
BUM-BUM 3191	UDIC	356	ISO HYPERTH.	DRY TROPUDIC	180	105	180	176				
CABRUTA 2401	USTIC	229	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	56				
CACHINCH2318	USTIC	281	ISO HYPERTH.	UDIC TROPUST.	180	56	180	121				
CALABOZO3404	USTIC	231	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	51				
CAMATAGU2521	USTIC	248	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	68				
CAMPAMEN3933	USTIC	198	ISO HYPERTH.	TYPIC TROPUST.	180	25	180	43				
CANAGUA 3194	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	105	180	138
CANAIMA 5920	USTIC	307	ISO HYPERTH.	UDIC TROPUST.	180	82	180	127				
CANO BEN2378	USTIC	246	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	75				
CAPACHO 4020	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	66	180	111
CARACOLI3025	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
CARIPITO1887	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	75	180	146
CARMEN D2522	USTIC	249	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	69				
CARORA 1185	ARIDIC	74	ISO HYPERTH.	WEAK ARIDIC	74	15	90	23				
CASIGUA-3021	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	75	180	136
CENDE 2148	UDIC	360	ISO MESIC	TYPIC UDIC					180	180	180	180
CHACANTA3138	UDIC	360	ISO THERMIC	DRY TROPUDIC					180	75	180	149
CHIGUARA3053	USTIC	110	ISO HYPERTH.	ARIDIC TROPUST.	75	35	75	77				
CIUDAD B3882	USTIC	169	ISO HYPERTH.	ARIDIC TROPUST.	154	26	154	41				
CIUDAD B3885	USTIC	145	ISO HYPERTH.	ARIDIC TROPUST.	130	16	138	31				

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 11/16/81

90

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR VENE

NAME OF STATION	MOISTURE REGIME	CON.D. M/D T>8	TEMPERATURE REGIME	TENTATIVE SUBDIVISION OF MOISTURE REGIME	CONS DAYS MOIST(2+3) SUM.	CONS DAYS MOIST(2+3) WINT	CUM.DAYS MOIST(2+3) SUM.	CUM.DAYS MOIST(2+3) WINT	CONS.DAYS COMP.MOIST SUM.	CONS.DAYS COMP.MOIST WINT	CUM.DAYS COMP.MOIST SUM.	CUM.DAYS COMP.MOIST WINT
CIUDAD P4802	USTIC	265	ISO HYPERTH.	TYPIC TROPUST.	180	70	180	109				
CLARINES2608	ARIDIC	28	ISO HYPERTH.	TYPIC ARIDIC	28	15	92	15				
COLON 8092	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
CONCHA 2095	USTIC	141	ISO HYPERTH.	ARIDIC TROPUST.	75	75	142	152				
CORDERO 4016	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	75	180	149
CORO 235	ARIDIC	8	ISO HYPERTH.	TYPIC ARIDIC	8	0	8	0				
COROZO-P3454	USTIC	241	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	68				
CUICAS 2125	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
CUMAREBO 274	USTIC	88	ISO HYPERTH.	ARIDIC TROPUST.	45	43	98	83				
CUNAVICH4465	USTIC	218	ISO HYPERTH.	TYPIC TROPUST.	173	45	173	45				
CURBATI 3165	USTIC	324	ISO HYPERTH.	UDIC TROPUST.	180	75	180	144				
CURBATI 3185	UDIC	317	ISO HYPERTH.	DRY TROPUDIC	180	75	180	156				
DOLORES 3276	USTIC	259	ISO HYPERTH.	TYPIC TROPUST.	180	75	180	79				
DURADAS 4057	UDIC	326	ISO HYPERTH.	DRY TROPUDIC	180	75	180	156				
EJIDO 3043	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	62	180	107
EL AMPAR4194	USTIC	282	ISO HYPERTH.	UDIC TROPUST.	180	75	180	109				
EL CABAL3417	USTIC	228	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	55				
EL CEDRA4298	USTIC	235	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	76				
EL COBRE3094	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
EL COROZ3162	USTIC	298	ISO HYPERTH.	UDIC TROPUST.	180	75	180	118				
EL CUCHA3286	USTIC	231	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	69				
EL DORAD5924	USTIC	328	ISO HYPERTH.	UDIC TROPUST.	180	103	180	171				
EL GUAPO1682	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	100	180	161
EL GUAYA3033	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	75	180	149
EL GUAYA3034	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	105	180	162
EL GURI 6927	USTIC	312	ISO HYPERTH.	UDIC TROPUST.	180	87	180	141				
EL JUNCO4028	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
EL LIMON9423	USTIC	297	ISO HYPERTH.	UDIC TROPUST.	180	75	180	117				
EL MANGU3416	USTIC	227	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	58				
EL MANGU3718	USTIC	186	ISO HYPERTH.	TYPIC TROPUST.	171	18	171	33				
EL MANTE4947	USTIC	307	ISO HYPERTH.	UDIC TROPUST.	180	82	180	145				
EL MESON3108	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
EL MOLIN3023	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
EL MORRO3080	USTIC	88	ISO THERMIC	ARIDIC TROPUST.	88	45	152	67				
EL OREGA4908	USTIC	266	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	104				
EL PALMA4906	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
EL PAO 3904	USTIC	305	ISO HYPERTH.	UDIC TROPUST.	180	80	180	125				
EL REAL 3261	USTIC	268	ISO HYPERTH.	TYPIC TROPUST.	180	75	180	88				
EL RECRE4024	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	89	180	164
EL RON 4040	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
EL SAMAN4302	USTIC	232	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	67				
EL SOMBR2470	USTIC	244	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	64				
EL TIGRE3716	USTIC	226	ISO HYPERTH.	TYPIC TROPUST.	180	31	180	63				
EL YAGUA4301	USTIC	227	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	75				
ESTACION3081	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180

COMPUTED BY FORTRAN PROGRAM VWG8, APR 1981

DATE 11/16/81

91

VENEZUELA

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR VENE

NAME OF STATION	MOISTURE REGIME	CON.D. M/D T>8	TEMPERATURE REGIME	TENTATIVE SUBDIVISION OF MOISTURE REGIME	CONS DAYS MOIST(2+3) SUM.	CONS DAYS MOIST(2+3) WINT	CUM.DAYS MOIST(2+3) SUM.	CUM.DAYS MOIST(2+3) WINT	CONS.DAYS COMP.MOIST SUM.	CONS.DAYS COMP.MOIST WINT	CUM.DAYS COMP.MOI. SUM.	CUM.DAYS COMP.MOI. WINT
*ESTANQUE3054	ARIDIC	19	ISO HYPERTH.	TYPIC ARIDIC	19	14	36	28				
*GAVILAN 9422	USTIC	319	ISO HYPERTH.	UDIC TROPUST.	180	75	180	154				
*GUANARE 2297	USTIC	287	ISO HYPERTH.	UDIC TROPUST.	180	75	180	107				
*GUANARIT3228	USTIC	241	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	73				
*GUARAQUE3030	UDIC	360	ISO THERMIC	DRY TROPUDIC								
*GUARINUM9412	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	75	180	141
*GUATOPO 2505	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
*GUAYABAL3415	USTIC	226	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	54	180	115	180	160
*HATO BUE4907	USTIC	296	ISO HYPERTH.	UDIC TROPUST.	180	71	180	140				
*HATO CAR3155	USTIC	277	ISO HYPERTH.	UDIC TROPUST.	180	75	180	97				
*HATO CAR5201	USTIC	272	ISO HYPERTH.	UDIC TROPUST.	180	75	180	92				
*HDA. ALT4032	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
*HDA. LA 4053	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
*HDA. YUC3139	USTIC	294	ISO HYPERTH.	UDIC TROPUST.	180	75	180	114				
*HDA.EL D4047	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
*HDA.LA G9054	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
*JAJI 3169	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
*JUBALITO3332	USTIC	236	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	69				
*KAVANAYE6933	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
*LA ACEQL3190	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	105	180	141
*LA CANDE3438	USTIC	234	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	62				
*LA CANDE4665	USTIC	254	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	89				
*LA CANOA3811	USTIC	166	ISO HYPERTH.	ARIDIC TROPUST.	151	15	151	27				
*LA CAPIL3333	USTIC	244	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	80				
*LA COPE 4045	USTIC	351	ISO HYPERTH.	UDIC TROPUST.	180	96	180	171				
*LA ESMER8602	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
*LA GRITA3109	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
*LA HORNA4711	USTIC	245	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	65				
*LA MULER4061	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
*LA PARAG5887	USTIC	265	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	96				
*LA PLAYA3066	USTIC	202	ISO THERMIC	TYPIC TROPUST.	105	97	163	169				
*LA PROVI4081	PERUDIC	360	ISO HYPERTH.	PERUDIC					180	180	180	180
*LA PUNTA3045	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	85	180	160
*LA RAYA 4661	USTIC	312	ISO HYPERTH.	UDIC TROPUST.	180	75	180	132				
*LA SABAN3872	ARIDIC	88	ISO HYPERTH.	WEAK ARIDIC	73	15	103	27				
*LA SIERR2303	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	75	180	143
*LA SOLIT3000	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
*LA TRINI4201	USTIC	266	ISO HYPERTH.	TYPIC TROPUST.	180	75	180	86				
*LA VERGA5883	USTIC	284	ISO HYPERTH.	UDIC TROPUST.	180	59	180	104				
*LA VICTO4175	USTIC	296	ISO HYPERTH.	UDIC TROPUST.	180	75	180	116				
*LA VITER4666	USTIC	209	ISO HYPERTH.	TYPIC TROPUST.	180	16	180	45				
*LAGUNILL3055	ARIDIC	28	ISO HYPERTH.	TYPIC ARIDIC	28	18	28	18				
*LAS BABA4970	USTIC	291	ISO HYPERTH.	UDIC TROPUST.	180	66	180	111				
*LAS COLO4058	UDIC	323	ISO HYPERTH.	DRY TROPUDIC	180	75	180	150				
*LAS DANT4060	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 11/16/81

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR VENE

NAME OF STATION	MOISTURE REGIME	CON.D. M/D T>8	TEMPERATURE REGIME	TENTATIVE SUBDIVISION OF MOISTURE REGIME	CONS DAYS MOIST(2+3) SUM.	CONS DAYS MOIST(2+3) WINT	CUM.DAYS MOIST(2+3) SUM.	CUM.DAYS MOIST(2+3) WINT	CONS.DAYS COMP.MOIST SUM.	CONS.DAYS COMP.MOIST WINT	CUM.DAYS COMP.MOI. SUM.	CUM.DAYS COMP.MOI. WINT
LAS DELI4051	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
LAS MARG6573	USTIC	258	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	95				
LAS TAPI3132	USTIC	206	ISO THERMIC	TYPIC TROPUST.	135	75	174	146				
LAS TRIN4663	USTIC	280	ISO HYPERTH.	UDIC TROPUST.	180	55	180	112				
LIBERTAD3274	USTIC	265	ISO HYPERTH.	TYPIC TROPUST.	180	75	180	85				
LOBATERA4014	USTIC	104	ISO HYPERTH.	ARIDIC TROPUST.	75	29	89	95				
LOMA DEL3604	USTIC	158	ISO HYPERTH.	ARIDIC TROPUST.	158	15	167	15				
LOS HICO4662	USTIC	263	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	83				
LOS LAUR4018	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
LOS NARA3403	USTIC	233	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	53				
LOS YOPA3719	USTIC	161	ISO HYPERTH.	ARIDIC TROPUST.	161	15	171	30				
LUZ 3262	USTIC	231	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	51				
MANRIQUE2324	USTIC	290	ISO HYPERTH.	UDIC TROPUST.	180	65	180	125				
MAPIRE 2620	USTIC	250	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	81				
MAPORAL3189	USTIC	293	ISO HYPERTH.	UDIC TROPUST.	180	75	180	113				
MARDA 9430	PERUDIC	360	ISO HYPERTH.	PERUDIC					180	180	180	180
MATURIN 2826	USTIC	258	ISO HYPERTH.	TYPIC TROPUST.	180	63	180	91				
MERIDA 3049	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
MESA BOL3052	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
MESA DE 3042	UDIC	360	ISO MESIC	TYPIC UDIC					180	180	180	180
MESA DE 3082	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
MICHAY 3187	UDIC	323	ISO HYPERTH.	DRY TROPUDIC	180	75	180	166				
MICHELEN4003	USTIC	327	ISO HYPERTH.	UDIC TROPUST.	105	180	164	180				
MIJAGUAL3253	USTIC	242	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	72				
MIJAGUAL3254	USTIC	242	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	85				
MOITACO 3751	USTIC	199	ISO HYPERTH.	TYPIC TROPUST.	180	15	180	29				
MUCUCHAC3133	USTIC	337	ISO HYPERTH.	UDIC TROPUST.	180	82	180	157				
MUCUCHIE3121	UDIC	360	ISO MESIC	TYPIC UDIC					180	96	180	171
MUCURUBA3039	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
NAVAY 4059	UDIC	313	ISO HYPERTH.	DRY TROPUDIC	180	75	180	133				
NUTRIAS 3295	USTIC	248	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	78				
OBISPOS 3159	USTIC	244	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	83				
PAGUEY 3154	USTIC	303	ISO HYPERTH.	UDIC TROPUST.	180	75	180	133				
PALENQUE3502	USTIC	222	ISO HYPERTH.	TYPIC TROPUST.	177	45	177	45				
PALMARIT4139	USTIC	267	ISO HYPERTH.	TYPIC TROPUST.	180	75	180	87				
PALMIRA 4027	USTIC	323	ISO HYPERTH.	UDIC TROPUST.	180	75	180	143				
PARAMO D4004	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
PARAMO E3005	PERUDIC	360	ISO THERMIC	PERUDIC					180	180	180	180
PARAMO L3027	UDIC	360	ISO MESIC	TYPIC UDIC					180	180	180	180
PARIAGUA3714	USTIC	261	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	81				
PEDRAZA 3163	USTIC	293	ISO HYPERTH.	UDIC TROPUST.	180	75	180	120				
PEDRAZA-3186	USTIC	294	ISO HYPERTH.	UDIC TROPUST.	180	75	180	130				
PIRITU 2267	USTIC	257	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	91				
PREGONER3097	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	75	180	128
PUENTE E8054	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180

COMPUTED BY FORTRAN PROGRAM VWC8, APR 1981

DATE 11/16/81

93

VENEZUELA

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR VENE

NAME OF STATION	MOISTURE REGIME	CON.D. M/D T>8	TEMPERATURE REGIME	TENTATIVE SUBDIVISION OF MOISTURE REGIME	CONS DAYS MOIST(2+3) SUM.	CONS DAYS MOIST(2+3) WINT	CUM.DAYS MOIST(2+3) SUM.	CUM.DAYS MOIST(2+3) WINT	CONS.DAYS COMP.MOIST SUM.	CONS.DAYS COMP.MOIST WINT	CUM.DAYS COMP.MOI. SUM.	CUM.DAYS COMP.MOI. WINT
PUENTE P8043	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	105	180	167
PUENTE S4083	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
PUENTE U4054	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
PUERTO A9407	USTIC	282	ISO HYPERTH.	UDIC TROPUST.	180	75	180	113				
PUERTO E3871	ARIDIC	89	ISO HYPERTH.	WEAK ARIDIC	74	15	110	27				
PUERTO L3214	USTIC	244	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	78				
PUERTO O3813	USTIC	145	ISO HYPERTH.	ARIDIC TROPUST.	130	15	158	16				
PUNTA G03183	USTIC	279	ISO HYPERTH.	UDIC TROPUST.	180	75	180	99				
QUEBRADA3136	USTIC	304	ISO HYPERTH.	UDIC TROPUST.	180	75	180	124				
QUENIQUE4017	UDIC	360	ISO THERMIC	DRY TROPUDIC					180	75	180	146
QUIBOR 2210	ARIDIC	19	ISO HYPERTH.	TYPIC ARIDIC	19	11	32	22				
QUIU 3188	USTIC	312	ISO HYPERTH.	UDIC TROPUST.	180	75	180	145				
RIO CLAR2205	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	75	180	136
RUBIO 4042	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	58	180	103
RUBIO 4043	USTIC	360	ISO HYPERTH.	UDIC TROPUST.					180	44	180	59
RUBIO 4084	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	75	180	143
SABANA G3073	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
SABANETA3212	USTIC	248	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	89				
SABANETA4039	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	75	180	133
SAI-SAI 3193	USTIC	298	ISO HYPERTH.	UDIC TROPUST.	180	75	180	130				
SAN ANTO3505	USTIC	198	ISO HYPERTH.	TYPIC TROPUST.	180	28	180	46				
SAN ANTO4025	ARIDIC	78	ISO HYPERTH.	WEAK ARIDIC	75	18	75	36				
SAN CARL9409	PERUDIC	360	ISO HYPERTH.	PERUDIC					180	180	180	180
SAN CRIS4037	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	70	180	115
SAN DIEG3762	USTIC	207	ISO HYPERTH.	TYPIC TROPUST.	180	18	180	45				
SAN FERN4404	USTIC	231	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	61				
SAN HIPO3222	USTIC	251	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	83				
SAN JOSE4005	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	101	180	176
SAN JUAN4406	USTIC	215	ISO HYPERTH.	TYPIC TROPUST.	170	45	170	45				
SAN LORE2027	USTIC	296	ISO HYPERTH.	UDIC TROPUST.	180	75	180	116				
SAN MATE2725	USTIC	146	ISO HYPERTH.	ARIDIC TROPUST.	146	15	153	15				
SAN MIGU3840	USTIC	220	ISO HYPERTH.	TYPIC TROPUST.	180	25	180	52				
SAN PEDR4002	USTIC	206	ISO HYPERTH.	TYPIC TROPUST.	75	131	91	159				
SAN PEDR4800	USTIC	263	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	96				
SAN PEDR5500	USTIC	242	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	73				
SAN PEDR8056	UDIC	360	ISO HYPERTH.	TYPIC UDIC					135	180	170	180
SAN SEBA2409	USTIC	250	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	70				
SAN SILV3173	USTIC	233	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	67				
SAN VICE9006	PERUDIC	360	ISO THERMIC	PERUDIC					180	180	180	180
SANTA AN4044	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	75	180	148
SANTA CL3720	USTIC	170	ISO HYPERTH.	ARIDIC TROPUST.	155	15	155	27				
SANTA CR3065	USTIC	147	ISO HYPERTH.	ARIDIC TROPUST.	102	45	177	97				
SANTA EL7947	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
SANTA FE4082	PERUDIC	360	ISO HYPERTH.	PERUDIC					180	180	180	180
SANTA LU3283	USTIC	234	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	75				

COMPUTED BY FORTRAN PROGRAM V#08, APR 1981

DATE 11/16/81

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR VENE

NAME OF STATION	MOISTURE REGIME	CON.D. M/D T>8	TEMPERATURE REGIME	TENTATIVE SUBDIVISION OF MOISTURE REGIME	CONS DAYS MOIST(2+3) SUM.	CONS DAYS MOIST(2+3) WINT	CUM.DAYS MOIST(2+3) SUM.	CUM.DAYS MOIST(2+3) WINT	CONS.DAYS COMP.MOIST SUM.	CONS.DAYS COMP.MOIST WINT	CUM.DAYS COMP.MOIST SUM.	CUM.DAYS COMP.MOIST WINT
SANTA LU9512	PERUDIC	360	ISO HYPERTH.	PERUDIC					180	180	180	180
SANTA MA6701	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
SANTA RI2413	USTIC	218	ISO HYPERTH.	TYPIC TROPUST.	173	45	173	45				
SANTA RO3263	USTIC	238	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	71				
SANTA RO4660	USTIC	271	ISO HYPERTH.	UDIC TROPUST.	180	46	180	105				
SARARE 2229	USTIC	265	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	103				
SEBORUCO3085	ARIDIC	81	ISO HYPERTH.	WEAK ARIDIC	75	26	89	77				
SICARIGL2108	USTIC	147	ISO HYPERTH.	ARIDIC TROPUST.	105	42	119	85				
SUCRE 3305	USTIC	239	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	70				
SURIPA 3192	USTIC	295	ISO HYPERTH.	UDIC TROPUST.	180	75	180	122				
TABAY 3038	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
TARIBA 4034	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	54	180	99
TINACO 2336	USTIC	256	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	91				
TORENO-S3156	USTIC	236	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	70				
TURUNOS 3158	USTIC	246	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	93				
TOVAR 3069	USTIC	317	ISO HYPERTH.	UDIC TROPUST.	180	92	180	159				
TOVAR-AL3067	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	99	180	174
UMUQUENA8065	UDIC	360	ISO HYPERTH.	TYPIC UDIC					105	180	161	180
UPATA 3995	USTIC	145	ISO HYPERTH.	ARIDIC TROPUST.	130	28	160	43				
URENA 4012	ARIDIC	88	ISO HYPERTH.	WEAK ARIDIC	75	20	75	52				
URIMAN 6931	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
UVERITO 3752	USTIC	167	ISO HYPERTH.	ARIDIC TROPUST.	152	15	152	30				
VALLE DE2325	USTIC	281	ISO HYPERTH.	UDIC TROPUST.	180	56	180	110				
VALLE GR3024	PERUDIC	360	ISO THERMIC	PERUDIC					180	180	180	180
VILLA ME2192	ARIDIC	58	ISO THERMIC	WEAK ARIDIC	54	58	98	73				
WONKEN 7906	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
YUCA-CAS3137	USTIC	242	ISO HYPERTH.	TYPIC TROPUST.	180	45	180	72				
YUTAJE 9420	USTIC	298	ISO HYPERTH.	UDIC TROPUST.	180	75	180	126				
ZARAZA 2677	USTIC	208	ISO HYPERTH.	TYPIC TROPUST.	180	23	180	51				
ZEA 3063	UDIC	360	ISO THERMIC	TYPIC UDIC					180	180	180	180
ZEA-LA F3142	UDIC	360	ISO HYPERTH.	TYPIC UDIC					180	180	180	180
ZORCA 4026	UDIC	360	ISO HYPERTH.	DRY TROPUDIC					180	61	180	106
ZUATA 2622	USTIC	179	ISO HYPERTH.	ARIDIC TROPUST.	164	15	164	25				

COMPUTED BY FORTRAN PROGRAM VW08, APR 1981

DATE 11/16/81

95

VENEZUELA

Aridic tropustic	Isohyperthermic
	Isomesic
	Isothermic
Dry tempudic	Hyperthermic
	Thermic
Dry tropudic	Isohyperthermic
	Isomesic
	Isothermic
Dry xeric	Thermic
Extreme aridic	Hyperthermic
	Isohyperthermic
	Isothermic
	Mesic
	Thermic
Perudic	Hyperthermic
	Isohyperthermic
	Isomesic
	Isothermic
	Mesic
	Thermic
Typic aridic	Hyperthermic
	Isohyperthermic
	Mesic
	Thermic
Typic tempustic	Hyperthermic
	Mesic
	Thermic
Typic tropustic	Isohyperthermic
	Isomesic
	Isothermic
Typic udic	Cryic
	Hyperthermic
	Isohyperthermic
	Isomesic
	Isothermic
	Mesic
	Thermic
Typic xeric	Mesic
	Thermic
Udic tropustic	Isohyperthermic
	Isomesic
	Isothermic
Weak aridic	Hyperthermic
	Isohyperthermic
	Isomesic
	Isothermic
	Mesic
	Thermic
Wet tempustic	Mesic
	Thermic
Xeric tempustic	Hyperthermic

