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9. ABSTRACT

With increasing demands for more food and other agricultural production supplemental irrigation becomes of greater importance. Crops are produced throughout the Southea: States without irrigation. However, yields are generally significantly below levels possible with adequate moisture supplies. A numerical evaluation of monthly moisture adequacies or deficits is presented. The states considered are Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, Missouri, North Carolina, South Carolina, Tennessee, Virginia and West Virginia.

A precise evaluation of moisture adequacies requires a daily evaluation of moisture requirements and of moisture availability. The climate of a given area can be analy: with respect to requirements for supplemental irrigation by using a knowledge of cro evapotranspiration requirements, soil moisture characteristics and rainfall availabl for plant use. However, studies based on daily data are time consuming and for that reason are seldom applied over large areas. For regional studies some generalizatio including the use of monthly averages and monthly indices, may be more appropriate.

In order to approximately evaluate the needs for supplemental irrigation over a 13 st area the use of monthly moisture indices was employed. This procedure can be improv through correlation with analyses utilizing daily data and through greater use of mo availability yield relationships

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MOISTURE ADEQUACIES FOR AGRICULTURE IN THE SOUTHEAST

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MOISTURE ADEQUACIES FOR AGRICULTURE IN THE SOUTHEAST

By George H. Hargreaves,[1] F. ASCE

INTRODUCTION

With increasing demands for more food and other agricultural production supplemental irrigation becomes of greater importance. Crops are produced throughout the Southeastern States without irrigation. However, yields are generally significantly below levels possible with adequate moisture supplies. A numerical evaluation of monthly moisture adequacies or deficits is presented. The states considered are Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, Missouri, North Carolina, South Carolina, Tennessee, Virginia and West Virginia.

A precise evaluation of moisture adequacies requires a daily evaluation of moisture requirements and of moisture availability. The climate of a given area can be analyzed with respect to requirements for supplemental irrigation by using a knowledge of crop evapotranspiration requirements, soil moisture characteristics and rainfall available for plant use. However, studies based on daily data are time consuming and for that reason are seldom applied over large areas. For regional studies some generalizations, including the use of monthly averages and monthly indices, may be more appropriate.

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In order to approximately evaluate the needs for supplemental irrigation over a 13 state area the use of monthly moisture indices was employed. This procedure can be improved through correlation with analyses utilizing daily data and through greater use of moisture availability yield relationships.

METHODOLOGY

Mean monthly temperature data are given by Wernstedt (7)[2]. Mean monthly values of relative humidity are less readily available. Maps showing monthly means are presented by the Environmental Data Service (1). These give lines of equal values to the nearest 10 percent. Interpolation between these values is possible. However, the accuracy is probably not great. This method does, however, provide a good source for rapidly obtaining approximate values of relative humidity. The Environmental Science Services Administration (2) has published mean precipitation and various levels of probabilities of precipitation for 23 states.

For the 13 states selected for this study the climatic stations and divisions selected by the Environmental Science Administration were used. Mean temperature, mean relative humidity, mean precipitation and the 75 percent probability of occurrence of precipitation (that equaled or exceeded three years out of four) were punched on computer cards. The header cards consisted of the station or division name, the latitude and the number of years of record. Details of the computer program are given in Appendix II - Computer Program Used.

The computer print out for the 13 state area is presented as Table 1, and gives mean temperature in degree Fahrenheit, TM; mean relative humidity

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[2]Numerals in parentheses refer to corresponding items in the Appendix - References

in percent, HM; mean precipitation, PREC; dependable precipitation, PD, (the 75 percent probability of precipitation); potential evapotranspiration, ETP; a moisture deficit or evapotranspiration deficit, ETDF; and a moisture availability index, MAI.