Moisture Regime Tables

LIST OF STATIONS WITH
ARIDIC TROPUST.
MOISTURE REGIME

TEMPERATURE REGIME	COUNTRY CODE	NAME OF STATION	MEAN SOIL TEMPERATURE ANNUAL	SUMMER	WINTER	DAYS SOIL TEMP > 8	CUMULATIVE DAYS MCS IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX CONS DAYS THAT MCS IS MOIST WHEN SOIL TEMP > 8	DRY AFTER SUM SOLS	MOIST AFTER WINT SOL
ISO HYPERTH.	BOLI	SAN JOSE	27.7	28.7	25.4	360	129	101	130	129	101	130	177	2	0
	BRAZ	CABO FRIO	25.4	26.6	24.1	360	152	208	0	152	208	0	78	13	0
		IGUATU	29.9	30.5	29.1	360	189	70	101	189	70	101	158	17	0
		PAO DE ACUCA	28.4	29.5	26.4	360	198	91	71	198	91	71	142	75	71
		PAODEACUCAR	27.4	28.5	25.4	360	199	90	71	199	90	71	141	75	71
		PARATINGA	28.4	28.0	27.4	360	184	42	134	184	42	134	176	0	0
		PROPRIA	28.2	29.3	26.5	360	161	45	154	161	45	154	173	105	109
		QUIXADA	29.3	29.6	28.9	360	209	47	104	209	47	104	119	23	0
		QUIXADA	28.4	28.6	28.1	360	180	58	112	180	68	112	168	18	7
		QUIXERAMBIM	30.4	31.0	29.8	360	233	39	88	233	39	88	108	45	0
		QUIXERAMOBIM	29.0	29.6	28.4	360	192	59	109	192	59	109	158	20	4
		QUIXERAMOBIM	30.4	31.0	29.8	360	233	39	88	233	39	88	108	45	0
		SAOCASTANO	24.0	24.9	22.5	360	145	215	0	145	215	0	163	45	0
		SOBRAL	29.0	29.3	28.8	360	182	38	140	182	38	140	166	18	5
		SOBRAL	30.5	30.9	30.3	360	197	60	103	197	60	103	154	21	0
		SURUBIM	26.2	26.9	24.8	360	207	153	0	207	153	0	137	75	0
		SURUBIM	25.2	25.9	23.8	360	207	153	0	207	153	0	137	75	0
	ECUA	BAHIA DE CAR	27.2	27.7	26.5	360	239	40	81	239	40	81	98	15	0
		ESMERALDAS	27.9	28.1	28.0	360	204	53	103	204	53	103	146	120	75
		GUAYAQUIL	27.9	28.4	27.2	360	181	35	144	181	35	144	179	15	0
		MACARA	27.4	28.0	26.5	360	243	48	69	243	40	69	117	45	0
		MACHALA	27.2	27.9	26.4	360	201	53	106	201	53	106	159	15	0
		PORTOVIEJO	27.4	27.7	26.8	360	221	51	88	221	51	88	139	15	0
		SANTA ISABEL	22.1	21.4	23.0	360	266	94	0	266	94	0	94	75	0
	PERU	HUANCABAMBA	22.1	22.2	21.9	360	247	113	0	247	113	0	113	15	0
		HUANUCO	22.1	22.2	21.9	360	243	117	0	243	117	0	101	14	0
		TARAPOTO	29.0	29.4	28.6	360	96	141	123	96	141	123	167	15	11
	VENE	ALTAMIRA3602	29.4	29.1	28.8	360	152	74	134	152	74	134	167	4	0
		ANACO 2757	28.7	28.5	28.0	360	173	57	130	173	57	130	177	0	0
		BACHAQUE2007	30.5	30.6	30.1	360	160	149	51	160	149	51	96	16	0
		BARRANCA3938	29.8	29.5	29.1	360	149	105	106	149	105	106	117	5	0
		CHIGUARA3053	24.6	24.5	24.3	360	208	152	0	208	152	0	110	105	0
		CIUDAD B3882	30.1	29.7	29.3	360	165	56	139	165	56	139	169	0	0
		CIUDAD B3885	29.8	29.5	29.3	360	191	70	99	191	70	99	145	0	0
		CONCHA 2095	30.0	30.0	29.7	360	66	90	204	66	90	204	141	12	41
		CUMAREBO 274	30.4	30.5	29.6	360	179	135	46	179	135	46	88	21	31
		LA CANOA3811	29.7	29.2	29.2	360	182	57	121	182	57	121	166	0	0
		LOBATERA4014	25.2	25.0	25.0	360	176	184	0	176	184	0	104	75	0
		LOMA DEL3604	29.9	29.8	29.4	360	178	73	109	178	73	109	158	6	0
		LOS YOPA3719	28.5	28.2	27.9	360	159	92	109	159	92	109	161	5	0
		PUERTO 03813	29.7	29.1	29.5	360	186	43	131	186	43	131	145	0	0
		SAN MATE2725	29.2	29.1	28.5	360	192	34	134	192	34	134	146	8	0
		SANTA CL3720	29.7	29.4	29.1	360	178	65	117	178	65	117	170	0	0
		SANTA CR3065	27.3	27.1	27.0	360	86	274	0	86	274	0	147	3	0
		SICARIGU2108	27.6	27.6	27.0	360	156	107	97	156	107	97	147	45	22

VW08 AUGUST 1981

DATE 08/25/81

ARIDIC TROPUSTIC

LIST OF STATIONS WITH
ARIDIC TROPUST.
MOISTURE REGIME

TEMPERATURE REGIME	COUNTRY CODE	NAME OF STATION	MEAN SOIL TEMPERATURE ANNUAL	SUMMER	WINTER	DAYS SOIL TEMP > 8	CUMULATIVE DAYS MCS IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX CONS DAYS THAT MCS IS MOIST WHEN SOIL TEMP > 8	DRY AFTER SUM SOLS	MOIST AFTER WINT SOL
ISO HYPERTH.	VENE	UPATA 3995	27.9	27.5	27.3	360	157	104	99	157	104	99	145	0	0
		UVERITO 3752	29.4	29.1	28.9	360	178	86	96	178	86	96	167	0	0
		ZUATA 2622	29.8	29.5	29.3	360	171	58	131	171	58	131	179	0	0
ISO MESIC	ARGT	QUIACA	12.0	13.6	8.8	246	205	155	0	147	155	0	155	0	0
	BOLI	CHALLAPATA	13.1	14.4	10.0	270	206	154	0	206	154	0	154	0	0
		CHARANA	11.0	12.3	8.5	225	252	108	0	198	108	0	108	15	0
		CHUQUINA	12.8	13.4	11.1	303	168	192	0	168	192	0	172	0	0
		POTOSI	11.5	12.6	9.0	234	125	80	155	125	80	126	120	15	20
		TACAGUA	9.9	12.0	8.0	176	115	71	174	115	51	87	93	15	39
		VILLA AROMA	8.7	9.7	6.9	79	221	139	0	140	114	0	79	15	0
		VISCACHANTI	11.6	13.2	8.9	232	122	93	145	122	57	145	154	0	0
	ECUA	CANAR	13.4	13.4	13.0	360	192	168	0	192	168	0	168	45	0
		PALMIRA	13.4	13.4	13.0	360	245	115	0	245	115	0	115	75	0
ISO THERMIC	BOLI	MIZQUE	20.9	22.1	18.1	360	174	76	110	174	76	110	168	0	0
	ECUA	CALDERON	17.9	17.6	18.1	360	141	219	0	141	219	0	167	38	0
		GUAYLLABAMBA	18.5	18.5	18.4	360	137	223	0	137	223	0	137	73	0
		LATACUNGA	15.3	15.7	14.7	360	223	137	0	223	137	0	110	75	0
	VENE	EL MORRO 3080	19.6	19.5	19.2	360	141	219	0	141	219	0	88	5	0

LIST OF STATIONS WITH
DRY TEMPUDIC
MOISTURE REGIME

TEMPERATURE REGIME	COUNTRY CODE	NAME OF STATION	MEAN SOIL TEMPERATURE ANNUAL	SUMMER	WINTER	DAYS SOIL TEMP > 8	CUMULATIVE DAYS MOS IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX CONS DAYS THAT MOS IS MOIST WHEN SOIL TEMP > 8	DRY AFTER SUM SOLS	MOIST AFTER WINT SOL
HYPERTH.	ARGT	MISION F.TAC	25.4	28.6	22.1	360	11	73	276	11	73	276	321	9	120
	BOLI	SANANDITA	23.0	25.8	19.5	360	0	72	288	0	72	288	360	0	94
		YACUIBA	24.9	27.4	21.2	360	9	56	295	9	56	295	351	0	70
THERMIC	ARGT	SAN SALVADOR	18.8	21.5	15.3	360	0	76	284	0	76	284	360	0	89

VW08 AUGUST 1981

DATE 08/25/81

100

DRY TEMPUDIC

LIST OF STATIONS WITH
DRY TROPUDIC
MOISTURE REGIME

TEMPERATURE REGIME	COUNTRY CODE	NAME OF STATION	MEAN SOIL TEMPERATURE ANNUAL	SUMMER	WINTER	DAYS SOIL TEMP > 8	CUMULATIVE DAYS MCS IN ONE YEAR IS DRY	M/D	MCI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX CONS DAYS THAT MCS IS MOIST WHEN SOIL TEMP > 8	DRY AFTER SUM SOLS	MOIST AFTER WINT SOL
ISO HYPERTH.	BOLI	COBIJA	27.2	27.5	25.8	360	0	66	294	0	66	294	360	0	39
		SANTA ANA	28.9	28.8	27.3	360	25	57	278	25	57	278	321	0	23
		TRINIDAD	29.0	29.5	27.5	360	0	48	312	0	48	312	360	0	57
	BRAZ	ALTO TAPAJOS	27.8	27.7	27.5	360	18	69	273	18	69	273	342	0	18
		ALTO TAPAJOS	27.8	27.7	27.5	360	18	69	273	18	69	273	342	0	18
		AREIA	23.1	23.8	21.9	360	0	65	295	0	65	295	360	0	120
		BELO HORIZON	23.2	24.2	21.4	360	0	66	294	0	66	294	360	0	39
		BELO HORIZON	23.2	24.2	21.4	360	0	66	294	0	66	294	360	0	39
		CAMPOS	25.6	27.1	23.9	360	0	72	288	0	72	288	360	0	43
		CARATINGA	22.8	24.2	20.5	360	0	37	323	0	37	323	360	0	68
		CATU	25.9	26.9	24.3	360	0	50	310	0	50	310	360	0	120
		CLEVELANDIA	27.4	27.2	27.1	360	0	55	305	0	55	305	360	0	120
		CONCEICAO SE	23.1	24.4	20.9	360	0	42	318	0	42	318	360	0	63
		FRUTAL	25.4	26.3	23.5	360	0	54	306	0	54	306	360	0	51
		GAMELEIRA	22.2	23.4	19.7	360	0	38	322	0	38	322	360	0	67
		GARANHUNS	22.9	23.8	21.3	360	0	80	280	0	80	280	360	0	120
		GARGAU	25.3	26.6	23.9	360	0	72	288	0	72	288	360	0	33
		GOIANA	27.5	28.0	26.4	360	1	76	283	1	76	283	359	0	120
		GUARATINGA	22.4	23.4	20.1	360	0	43	317	0	43	317	360	0	62
		HUMAITA	28.2	27.9	28.1	360	12	67	281	12	67	281	348	0	26
		ITABIRA	22.0	23.5	19.8	360	0	33	327	0	33	327	360	0	72
		ITAPERUNA	25.4	27.0	23.4	360	0	62	298	0	62	298	360	0	43
		LEOPOLDINA	25.1	26.7	23.1	360	0	66	294	0	66	294	360	0	39
		MONTE ALEGRE	24.0	25.0	21.8	360	0	53	307	0	53	307	360	0	52
		PARACATU	24.6	25.1	22.6	360	0	53	307	0	53	307	360	0	52
		PIRENPOLIS	24.4	24.6	23.0	360	32	45	283	32	45	283	328	0	28
		PITANGUI	23.7	24.8	21.6	360	0	84	276	0	84	276	360	0	51
		PORCIUNCULA	24.5	26.1	22.2	360	0	62	298	0	62	298	360	0	43
		PORTO VELHO	27.9	27.6	27.9	360	23	64	273	23	64	273	337	0	18
		PRESIDENTE M	24.6	25.1	22.4	360	0	62	298	0	62	298	360	0	43
		QUARTEIS	25.3	26.9	22.8	360	0	67	293	0	67	293	360	0	38
		SAN ANTONIO	25.3	26.9	22.8	360	0	72	288	0	72	288	360	0	33
		SANTA LUZIA	23.2	23.6	21.8	360	0	68	292	0	68	292	360	0	37
		SAO GONCALO	25.7	26.8	24.0	360	0	54	306	0	54	306	360	0	120
		SAO TOME FAR	25.6	27.1	23.9	360	0	53	307	0	53	307	360	0	57
		SAOGONCALODO	24.7	25.8	23.0	360	0	54	306	0	54	306	360	0	120
		SETA LAGOAS	23.3	24.3	21.0	360	0	71	289	0	71	289	360	0	34
		TEOFILO OTON	24.7	26.0	22.5	360	0	34	326	0	34	326	360	0	71
		UBA	24.2	25.9	21.8	360	0	54	306	0	54	306	360	0	51
	COLO	CHINACOTA	22.6	22.8	21.9	360	0	31	329	0	31	329	360	0	120
		PUEBLO BELLO	23.8	24.2	23.7	360	0	47	313	0	47	313	360	0	45
	ECUA	LIMONES	28.4	28.2	28.4	360	0	31	329	0	31	329	360	0	120
	GUIA	CAYENNE/ROCH	28.0	27.8	27.7	360	0	35	325	0	35	325	360	0	120
		ROCHAMBEAU	28.9	28.7	28.8	360	0	40	320	0	40	320	360	0	120
		ST-GEORGES	28.4	28.3	28.0	360	0	32	328	0	32	328	360	0	120

DRY TROPUDIC

LIST OF STATIONS WITH
DRY TROPUDIC
MOISTURE REGIME

TEMPERATURE REGIME	COUNTRY CODE	NAME OF STATION	MEAN SOIL TEMPERATURE ANNUAL	SUMMER	WINTER	DAYS SOIL TEMP > 8	CUMULATIVE DAYS MCS IN ONE YEAR IS DRY	M/D	MCI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX CONS DAYS THAT MCS IS MOIST WHEN SOIL TEMP > 8	DRY AFTER SUM SOLS	MOIST AFTER WINT SOL
ISO HYPERTH.	SURI	AFOBAKA61	28.8	28.2	27.8	360	0	40	320	0	40	320	360	0	95
		AFOBAKKA65	28.6	28.6	27.8	360	18	27	315	18	27	315	342	3	120
		ALBINA65	29.3	29.0	28.6	360	0	38	322	0	38	322	360	0	120
		ALBINA73	30.0	29.8	29.6	360	0	54	306	0	54	306	360	0	81
		BROKOPOND061	29.6	29.1	28.7	360	0	38	322	0	38	322	360	0	97
		COPPENAMEP69	30.4	30.1	29.7	360	21	48	291	21	48	291	327	0	83
		MARIENBURG69	29.6	29.4	29.2	360	2	77	281	2	77	281	358	0	105
		MOENGO61	29.5	29.2	28.8	360	31	54	275	31	54	275	329	0	74
		MOENGO65	29.5	29.3	28.8	360	17	65	278	17	65	278	343	2	120
		NICKERIE	29.9	29.8	29.5	360	4	50	306	4	50	306	356	0	120
		PALOEMEU61	29.3	29.4	28.4	360	13	59	288	13	59	288	347	0	120
		PARANAM61	29.2	28.8	28.4	360	38	27	295	38	27	295	322	0	70
		STONDANSI65	29.7	29.4	29.0	360	57	27	276	57	27	276	303	12	120
	VENE	AREKUNA 6928	27.7	27.1	27.5	360	24	57	279	24	57	279	314	0	54
		BARINITA3126	27.8	27.7	27.4	360	0	51	309	0	51	309	360	0	54
		BOCA DE 3906	29.8	29.5	29.2	360	0	34	326	0	34	326	360	0	92
		BUM-BUM 3191	29.3	29.1	29.0	360	4	69	287	4	69	287	356	0	32
		CANAGUA 3194	29.3	29.1	28.9	360	0	42	318	0	42	318	360	0	45
		CAPACHO 4020	23.1	23.0	22.9	360	0	69	291	0	69	291	360	0	66
		CARIPITO1887	29.9	29.7	29.1	360	0	34	326	0	34	326	360	0	71
		CASIGUA-3021	30.4	30.3	30.1	360	0	44	316	0	44	316	360	0	61
		CORDERO 4016	24.1	23.9	23.9	360	0	31	329	0	31	329	360	0	74
		CURBATI 3185	29.3	29.2	29.0	360	24	56	280	24	56	280	317	0	25
		DORADAS 4057	29.4	29.1	29.3	360	24	46	290	24	46	290	326	0	35
		EJIDO 3043	23.4	23.3	23.0	360	0	73	287	0	73	287	360	0	62
		EL GUAYA3033	30.5	30.5	30.3	360	0	31	329	0	31	329	360	0	61
		LA ACEQU3190	29.1	29.0	28.8	360	0	39	321	0	39	321	360	0	45
		LA SIERR2303	24.3	24.3	23.7	360	0	37	323	0	37	323	360	0	68
		LAS COLO4058	29.3	29.0	29.2	360	30	42	288	30	42	288	323	0	33
		MICHAY 3187	29.0	28.9	28.7	360	14	62	284	14	62	284	323	0	29
		NAVAY 4059	29.6	29.3	29.5	360	47	30	283	47	30	283	313	0	28
		PREGONER3097	23.1	22.9	22.8	360	0	52	308	0	52	308	360	0	53
		RIO CLAR2205	24.7	24.7	24.1	360	0	44	316	0	44	316	360	0	61
		RUBIO 4042	24.7	24.6	24.5	360	0	77	283	0	77	283	360	0	58
		RUBIO 4084	25.7	25.6	25.5	360	0	37	323	0	37	323	360	0	68
		SABANETA4039	26.6	26.5	26.4	360	0	47	313	0	47	313	360	0	58
		SAN CRIS4037	24.8	24.6	24.5	360	0	65	295	0	65	295	360	0	70
		SANTA AN4044	25.6	25.5	25.4	360	0	32	328	0	32	328	360	0	59
		TARIBA 4034	24.7	24.5	24.5	360	0	81	279	0	81	279	360	0	54
		ZORCA 4026	25.8	25.7	25.6	360	0	74	286	0	74	286	360	0	61
ISO MESIC	PERU	CUZCO	13.7	14.0	12.4	360	0	73	287	0	73	287	360	0	62
		DESAGUADERO	10.4	11.7	7.8	208	0	42	318	0	42	236	208	0	120
		JULIACA	10.4	10.8	9.1	205	0	66	294	0	66	294	205	0	99
		PUNO	10.4	10.8	9.1	205	0	64	296	0	64	296	205	0	101
		TICAMPA	13.3	13.5	12.5	360	0	33	327	0	33	327	360	0	72

LIST OF STATIONS WITH
DRY TROPUDIC
MOISTURE REGIME

TEMPERATURE REGIME	COUNTRY CODE	NAME OF STATION	MEAN SOIL TEMPERATURE ANNUAL	SUMMER	WINTER	DAYS SOIL TEMP > 8	CUMULATIVE DAYS MOS IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX CONS DAYS THAT MOS IS WHEN SOIL TEMP > 8	MOIST AFTER SUM SOLS	DRY AFTER WINT SOL	MOIST AFTER
ISO THERMIC	BRAZ	ITAMARANDIBA	21.6	22.8	19.5	360	0	77	283	0	77	283	360	0	58	
	ECUA	CARIAMANGA	18.4	18.5	17.9	360	0	45	315	0	45	315	360	0	96	
	PERU	CAJAMARCA	16.5	16.7	16.1	360	0	36	324	0	36	324	360	0	69	
		HUMANGA	17.3	17.7	16.1	360	0	66	294	0	66	294	360	0	39	
	VENE	BAILADOR3167	19.8	19.7	19.5	360	0	87	273	0	87	273	360	0	91	
		CHACANTA3138	18.6	18.5	18.2	360	0	31	329	0	31	329	360	0	74	
		GUARAQUE3030	21.9	21.7	21.6	360	0	39	321	0	39	321	360	0	66	
		QUENIQUE4017	20.9	20.8	20.7	360	0	34	326	0	34	326	360	0	71	

LIST OF STATIONS WITH
DRY XERIC
MOISTURE REGIME

TEMPERATURE REGIME	COUNTRY CODE	NAME OF STATION	MEAN SOIL TEMPERATURE ANNUAL	SUMMER	WINTER	DAYS SOIL TEMP > 8	CUMULATIVE DAYS MCS IN ONE YEAR IS DRY	M/D	MCI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX CONS DAYS THAT MCS IS MOIST WHEN SOIL TEMP > 8	DRY AFTER SUM SOLS	MOIST AFTER WINT SOL
THERMIC	CHIL	CABILDO	17.1	19.9	13.9	360	152	86	122	152	86	122	208	120	105
		CATAPILCO	17.1	19.9	13.9	360	130	65	165	130	65	165	230	115	120
		CAUQUE' ES	17.3	21.4	13.8	360	116	31	213	116	31	213	244	101	120
		CURICO	16.2	20.3	12.6	324	114	31	215	114	31	215	160	99	120
		LACALERA	16.3	19.0	13.4	360	132	62	166	132	62	166	228	117	120
		LOSANDES	18.3	22.3	14.3	360	151	51	158	151	51	158	209	120	120
		PENABLANCA	17.1	19.9	13.9	360	136	59	165	136	59	165	224	120	120
		PUQUILLAY	16.7	19.7	13.8	360	110	44	206	110	44	206	250	95	120
		QUILLOTA	18.0	20.7	15.2	360	129	63	168	129	63	168	231	114	120
		QUILPUE	15.9	18.6	13.4	360	116	68	176	116	68	176	244	101	120
		RANCAGUA	15.5	19.4	11.7	289	121	63	176	121	63	176	133	106	120
		RENGO	16.6	20.4	12.7	344	118	35	207	118	35	207	183	103	120
		SANFERNANDO	15.9	19.7	12.3	310	110	33	217	110	33	217	158	95	120
		SANJOSEMAIPO	15.5	19.0	12.1	297	113	34	213	113	34	213	143	98	120
		SANTIAGO	17.0	20.9	13.2	360	134	57	169	134	57	169	226	119	120
		TALCA	17.2	21.5	13.4	360	118	33	209	118	33	209	242	103	120

VW08 AUGUST 1981

DATE 08/25/81

LIST OF STATIONS WITH
EXTREME ARIDIC
MOISTURE REGIME

TEMPERATURE REGIME	COUNTRY CODE	NAME OF STATION	MEAN SOIL TEMPERATURE ANNUAL	SUMMER	WINTER	DAYS SOIL TEMP > 8	CUMULATIVE DAYS MCS IN ONE YEAR IS DRY	M/D	MCI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX CONS DAYS THAT MCS IS WHEN TEMP > 8	MOIST AFTER SUM SOLS	DRY AFTER WINT SOL	MOIST AFTER WINT SOL
HYPERTH.	PERU	PALPA	24.1	26.4	21.0	360	360	0	0	360	0	0	0	120	0	
ISO HYPERTH.	PERU	ALTO IEL	23.6	24.9	22.1	360	360	0	0	360	0	0	0	120	0	
		BEBEDERO	25.6	26.8	24.0	360	360	0	0	360	0	0	0	120	0	
		CANETE	22.6	24.5	20.7	360	360	0	0	360	0	0	0	120	0	
		CANETE	22.3	24.2	20.3	360	360	0	0	360	0	0	0	120	0	
		CARTAVIO	22.9	24.4	21.7	360	360	0	0	360	0	0	0	120	0	
		CASA GRANDE	23.5	25.2	22.0	360	360	0	0	360	0	0	0	120	0	
		CAYALTI	24.7	26.1	22.9	360	360	0	0	360	0	0	0	120	0	
		CHICLAYO	24.4	25.7	23.0	360	360	0	0	360	0	0	0	120	0	
		COPARA	22.7	24.4	19.9	360	360	0	0	360	0	0	0	120	0	
		GUADALUPE	24.4	25.8	22.5	360	360	0	0	360	0	0	0	120	0	
		HUAMANI	22.0	23.3	19.8	360	360	0	0	360	0	0	0	120	0	
		HUANCANO	23.0	23.9	21.3	360	360	0	0	360	0	0	0	120	0	
		ICA	23.5	25.3	21.0	360	360	0	0	360	0	0	0	120	0	
		LAMBAYEQUE	24.9	26.4	23.3	360	360	0	0	360	0	0	0	120	0	
		MAJORO	23.6	25.8	20.8	360	360	0	0	360	0	0	0	120	0	
		OCUCAJE	23.1	24.7	20.3	360	360	0	0	360	0	0	0	120	0	
		PARQUE DE RE	22.3	24.3	20.2	360	360	0	0	360	0	0	0	120	0	
		PIURA	27.8	29.1	26.3	360	360	0	0	360	0	0	0	120	0	
		PUERTO CHICA	24.3	25.3	23.5	360	360	0	0	360	0	0	0	120	0	
		SAN JAVIER	24.1	26.0	21.3	360	360	0	0	360	0	0	0	120	0	
		SAN JUAN	24.9	26.4	23.3	360	360	0	0	360	0	0	0	120	0	
		TALARA	25.8	27.1	24.5	360	360	0	0	360	0	0	0	120	0	
ISO THERMIC	CHIL	ANTOFAGASTA	18.9	21.1	17.1	360	360	0	0	360	0	0	0	120	0	
		ARICA	21.0	23.0	19.2	360	360	0	0	360	0	0	0	120	0	
		CALDERA	18.8	21.0	16.8	360	360	0	0	360	0	0	0	120	0	
		CHANARAL	18.1	20.3	16.2	360	360	0	0	360	0	0	0	120	0	
		COQUIMBO	17.0	18.7	15.5	360	360	0	0	360	0	0	0	120	0	
		IQUIQUE	20.3	21.9	18.7	360	360	0	0	360	0	0	0	120	0	
		LASERENA	16.6	18.7	14.8	360	360	0	0	360	0	0	0	120	0	
	PERU	AREQUIPA	15.6	16.1	14.5	360	360	0	0	360	0	0	0	120	0	
		AREQUIPA	15.5	16.1	14.4	360	360	0	0	360	0	0	0	120	0	
		CAMPO DE MAR	21.0	23.0	19.2	360	360	0	0	360	0	0	0	120	0	
		HUAYAN	21.6	23.3	19.6	360	360	0	0	360	0	0	0	120	0	
		LIMA	20.6	22.4	18.7	360	360	0	0	360	0	0	0	120	0	
		LIMATAMBO	21.3	23.1	19.4	360	360	0	0	360	0	0	0	120	0	
		MOLINA ILA	21.8	23.8	19.7	360	360	0	0	360	0	0	0	120	0	
		PARAMONGA	21.2	22.7	19.9	360	360	0	0	360	0	0	0	120	0	
		PISCO	21.8	23.5	20.0	360	360	0	0	360	0	0	0	120	0	
		PISCO	21.2	22.9	19.5	360	360	0	0	360	0	0	0	120	0	
		PUNTA ILA	21.9	23.4	20.2	360	360	0	0	360	0	0	0	120	0	
		RETES	21.4	23.1	19.5	360	360	0	0	360	0	0	0	120	0	
		TACNA	18.9	21.2	16.7	360	360	0	0	360	0	0	0	120	0	
		TRUJILLO	21.8	22.9	20.9	360	360	0	0	360	0	0	0	120	0	
		VITOR	20.2	19.9	20.2	360	360	0	0	360	0	0	0	120	0	

LIST OF STATIONS WITH
EXTREME ARIDIC
MOISTURE REGIME

TEMPERATURE REGIME	COUNTRY CODE	NAME OF STATION	MEAN SOIL TEMPERATURE ANNUAL	SUMMER	WINTER	DAYS SOIL TEMP > 8	CUMULATIVE DAYS MCS IN ONE YEAR IS DRY	M/D	MCI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX CONS DAYS THAT MCS IS WHEN MOIST TEMP > 8	DRY AFTER SUM SOLS	MOIST AFTER WINT SOL
MESIC	ARGT	CANADCN LEON	11.0	14.9	6.6	195	360	0	0	236	0	0	0	120	0
		COLONIA LAS	13.4	17.3	9.0	232	360	0	0	290	0	0	0	120	0
		DESEADO	11.9	14.6	9.0	211	360	0	0	315	0	0	0	120	0
		HUMAHUACA	11.7	13.5	8.4	237	360	0	0	289	0	0	0	120	0
		LAGOARGENTIN	9.7	12.9	6.2	176	360	0	0	215	0	0	0	120	0
		PUERTO S.CRU	10.6	14.0	6.7	186	360	0	0	239	0	0	0	120	0
		SAN JULIAM	11.5	14.3	7.8	205	360	0	0	269	0	0	0	120	0
		SARMIENTO	13.4	17.3	9.0	232	360	0	0	290	0	0	0	120	0
		VILLAVICENCI	13.0	17.0	9.7	229	360	0	0	360	0	0	0	120	0
	BOLI	UYUNI	12.5	14.9	7.7	252	360	0	0	271	0	0	0	120	0
THERMIC	ARGT	CACHEUTA	18.5	23.5	13.2	316	360	0	0	360	0	0	0	120	0
		CAFAYATE	20.4	23.1	16.4	360	360	0	0	360	0	0	0	120	0
		CHAMICAL	20.8	25.3	15.9	360	360	0	0	360	0	0	0	120	0
		CIPOLLETTI	16.3	20.9	11.4	282	360	0	0	360	0	0	0	120	0
		CCMCDORC RIV	15.1	18.7	11.5	283	360	0	0	360	0	0	0	120	0
		CORONEL GCM	16.8	21.6	11.8	289	360	0	0	360	0	0	0	120	0
		GENERALGODOY	16.5	21.6	11.3	272	360	0	0	360	0	0	0	120	0
		JACHAL	18.8	23.7	13.8	360	360	0	0	360	0	0	0	120	0
		MENDOZA ARGE	18.2	22.9	13.3	321	360	0	0	360	0	0	0	120	0
		PLAZAHUINCUL	15.6	20.6	10.8	262	360	0	0	360	0	0	0	120	0
		PLUMERILLC	18.5	23.7	13.0	311	360	0	0	360	0	0	0	120	0
		PUERTO MADRY	15.8	20.2	11.2	279	360	0	0	360	0	0	0	120	0
		SAN ANT.OES	17.6	21.9	13.2	327	360	0	0	360	0	0	0	120	0
		SAN ANTONIO	17.6	22.0	13.2	360	360	0	0	360	0	0	0	120	0
		SAN JUAN	19.8	25.2	14.0	326	360	0	0	360	0	0	0	120	0
		SANTA MARIA	16.7	19.5	13.9	360	360	0	0	360	0	0	0	120	0
		TRELEW	15.8	20.2	11.2	279	360	0	0	360	0	0	0	120	0
		TRELEW ARGEN	16.0	20.2	11.4	280	360	0	0	360	0	0	0	120	0
	CHIL	COPIAPO	18.2	21.1	15.5	360	360	0	0	360	0	0	0	120	0
		OVALLE	17.4	20.2	14.9	360	360	0	0	360	0	0	0	120	0
		PLENGUAVACA	19.3	22.1	16.6	360	360	0	0	360	0	0	0	120	0
		VICUNA	18.1	20.7	15.5	360	360	0	0	360	0	0	0	120	0
	PERU	ICA (ASOC.)	22.0	24.2	19.1	360	360	0	0	360	0	0	0	120	0

VW08 AUGUST 1981

DATE 08/25/81

106

EXTREME ARIDIC

LIST OF STATIONS WITH
PERUDIC
MOISTURE REGIME

TEMPERATURE REGIME	COUNTRY CODE	NAME OF STATION	MEAN SOIL TEMPERATURE ANNUAL	SUMMER	WINTER	DAYS SOIL TEMP > 8	CUMULATIVE DAYS MCS IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX CONS DAYS THAT MCS IS WHEN SOIL TEMP > 8	MOIST DRY AFTER SUM SCLS	MOIST AFTER WINT SOL
*HYPERTH.	BRAZ	BLUMENAU	22.7	25.3	20.0	360	0	0	360	0	0	360	360	0	120
*		BRUSQUE	22.2	24.8	19.4	360	0	0	360	0	0	360	360	0	120
*		CAMBORIU	22.1	24.6	19.4	360	0	0	360	0	0	360	360	0	120
*ISO HYPERTH.	BOLI	TODOS SANTOS	27.1	28.3	24.9	360	0	0	360	0	0	360	360	0	120
*	BRAZ	ANGRA DOS RE	25.0	26.7	23.4	360	0	0	360	0	0	360	360	0	120
*		FONTE BOA	27.4	27.4	27.1	360	0	0	360	0	0	360	360	0	120
*		IAUARETE	27.5	26.7	27.9	360	0	0	360	0	0	360	360	0	120
*		IGUAPE	23.9	26.1	21.6	360	0	0	360	0	0	360	360	0	120
*		ILHEUS	26.8	27.7	25.5	360	0	0	360	0	0	360	360	0	120
*		ILHEUS	25.8	26.9	24.4	360	0	0	360	0	0	360	360	0	120
*		JANUARETE	27.3	27.4	26.8	360	0	0	360	0	0	360	360	0	120
*		JARDIN BOTAN	24.7	26.5	22.9	360	0	0	360	0	0	360	360	0	120
*		PARANAGUA	23.5	25.7	21.3	360	0	0	360	0	0	360	360	0	120
*		RIO DOURO	24.2	25.9	22.5	360	0	0	360	0	0	360	360	0	120
*		SANTOS	24.4	26.3	22.4	360	0	0	360	0	0	360	360	0	120
*		SAO FRANCISC	23.1	25.3	20.9	360	0	0	360	0	0	360	360	0	120
*		SAO GABRIEL	27.9	28.0	27.3	360	0	0	360	0	0	360	360	0	120
*		SAO PEDRO	24.5	26.1	23.2	360	0	0	360	0	0	360	360	0	120
*		TARACUA	27.5	26.8	27.9	360	0	0	360	0	0	360	360	0	120
*		TINGUA	24.1	25.8	22.4	360	0	0	360	0	0	360	360	0	120
*		UAPES BRAZIL	27.7	27.8	27.2	360	0	0	360	0	0	360	360	0	120
*		UAUPES	27.7	27.8	27.2	360	0	0	360	0	0	360	360	0	120
*		XEREM	23.7	25.6	21.8	360	0	0	360	0	0	360	360	0	120
*	COLO	CHAPARRAL	25.2	25.7	25.1	360	0	0	360	0	0	360	360	0	120
*		CHAPETON-IBA	22.5	22.6	22.3	360	0	0	360	0	0	360	360	0	120
*		SAN-VINCENTE	24.3	24.2	24.7	360	0	0	360	0	0	360	360	0	120
*		YACOPI	22.8	23.3	22.3	360	0	0	360	0	0	360	360	0	120
*	ECUA	MENDEZ	26.1	26.3	25.4	360	0	0	360	0	0	360	360	0	120
*	PERU	IQUITOS	24.7	26.1	22.9	360	0	0	360	0	0	360	360	0	120
*		QUINCEMIL	25.0	25.2	24.7	360	0	0	360	0	0	360	360	0	120
*		TINGO MARIA	25.0	25.2	24.7	360	0	0	360	0	0	360	360	0	120
*		YURIMAGUAS	24.7	26.1	22.9	360	0	0	360	0	0	360	360	0	120
*	SURI	STOELMANSE73	29.3	29.3	28.8	360	0	0	360	0	0	360	360	0	120
*	VENE	LA PROVI4081	23.6	23.5	23.4	360	0	0	360	0	0	360	360	0	120
*		MAROA 9430	30.0	28.6	31.0	360	0	0	360	0	0	360	360	0	120
*		SAN CARL9409	30.1	28.5	31.3	360	0	0	360	0	0	360	360	0	120
*		SANTA FE4082	24.9	24.8	24.7	360	0	0	360	0	0	360	360	0	120
*		SANTA LU9512	29.2	28.4	29.6	360	0	0	360	0	0	360	360	0	120
*ISO MESIC	BRAZ	ALTO ITATIAI	14.0	15.2	12.3	360	0	0	360	0	0	360	360	0	120
*	CHIL	ANCUD	12.6	14.7	10.6	257	0	0	360	0	0	360	257	0	120
*		CABORAPER	11.5	12.9	10.1	225	0	0	360	0	0	360	225	0	120
*		ISLAGUAFO	12.2	13.8	11.0	264	0	0	360	0	0	360	264	0	120
*		SANPEDRO	11.1	13.2	9.2	196	0	0	360	0	0	360	196	0	120
*	ECUA	PAPALLACTA	11.9	12.1	11.3	360	0	0	360	0	0	360	360	0	120
*ISO THERMIC	BRAZ	CASTRO	19.2	21.5	16.7	360	0	0	360	0	0	360	360	0	120

LIST OF STATIONS WITH
PERUDIC
MOISTURE REGIME

TEMPERATURE REGIME	COUNTRY CODE	NAME OF STATION	MEAN SOIL TEMPERATURE ANNUAL	SUMMER	WINTER	DAYS SOIL TEMP > 8	CUMULATIVE DAYS MCS IN ONE YEAR IS DRY	M/D	MCI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX CONS DAYS THAT MCS IS MOIST WHEN SOIL TEMP > 8	DRY AFTER SUM SCLS	MOIST AFTER WINT SOL
ISO THERMIC	BRAZ	CURITIBA	19.0	21.1	16.8	360	0	0	360	0	0	360	360	0	120
		CURITIBA BRA	19.0	21.1	16.9	360	0	0	360	0	0	360	360	0	120
		GUARAPUAVA	19.2	21.3	16.9	360	0	0	360	0	0	360	360	0	120
		IVAI	20.6	22.9	18.0	360	0	0	360	0	0	360	360	0	120
		JAGUARIAIVA	20.1	22.3	17.6	360	0	0	360	0	0	360	360	0	120
		PETROPOLIS	20.4	22.1	18.7	360	0	0	360	0	0	360	360	0	120
		PONTA GROSSA	20.1	22.3	17.8	360	0	0	360	0	0	360	360	0	120
		SAO FRANCISC	17.0	19.5	14.6	360	0	0	360	0	0	360	360	0	120
	COLO	JARDIN	21.9	22.1	21.7	360	0	0	360	0	0	360	360	0	120
		SEVILLA	21.9	22.1	21.9	360	0	0	360	0	0	360	360	0	120
	VENE	PARAMO E3005	17.4	17.2	17.0	360	0	0	360	0	0	360	360	0	120
		SAN VICE9006	19.7	19.5	19.5	360	0	0	360	0	0	360	360	0	120
		VALLE GR3024	15.2	15.1	14.7	360	0	0	360	0	0	360	360	0	120
MESIC	CHIL	PUERTOAYSEN	11.4	14.0	8.4	209	0	0	360	0	0	282	209	0	120
THERMIC	BRAZ	ALFREDO CHAV	19.2	22.1	16.6	360	0	0	360	0	0	360	360	0	120
		CAXIAS SUL	18.5	21.2	16.0	360	0	0	360	0	0	360	360	0	120
		CRUZ ALTA	21.1	24.2	18.2	360	0	0	360	0	0	360	360	0	120
		CURITIBANOS	17.8	20.2	15.2	360	0	0	360	0	0	360	360	0	120
		IRAI	21.5	24.6	18.4	360	0	0	360	0	0	360	360	0	120
		LAGES	18.3	21.0	15.5	360	0	0	360	0	0	360	360	0	120
		PASSO FUNDO	20.1	23.0	17.4	360	0	0	360	0	0	360	360	0	120
		RIO NEGRO	18.9	21.3	16.3	360	0	0	360	0	0	360	360	0	120
		RUY BARBOSA	18.9	21.8	16.3	360	0	0	360	0	0	360	360	0	120
		TEREZOPOLIS	20.8	23.4	18.1	360	0	0	360	0	0	360	360	0	120
		URUSSANGA	21.6	24.2	19.0	360	0	0	360	0	0	360	360	0	120
		VALOES	18.7	21.5	15.6	360	0	0	360	0	0	360	360	0	120
		XANXERE	18.5	21.3	15.7	360	0	0	360	0	0	360	360	0	120

108

PERUDIC

LIST OF STATIONS WITH
TYPIC ARIDIC
MOISTURE REGIME

TEMPERATURE REGIME	COUNTRY CODE	NAME OF STATION	MEAN SOIL TEMPERATURE ANNUAL	SUMMER	WINTER	DAYS SOIL TEMP > 8	CUMULATIVE DAYS MCS IN ONE YEAR IS DRY	M/D	MCI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX CONS DAYS THAT MCS IS MOIST WHEN SOIL TEMP > 8	DRY AFTER SUM SOLS	MOIST AFTER WINT SOL
HYPERTH.	ARGT	ANATUYA	23.0	26.9	18.7	360	269	91	0	269	91	0	29	16	0
		CAMPO GALLO	24.2	27.6	20.4	360	266	94	0	266	94	0	25	20	0
		CATAMARCA	22.6	26.9	17.1	360	329	31	0	329	31	0	12	63	0
		GUEMES	22.2	25.2	18.0	360	277	83	0	277	83	0	24	22	0
		JOAQUINVGONZ	24.2	27.6	20.0	360	262	98	0	262	98	0	27	18	0
		LA RIOJA ARG	22.3	26.7	17.3	360	323	37	0	323	37	0	13	32	0
		RECREO	22.7	26.7	17.7	360	293	67	0	293	67	0	16	29	0
		RIVADAVIA	24.9	28.0	21.2	360	245	115	0	245	115	0	29	16	0
		SANTIAGO DEL	23.0	26.9	18.6	360	258	102	0	258	102	0	41	16	0
		SANTIAGO EST	22.8	26.7	18.2	360	267	93	0	267	93	0	26	19	0
ISO HYPERTH.	BRAZ	MONTE SANTO	25.9	27.1	23.9	360	231	129	0	231	129	0	26	50	0
		MONTESANTO	25.1	26.1	23.1	360	192	168	0	192	168	0	27	18	0
		REMANSO	29.6	29.7	28.6	360	282	78	0	282	78	0	21	24	0
		REMANSO BRAZ	29.5	29.7	28.6	360	282	78	0	282	78	0	21	24	0
	ECUA	ANCON	26.1	27.0	24.8	360	328	32	0	328	32	0	18	45	0
		LIBERTAD (LA	27.8	28.5	27.0	360	326	34	0	326	34	0	19	45	0
		MANTA	27.2	27.7	26.5	360	333	27	0	333	27	0	15	45	0
		SALINAS	25.5	26.6	24.4	360	351	9	0	351	9	0	9	75	0
	PERU	ZORRITOS	27.2	28.2	26.3	360	350	10	0	350	10	0	10	65	0
	VENE	ADICORA 213	30.4	30.5	29.6	360	312	48	0	312	48	0	23	105	0
		CLARINES2608	30.0	29.8	29.3	360	253	107	0	253	107	0	28	13	0
		CORO 235	30.2	30.4	29.5	360	352	8	0	352	8	0	8	105	0
		ESTANQUE3054	27.9	27.8	27.6	360	296	64	0	296	64	0	19	105	0
		LAGUNILL3055	24.1	24.0	23.8	360	314	46	0	314	46	0	28	105	0
		QUIBOR 2210	26.2	26.2	25.6	360	306	54	0	306	54	0	19	105	0
MESIC	ARGT	MAQUINCHAO	11.8	16.7	6.8	196	265	95	0	215	20	0	2	120	0
		PUENTE INCA	9.9	14.1	5.3	172	217	143	0	188	23	0	0	120	0
		RIO GALLEGOS	9.4	12.8	5.7	165	246	114	0	189	20	0	0	120	0
		USPALLATA	9.9	14.1	5.3	172	253	107	0	194	17	0	0	120	0
THERMIC	ARGT	ANDALGALA	20.4	24.6	15.1	360	331	29	0	331	29	0	15	61	0
		BUENA ESPER	17.8	22.4	12.6	297	259	101	0	259	101	0	25	20	0
		CHEPES	20.8	25.3	15.9	360	347	13	0	347	13	0	13	62	0
		COMODORERIVI	15.3	18.9	11.6	284	284	76	0	284	76	0	23	120	0
		GENERAL ACHA	17.6	22.6	12.9	312	268	92	0	268	92	0	29	45	0
		QUILINO	19.9	23.6	15.8	360	260	100	0	260	100	0	23	22	0
		RIO COLORADO	17.4	22.3	12.8	310	338	22	0	338	22	0	22	120	0
		SAN LUIS ARG	19.1	23.5	14.4	360	236	124	0	236	124	0	24	23	0
		TINOGASTA	20.0	24.4	14.8	360	340	20	0	340	20	0	11	64	0
		UNION	18.4	23.4	12.9	310	287	73	0	287	73	0	17	29	0
		VILLA DOLOR	20.4	24.3	15.8	360	246	114	0	246	114	0	28	19	0
	BOLI	CPLGCA	18.8	20.7	15.2	360	314	46	0	314	46	0	16	59	0