Potential evapotranspiration, ETP, given in Table 1 as POT ET is calculated from the latitude, mean temperature, TM, and mean relative humidity, HM, from an equation given by Hargreaves (4). Details of the calculations with explanations on comment cards are presented in Appendix II. The equation can be written:

$$ETP = MF \times TM \times CH \tag{1}$$

in which MF is a monthly factor depending upon latitude, TM is mean temperature in degrees Fahrenheit and CH is a correction for relative humidity. The equation for CH is

$$CH = 0.166\ (100-HM)^{1/2} \tag{1a}$$

with a maximum value of CH = 1.00. Values of MF are given in Table 2 for the latitudes encountered in the United States. The moisture deficit, ETDF, as defined by Hargreaves (3), is given by the equation

$$ETDF = PD - ETP \tag{2}$$

The moisture availability index, MAI, described by Hargreaves (3), is obtained from the equation

$$MAI = PD/ETP \tag{3}$$

for each state or division a regression was made showing PD as a function of PREC. The regression equations are presented in Table 1, together with the R squared values.

DEPENDABILITY OF PRECIPITATION

There are significant differences in precipitation distribution in the Southeast. Adequacy of mean precipitation does not guarantee adequacy

of either amount or distribution. An example of an extreme case can be cited for the rainfall station at Conceicao, Paraiba, Brasil. Although the climate of Northeast Brazil is more erratic and unpredictable than is the case for the Southeastern States of the United States a record from Northeast Brazil illustrates an extreme of distribution. The potential evapotranspiration for February is estimated to be 6.0 inches. Mean rainfall for a 56 year period is 7.0 inches or 1.16 percent of adequacy. However, the period of record contains three years of zero rainfall during February, 13 years of less than one-third adequacy, six years with more than 12 inches and one year with more than 52 inches during this month. Obviously some form of probability analysis compared with potential evapotranspiration will be much more useful than mean precipitation.

It is proposed that in the analysis of moisture adequacies for agricultural production and the needs and requirements for irrigation "dependable precipitation," defined by Hargreaves (3), be used to specify the 75 percent probability of occurrence. For supplemental irrigation development the rainfall that may be expected to occur three years out of four is a reasonable value for most crops. Some deficit during one year in four can usually be economically tolerated, particularly when each month is assigned this same level of probability. For some high value crops or special conditions, a higher probability of occurrence may be desirable. The concept of precipitation probability is combined with potential evapotranspiration to provide a moisture availability index, MAI, (Equation 3) which is an indication of the degree of moisture adequacy at the specified probability level.

More study and analysis is desirable with respect to the relationships between monthly probabilities and daily distribution. Those locations having wide variations in monthly totals will tend to have poorer and more

erratic distribution of precipitation within the months. The final objective is to relate dependability of amounts of precipitation to yield and to the economics of making up the deficits through supplemental irrigation. Provided MAI is found to correlate well with yields from a wide variety of crops, then this index will increase in usefulness in the analysis of irrigation problems.

CLASSIFICATION OF MOISTURE DEFICITS

Hargreaves (3) proposed the following classification for evaluating moisture deficits:

Range in MAI	Classification
0.00 to 0.33	Very deficient
0.34 to 0.67	Moderately deficient
0.68 to 1.00	Somewhat deficient
1.01 to 1.33	Adequate
1.34 and above	Excessive

Mirnezami (6) found a high level of correlation between MAI and yield of dry farmed wheat. In the very deficient range the response to fertilization application was not positive. Adequate moisture is of greater importance during the flowering, fruiting and fruit on grain sizing stages. Values of MAI in the very deficient range during these periods are considered to be danger signals. The economics of applying supplemental irrigation during these critical periods should be investigated. An inspection of Table I indicates that most locations and divisions in the Southeast have months that are very deficient during critical periods.

DISCUSSION

For most of the Southeast May is a critical month. An inspection of Table 1 indicates that when rainfall is very deficient in May it is

also very deficient or moderately deficient in April. For this reason there usually will not be very much carry over soil moisture at the beginning of May. June is also critical for some crops.

A review of the analysis given in Table 1 shows that rainfall is very deficient during May for 37 stations and/or divisions (35%). June is very deficient for 41 (38%). May and June are both deficient for 11 (10%). May and/or June are very deficient for 67 (63%). This analysis was not made to determine area of coverage but seems to indicate that nearly two thirds of the Southeast suffers from severe moisture deficits during either May or June. The probability of having less than a third adequacy one year in four is seriously limiting on crop production and economic development of the region.