LIST OF STATIONS WITH
TYPIC TEMPUST.
MOISTURE REGIME

TEMPERATURE REGIME	COUNTRY CODE	NAME OF STATION	MEAN SOIL TEMPERATURE ANNUAL	SUMMER	WINTER	DAYS SOIL TEMP > 8	CUMULATIVE DAYS MCS IN ONE YEAR IS DRY	M/D	MCI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX CONS DAYS THAT MCS IS MOIST WHEN SOIL TEMP > 8	DRY AFTER SUM SCLS	MOIST AFTER WINT SOL
HYPE[illegible]	ARGT	EMBARCACION	24.9	28.0	21.2	360	166	81	113	166	81	113	160	8	0
		GRAN	24.9	28.0	21.2	360	84	135	141	84	135	141	215	4	6
	BOLI	VILLA MONTES	26.6	29.6	23.0	360	122	48	190	122	48	190	213	15	28
	PARA	MARISCAL-EST	27.6	30.1	24.5	360	163	197	0	163	197	0	86	11	0
MESIC	ARGT	LA QUIACA	11.7	13.5	8.4	237	227	133	0	156	133	0	133	2	0
		LA QUIACA AR	11.9	13.7	8.6	242	213	147	0	148	147	0	147	0	0
	BOLI	VILLAZON	12.0	13.9	8.4	240	226	134	0	157	134	0	108	4	0
THERMIC	ARGT	BAHIA BLA	17.2	22.0	12.8	316	63	297	0	63	297	0	120	22	0
		BELL VILLE	19.2	23.3	14.8	360	4	356	0	4	356	0	356	4	0
		BERNASCONI	17.3	22.5	12.5	304	65	295	0	65	295	0	107	21	0
		CERES ARGENT	21.4	25.5	17.4	360	2	358	0	2	358	0	358	2	0
		CORDOBA ARGE	20.0	24.0	16.0	360	88	272	0	88	272	0	134	9	0
		CORONEL MOLD	20.4	23.1	16.4	360	219	141	0	219	141	0	114	3	0
		EMBALSE	19.1	23.3	15.0	360	131	229	0	131	229	0	109	11	0
		HUINCA RENAN	18.2	23.4	13.3	323	20	340	0	20	340	0	157	13	0
		MACACHIN	17.6	22.8	12.8	308	36	324	0	36	324	0	140	19	0
		PILAR	19.0	22.8	15.0	360	47	313	0	47	313	0	286	0	0
		SANATORIO	19.9	23.6	15.8	360	92	268	0	92	268	0	166	7	0
		VICTORICA	17.8	22.9	13.0	315	86	274	0	86	274	0	98	17	0
		VILLA MARIA	20.6	24.4	16.6	360	55	305	0	55	305	0	178	12	0
	BOLI	PAROTANI	21.5	23.4	18.2	360	116	98	146	116	98	146	244	0	0
		TARIJA	20.7	22.6	17.3	360	88	119	153	88	119	153	247	0	0

VW08 AUGUST 1981

DATE 08/25/81

110

TYPIC TEMPUSTIC

LIST OF STATIONS WITH
TYPIC TROPUST.
MOISTURE REGIME

TEMPERATURE REGIME	COUNTRY CODE	NAME OF STATION	MEAN SOIL TEMPERATURE ANNUAL	SUMMER	WINTER	DAYS SOIL TEMP > 5	CUMULATIVE DAYS MCS IN ONE YEAR IS DRY	M/D	MCI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX CONS DAYS THAT MCS IS MOIST WHEN SOIL TEMP > 8	DRY AFTER SUM SOLS	MOIST AFTER WINT SOL
ISO HYPERTH.	BOLI	CAMIRI	25.4	27.1	22.4	360	126	89	145	126	89	145	220	0	0
		GUAYARMERIN	29.1	28.8	28.6	360	82	70	208	82	70	208	241	0	0
		MAGDALENA	29.4	29.2	28.6	360	82	101	177	82	101	177	246	0	0
		PUERTO SUARE	28.2	29.5	25.4	360	99	127	134	99	127	134	195	0	0
		ROBORE	28.7	30.0	26.2	360	73	90	197	73	90	197	236	0	32
	BRAZ	ANADIA	26.5	27.5	25.1	360	74	96	190	74	96	190	252	45	120
		ANADIA	25.5	26.5	24.1	360	73	97	190	73	97	190	253	45	120
		ARACAJU	27.2	27.7	26.2	360	98	95	167	98	95	167	230	45	120
		ARACAJU	28.0	28.6	26.9	360	91	68	201	91	68	201	269	75	120
		ARACAJU BRAZ	27.9	28.6	26.9	360	91	68	201	91	68	201	269	75	120
		ARAQUAI	26.6	27.4	24.6	360	150	45	165	150	45	165	199	0	0
		BARRA DO COR	28.5	28.2	27.5	360	118	79	163	118	79	163	228	0	0
		BARRA DO COR	28.4	28.2	27.5	360	118	79	163	118	79	163	228	0	0
		BOA VISTA BR	29.9	28.1	30.7	360	64	81	215	64	81	215	255	0	15
		CAMPINA GRAN	25.4	26.2	24.0	360	137	100	123	137	100	123	202	75	108
		CAMPINAGRAND	23.5	24.2	22.3	360	111	117	132	111	117	132	221	75	117
		CARCLINA	29.0	28.1	29.4	360	93	59	208	93	59	208	267	0	0
		CAXIAS	29.4	29.2	28.7	360	134	60	166	134	60	166	196	11	0
		CORUMBA	27.6	28.8	25.5	360	68	122	170	68	122	170	239	0	5
		CORUMBA BRAZ	27.5	28.8	25.5	360	69	121	170	69	121	170	238	0	5
		FERNANDO NOR	28.1	28.3	27.6	360	107	61	192	107	61	192	253	45	87
		FERNANDONORO	27.1	27.3	26.6	360	108	60	192	108	60	192	252	45	87
		FORTALEZA	27.7	28.1	27.2	360	114	62	184	114	62	184	246	15	49
		FORTALEZA	29.2	29.5	28.7	360	144	45	171	144	45	171	201	15	36
		GRAJAU	28.3	28.0	27.8	360	89	74	197	89	74	197	259	0	2
		GUARABIRA	28.1	28.8	26.8	360	130	91	139	130	91	139	198	45	94
		GUARABIRA	27.0	27.8	25.8	360	92	85	183	92	85	183	243	45	108
		IBIPETUBA	25.9	25.9	24.5	360	101	91	168	101	91	168	247	0	0
		IBIPETUBA	26.6	26.7	24.9	360	99	55	206	99	55	206	253	0	0
		IGUATU	28.1	28.8	27.2	360	166	42	152	166	42	152	183	19	17
		IMPERATRIZ	27.9	27.7	27.4	360	70	54	236	70	54	236	269	0	11
		JACOBINA	26.3	27.2	24.5	360	76	284	0	76	284	0	193	13	0
		JANUARIA	26.9	27.1	25.5	360	115	54	191	115	54	191	236	0	0
		JEQUITINHONH	27.2	28.3	25.2	360	161	40	159	161	40	159	190	0	0
		JOAO PESSOA	28.0	28.6	26.9	360	72	63	225	72	63	225	259	20	120
		MACAIBA	27.9	28.6	26.8	360	97	80	183	97	80	183	244	45	108
		MONDUBIM	27.9	28.3	27.3	360	98	65	197	98	65	197	262	15	62
		MONDUBIM	26.9	27.3	26.3	360	98	65	197	98	65	197	262	15	62
		NATAL	27.6	28.2	26.6	360	96	57	207	96	57	207	264	45	102
		NATAL	28.6	29.2	27.5	360	100	46	214	100	46	214	239	45	109
		NATAL BRAZIL	28.6	29.2	27.5	360	100	47	213	100	47	213	239	45	108
		NAZARE DO MA	27.4	28.3	26.1	360	90	78	192	90	78	192	257	45	117
		NAZAREDAMATA	25.9	26.7	24.7	360	61	103	196	61	103	196	261	18	120
		NAZARETH	26.9	27.7	25.7	360	61	103	196	61	103	196	261	18	120
		NOVA CRUZ	28.1	29.0	26.8	360	133	66	161	133	66	161	212	45	86

TYPIC TROPUSTIC

LIST OF STATIONS WITH
TYPIC TROPUST.
MOISTURE REGIME

TEMPERATURE REGIME	COUNTRY CODE	NAME OF STATION	MEAN SOIL TEMPERATURE ANNUAL	SUMMER	WINTER	DAYS SOIL TEMP > 8	CUMULATIVE DAYS MCS IN ONE YEAR IS DRY	M/D	MOI	DRY	M/D	MOI	MCS WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX CONS DAYS THAT MCS IS MOIST WHEN SOIL TEMP > 8	DRY AFTER SUM SOLS	MOIST AFTER WINT SOL
ISO HYPERTH.	BRAZ	NOVACRUZ	27.1	28.0	25.8	360	133	66	161	133	66	161	212	45	86			
		OLINDA BRAZI	28.3	29.0	27.2	360	78	55	227	78	55	227	258	45	120			
		OLINDA-RECIF	28.4	29.0	27.3	360	80	53	227	80	53	227	258	45	120			
		PALMEIRA	25.9	26.9	24.1	360	122	98	140	122	98	140	201	75	120			
		PALMEIRA DOS	26.9	27.9	25.1	360	122	98	140	122	98	140	201	75	120			
		PARATINGARIO	27.2	27.0	26.4	360	169	110	81	169	110	81	191	0	0			
		PESQUEIRA	25.1	26.1	23.3	360	107	115	138	107	115	138	216	21	93			
		PORANGABA	28.7	29.1	28.2	360	114	62	184	114	62	184	246	15	49			
		RIO BRANCO	28.2	28.0	27.4	360	169	110	81	169	110	81	191	0	0			
		SANTA RITA R	26.9	26.9	25.5	360	101	91	168	101	91	168	247	0	0			
		SAO BENTO	28.9	28.9	28.8	360	98	43	219	98	43	219	247	15	54			
		SAO LUIZ	29.2	29.2	29.0	360	106	26	228	106	26	228	254	15	63			
		SIMOESLOPES	25.6	26.7	23.8	360	119	50	191	119	50	191	227	103	120			
		TEREZINA	29.9	29.7	29.4	360	136	59	165	136	59	165	192	7	0			
		TURIACU	29.2	29.4	28.9	360	83	63	214	83	63	214	268	15	79			
		TURIACU BRAZ	29.1	29.1	28.9	360	82	64	214	82	64	214	268	15	79			
		UMBUZEIRO	24.9	25.7	23.5	360	85	100	175	85	100	175	249	75	120			
		UMBUZEIRO	24.3	25.1	22.9	360	77	113	170	77	113	170	268	45	120			
	ECUA	BABAHOYO	27.6	27.9	26.6	360	127	55	178	127	55	178	219	13	13			
		BALZAR	27.8	28.1	27.1	360	119	44	197	119	44	197	229	14	32			
		DAULE	28.3	28.6	27.6	360	155	44	161	155	44	161	197	15	0			
		GUAYAQUIL EC	27.4	27.8	26.5	360	163	36	161	163	36	161	197	15	0			
		ISABEL MARIA	27.5	28.0	26.5	360	144	48	168	144	48	168	206	14	3			
		MILAGRO	27.1	27.5	26.3	360	145	40	175	145	40	175	215	15	10			
		PICHILINGUE	27.0	27.3	26.0	360	97	66	197	97	66	197	263	0	28			
		PORTOVELO	25.7	25.6	25.4	360	103	66	191	103	66	191	257	0	26			
	PERU	QUILLABAMBA	26.7	26.3	26.6	360	84	133	143	84	133	143	255	0	0			
	SURI	PALOEMEU69	30.6	30.6	30.3	360	102	24	234	102	24	234	258	27	105			
	VENE	ACARIGUA2255	29.2	29.1	28.7	360	86	51	223	86	51	223	254	0	0			
		ACHAGUAS4303	30.1	29.8	29.7	360	119	39	202	119	39	202	228	0	0			
		APARTADE2332	29.3	29.2	28.8	360	90	46	224	90	46	224	255	0	0			
		ARAURE 2248	29.2	29.1	28.7	360	76	55	229	76	55	229	260	0	4			
		BANCOS D3435	29.7	29.5	29.2	360	122	25	213	122	25	213	238	0	0			
		BANCOS D3436	29.7	29.5	29.2	360	121	35	204	121	35	204	232	0	0			
		BARBACOA2551	29.5	29.4	28.9	360	128	61	171	128	61	171	232	0	0			
		BARRANCA2621	29.9	29.7	29.5	360	154	39	167	154	39	167	197	0	0			
		BOROTA 4015	22.4	22.3	22.2	360	57	197	106	57	197	106	192	39	61			
		CABRUTA 2401	29.5	29.1	29.1	360	124	35	201	124	35	201	229	0	0			
		CALABOZO3404	29.7	29.5	29.2	360	129	28	203	129	28	203	231	0	0			
		CAMATAGU2521	28.3	28.2	27.6	360	112	69	179	112	69	179	248	0	0			
		CAMPAMEN3533	29.4	29.1	28.9	360	137	67	156	137	67	156	198	0	0			
		CANO BEN2378	29.4	29.2	28.8	360	105	39	216	105	39	216	246	0	0			
		CARMEN D2522	28.7	28.6	28.1	360	111	64	185	111	64	185	249	0	0			
		CIUDAD P4802	27.6	27.1	27.1	360	71	65	224	71	65	224	265	0	18			
		COROZO-P3454	29.9	29.7	29.5	360	112	33	215	112	33	215	241	0	0			

VW08 AUGUST 1981

DATE 08/25/81

112

TYPIC TROPUSTIC

LIST OF STATIONS WITH
TYPIC TROPUST.
MOISTURE REGIME

TEMPERATURE REGIME	COUNTRY CODE	NAME OF STATION	MEAN SOIL TEMPERATURE ANNUAL	SUMMER	WINTER	DAYS SOIL TEMP > 8	CUMULATIVE DAYS MCS IN ONE YEAR IS DRY	M/D	MCI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX CONS DAYS THAT MCS IS MOIST WHEN SOIL TEMP > 8	DRY AFTER SUM SOLS	MOIST AFTER WINT SOL
ISO HYPERTH.	VENE	CUNAVICH4465	30.1	29.7	29.8	360	142	25	193	142	25	193	218	0	0
		DOLORES 3276	30.0	29.8	29.7	360	101	55	204	101	55	204	259	0	0
		EL CABAL3417	29.8	29.6	29.4	360	125	93	142	125	93	142	228	0	0
		EL CEDRA4298	30.1	29.8	29.8	360	104	50	206	104	50	206	235	0	0
		EL CUCHA3286	29.8	29.6	29.5	360	111	44	205	111	44	205	231	0	0
		EL MANGU3416	29.8	29.6	29.3	360	122	37	201	122	37	201	227	0	0
		EL MANGU3718	28.6	28.3	28.0	360	156	68	136	156	68	136	186	0	0
		EL OREGA4908	28.7	28.2	28.3	360	76	132	152	76	132	152	266	0	0
		EL REAL 3261	29.7	29.5	29.3	360	92	55	213	92	55	213	268	0	0
		EL SAMAN4202	30.0	29.8	29.7	360	113	42	205	113	42	205	232	0	0
		EL SOMBR2473	29.5	29.3	28.9	360	116	29	215	116	29	215	244	0	0
		EL TIGRE3716	28.3	28.1	27.7	360	117	54	189	117	54	189	226	0	0
		EL YAGUA4301	30.0	29.7	29.7	360	105	55	200	105	55	200	227	0	0
		GUANARIT3228	29.9	29.7	29.5	360	107	39	214	107	39	214	241	0	0
		GUAYABAL3415	30.1	29.8	29.7	360	126	64	170	126	64	170	226	0	0
		JOBALITO3332	29.8	29.6	29.3	360	111	41	208	111	41	208	236	0	0
		LA CANDE3438	29.8	29.6	29.4	360	118	65	177	118	65	177	234	0	0
		LA CANDE4665	29.3	28.8	29.0	360	91	49	220	91	49	220	254	0	0
		LA CAPIL3333	29.5	29.3	29.1	360	100	43	217	100	43	217	244	0	0
		LA HORNA4711	29.6	29.2	29.1	360	115	69	176	115	69	176	245	0	0
		LA PARAG5887	28.3	27.7	27.9	360	84	78	198	84	78	198	265	0	3
		LA TRINI4201	29.9	29.6	29.8	360	94	58	208	94	58	208	266	0	0
		LA VITER4666	29.1	28.7	28.7	360	135	51	174	135	51	174	209	0	0
		LAS MARG6373	25.5	25.5	24.8	360	85	78	197	85	78	197	258	0	2
		LIBERTAD3274	29.8	29.6	29.4	360	95	57	203	95	57	208	265	0	0
		LOS HICO4662	28.9	28.5	28.4	360	97	68	195	97	68	195	263	0	0
		LOS NARA3403	29.7	29.6	29.2	360	127	28	205	127	28	205	233	0	0
		LUZ 3262	29.6	29.4	29.3	360	129	27	204	129	27	204	231	0	0
		MAPIRE 2620	29.8	29.4	29.3	360	99	72	189	99	72	189	250	0	0
		MATURIN 2826	29.6	29.4	28.8	360	89	46	225	89	46	225	258	0	30
		MIJAGUAL3253	29.4	29.3	29.1	360	108	43	209	108	43	209	242	0	0
		MIJAGUAL3254	29.8	29.6	29.4	360	95	51	214	95	51	214	242	0	0
		MOITACO 3751	29.7	29.3	29.2	360	151	40	169	151	40	169	199	0	0
		NUTRIAS 3295	29.9	29.7	29.6	360	102	37	221	102	37	221	248	0	0
		OBISPOS 3159	29.5	29.4	29.2	360	97	47	216	97	47	216	244	0	0
		PALENQUE3502	29.7	29.5	29.2	360	138	57	165	138	57	165	222	0	0
		PALMARIT4139	29.9	29.7	29.7	360	93	58	209	93	58	209	267	0	0
		PARIAGUA3714	28.5	28.2	27.9	360	99	64	197	99	64	197	261	0	2
		PIRITU 2267	29.0	28.9	28.5	360	89	47	224	89	47	224	257	0	0
		PUERTO L3214	29.7	29.6	29.3	360	102	41	217	102	41	217	244	0	0
		SABANETA3212	29.3	29.2	28.9	360	91	51	218	91	51	218	248	0	0
		SAN ANTO3505	29.3	29.0	28.8	360	134	86	140	134	86	140	198	0	0
		SAN DIEG3762	29.2	28.9	28.7	360	135	49	176	135	49	176	207	0	0
		SAN FERN4404	29.4	27.8	29.7	360	119	37	204	119	37	204	231	0	0
		SAN HIPO3222	29.3	29.2	28.9	360	97	43	220	97	43	220	251	0	0

LIST OF STATIONS WITH
TYPIC TROPUST.
MOISTURE REGIME

TEMPERATURE REGIME	COUNTRY CODE	NAME OF STATION	MEAN SOIL TEMPERATURE ANNUAL	SUMMER	WINTER	DAYS SOIL TEMP > 8	CUMULATIVE DAYS MCS IN YEAR IS DRY	M/D MCI	ONE	WHEN SOIL TEMP >5 DRY	M/D MOI		MAX CONS DAYS THAT MCS IS MOIST WHEN SOIL TEMP > 8	DRY AFTER SUM SCLS	MOIST AFTER WINT SOL
ISO HYPERTH.	VENE	SAN JUAN4406	30.0	29.7	29.7	360	145	25	190	145	25	190	215	0	0
		SAN MIGU3840	29.3	28.9	28.7	360	128	52	180	128	52	180	220	0	0
		SAN PEDR4002	26.6	26.4	26.3	360	110	121	129	110	121	129	206	75	84
		SAN PEDR4800	28.4	27.9	28.1	360	84	86	190	84	86	190	263	0	0
		SAN PEDR5500	30.0	29.4	29.9	360	107	37	216	107	37	216	242	0	0
		SAN SEBA2409	28.2	28.2	27.6	360	110	64	186	110	64	186	250	0	0
		SAN SILV3173	29.6	29.5	29.3	360	113	40	207	113	40	207	233	0	0
		SANTA LU3283	30.1	29.9	29.8	360	105	49	206	105	49	206	234	0	0
		SANTA RI2413	29.4	29.1	29.0	360	142	57	161	142	57	161	218	0	0
		SANTA RO3263	29.6	29.4	29.2	360	109	39	212	109	39	212	238	0	0
		SARARE 2229	28.7	28.7	28.2	360	77	53	230	77	53	230	265	0	5
		SUCRE 3305	29.8	29.6	29.3	360	110	41	209	110	41	209	239	0	0
		TINACO 2336	29.4	29.3	28.9	360	89	45	226	89	45	226	256	0	0
		TORENO-S3156	29.9	29.7	29.5	360	110	41	209	110	41	209	236	0	0
		TORUNOS 3158	29.6	29.4	29.2	360	87	56	217	87	56	217	246	0	0
		YUCA-CAS3137	29.0	28.9	28.6	360	108	39	213	108	39	213	242	0	0
		ZARAZA 2677	30.1	29.9	29.5	360	129	58	173	129	58	173	208	0	0
ISO MESIC	BOLI	ALTO (EL)	11.2	11.4	10.2	268	0	97	263	0	97	263	268	0	68
		PUNA	14.7	15.6	12.4	360	101	129	130	101	129	130	259	0	0
		VACAS	13.8	15.2	11.3	305	19	106	235	19	106	235	184	0	70
	PERU	ARMA	12.3	12.0	12.5	360	98	102	160	98	102	160	262	15	25
ISO THERMIC	BOLI	ANGOSTURA (L	18.4	19.2	15.8	360	118	94	148	118	94	148	242	0	0
		COCHABAMBA	20.7	21.1	18.5	360	171	90	99	171	90	99	189	0	0
		POCOATA	16.8	18.5	14.0	360	129	45	186	129	45	186	231	15	21
		TIRAQUE	15.2	15.6	13.8	360	122	76	162	122	76	162	238	0	0
	CHIL	VALPARAISO	16.9	19.0	15.2	360	117	69	174	117	69	174	243	102	120
	PERU	ABANCAY	19.2	19.0	18.5	360	97	119	144	97	119	144	263	0	9
	VENE	LA PLAYA3066	21.6	21.5	21.3	360	28	220	112	28	220	112	202	9	67
		LAS TAPI3132	21.9	21.8	21.6	360	40	239	81	40	239	81	206	6	36

VW08 AUGUST 1981

DATE 08/25/81

114

TYPIC TROPUSTIC

LIST OF STATIONS WITH
TYPIC UDIC
MOISTURE REGIME

TEMPERATURE REGIME	COUNTRY CODE	NAME OF STATION	MEAN SOIL TEMPERATURE ANNUAL	SUMMER	WINTER	DAYS SOIL TEMP > 8	CUMULATIVE DAYS MCS IN ONE YEAR IS DRY	M/D	MCI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX CONS DAYS THAT MCS IS WHEN SOIL TEMP > 8	DRY AFTER SUM SOLS	MOIST AFTER WINT SOL
CRYIC	PERU	AGNOCOCHA	5.3	5.7	4.4	0	0	0	360	0	0	0	0	0	120
		CASAPALCA	5.0	5.1	4.6	0	0	0	360	0	0	0	0	0	120
		CAYLLONA	6.1	7.0	4.1	0	0	0	360	0	0	61	0	0	120
		CERRO DE PAS	5.0	5.1	4.6	0	0	0	360	0	0	0	0	0	120
		CUENCA-RIO-V	6.6	7.8	4.4	0	0	0	360	0	0	150	0	0	120
		IMATA	5.5	6.5	4.4	0	0	0	360	0	0	0	0	0	120
		PACOCOCHA	6.9	7.0	6.2	0	0	0	360	0	0	51	0	0	120
		PARON	5.5	6.5	4.4	0	0	0	360	0	0	0	0	0	120
		PULTOC	6.6	6.9	5.8	0	0	0	360	0	0	360	0	0	120
		SANTA ANA	7.3	8.2	5.8	0	0	0	360	0	0	172	0	0	120
HYPERTH.	ARGT	CONCEPCION	23.7	27.1	20.4	360	0	17	343	0	17	343	360	0	120
		CONCEPCION S	23.4	26.7	20.2	360	0	0	360	0	0	360	360	0	120
		CORRIENTES A	24.1	27.7	20.8	360	0	0	360	0	0	360	360	0	120
		ESQUINA	22.8	26.7	19.0	360	0	2	358	0	2	358	360	0	120
		FORMOSA ARGE	24.5	27.9	21.1	360	0	0	360	0	0	360	360	0	120
		GOYA	23.1	26.9	19.6	360	0	0	360	0	0	360	360	0	120
		LORETO	22.8	26.1	19.7	360	0	0	360	0	0	360	360	0	120
		MERCEDES	22.2	26.3	18.5	360	0	0	360	0	0	360	360	0	120
		POSADAS	23.4	26.7	20.2	360	0	0	360	0	0	360	360	0	120
		PRES.R.S.PEN	23.5	27.0	20.0	360	0	17	343	0	17	343	360	0	120
		PRESIDENCIA	23.7	27.2	20.2	360	0	0	360	0	0	360	360	0	120
		SAN FRAN LAI	24.3	27.7	20.9	360	0	0	360	0	0	360	360	0	120
		SAN LORENZO	23.7	27.1	20.4	360	0	0	360	0	0	360	360	0	120
		SANTO TOME	23.4	26.7	20.2	360	0	0	360	0	0	360	360	0	120
		VERA	22.3	26.3	18.7	360	0	0	360	0	0	360	360	0	120
	BOLI	BERMEJO	25.2	28.1	21.0	360	0	23	337	0	23	337	360	0	91
	BRAZ	PORTO ALEGRE	22.0	25.1	19.0	360	0	0	360	0	0	360	360	0	120
		PORTO ALEGRE	22.0	25.1	18.9	360	0	0	360	0	0	360	360	0	120
		SAO LUIZ GON	22.3	25.7	19.2	360	0	0	360	0	0	360	360	0	120
		URUGUAIANA	22.3	26.2	18.7	360	0	0	360	0	0	360	360	0	120
	COLO	PIJAO	41.4	81.8	35.6	360	0	15	345	0	15	345	360	0	120
	PARA	ASUNCION	26.6	29.8	23.3	360	0	0	360	0	0	360	360	0	120
		ASUNCION PAR	26.2	29.2	23.1	360	0	0	360	0	0	360	360	0	120
		ENCARNACION	24.2	27.6	21.1	360	0	0	360	0	0	360	360	0	120
		PILAR	25.0	28.6	21.6	360	0	5	355	0	5	355	360	0	120
		PUERTO-CASAD	27.4	29.8	24.6	360	0	0	360	0	0	360	360	0	120
		PUERTO-PRESI	24.5	27.5	21.3	360	0	0	360	0	0	360	360	0	120
		VILLARRICA	25.0	28.1	22.1	360	0	0	360	0	0	360	360	0	120
ISO HYPERTH.	BOLI	ALCOCHE	27.1	27.8	25.6	360	0	6	354	0	6	354	360	0	69
		APOLO	22.5	22.9	21.3	360	0	0	360	0	0	360	360	0	120
		CHULUMANI	22.9	23.5	21.5	360	0	0	360	0	0	360	360	0	120
		RURRENABAQUE	28.1	28.9	26.5	360	0	8	352	0	8	352	360	0	103
		SAN BORJA	27.7	28.7	26.6	360	0	14	346	0	14	346	360	0	91
	BRAZ	AQUIDAUANA	26.5	28.0	24.2	360	0	0	360	0	0	360	360	0	120
		ARAXA	22.3	23.1	20.5	360	0	0	360	0	0	360	360	0	120

LIST OF STATIONS WITH
TYPIC UDIC
MOISTURE REGIME

TEMPERATURE REGIME	COUNTRY CODE	NAME OF STATION	MEAN SOIL TEMPERATURE ANNUAL	SUMMER	WINTER	DAYS SOIL TEMP > 8	CUMULATIVE DAYS MCS IN ONE YEAR IS DRY	M/D	MCI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX CONS DAYS THAT MCS IS MOIST WHEN SOIL TEMP > 8	DRY AFTER SUM SOLS	MOIST AFTER WINT SOL
ISO HYPERTH.	BRAZ	AVARE	22.1	23.8	20.3	360	0	0	360	0	0	360	360	0	120
		BANDEIRANTES	23.1	24.7	21.1	360	0	0	360	0	0	360	360	0	120
		BANGU	25.7	27.6	23.8	360	0	0	360	0	0	360	360	0	120
		BARCELOS	28.5	28.7	28.2	360	0	0	360	0	0	360	360	0	120
		BARREIROS	26.3	26.9	25.5	360	0	0	360	0	0	360	360	0	120
		BARREIROS	25.3	25.9	24.5	360	0	0	360	0	0	360	360	0	120
		BELA VISTA	25.1	27.0	22.3	360	0	0	360	0	0	360	360	0	120
		BELEM	28.4	28.3	28.5	360	0	0	360	0	0	360	360	0	120
		BELEM BRAZIL	28.4	28.3	28.5	360	0	0	360	0	0	360	360	0	120
		CAMPO GRANDE	24.9	26.1	23.1	360	0	0	360	0	0	360	360	0	120
		CARAVELAS	25.9	26.6	24.3	360	0	0	360	0	0	360	360	0	120
		CARAVELAS	25.0	26.1	23.2	360	0	0	360	0	0	360	360	0	120
		CARAVELAS BA	26.0	27.2	24.4	360	0	0	360	0	0	360	360	0	120
		CARMO	24.3	25.9	22.3	360	0	25	335	0	25	335	360	0	61
		COARI	28.0	27.8	28.1	360	0	0	360	0	0	360	360	0	120
		COARI BRAZIL	28.0	27.8	28.1	360	0	0	360	0	0	360	360	0	120
		CONCEICAO BA	26.3	27.5	24.8	360	0	0	360	0	0	360	360	0	120
		CONCEICAO MA	22.7	24.1	20.3	360	0	5	355	0	5	355	360	0	100
		CRUZEIRO DO	26.7	26.8	26.1	360	0	0	360	0	0	360	360	0	120
		CRUZEIRC DO	26.9	26.8	26.1	360	0	0	360	0	0	360	360	0	120
		DEDDORO	24.7	26.3	22.8	360	0	0	360	0	0	360	360	0	120
		ENGENHO DE D	25.7	27.3	23.9	360	0	0	360	0	0	360	360	0	120
		ESCADA	24.4	25.0	23.6	360	0	10	350	0	10	350	360	0	120
		FLORIANOPOLI	22.9	25.2	20.6	360	0	0	360	0	0	360	360	0	120
		FRANCA	22.5	23.3	21.0	360	0	7	353	0	7	353	360	0	68
		GRAMINHA	22.2	23.4	20.0	360	0	0	360	0	0	360	360	0	120
		GUARAMIRANGA	23.1	23.5	22.5	360	0	26	334	0	26	334	360	0	120
		GUARAMIRANGA	22.1	22.4	21.5	360	0	0	360	0	0	360	360	0	120
		JUIZ DE FORA	22.1	23.9	19.6	360	0	0	360	0	0	360	360	0	120
		LAGUNA	22.1	24.5	19.8	360	0	0	360	0	0	360	360	0	120
		MACAE	25.1	26.6	23.5	360	0	0	360	0	0	360	360	0	120
		MANICORE	29.1	29.0	29.0	360	0	13	347	0	13	347	360	0	45
		MAR DE HESPA	23.0	24.8	20.5	360	0	0	360	0	0	360	360	0	120
		MENDES	22.9	24.6	21.1	360	0	0	360	0	0	360	360	0	120
		MURIAE	25.0	26.6	22.7	360	0	23	337	0	23	337	360	0	61
		NITEROI	25.5	27.5	23.6	360	0	0	360	0	0	360	360	0	120
		ONDINA	27.5	28.2	26.5	360	0	12	348	0	12	348	360	0	120
		PAQUETA	25.5	27.4	23.8	360	0	0	360	0	0	360	360	0	120
		PENHA	25.1	26.8	23.7	360	0	0	360	0	0	360	360	0	120
		PINHEIROS	23.6	25.2	22.4	360	0	5	355	0	5	355	360	0	70
		PIRACICABA	23.2	24.8	20.8	360	0	0	360	0	0	360	360	0	120
		PRACA 15 NOV	25.7	27.2	24.3	360	0	2	358	0	2	358	360	0	120
		REZENDE	23.5	25.1	21.3	360	0	0	360	0	0	360	360	0	120
		RIO DE JANEI	25.7	27.2	24.3	360	0	0	360	0	0	360	360	0	120
		SALVADOR	27.3	28.0	26.2	360	0	13	347	0	13	347	360	0	120

116

TYPIC UDIC

LIST OF STATIONS WITH
TYPIC UDIC
MOISTURE REGIME

TEMPERATURE REGIME	COUNTRY CODE	NAME OF STATION	MEAN SOIL TEMPERATURE ANNUAL	SUMMER	WINTER	DAYS SOIL TEMP > 8	CUMULATIVE DAYS MCS IN ONE YEAR IS DRY	M/D	MCI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX CONS DAYS THAT MCS IS MOIST WHEN SOIL TEMP > 8	DRY AFTER SUM SOLS	MOIST AFTER WINT SOL
ISO HYPERTH.	BRAZ	SALVADOR	26.3	27.0	25.3	360	0	0	360	0	0	360	360	0	120
		SALVADOR BRA	27.5	28.2	26.5	360	0	12	348	0	12	348	360	0	120
		SANTA CRUZ	25.4	27.1	23.9	360	0	0	360	0	0	360	360	0	120
		SAO BENTA DO	26.6	27.5	25.3	360	0	0	360	0	0	360	360	0	120
		SAO FRANCISC	26.8	27.7	25.5	360	0	13	347	0	13	347	360	0	120
		SAO PAULO MU	24.5	26.1	22.2	360	0	0	360	0	0	360	360	0	120
		SAOFRANCISCO	25.6	26.5	24.3	360	0	0	360	0	0	360	360	0	120
		SENA MADUREI	27.1	27.6	26.2	360	0	4	356	0	4	356	360	0	71
		SITIO DA BAT	25.0	26.9	22.9	360	0	0	360	0	0	360	360	0	120
		TRES LAGOAS	25.6	27.2	23.1	360	0	8	352	0	8	352	360	0	98
		UBERABA	24.4	24.8	22.7	360	0	25	335	0	25	335	360	0	55
		VALENCIA	22.7	24.4	20.5	360	0	0	360	0	0	360	360	0	120
		VASSOURAS	23.2	24.9	21.4	360	0	0	360	0	0	360	360	0	120
		VITORIA	26.0	27.3	24.6	360	0	0	360	0	0	360	360	0	120
	COLO	ALCALA	23.3	23.8	23.2	360	0	0	360	0	0	360	360	0	120
		BLONAY-CHINA	22.1	22.2	21.6	360	0	0	360	0	0	360	360	0	120
		CACHIPAY	22.3	23.3	20.0	360	0	27	333	0	27	333	360	0	120
		CHINCHINA (C	23.8	24.0	23.6	360	0	0	360	0	0	360	360	0	120
		DOLORES	23.5	23.7	23.3	360	0	0	360	0	0	360	360	0	120
		GIGANTE	22.3	22.3	22.1	360	0	0	360	0	0	360	360	0	120
		IBAGUE	23.0	23.3	22.7	360	0	0	360	0	0	360	360	0	120
		LA VIRGINIA	25.6	25.8	25.3	360	0	0	360	0	0	360	360	0	120
		LIBANO	22.1	22.5	21.8	360	0	0	360	0	0	360	360	0	120
		MANZANARES	22.8	23.2	22.2	360	0	0	360	0	0	360	360	0	120
		MEDELLIN	24.0	24.1	23.9	360	0	0	360	0	0	360	360	0	120
		MIRANDA	25.4	25.7	25.6	360	0	0	360	0	0	360	360	0	120
		PALESTINA (F	25.4	25.2	25.2	360	0	0	360	0	0	360	360	0	120
		PALESTINA (G	25.3	25.4	25.0	360	0	0	360	0	0	360	360	0	120
		PALMIRA	26.3	26.1	26.6	360	0	0	360	0	0	360	360	0	120
		RESTREPO	22.5	22.7	22.3	360	0	0	360	0	0	360	360	0	120
		SALAZAR	24.2	24.5	23.5	360	0	0	360	0	0	360	360	0	120
		TIBALUY	22.2	22.3	22.0	360	0	0	360	0	0	360	360	0	120
		TRUJILLO	23.4	23.8	23.2	360	0	0	360	0	0	360	360	0	120
		VENECIA	22.7	23.0	22.5	360	0	0	360	0	0	360	360	0	120
	ECUA	SAN LORENZO	28.4	28.2	28.4	360	0	0	360	0	0	360	360	0	120
		SANTO DOMING	24.5	24.4	24.3	360	0	0	360	0	0	360	360	0	120
		TIPUTINI	27.9	28.3	27.4	360	0	0	360	0	0	360	360	0	120
	GUIA	CAYENNE/ROCH	28.1	27.8	27.9	360	0	24	336	0	24	336	360	0	120
		MARIPASOULA	27.6	27.4	27.3	360	0	4	356	0	4	356	360	0	120
		ST-LAURENT	29.1	29.1	28.7	360	0	16	344	0	16	344	360	0	120
	GUYA	GEORGETOWN G	29.5	29.3	29.0	360	0	0	360	0	0	360	360	0	120
	PERU	JUANJU	29.0	29.4	28.6	360	0	27	333	0	27	333	360	0	45
		PUCALLAPA	29.4	29.7	29.0	360	0	27	333	0	27	333	360	0	39
		SAN RAMON	25.0	25.2	24.7	360	0	0	360	0	0	360	360	0	120
	SURI	MARIENBURG73	29.4	29.3	29.2	360	0	18	342	0	18	342	360	0	71

LIST OF STATIONS WITH
TYPIC UDIC
MOISTURE REGIME

TEMPERATURE REGIME	COUNTRY CODE	NAME OF STATION	MEAN SOIL TEMPERATURE ANNUAL	SUMMER	WINTER	DAYS SOIL TEMP > 8	CUMULATIVE DAYS MCS IN ONE YEAR IS DRY	M/D	MCI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX CONS DAYS THAT MCS IS MOIST WHEN SOIL TEMP > 8	DRY AFTER SUM SOLS	MOIST AFTER WINT SOL
ISO HYPERTH.	SURI	PARAMARIBO	29.7	29.5	29.2	360	0	13	347	0	13	347	360	0	120
		STOELMANSE61	29.4	29.2	28.6	360	0	16	344	0	16	344	360	0	119
		TAFELBERG	28.3	28.2	27.8	360	0	22	338	0	22	338	360	0	120
		ZANDERIJ AIR	28.1	27.9	27.7	360	0	8	352	0	8	352	360	0	120
	VENE	AGUAITA-1582	25.9	25.9	25.2	360	0	0	360	0	0	360	360	0	120
		ALTAMIRA3149	25.1	25.0	24.7	360	0	0	360	0	0	360	360	0	120
		APONGUA06936	24.4	23.5	24.3	360	0	0	360	0	0	360	360	0	120
		BOROTA 4071	22.4	22.3	22.2	360	0	7	353	0	7	353	360	0	120
		BRAMON-E4041	24.1	23.9	23.9	360	0	0	360	0	0	360	360	0	120
		CARACOLI3025	30.4	30.3	30.1	360	0	0	360	0	0	360	360	0	120
		COLON 8091	25.5	25.3	25.2	360	0	0	360	0	0	360	360	0	120
		COLON 8092	26.2	26.0	25.9	360	0	0	360	0	0	360	360	0	120
		COLON-ES3091	25.9	25.7	25.7	360	0	0	360	0	0	360	360	0	120
		COLON-PR3092	25.9	25.8	25.7	360	0	0	360	0	0	360	360	0	120
		CUICAS 2125	24.5	24.5	24.0	360	0	0	360	0	0	360	360	0	120
		EL GUAPO1682	29.8	29.7	29.1	360	0	19	341	0	19	341	360	0	100
		EL GUAYA3034	30.5	30.5	30.3	360	0	18	342	0	18	342	360	0	57
		EL JUNCO4028	23.0	22.8	22.8	360	0	0	360	0	0	360	360	0	120
		EL MESON3108	23.0	22.9	22.7	360	0	0	360	0	0	360	360	0	120
		EL PALMA4906	28.5	28.1	27.9	360	0	0	360	0	0	360	360	0	120
		EL RECRE4024	24.5	24.4	24.3	360	0	16	344	0	16	344	360	0	89
		EL RON 4040	22.8	22.6	22.6	360	0	0	360	0	0	360	360	0	120
		ESTACION3081	29.2	29.0	29.0	360	0	0	360	0	0	360	360	0	120
		GUARINUM9412	29.7	28.5	30.4	360	0	0	360	0	0	360	360	0	120
		GUATOPO 2505	25.9	25.8	25.2	360	0	20	340	0	20	340	360	0	115
		HDA. ALT4032	24.7	24.6	24.5	360	0	0	360	0	0	360	360	0	120
		HDA. LA 4053	25.4	25.2	25.2	360	0	0	360	0	0	360	360	0	120
		HDA.EL D4047	25.2	25.1	25.0	360	0	0	360	0	0	360	360	0	120
		HDA.LA G9054	25.5	25.3	25.3	360	0	0	360	0	0	360	360	0	120
		KAVANAYE6933	22.7	21.9	22.6	360	0	0	360	0	0	360	360	0	120
		LA ESMER8602	29.7	28.3	30.4	360	0	0	360	0	0	360	360	0	120
		LA MULER4061	23.7	23.6	23.5	360	0	0	360	0	0	360	360	0	120
		LA PUNTA3045	22.6	22.5	22.3	360	0	20	340	0	20	340	360	0	85
		LA SCLIT3000	30.6	30.6	30.3	360	0	0	360	0	0	360	360	0	120
		LAS DANT4060	25.4	25.2	25.2	360	0	0	360	0	0	360	360	0	120
		MESA BCL3052	25.1	24.9	24.7	360	0	0	360	0	0	360	360	0	120
		MESA DE 3082	27.9	27.7	27.6	360	0	0	360	0	0	360	360	0	120
		PUENTE E8054	29.7	29.6	29.4	360	0	0	360	0	0	360	360	0	120
		PUENTE P8043	30.3	30.3	30.1	360	0	13	347	0	13	347	360	0	45
		PUENTE S4083	26.4	25.4	26.6	360	0	0	360	0	0	360	360	0	120
		SAN JOSE4005	22.2	22.0	21.9	360	0	4	356	0	4	356	360	0	101
		SAN PEDR8056	24.2	24.0	23.8	360	0	10	350	0	10	350	360	0	120
		SANTA EL7947	24.2	23.5	24.3	360	0	0	360	0	0	360	360	0	120
		SANTA MA6701	26.5	25.6	26.7	360	0	0	360	0	0	360	360	0	120
		TOVAR-AL3067	24.9	24.8	24.6	360	0	6	354	0	6	354	360	0	99

LIST OF STATIONS WITH
TYPIC UDIC
MOISTURE REGIME

TEMPERATURE REGIME	COUNTRY CODE	NAME OF STATION	MEAN SOIL TEMPERATURE ANNUAL	SUMMER	WINTER	DAYS SOIL TEMP > 8	CUMULATIVE DAYS MCS IN ONE YEAR IS DRY	M/D	MCI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX CONS DAYS THAT MCS IS MOIST WHEN SOIL TEMP > 8	DRY AFTER SUM SOLS	MOIST AFTER WINT SOL
ISO HYPERTH.	VENE	UMUQUENA8064	28.3	28.1	28.0	360	0	0	360	0	0	360	360	0	120
		UMUQUENA8065	30.1	29.9	29.8	360	0	19	341	0	19	341	360	0	120
		URIMAN 6931	27.7	26.7	27.7	360	0	0	360	0	0	360	360	0	120
		WONKEN 7906	24.2	23.3	24.3	360	0	0	360	0	0	360	360	0	120
		ZEA-LA F3142	25.0	24.9	24.7	360	0	0	360	0	0	360	360	0	120
ISO MESIC	ARGT	USHUAIA	8.2	10.3	5.6	120	0	0	360	0	0	199	120	0	120
	BOLI	BELEN (EL)	9.5	10.6	7.3	162	0	0	360	0	0	267	162	0	120
		CHAPISIRCA	10.0	10.4	8.6	117	0	0	360	0	0	360	117	0	120
		COPACABANA	13.9	14.8	12.3	360	0	0	360	0	0	360	360	0	120
		GUAQUI	10.0	11.0	8.0	179	0	0	360	0	0	284	179	0	120
	CHIL	FRUTILLAR	12.9	15.5	10.6	250	0	0	360	0	0	360	250	0	120
		MAULLIN	12.2	14.3	10.4	249	0	0	360	0	0	360	249	0	120
		PUERTOMONTT	13.5	15.9	11.3	288	0	0	360	0	0	360	288	0	120
		PUERTOSAAVED	14.4	16.5	12.9	360	0	3	357	0	3	357	360	0	120
		PUNTAGALERA	13.6	15.1	12.3	360	0	0	360	0	0	360	360	0	120
		QUELLON	12.6	14.7	10.6	257	0	0	360	0	0	360	257	0	120
		SANPABLO	12.4	14.9	10.0	239	0	0	360	0	0	360	239	0	120
	COLO	USME	12.5	12.2	12.3	360	0	0	360	0	0	360	360	0	120
	ECUA	ANGEL (EL)	14.2	13.5	14.3	360	0	0	360	0	0	360	360	0	120
		COTOPAXI	10.1	10.3	9.8	33	0	0	360	0	0	360	33	0	120
		PILLARO	14.2	14.2	13.5	360	0	0	360	0	0	360	360	0	120
		SAN GABRIEL	14.2	13.2	14.6	360	0	0	360	0	0	360	360	0	120
		TISALEO	13.9	14.2	13.1	360	0	0	360	0	0	360	360	0	120
		TULCAN	13.5	12.7	13.8	360	0	0	360	0	0	360	360	0	120
	PERU	CHUQUIBAMBIL	9.5	10.3	7.3	165	0	0	360	0	0	270	165	0	120
		HUANCAYO	13.8	14.2	12.7	360	0	0	360	0	0	360	360	0	120
		LA-OROYA	11.2	11.6	10.0	269	0	0	360	0	0	360	269	0	120
		LAMPAS-BAJO	8.4	8.8	7.3	0	0	0	360	0	0	266	0	0	120
		PACHACHACA	13.3	13.5	12.5	360	0	0	360	0	0	360	360	0	120
		PUNO-GR-SALC	10.5	11.2	9.0	207	0	11	349	0	11	349	207	0	120
	VENE	CENDE 2148	12.4	12.4	11.8	360	0	0	360	0	0	360	360	0	120
		MESA DE 3042	14.6	14.5	14.1	360	0	0	360	0	0	360	360	0	120
		MUCUCHIE3121	13.5	13.5	13.0	360	0	9	351	0	9	351	360	0	96
		PARAMO E3070	14.1	14.0	13.7	360	0	0	360	0	0	360	360	0	120
		PARAMO E8066	11.7	11.6	11.3	360	0	0	360	0	0	360	360	0	120
		PARAMO L3027	12.0	11.9	11.5	360	0	0	360	0	0	360	360	0	120
ISO THERMIC	BOLI	ANZALDO	18.9	18.6	17.4	360	0	0	360	0	0	360	360	0	120
		IRUPANA	21.6	21.9	20.4	360	0	0	360	0	0	360	360	0	120
	BRAZ	BARBACENA	19.9	21.3	18.2	360	0	0	360	0	0	360	360	0	120
		BARREIRO ARA	21.4	22.5	19.2	360	0	0	360	0	0	360	360	0	120
		BONSUCESSO	21.9	23.0	20.1	360	0	0	360	0	0	360	360	0	120
		CACHOEIRA DO	20.9	22.0	19.0	360	0	0	360	0	0	360	360	0	120
		CAMBUQUIRA	21.7	22.9	19.8	360	0	0	360	0	0	360	360	0	120
		CAXAMBU	21.1	22.5	18.7	360	0	0	360	0	0	360	360	0	120
		CORDEIRO	20.4	22.3	17.9	360	0	0	360	0	0	360	360	0	120

LIST OF STATIONS WITH
TYPIC UDIC
MOISTURE REGIME

TEMPERATURE REGIME	COUNTRY CODE	NAME OF STATION	MEAN SOIL TEMPERATURE ANNUAL	SUMMER	WINTER	DAYS SOIL TEMP > 8	CUMULATIVE DAYS MCS IN ONE YEAR IS DRY	M/D MOI	WHEN SOIL TEMP >5 DRY	M/D MOI	MAX CONS DAYS THAT MCS IS MOIST WHEN SOIL TEMP > 8	DRY AFTER SUM SOLS	MOIST AFTER WINT SOL
ISO THERMIC	BRAZ	DIAMANTINA	20.8	21.9	19.1	360	0	9 351	0	9 351	360	0	96
		ITAJUBA	21.8	23.4	19.4	360	0	0 360	0	0 360	360	0	120
		LAVRAS	21.8	23.2	19.6	360	0	0 360	0	0 360	360	0	120
		MADALENA	22.0	23.6	19.9	360	0	0 360	0	0 360	360	0	120
		MIRANTE SANT	20.2	21.9	18.2	360	0	0 360	0	0 360	360	0	120
		MONTE SERRAT	20.7	22.4	18.6	360	0	0 360	0	0 360	360	0	120
		MUZAMBINHO	21.1	22.4	19.0	360	0	0 360	0	0 360	360	0	120
		NOVA FRIBURG	20.4	22.3	17.9	360	0	0 360	0	0 360	360	0	120
		OURO FINO	21.5	22.7	19.5	360	0	0 360	0	0 360	360	0	120
		OURO PRETO	19.9	21.3	17.8	360	0	0 360	0	0 360	360	0	120
		PASSO QUATRO	20.5	22.3	17.8	360	0	0 360	0	0 360	360	0	120
		PLIVEIRA	21.8	23.0	19.8	360	0	4 356	0	4 356	360	0	71
		POGOS DE CAL	20.2	21.7	17.8	360	0	0 360	0	0 360	360	0	120
		SANTOS DUMON	20.9	22.5	19.1	360	0	0 360	0	0 360	360	0	120
		SAO JOAO DEL	21.7	23.3	19.6	360	0	0 360	0	0 360	360	0	120
		SAO JOAO EVA	21.6	23.0	19.1	360	0	0 360	0	0 360	360	0	120
		SAO JOAO MAR	22.0	24.0	19.5	360	0	0 360	0	0 360	360	0	120
		SAO LOURENCO	20.9	22.8	17.9	360	0	0 360	0	0 360	360	0	120
		SAO PAULO	20.9	22.7	18.9	360	0	0 360	0	0 360	360	0	120
		SAO PAULO BR	21.3	23.1	19.2	360	0	0 360	0	0 360	360	0	120
		TERESOPOLIS	20.2	22.2	17.8	360	0	0 360	0	0 360	360	0	120
		TRES CORACOE	21.7	23.4	19.2	360	0	0 360	0	0 360	360	0	120
		VICOSA	21.3	23.1	18.7	360	0	0 360	0	0 360	360	0	120
	CHIL	CONTULMO	15.5	18.2	13.2	360	0	0 360	0	0 360	360	0	120
		ISLAMOCHA	15.2	17.2	13.6	360	0	14 346	0	14 346	360	0	120
	COLO	ANOLAIMA	21.3	21.3	21.4	360	0	0 360	0	0 360	360	0	120
		BOGOTA	15.7	15.5	15.5	360	0	0 360	0	0 360	360	0	120
		CONSACA	21.9	22.3	21.4	360	0	0 360	0	0 360	360	0	120
		FLORIDA-PCPA	19.8	19.9	19.7	360	0	0 360	0	0 360	360	0	120
		LAURELES	17.3	16.9	17.5	360	0	0 360	0	0 360	360	0	120
		MONIQUIRA	21.5	21.4	21.3	360	0	0 360	0	0 360	360	0	120
		PASTO-OBONUC	15.7	15.6	15.6	360	0	0 360	0	0 360	360	0	120
		POPAYAN	20.6	21.1	20.3	360	0	0 360	0	0 360	360	0	120
		SONSON	17.3	17.6	17.1	360	0	0 360	0	0 360	360	0	120
		TIBACUY	21.5	21.3	21.6	360	0	0 360	0	0 360	360	0	120
		TUNGUAVITA	16.4	15.8	16.7	360	0	0 360	0	0 360	360	0	120
		VILLARRICA	21.0	21.4	20.7	360	0	0 360	0	0 360	360	0	120
	ECUA	ARGELIA (LA)	17.5	17.6	17.0	360	0	0 360	0	0 360	360	0	120
		ASCAZUBI	17.9	17.6	18.1	360	0	0 360	0	0 360	360	0	120
		BANOS	19.4	19.6	18.7	360	0	0 360	0	0 360	360	0	120
		COTOCOLLAO	15.3	15.7	14.7	360	0	0 360	0	0 360	360	0	120
		CUENCA	16.6	16.9	16.0	360	0	0 360	0	0 360	360	0	120
		LOJA	18.4	18.5	17.9	360	0	0 360	0	0 360	360	0	120
		OTAVALO	16.6	16.1	16.8	360	0	0 360	0	0 360	360	0	120
		QUITO	15.5	15.5	15.5	360	0	0 360	0	0 360	360	0	120

120

TYPIC UDIC

LIST OF STATIONS WITH
TYPIC UDIC
MOISTURE REGIME

TEMPERATURE REGIME	COUNTRY CODE	NAME OF STATION	MEAN SOIL TEMPERATURE ANNUAL	SUMMER	WINTER	DAYS SOIL TEMP > 8	CUMULATIVE DAYS MCS IN ONE YEAR IS DRY	M/D	MCI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX CONS DAYS THAT MCS IS MOIST WHEN SOIL TEMP > 8	DRY AFTER SUM SOLS	MOIST AFTER WINT SOL
ISO THERMIC	ECUA	QUITO ECUADO	15.5	15.5	15.5	360	0	0	360	0	0	360	360	0	120
		TABACUNDO	15.5	15.5	15.5	360	0	0	360	0	0	360	360	0	120
		UYUMBICHO	15.5	15.5	15.5	360	0	0	360	0	0	360	360	0	120
	PERU	CHACAPOYAS	18.1	18.3	17.6	360	0	0	360	0	0	360	360	0	120
	VENE	AGUA DE 2128	17.7	17.7	17.1	360	0	0	360	0	0	360	360	0	120
		EL COBRE3094	19.2	19.1	18.9	360	0	0	360	0	0	360	360	0	120
		EL MOLIN3023	19.4	19.2	19.0	360	0	0	360	0	0	360	360	0	120
		JAJI 3169	19.6	19.5	19.2	360	0	0	360	0	0	360	360	0	120
		LA GRITA3086	21.6	21.5	21.3	360	0	1	359	0	1	359	360	0	104
		LA GRITA3109	21.5	21.7	20.8	360	0	0	360	0	0	360	360	0	120
		LAS DELI4051	21.1	20.9	20.9	360	0	0	360	0	0	360	360	0	120
		LOS LAUR4018	20.0	19.9	19.7	360	0	0	360	0	0	360	360	0	120
		MERIDA 3049	20.3	20.2	19.9	360	0	0	360	0	0	360	360	0	120
		MERIDA A3047	21.4	21.5	20.8	360	0	0	360	0	0	360	360	0	120
		MUCURUBA3039	16.8	16.7	16.3	360	0	0	360	0	0	360	360	0	120
		PARAMO D4004	15.7	15.5	15.3	360	0	0	360	0	0	360	360	0	120
		PUEBLO H3074	18.1	17.9	17.7	360	0	0	360	0	0	360	360	0	120
		PUEBLO L3198	17.9	17.8	17.4	360	0	0	360	0	0	360	360	0	120
		PUENTE U4054	18.7	18.5	18.5	360	0	0	360	0	0	360	360	0	120
		SABANA G3073	19.0	18.8	18.6	360	0	0	360	0	0	360	360	0	120
		TABAY 3038	16.8	16.7	16.3	360	0	0	360	0	0	360	360	0	120
		ZEA 3063	21.8	21.7	21.5	360	0	0	360	0	0	360	360	0	120
MESIC	ARGT	CERRO FITZ R	9.8	13.3	6.1	176	0	16	344	0	16	199	176	0	120
		ISLAVICTORIA	11.2	14.8	7.9	193	0	0	360	0	0	256	193	0	120
	CHIL	FLORDELLAGO	14.0	16.9	11.4	284	0	0	360	0	0	360	284	0	120
		LONQUIMAY	10.8	14.5	6.9	189	0	0	360	0	0	242	189	0	120
		PANGUIPULLI	14.2	17.3	11.2	280	0	0	360	0	0	360	280	0	120
		TEMUCO	14.6	17.5	11.9	322	0	3	357	0	3	357	322	0	120
		VALDIVIA	14.4	17.4	11.9	311	0	0	360	0	0	360	311	0	120
		VICTORIA	12.9	15.8	10.2	239	0	0	360	0	0	360	239	0	120
THERMIC	ARGT	ALBERDI	20.4	23.1	16.6	360	0	0	360	0	0	360	360	0	120
		ARIAS	19.4	23.8	15.1	360	0	0	360	0	0	360	360	0	120
		ASCOCHINGA	15.7	18.9	12.7	360	0	0	360	0	0	360	360	0	120
		AZUL ARGENTI	16.3	20.9	12.3	295	0	0	360	0	0	360	295	0	120
		BALCARCE	16.2	20.1	12.4	312	0	0	360	0	0	360	312	0	120
		BARROW	16.1	20.6	12.1	294	0	16	344	0	16	344	294	0	120
		BUENOS AIRES	19.4	23.4	15.6	360	0	0	360	0	0	360	360	0	120
		CASILDA	18.9	23.1	15.0	360	0	0	360	0	0	360	360	0	120
		CHIVILCOY	19.0	23.7	14.9	360	0	0	360	0	0	360	360	0	120
		CONCEPCION U	20.7	24.7	16.9	360	0	14	346	0	14	346	360	0	120
		CONCORDIA	21.1	25.3	17.2	360	0	0	360	0	0	360	360	0	120
		CORONEL SUAR	15.9	20.7	11.6	281	0	0	360	0	0	360	281	0	120
		DOLORES	17.4	21.4	14.0	360	0	0	360	0	0	360	360	0	120
		ESPERANZA	20.9	24.9	17.0	360	0	0	360	0	0	360	360	0	120
		GENERAL VILL	18.2	23.4	13.3	323	0	0	360	0	0	360	323	0	120

121

LIST OF STATIONS WITH
TYPIC UDIC
MOISTURE REGIME

TEMPERATURE REGIME	COUNTRY CODE	NAME OF STATION	MEAN SOIL TEMPERATURE ANNUAL	SUMMER	WINTER	DAYS SOIL TEMP > 8	CUMULATIVE DAYS MCS IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX CONS DAYS THAT MCS IS MOIST WHEN SOIL TEMP > 8	DRY AFTER SUM SOLS	MOIST AFTER WINT SOL
THERMIC	ARGT	GUALEGUAYCHU	20.0	24.4	16.0	360	0	0	360	0	0	360	360	0	120
		JUNIN	18.3	22.6	14.3	360	0	0	360	0	0	360	360	0	120
		LA PAZ,E,RIO	22.0	25.8	18.1	360	0	0	360	0	0	360	360	0	120
		LABOULAYE	18.7	23.2	14.2	360	0	0	360	0	0	360	360	0	120
		LAS FLORES	17.9	22.2	14.0	360	0	0	360	0	0	360	360	0	120
		MAR D PLATA	16.2	19.8	12.6	348	0	0	360	0	0	360	348	0	120
		MONTE CASERO	21.9	26.0	18.3	360	0	0	360	0	0	360	360	0	120
		NECOCHEA	16.5	20.1	13.1	360	0	2	358	0	2	358	360	0	120
		NUEVE D JUL	18.3	22.8	14.0	360	0	0	360	0	0	360	360	0	120
		PARANA	20.3	24.4	16.5	360	0	0	360	0	0	360	360	0	120
		PARANA ARGEN	20.5	24.5	16.8	360	0	0	360	0	0	360	360	0	120
		PERGAMINO	18.4	22.7	14.3	360	0	0	360	0	0	360	360	0	120
		PIGUE	15.7	20.6	11.4	276	0	7	353	0	7	353	276	0	120
		PILAR ARGENT	19.3	23.4	15.2	360	0	0	360	0	0	360	360	0	120
		PUEBLA BRUGO	20.2	24.6	16.5	360	0	0	360	0	0	360	360	0	120
		RIO CUARTO	18.4	22.5	14.0	360	0	0	360	0	0	360	360	0	120
		ROSARIO	19.2	23.4	15.2	360	0	0	360	0	0	360	360	0	120
		SAN MIGUEL T	21.2	24.6	17.1	360	0	0	360	0	0	360	360	0	120
		TANDIL	15.8	20.2	11.7	285	0	0	360	0	0	360	285	0	120
		TRENQUE	18.2	23.1	13.5	334	0	0	360	0	0	360	334	0	120
		TRES ARROYOS	16.6	20.9	12.5	310	0	0	360	0	0	360	310	0	120
		VILLAGUAY	20.5	24.5	16.7	360	0	0	360	0	0	360	360	0	120
		ZARATE	19.1	23.1	15.4	360	0	0	360	0	0	360	360	0	120
	BOLI	MOROCHATA	18.8	20.7	15.2	360	0	0	360	0	0	360	360	0	120
	BRAZ	ALEGRETE	21.1	24.8	17.7	360	0	0	360	0	0	360	360	0	120
		ALEGRETE BRA	21.1	24.7	17.7	360	0	0	360	0	0	360	360	0	120
		ARARANGUA	21.4	24.0	18.6	360	0	0	360	0	0	360	360	0	120
		BAGE	20.5	24.2	17.1	360	0	0	360	0	0	360	360	0	120
		ENCRUZILHADA	19.1	22.1	16.2	360	0	0	360	0	0	360	360	0	120
		PELOTAS	20.0	23.2	16.8	360	0	0	360	0	0	360	360	0	120
		RIO GRANDE	20.6	23.7	17.4	360	0	0	360	0	0	360	360	0	120
		SANTA MARIA	21.8	25.2	18.8	360	0	0	360	0	0	360	360	0	120
		SANTA VITORI	19.0	22.3	15.9	360	0	0	360	0	0	360	360	0	120
		SANTA VITORI	19.0	22.3	15.9	360	0	0	360	0	0	360	360	0	120
	URUG	COLONIA	20.0	23.8	16.5	360	0	0	360	0	0	360	360	0	120
		MELO	19.3	23.2	15.8	360	0	0	360	0	0	360	360	0	120
		MONTEVIDEO-P	19.0	22.7	15.5	360	0	0	360	0	0	360	360	0	120
		MONTEVIDEO/P	18.8	22.5	15.2	360	0	0	360	0	0	360	360	0	120
		PUNTA DEL ES	18.8	21.9	15.8	360	0	0	360	0	0	360	360	0	120
		PUNTA-DEL-ES	18.7	21.7	15.7	360	0	0	360	0	0	360	360	0	120
		ROCHA	18.4	21.9	15.2	360	0	0	360	0	0	360	360	0	120
		SALTO	20.6	24.8	16.9	360	0	0	360	0	0	360	360	0	120
		SALTO URUGUA	21.4	25.7	17.6	360	0	0	360	0	0	360	360	0	120

122

TYPIC UDIC

LIST OF STATIONS WITH
TYPIC XERIC
MOISTURE REGIME

TEMPERATURE REGIME	COUNTRY CODE	NAME OF STATION	MEAN SOIL TEMPERATURE ANNUAL	MEAN SOIL TEMPERATURE SUMMER	MEAN SOIL TEMPERATURE WINTER	DAYS SOIL TEMP > 8	CUMULATIVE DAYS MCS IN ONE YEAR IS DRY M/D MCI	CUMULATIVE DAYS MCS IN ONE YEAR IS DRY M/D MOI	CUMULATIVE DAYS MCS IN ONE YEAR IS SOIL TEMP >5	WHEN SOIL TEMP > 8 DRY M/D MCI	WHEN SOIL TEMP > 8 DRY M/D MOI	WHEN SOIL TEMP > 8 SUM SOLS	MAX CONS DAYS THAT MCS IS MOIST WHEN SOIL TEMP > 8	DRY AFTER SUM SOLS	MOIST AFTER WINT SOL
MESIC	ARGT	ESQUEL	9.9	11.9	6.0	81	66	105	189	66	76	76	81	51	120
	CHIL	ELTENIENTE	12.6	16.1	9.1	225	64	58	238	64	58	163	140	56	120
THERMIC	CHIL	ANGOL	15.4	18.9	12.4	349	54	76	230	54	76	230	222	54	120
		CHILLAN	15.5	19.3	12.1	299	53	76	231	53	76	231	173	53	120
		LINARES	16.3	20.5	12.7	333	72	64	224	72	64	224	174	72	120

VW08 AUGUST 1981

DATE 08/25/81

TYPIC XERIC

123

LIST OF STATIONS WITH
UDIC TROPUST.
MOISTURE REGIME

TEMPERATURE REGIME	COUNTRY CODE	NAME OF STATION	MEAN SOIL TEMPERATURE ANNUAL	SUMMER	WINTER	DAYS SOIL TEMP > 8	CUMULATIVE DAYS MCS IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX CONS DAYS THAT MCS IS WHEN MOIST TEMP > 8	DRY AFTER SUM SOLS	MOIST AFTER WINT SOL
ISO HYPERTH.	BOLI	CONCEPCION	26.8	27.7	24.9	360	14	93	253	14	93	253	326	0	58
		RIBERALTA	29.4	29.2	28.8	360	61	71	228	61	71	228	290	0	3
		SAN IGNACIO	26.4	27.3	23.9	360	4	87	269	4	87	269	356	0	64
		SAN JOQUIN	28.8	29.0	27.5	360	33	97	230	33	97	230	327	0	5
		SANTA CRUZ	27.2	28.4	24.7	360	31	102	227	31	102	227	284	0	62
	BRAZ	AGUA BRANCA	25.3	26.4	23.2	360	35	136	189	35	136	189	296	21	120
		AREIA	24.1	24.8	22.8	360	0	99	261	0	99	261	360	0	120
		BARRA ITABAP	25.3	26.6	23.9	360	53	142	165	53	142	165	286	0	0
		BARREIRAS	25.7	25.5	24.5	360	83	104	173	83	104	173	277	0	0
		BELTERRA	30.3	30.0	30.3	360	42	66	252	42	66	252	311	0	57
		BOA VISTA TO	27.5	27.4	26.7	360	53	92	215	53	92	215	285	0	20
		CACERES	27.6	28.3	25.7	360	58	68	234	58	68	234	282	0	9
		CACHOEIRO IT	25.6	27.3	23.8	360	67	131	162	67	131	162	293	0	0
		CAETITE	23.7	24.1	22.1	360	24	90	246	24	90	246	336	0	21
		CAETITE	23.0	23.5	21.5	360	50	117	193	50	117	193	287	0	0
		CAETITE BRAZ	23.7	24.1	22.1	360	22	88	250	22	88	250	338	0	25
		CATALAO	23.9	24.3	22.5	360	16	85	259	16	85	259	344	0	34
		CONCEICAO AR	28.0	27.5	27.9	360	65	45	250	65	45	250	283	0	15
		CONCEICAO DO	27.7	27.4	27.5	360	75	64	221	75	64	221	285	0	0
		CORRENTES	24.4	25.2	22.9	360	74	98	188	74	98	188	286	74	120
		CORRENTES	25.4	26.2	23.9	360	74	97	189	74	97	189	286	74	120
		CORURIPE	26.9	27.6	25.8	360	61	78	221	61	78	221	287	43	120
		CORURIPE	25.9	26.6	24.8	360	61	78	221	61	78	221	287	43	120
		COXIPO	27.4	28.1	25.4	360	29	84	247	29	84	247	322	0	22
		CUIABA	28.1	28.5	26.7	360	54	72	234	54	72	234	306	0	9
		CUIABA BRAZI	28.1	28.5	26.7	360	54	72	234	54	72	234	306	0	9
		CURVELO	24.4	25.5	22.2	360	11	95	254	11	95	254	349	0	29
		FORMOSA	23.8	24.0	22.4	360	35	78	247	35	78	247	325	0	22
		FORMOSA BRAZ	23.8	24.0	22.4	360	36	77	247	36	77	247	324	0	22
		GOIANA	26.3	26.8	25.3	360	12	81	267	12	81	267	348	12	120
		GOIANIA	24.4	24.8	22.7	360	17	82	261	17	82	261	343	0	36
		GOIAS	26.1	26.0	24.8	360	43	91	226	43	91	226	306	0	0
		GRAO MOGOL	23.4	24.4	21.6	360	1	97	262	1	97	262	359	0	37
		ITABAIANINHA	25.0	26.1	23.5	360	42	109	209	42	109	209	277	23	120
		ITABAIANINHA	26.0	27.0	24.6	360	48	95	217	48	95	217	286	44	120
		JACOBINA	24.9	25.8	23.1	360	13	158	189	13	158	189	291	4	114
		JOAOPESSOA	26.7	27.3	25.5	360	56	77	227	56	77	227	292	18	120
		LUZIANIA	23.4	23.8	21.8	360	19	86	255	19	86	255	341	0	30
		MACAIBA	25.7	26.3	25.0	360	69	76	215	69	76	215	280	19	110
		MACEIO	27.9	28.6	26.8	360	58	84	218	58	84	218	281	21	120
		MADEIO	27.0	27.6	26.0	360	62	90	208	62	90	208	275	21	120
		MANAUS	29.2	28.5	29.6	360	23	74	263	23	74	263	327	0	38
		MANAUS BRAZI	29.2	28.5	29.6	360	23	74	263	23	74	263	327	0	38
		MERURI	25.7	26.1	23.6	360	21	89	250	21	89	250	327	0	25
		MONTE CLAROS	24.9	25.6	23.0	360	59	88	213	59	88	213	274	0	0

LIST OF STATIONS WITH
UDIC TROPUST.
MOISTURE REGIME

TEMPERATURE REGIME	COUNTRY CODE	NAME OF STATION	MEAN SOIL TEMPERATURE ANNUAL	SUMMER	WINTER	DAYS SOIL TEMP > 8	CUMULATIVE DAYS MCS IN ONE YEAR IS DRY	M/D	MOI	DAYS MCS WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX CONS DAYS THAT MCS IS MOIST WHEN SOIL TEMP > 8	DRY AFTER SUM SOLS	MOIST AFTER WINT SOL
ISO HYPERTH.	BRAZ	OLINDA	27.5	28.1	26.5	360	80	61	219	80	61	219	280	45	114
		PARANA	25.6	27.2	23.1	360	36	79	245	36	79	245	324	0	20
		PARAPEUNA	23.2	24.9	21.4	360	0	94	266	0	94	266	360	0	41
		PARINTINS	30.3	30.0	30.3	360	37	56	267	37	56	267	294	0	65
		PEDRA AZUL	24.7	25.8	22.6	360	0	92	268	0	92	268	360	0	43
		PILAR	26.9	27.7	25.6	360	37	94	229	37	94	229	294	20	120
		PILARMANGABA	25.9	26.7	24.6	360	37	94	229	37	94	229	294	20	120
		PIRAPORA	25.7	26.4	23.6	360	65	74	221	65	74	221	275	0	0
		PORTO DE PED	27.7	28.3	26.8	360	60	64	236	60	64	236	279	45	120
		PORTO NACION	28.3	27.9	27.8	360	88	63	209	88	63	209	272	0	0
		PORTO NACION	28.2	27.7	27.7	360	86	64	210	86	64	210	274	0	0
		PORTO VELHO	28.7	28.6	28.3	360	24	68	268	24	68	268	336	0	15
		PORTODEPEDRA	26.7	27.3	25.8	360	60	64	236	60	64	236	279	45	120
		SANTA CRUZ	26.0	26.2	24.6	360	28	87	245	28	87	245	319	0	20
		SANTA CRUZ B	25.6	26.1	23.6	360	20	88	252	20	88	252	328	0	27
		SANTAREM BRA	28.5	28.4	28.3	360	35	88	237	35	88	237	308	0	72
		SAO FIDELIS	26.0	27.7	23.8	360	66	101	193	66	101	193	294	0	0
		SAO FRANCISC	25.6	26.1	23.6	360	69	62	229	69	62	229	279	0	4
		SAO LUIZ CAC	26.4	27.0	24.4	360	26	78	256	26	78	256	308	0	31
		SATUBA	26.7	27.4	25.6	360	26	109	225	26	109	225	325	21	120
		SOURE	29.4	29.3	29.3	360	56	57	247	56	57	247	304	0	82
		TAGUATINGA	26.6	26.1	26.0	360	74	70	216	74	70	216	286	0	0
		TAPACURA	26.7	27.4	25.6	360	35	116	209	35	116	209	315	20	120
		TAPERA	25.7	26.4	24.6	360	35	116	209	35	116	209	315	20	120
		TAPERINHA-SA	28.5	28.4	28.2	360	35	88	237	35	88	237	308	0	72
		TRACATEUA	27.4	27.7	27.1	360	56	35	269	56	35	269	304	15	104
	ECUA	COLIMES	27.4	27.7	26.8	360	65	38	257	65	38	257	295	0	62
	PERU	PUERTO MALDO	29.0	29.0	28.2	360	12	103	245	12	103	245	322	0	42
	SURI	CORONIE65	29.6	29.5	29.1	360	37	107	216	37	107	216	323	22	74
		MARIENBURG65	29.5	29.4	29.0	360	26	90	244	26	90	244	318	0	83
		PALOEMEU65	29.7	29.5	28.9	360	58	55	247	58	55	247	302	13	105
		SIPALIWINI	29.3	29.1	29.0	360	40	63	257	40	63	257	287	0	105
		STOELMANSE65	29.5	29.3	28.7	360	53	38	269	53	38	269	296	19	120
	VENE	BARINAS 3143	29.4	29.3	29.1	360	73	59	228	73	59	228	287	0	3
		BARINAS-3144	27.8	27.7	27.4	360	52	64	244	52	64	244	308	0	19
		CACHINCH2318	27.9	27.9	27.3	360	59	58	243	59	58	243	281	0	18
		CANAIMA 5920	27.6	26.9	27.5	360	53	41	266	53	41	266	307	0	41
		CURBATI 3165	27.9	27.7	27.5	360	36	68	256	36	68	256	324	0	31
		EL AMPAR4194	29.9	29.5	29.8	360	71	38	251	71	38	251	282	0	15
		EL COROZ3162	29.0	28.9	28.7	360	62	63	235	62	63	235	298	0	10
		EL DORAD5924	29.1	28.4	28.7	360	9	99	252	9	99	252	328	0	57
		EL GURI 6927	28.2	27.8	27.7	360	39	69	252	39	69	252	312	0	57
		EL LIMON9423	30.0	29.3	30.1	360	63	59	238	63	59	238	297	0	13
		EL MANTE4947	28.1	27.6	27.6	360	35	89	236	35	89	236	307	0	41
		EL PAC 3904	27.7	27.3	27.1	360	55	71	234	55	71	234	305	0	39

LIST OF STATIONS WITH
UDIC TROPUST.
MOISTURE REGIME

TEMPERATURE REGIME	COUNTRY CODE	NAME OF STATION	MEAN SOIL TEMPERATURE ANNUAL	SUMMER	WINTER	DAYS SOIL TEMP > 8	CUMULATIVE DAYS MCS IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX CONS DAYS THAT MCS IS WHEN SOIL TEMP > 8 MOIST	DRY AFTER SUM SOLS	MOIST AFTER WINT SOL
ISO HYPERTH.	VENE	GAVILAN 9422	29.9	29.2	30.1	360	26	83	251	26	83	251	319	0	26
		GUANARE 2297	29.1	29.0	28.7	360	73	62	225	73	62	225	287	0	0
		HATO BUE4907	28.8	28.3	28.3	360	40	103	217	40	103	217	296	0	20
		HATO CAR3155	29.5	29.4	29.2	360	83	58	219	83	58	219	277	0	0
		HATO CAR5201	30.0	29.6	30.0	360	88	56	216	88	56	216	272	0	0
		HDA. YUC3139	29.0	28.9	28.6	360	66	60	234	66	60	234	294	0	9
		LA COPE 4045	28.2	28.0	28.1	360	9	82	269	9	82	269	351	0	44
		LA RAYA 4661	29.0	28.6	28.6	360	48	63	249	48	63	249	312	0	24
		LA VERGA5883	27.3	26.8	27.0	360	76	35	249	76	35	249	284	0	24
		LA VICTO4175	29.8	29.4	29.7	360	64	30	266	64	30	266	296	0	15
		LAS BABA4970	28.5	28.1	28.1	360	69	38	253	69	38	253	291	0	15
		LAS TRIN4663	29.1	28.4	29.0	360	68	83	209	68	83	209	280	0	14
		MANRIQUE2324	27.6	27.6	27.1	360	55	52	253	55	52	253	290	0	28
		MAPORALI3189	29.5	29.3	29.3	360	67	60	233	67	60	233	293	0	8
		MICHELEN4003	23.5	23.3	23.3	360	16	156	188	16	156	188	327	13	84
		MUCUCHAC3133	24.7	24.6	24.4	360	23	112	225	23	112	225	337	0	30
		PAGUEY 3154	29.1	28.9	28.7	360	47	76	237	47	76	237	303	0	12
		PALMIRA 4027	24.1	23.9	23.9	360	37	119	204	3[illegible]	119	204	323	0	39
		PEDRAZA 3163	29.5	29.3	29.1	360	60	37	263	60	37	263	293	0	15
		PEDRAZA-3186	29.1	29.0	28.9	360	50	78	232	50	78	232	294	0	7
		PUERTO A6424	29.6	27.6	31.2	360	63	70	227	63	70	227	285	0	2
		PUERTO A9407	30.3	28.6	31.7	360	67	72	221	67	72	221	282	0	0
		PUNTA GO3183	29.5	29.3	29.2	360	81	59	220	81	59	220	279	0	0
		QUEBRADA3136	29.0	28.9	28.7	360	56	36	268	56	36	268	304	0	15
		QUIU 3188	29.1	28.9	28.8	360	35	77	248	35	77	248	312	0	23
		RUBIO 4043	25.5	25.3	25.3	360	0	121	239	0	121	239	360	0	44
		SAI-SAI 3193	29.5	29.3	29.3	360	50	72	238	50	72	238	298	0	13
		SAN LORE2027	30.6	30.5	30.1	360	64	65	231	64	65	231	296	0	9
		SANTA RC4660	29.0	28.6	28.6	360	75	83	202	75	83	202	271	0	7
		SURIPA 3192	29.6	29.4	29.4	360	58	67	235	58	67	235	295	0	10
		TOVAR 3069	24.4	24.2	24.0	360	21	200	139	21	200	139	317	0	64
		VALLE DE2325	27.9	27.9	27.3	360	70	55	235	70	55	235	281	0	10
		YUTAJE 9420	29.7	28.9	29.9	360	54	40	266	54	40	266	298	0	15
ISO MESIC	BOLI	LA PAZ	12.9	13.3	11.5	360	0	102	258	0	102	258	360	0	63
	CHIL	CONCEPCION	14.9	17.6	12.6	360	0	98	262	0	98	262	360	0	120
		PUNTACARRANZ	14.9	16.5	13.6	360	78	51	231	78	51	231	282	63	120
		PUNTATUMBES	14.5	16.3	13.3	360	69	57	234	69	57	234	291	54	120
		TALCAHUANO	15.0	17.4	13.0	360	10	103	247	10	103	247	350	10	120
	PERU	CASTROVIRREY	9.4	9.7	8.8	360	0	143	217	0	143	217	360	0	52
		COCAS	14.1	13.9	13.9	360	45	142	173	45	142	173	315	0	35
		JAUJA	13.3	13.5	12.5	360	0	142	218	0	142	218	360	0	53
ISO THERMIC	BOLI	PADILLA	21.1	22.1	18.8	360	71	117	172	71	117	172	289	0	7
		SORATA	19.4	19.8	19.1	360	0	115	245	0	115	245	360	0	50
		SUCRE	18.1	18.7	16.3	360	15	154	191	15	154	191	345	0	26
		TOTORA	18.4	18.8	16.7	360	42	126	192	42	126	192	318	0	27

VW08 AUGUST 1981

CATE 08/25/81

126

UDIC TROPUSTIC

LIST OF STATIONS WITH
UDIC TROPUST.
MOISTURE REGIME

TEMPERATURE REGIME	COUNTRY CODE	NAME OF STATION	MEAN SOIL TEMPERATURE ANNUAL	SUMMER	WINTER	DAYS SOIL TEMP > 8	CUMULATIVE DAYS MCS IN ONE YEAR IS DRY	M/D	MOI	WHEN SOIL TEMP >5 DRY	M/D	MOI	MAX CONS DAYS THAT MCS IS MOIST WHEN SOIL TEMP > 8	DRY AFTER SUM SOLS	MOIST AFTER WINT SOL
ISO THERMIC	BOLI	VALLE GRANDE	18.7	20.1	16.9	360	0	109	251	0	109	251	360	0	56
	BRAZ	GARAHUNS	21.9	22.8	20.3	360	16	149	195	16	149	195	344	16	120
		MORRO DO CHA	21.6	22.3	19.8	360	34	100	226	34	100	226	326	0	61
		MORRODOCHAPO	20.6	21.3	18.8	360	34	100	226	34	100	226	326	0	61
	CHIL	CONSTITUCION	15.9	18.5	13.6	360	57	75	228	57	75	228	303	57	120
		ISANTAMARIA	15.5	17.1	13.9	360	18	98	244	18	98	244	342	18	120
	ECUA	GUARANDA	15.6	15.7	15.4	360	0	91	269	0	91	269	360	0	74
		IBARRA	18.5	18.5	18.4	360	32	210	118	32	210	118	328	32	15
		PATATE	19.1	19.3	18.3	360	70	290	0	70	290	0	290	70	0
	PERU	BELLAVISTA	16.5	16.7	16.1	360	1	159	200	1	159	200	359	0	35
		HUARAZ	16.3	16.3	15.7	360	0	92	268	0	92	268	360	0	43

LIST OF STATIONS WITH
WEAK ARIDIC
MOISTURE REGIME

TEMPERATURE REGIME	COUNTRY CODE	NAME OF STATION	MEAN SOIL TEMPERATURE ANNUAL	SUMMER	WINTER	DAYS SOIL TEMP > 8	CUMULATIVE DAYS MOIST IN ONE YEAR IS DRY	M/D	MOI	DRY	M/D	MOI	MOIST WHEN SOIL TEMP >5 TEMP > 8	MAX CONS DAYS THAT MOIST IS DRY AFTER SUM SOLS	MOIST AFTER WINT SOL
HYPERTH.	ARGT	SUNCHO CORR	23.0	26.9	18.7	360	240	120	0	240	120	0	57	15	0
ISO HYPERTH.	BRAZ	BARRA	28.8	28.8	27.4	360	218	142	0	218	142	0	82	9	0
		BARRADORICGR	27.6	27.6	26.4	360	221	139	0	221	139	0	81	17	0
		CRUSETA	29.9	30.5	28.9	360	286	74	0	286	74	0	50	45	0
		CRUZETA	28.9	29.5	27.9	360	286	74	0	286	74	0	50	45	0
		REMANSO	62.9	28.1	27.7	360	234	84	42	234	84	42	68	17	0
	ECUA	PUERTO BOLIV	27.2	27.9	26.2	360	261	54	45	261	54	45	86	17	0
	VENE	CARORA 1185	28.1	28.1	27.5	360	247	113	0	247	113	0	74	75	0
		LA SABAN3872	29.9	29.5	29.3	360	230	77	53	230	77	53	88	15	0
		PUERTO E3871	29.9	29.5	29.4	360	223	137	0	223	137	0	99	9	0
		SAN ANTO4025	28.2	28.1	28.1	360	249	111	0	249	111	0	78	105	0
		SEBORUCO3085	28.2	28.0	27.9	360	194	166	0	194	166	0	81	75	0
		URENA 4012	28.6	28.5	28.4	360	233	75	52	233	75	52	88	105	7
ISO MESIC	BOLI	JOYA (LA)	12.2	13.3	9.9	277	248	112	0	248	112	0	86	19	0
		ORURO	13.1	14.4	10.0	270	273	87	0	273	87	0	87	18	0
ISO THERMIC	ECUA	AMBATO	16.4	16.7	15.6	360	245	115	0	245	115	0	86	75	0
		RIOBAMBA	15.7	16.0	15.1	360	314	46	0	314	46	0	46	105	0
	PERU	ACORA	19.7	19.9	19.2	360	302	58	0	302	58	0	58	45	0
		CARAZ	18.1	18.3	17.6	360	280	80	0	280	80	0	80	45	0
	VENE	VILLA ME2192	21.9	21.8	21.4	360	189	171	0	189	171	0	58	42	0
MESIC	ARGT	LAS LAJAS	14.3	18.8	10.0	239	199	75	86	199	40	86	61	120	75
THERMIC	ARGT	CARMEN D PAT	16.5	21.0	12.3	301	241	119	0	241	119	0	82	120	0
		CHOS MALAL	16.2	20.7	11.8	289	211	71	78	211	71	78	70	120	75
		CRUZ DEL EJE	19.4	23.1	15.4	360	241	119	0	241	119	0	57	18	0
		ESCUELAAVIAC	19.5	23.7	15.1	360	188	172	0	188	172	0	58	15	0
		FORTINMERCED	17.4	22.0	12.7	308	187	173	0	187	173	0	78	120	0
		MALARGUE	15.9	20.7	11.5	275	257	103	0	257	103	0	53	120	0
		PATAGONES	16.8	21.1	12.6	311	308	52	0	308	52	0	52	120	0
	BOLI	TUPIZA	17.6	19.2	14.1	359	232	128	0	232	128	0	87	18	0

VW08 AUGUST 1981

DATE 08/25/81

128

WEAK ARIDIC

LIST OF STATIONS WITH
WET TEMPUST.
MOISTURE REGIME

TEMPERATURE REGIME	COUNTRY CODE	NAME OF STATION	MEAN SOIL TEMPERATURE ANNUAL	SUMMER	WINTER	DAYS SOIL TEMP > 8	CUMULATIVE DAYS MCS IN ONE YEAR IS DRY	M/D MOI	M/D MOI	WHEN SOIL TEMP >5 DRY	M/D MOI	M/D MOI	MAX CONS DAYS THAT MCS IS MOIST WHEN SOIL TEMP > 8	DRY AFTER SUM SOLS	MOIST AFTER WINT SOL
MESIC	ARGT	BARILOCHE AR	10.8	14.5	7.5	183	0	103	257	0	103	136	183	0	120
	CHIL	TRAIGUEN	14.9	18.2	12.1	316	0	92	268	0	92	268	316	0	120
THERMIC	ARGT	LA COCHA	21.7	25.2	17.6	360	56	126	178	56	126	178	264	8	73
		ROSARIO FRON	20.4	23.1	16.4	360	14	109	237	14	109	237	329	0	72
		SALTA	18.7	21.5	14.9	360	14	110	236	14	110	236	346	0	71
		SALTA ARGENT	19.3	22.0	15.6	360	20	115	225	20	115	225	321	0	60
	CHIL	LOSANGELES	15.8	19.7	12.5	336	9	113	238	9	113	238	207	9	120

VW08 AUGUST 1981

DATE 08/25/81

WET TEMPUSTIC

129

LIST OF STATICNS WITH
XERIC TEMPUST.
MCISTURE REGIME

PAGE 1

TEMPERATURE REGIME	COUNTRY CODE	NAME CF STATION	MEAN SOIL TEMPERATURE ANNUAL	SUMMER	WINTER	DAYS SOIL TEMP > 8	CUMULATIVE DAYS MCS IN ONE YEAR IS DRY M/D MCI	WHEN SOIL TEMP >5 DRY M/D MOI	MAX CONS DAYS THAT MCS IS WHEN SOIL TEMP > 8 MOIST	SUM SCLS	DRY AFTER	MOIST AFTER WINT SOL
HYPERTH.	CHIL	LOLCL	22.1	26.5	17.7	360	142 24 194	142 24 194	218	120	120	

VW08 AUGUST 1981

DATE 08/25/81

130

XERIC TEMPUSTIC

A

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION

FOR URUG PAGE 1

NAME OF STATION	MEAN SOIL TEMPERATURE ANN	SUMM	WINT	TEMPERATURE REGIME	CUMULATIVE DAYS MSC IN ONE YEAR IS DRY M/D MOI			WHEN SOIL TEMP >5 DRY M/D MOI			MAX.CONSECUTIVE DAYS THAT MCS IS MOIST IN SOME PARTS IN ONE YEAR	WHEN SOIL TEMP > 8	DRY AFTER SUMMER SOLST.	MOIST AFTER WINTER SOLST.	MOISTURE REGIME
COLONIA	20.0	23.8	16.5	THERMIC	0	0	360	0	0	360	360	360	0	120	UDIC
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

B

DETERMINATION OF SOIL MOISTURE REGIME ACCORDING TO FRANKLIN NEWHALL SYSTEM OF COMPUTATION
(CORRECTION FOR TEMPERATURE IS 2.5; SEASONAL AMPLITUDE MODIFIED BY FACTOR 0.66)

PAGE 1

NAME OF STATION	MOISTURE REGIME	CON.D. M/D T>8	TEMPERATURE REGIME	TENTATIVE SUBDIVISION OF MOISTURE REGIME	CONS DAYS MOIST(2+3) SUM. WINT	CUM.DAYS MOIST(2+3) SUM. WINT	CONS.DAYS COMP.MOIST SUM. WINT	CUM.DAYS COMP.MOI. SUM. WINT
ACONOCOCHA	UDIC	0	CRYIC	CONTUDIC	180	180	180	180
	1	2	3	4	5	6	7	8	9	10	11	12	13

C

LIST OF STATIONS WITH
TYPIC XERIC
MOISTURE REGIME

PAGE 1

TEMPERATURE REGIME	COUNTRY CODE	NAME OF STATION	MEAN SOIL TEMPERATURE ANNUAL	SUMMER	WINTER	DAYS SOIL TEMP > 8	CUMULATIVE DAYS MCS IN ONE YEAR IS DRY M/D MOI			WHEN SOIL TEMP >5 DRY M/D MOI			MAX CONS DAYS THAT MCS IS MOIST WHEN SOIL TEMP > 8	DRY AFTER SUM SOLS	MOIST AFTER WINT SOL
MESIC	ARGT	ESQUEL	9.9	11.9	6.0	81	66	105	189	66	76	76	81	51	120
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

EXPLANATION OF DATA IN THE TABLES

TABLE A. COUNTRY LISTINGS.

Column 1: mean annual soil temperature calculated by adding 2.5°C to the atmospheric mean.

Column 2: mean summer soil temperature in °C at 50 cm depth calculated by averaging the three summer month air temperatures (June, July and August or December, January and February depending upon the hemisphere) and adding 2.5°C to this average. One sixth of the difference between winter and summer temperature is then subtracted from this average to take into account the decrease in seasonal amplitude at 50 cm depth.

Column 3: mean winter soil temperature in °C at 50 cm depth obtained by averaging the monthly air temperatures during the winter months, June, July and August or December, January and February depending on the hemisphere, and adding 2.5°C to that average. 1/6 of the difference between winter and summer air temperatures is added to this average in order to take into account the decrease in seasonal amplitude at 50 cm depth.

Column 4: name of the soil temperature regime at the station, taking into account the results of the computation and applying the definitions of Soil Taxonomy.

Column 5: number of cumulative days that the moisture control section is completely dry in one year.

Column 6: number of cumulative days that the moisture control section is partly moist or partly dry during one year. Soil Taxonomy also refers to this moisture condition as "moist or dry in some parts".

Column 7: number of cumulative days that the moisture control section is completely moist during one year.

Column 8: number of cumulative days that the moisture control section is completely dry when the soil temperature at 50 cm depth is higher than 5°C.

Column 9: number of cumulative days that the moisture control section is partly moist or partly dry when the soil temperature at 50 cm depth is higher than 5°C. Soil Taxonomy also refers to this moisture condition as "moist or dry in some parts".

Column 10: number of cumulative days that the moisture control section is completely moist when the soil temperature is higher than 5°C.

Column 11: highest number of consecutive days in one year that the moisture control section is moist in some or all parts, or, stated differently, the maximum number of consecutive days in one year that the moisture control section is not completely dry. To compute this number the program considers two years so that the sequence is not broken by a change of calendar year.

Column 12: maximum number of consecutive days in a year that the moisture control section is moist in some or all parts at the time that the soil temperature at 50 cm depth is higher than 8°C. To compute this number the program considers a period of two years so that the sequence is not broken by a change of calendar year.

Column 13: maximum number of consecutive days that the moisture control section is completely dry during the 4 months which follow the summer solstice. The control period is 120 days starting the first of July or the first of January depending upon the hemisphere.

Column 14: maximum number of consecutive days that the moisture control section is completely moist after the winter solstice. The control period is 120 days starting the first of July or the first of January depending upon the hemisphere.

Column 15: the moisture regime calculated on the basis of the numerical data of the previous columns following the definitions of Soil Taxonomy.

TABLE B. TENTATIVE SUBDIVISION OF THE MOISTURE REGIMES

Column 1: same as Column 15 of Table A.

Column 2: same as Column 12 of Table A.

Column 3: same as Column 4 of Table A.

Column 4: tentative subdivision of the moisture regime, following the key to tentative subdivisions in this publication.

Column 5: same as Column 15 of Table A.

Column 6: maximum number of consecutive days that the moisture control section is moist in some or all parts during the six months following the summer solstice.

Column 7: maximum number of consecutive days that the moisture control section is moist in some or all parts during the six months which follow the winter solstice.

Column 8: number of cumulative days that the moisture control section is moist in some or all parts during the six months which follow the summer solstice.

Column 9: number of cumulative days that the moisture section is moist in some or all parts during six months following the winter solstice.

Column 10: maximum number of consecutive days that the moisture control section is completely moist during the six months following the summer solstice.

Column 11: maximum number of consecutive days in one year that the moisture control section is completely moist during the six months following the winter solstice.

Column 12: number of cumulative days that the moisture control section is completely moist during the six months following the summer solstice.

Column 13: number of cumulative days that the moisture control section is completely moist during the six months following the winter solstice.

TABLE C. MOISTURE REGIME LISTINGS.

Column 1: the soil temperature regime, same as the information given in Table A, Column 4. In these listings the temperature regimes follow in alphabetic order.

Column 2: country codes, for explanation see following page.

Column 3: name of the station given in alphabetic order for each country.

Column 4: mean annual soil temperature in °C. For explanation see Column 1 in Table A.

Column 5: mean summer soil temperature at 50 cm depth; for explanation see Column 2 in Table A.

Column 6: mean winter soil temperature at 50 cm depth; for explanation see Column 3 in Table A.

Column 7: the number of days in one year that the soil temperature at 50 cm depth is higher than 8°C. The beginning and ending dates of the 8°C soil temperature season is approximated from the sequence of monthly air temperatures. For the beginning of the season the last air temperature below 8°C and the first one above are linearly interpolated between the 15th of each month. Then 15 days are added to the date to compensate for the time lag between air and soil temperatures. For autumn, or the end of the 8°C temperature season, a similar procedure is followed except that the temperatures above and below the critical limits are reversed. It should be noted that the air temperature input data are not corrected by the 2.5°C used for calculating the mean annual, winter and summer soil temperatures. For this reason, some discrepancies between these data may occur in the tables.

Columns 8, 9, 10, 11, 12, 13 are identical to Columns 5, 6, 7, 8, 9, 10 of Table A.

Columns 14, 15 and 16 have the same data as Columns 12, 13, and 14 of Table A.

COUNTRY CODES

ARGT	Argentina
BOLI	Bolivia
BRAZ	Brazil
CHIL	Chili
COLO	Colombia
ECUA	Ecuador
GUIA	French Guiana
GUYA	Guyana
PARA	Paraguay
PERU	Peru
SURI	Surinam
URUG	Uruguay
VENE	Venezuela

BIBLIOGRAPHY

Cenicafe. 1979. Anuario Meteorologico 1978. Federacion Nacional de Cafeteros de Colombia, Chinchina, Caldas, Colombia.

Hargreaves, G. H. 1977. World Water for Agriculture. Utah State University, USA.

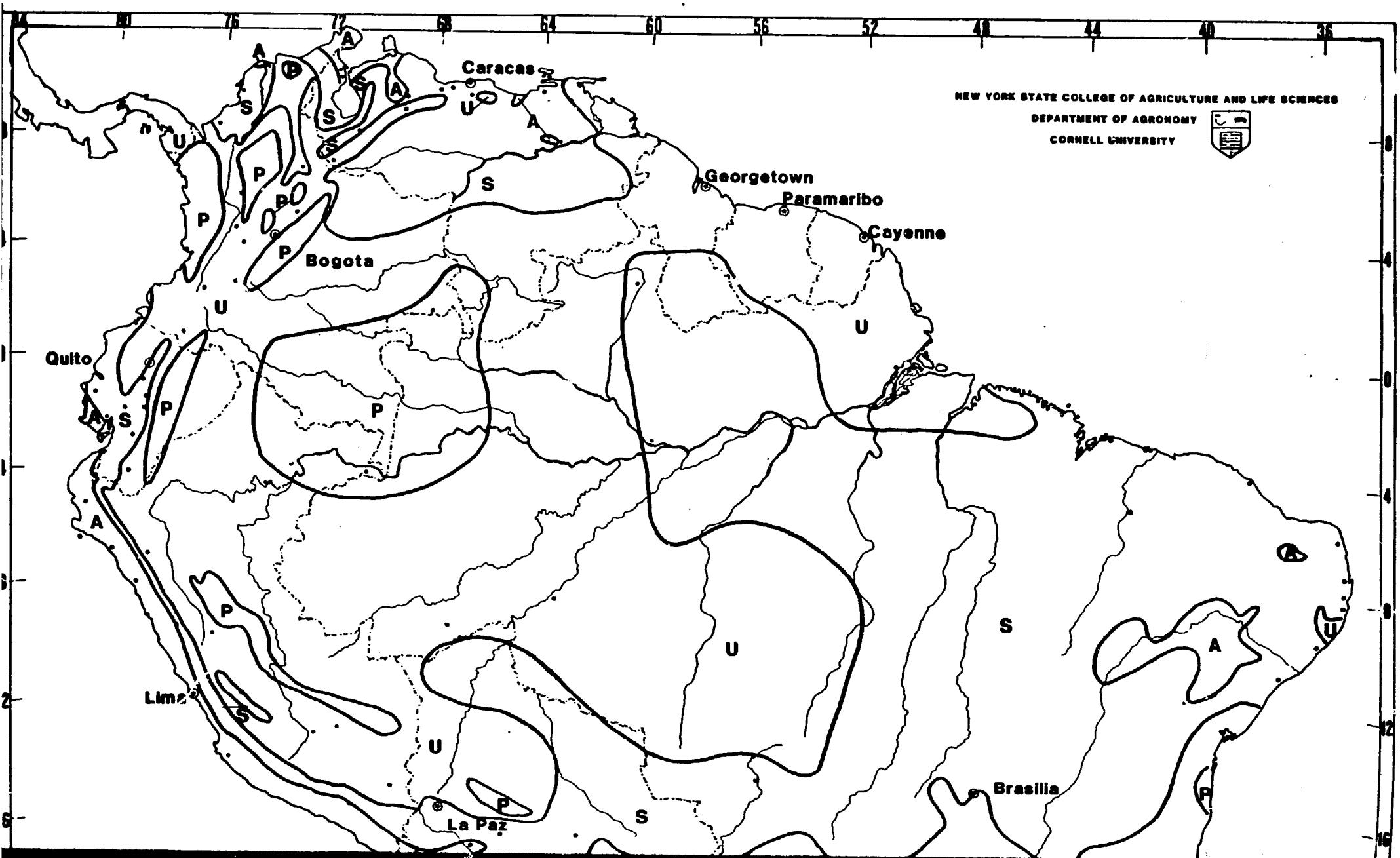
Newhall, F. 1972. Calculation of Soil Moisture Regimes from the Climatic Record. Rev. 4. Mimeographed, 17 pages, 3 tables, 7 figures. Soil Conservation Service, USDA, Washington, D.C.

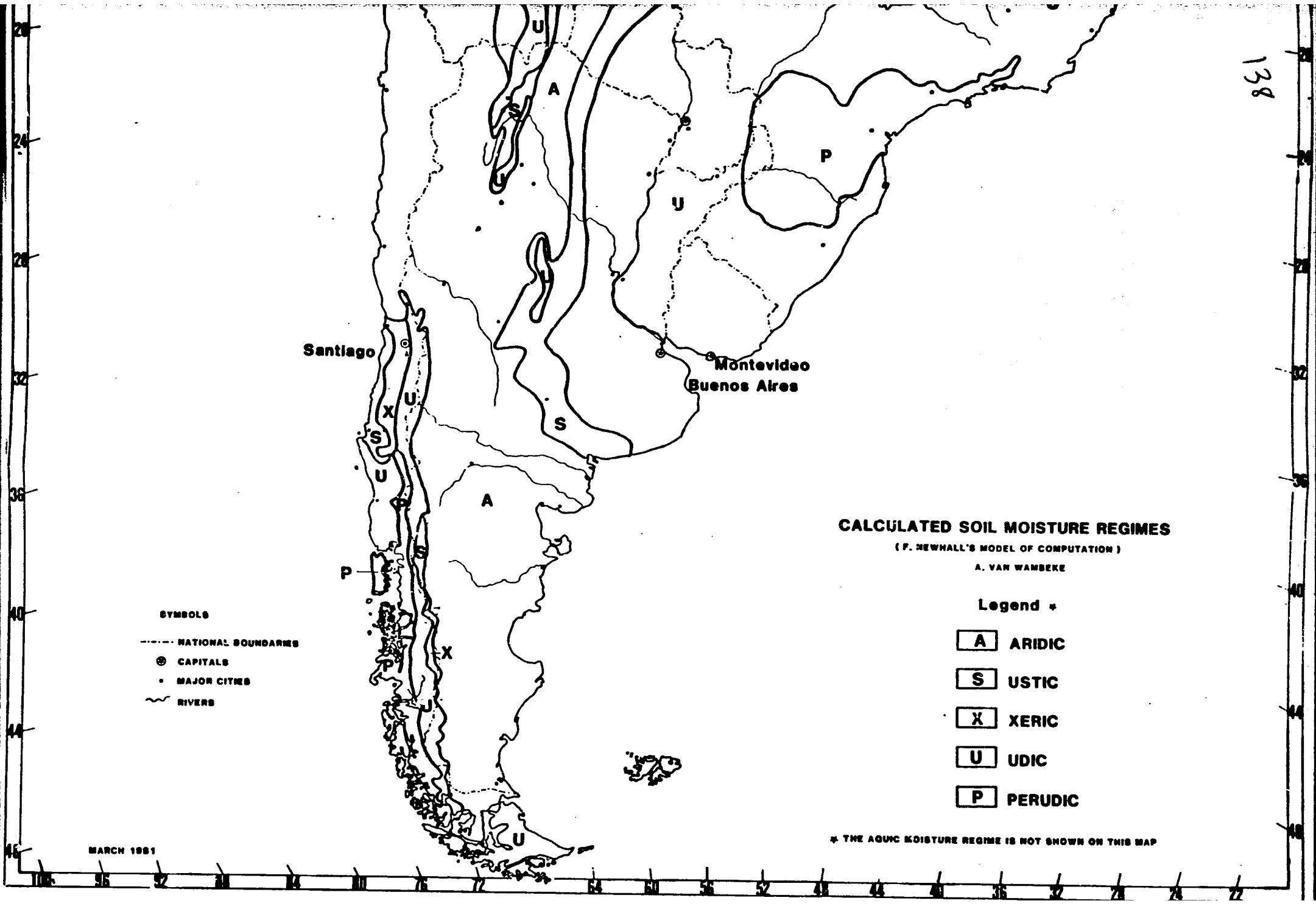
Soil Survey Staff. 1975. Soil Taxonomy. A Basic System of Soil Classification for Making and Interpreting Soil Surveys. Agricultural Handbook No. 436. Soil Conservation Service, USDA, Washington, D.C.

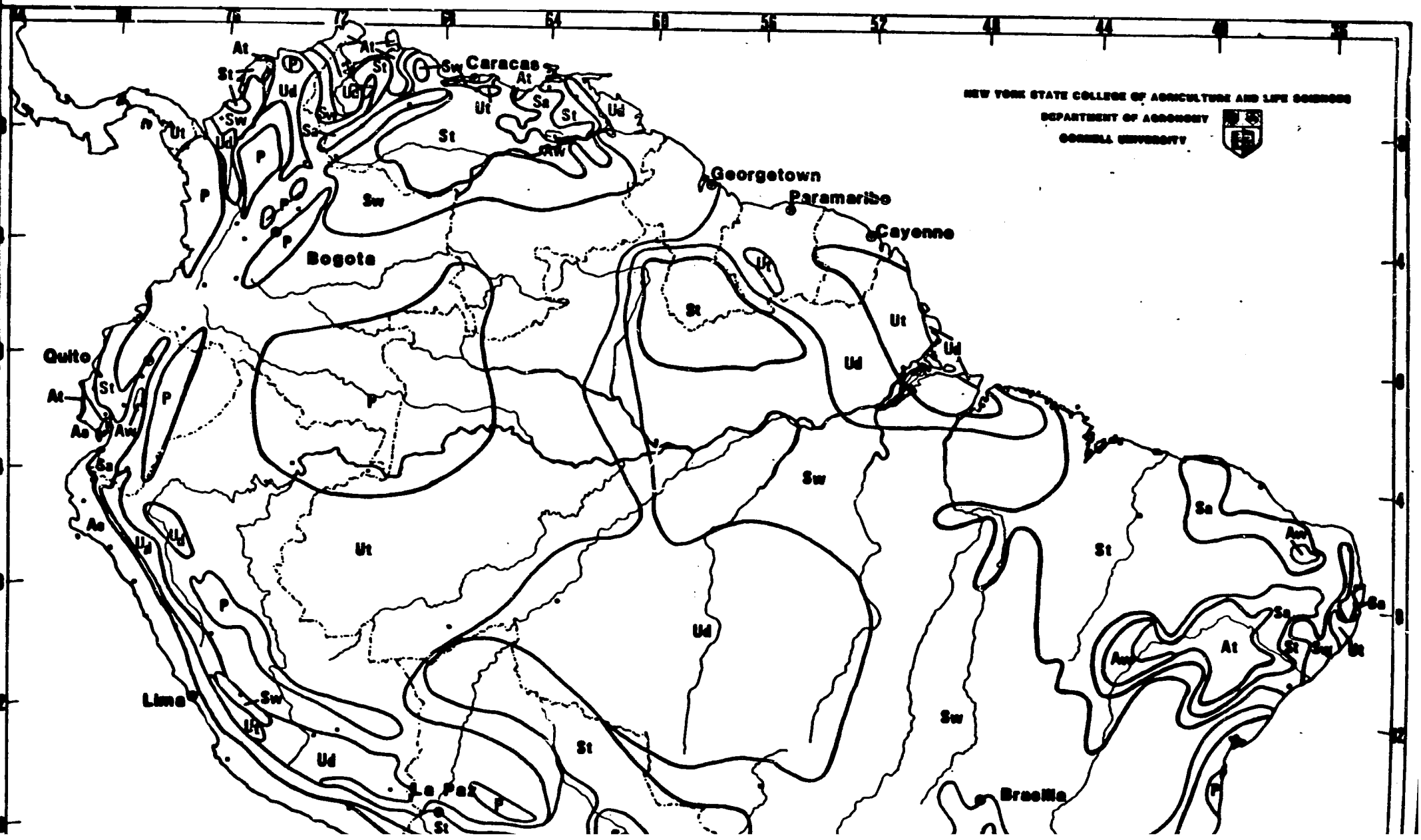
Van Wambeke, A., C. O. Scoppa. 1976. Las taxas climáticas de los suelos argentinos. Revista de Investigaciones Agropecuarias INTA. Vol. XIII(1) 7-39, Buenos Aires.

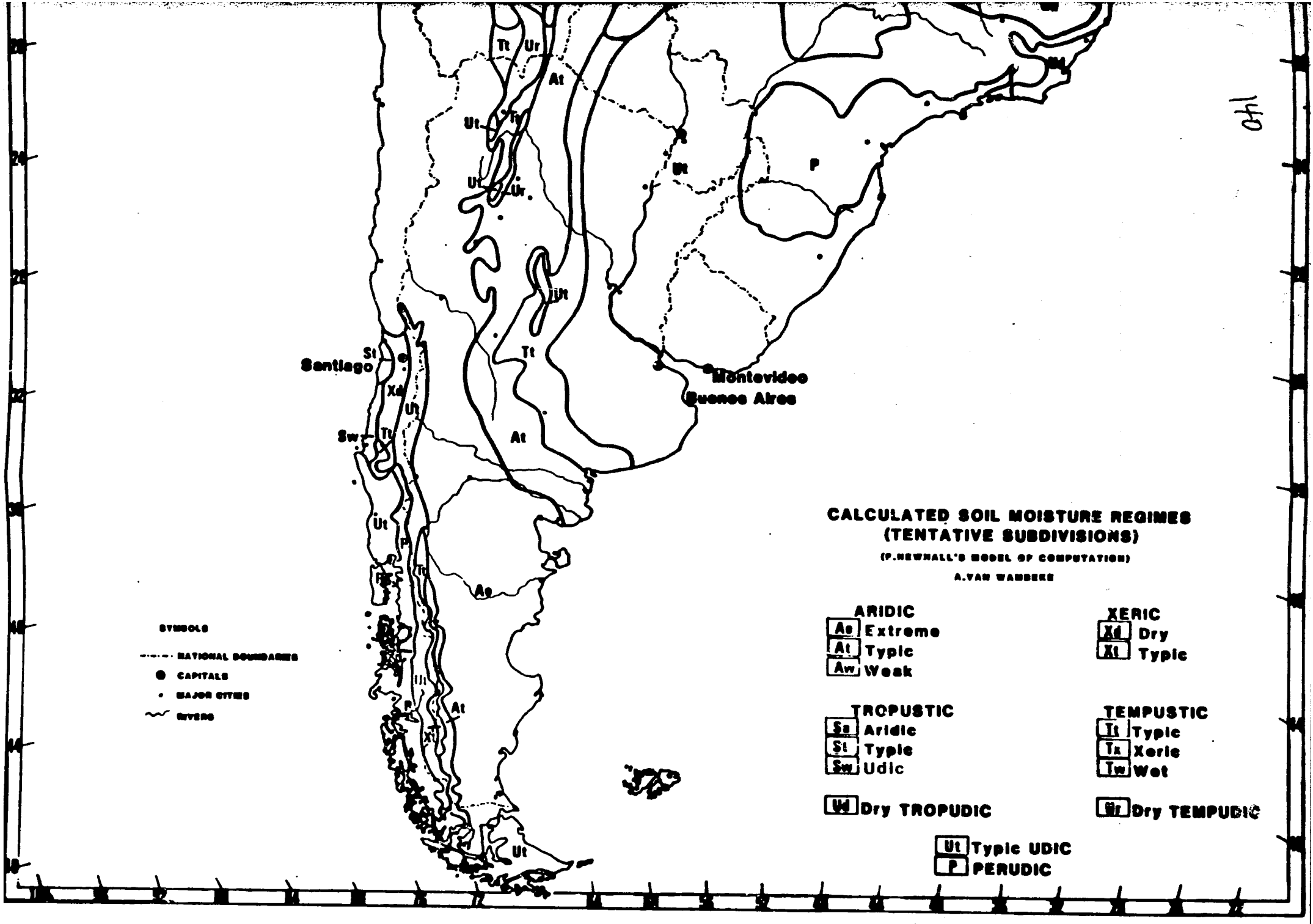
Wernstedt, Frederick L. 1972. World Climatic Data. Climatic Data Press, Lemont, Pennsylvania. USA.

World Meteorological Organization. 1975. Climatic Atlas of South America. Geneva, Switzerland.


NEW YORK STATE COLLEGE OF AGRICULTURE AND LIFE SCIENCES
DEPARTMENT OF AGRONOMY
CORNELL UNIVERSITY
Caracas
Georgetown
Paramaribo
Cayenne
Bogota
Quito
Lima
La Paz
Brasilia
A
P
S
U


CALCULATED SOIL MOISTURE REGIMES
(F. NEWHALL'S MODEL OF COMPUTATION)
A. VAN WAMBEKE
Legend *
A ARIDIC
S USTIC
X XERIC
U UDIC
P PERUDIC
* THE AQUIC MOISTURE REGIME IS NOT SHOWN ON THIS MAP
SYMBOLS
NATIONAL BOUNDARIES
CAPITALS
MAJOR CITIES
RIVERS
Santiago
Montevideo
Buenos Aires
MARCH 1981


NEW YORK STATE COLLEGE OF AGRICULTURE AND LIFE SCIENCES
DEPARTMENT OF AGRONOMY
CORNELL UNIVERSITY
Caracas
Georgetown
Paramaribo
Cayenne
Bogota
Quito
Lima
La Paz
Brasilia
At
St
Sw
Ud
Ut
Sa
P
Aw


CALCULATED SOIL MOISTURE REGIMES
(TENTATIVE SUBDIVISIONS)
(P.NEWHALL'S MODEL OF COMPUTATION)
A.VAN WAMBEKE
ARIDIC
Ae Extreme
At Typic
Aw Weak
XERIC
Xd Dry
Xt Typic
TROPUSTIC
Sa Aridic
St Typic
Sw Udic
TEMPUSTIC
Tt Typic
Tx Xeric
Tw Wet
Ud Dry TROPUDIC
Ur Dry TEMPUDIC
Ut Typic UDIC
P PERUDIC
SYMBOLS
NATIONAL BOUNDARIES
CAPITALS
MAJOR CITIES
RIVERS
Santiago
Montevideo
Buenos Aires