Distribution of precipitation within the month is also of considerable importance. Based on studies by Hargreaves and Christiansen (5), rainfall at the level of one third of adequacy, if evenly distributed throughout the month, may maintain production of some crops at about 41 percent of optimum.

However, values of MAI of less than 0.34 are quite limiting on production regardless of distribution. Also, in general, with lower values of MAI undesirable distribution becomes more probable.

If irrigation water can be economically supplied then irrigation development should be considered as a means of making up serious moisture deficits, particularly during months that are critical for good crop production.

CONCLUSION

Moisture availability indices based upon precipitation probabilities (the 75 percent probability of occurrence) are presented for the 13

Southeastern States. These indices, based upon monthly precipitation and climatic data, provide an indication of the probability that rainfall will be adequate in supplying moisture requirements equal to potential evapotranspiration.

Further study is recommended in comparing the distribution of precipitation throughout the months from daily data with these monthly indices. Other studies should relate moisture deficits to yields or to reduction in yields and to the economic considerations relative to providing supplemental irrigation for very deficient months.

APPENDIX I - REFERENCES

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TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

MONTGOMERY ALABAMA — LAT 32 18 — 37 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	49.	52.	57.	65.	73.	80.	82.	82.	77.	66.	55.	49.	66.
MEAN R.H.	77.	75.	70.	72.	73.	73.	76.	77.	76.	74.	73.	76.	74.
MEAN PREC	4.18	4.60	5.97	4.71	3.23	4.06	5.12	3.89	4.01	2.31	3.07	4.90	50.05
PREC DEP	2.65	3.02	3.94	2.47	1.89	2.68	3.58	3.34	1.67	.68	1.23	3.03	
POT ET	1.59	2.08	3.76	5.20	7.00	7.98	7.76	6.70	4.99	3.39	2.03	1.48	53.97
ETDF	-1.06	-.94	-.18	2.73	5.11	5.30	4.18	3.36	3.32	2.71	.70	-1.55	27.42
MAI	1.67	1.45	1.05	.47	.27	.34	.46	.50	.33	.20	.65	2.04	

PD = -1.075 + .863 * PREC
RSQ=.7830

ALABAMA PRAIRIE DIVISION — LAT 32 20 — 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	49.	52.	57.	65.	73.	80.	82.	82.	77.	66.	55.	49.	66.
MEAN R.H.	77.	75.	70.	72.	73.	73.	76.	77.	76.	74.	73.	76.	74.
MEAN PREC	4.52	4.72	6.29	5.13	3.41	3.94	5.41	3.97	3.23	2.20	3.23	5.00	51.05
PREC DEP	3.06	3.39	4.66	3.13	1.98	2.75	4.16	2.53	1.84	.86	1.66	3.22	
POT ET	1.58	2.08	3.76	5.20	7.00	7.98	7.76	6.70	4.99	3.39	2.03	1.48	53.96
ETDF	-1.48	-1.31	-.90	2.07	5.02	5.23	3.60	4.17	3.15	2.53	.37	-1.74	26.15
MAI	1.93	1.63	1.24	.60	.28	.34	.54	.38	.37	.25	.92	2.17	

PD = -1.164 + .925 * PREC
RSQ=.9606

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

ALABAMA NORTHERN VALLEY DIVISION — LAT 34 30 — 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	42.	45.	51.	62.	70.	78.	80.	80.	73.	62.	50.	44.	61.
MEAN R.H.	74.	72.	70.	66.	68.	70.	76.	76.	73.	70.	70.	70.	71.
MEAN PREC	5.44	4.96	6.04	4.63	3.41	3.65	4.40	3.48	3.27	2.68	3.91	5.00	50.87
PREC DEP	3.38	3.07	4.34	3.22	2.20	2.30	3.02	2.28	1.83	1.16	2.24	3.04	
POT ET	1.32	1.79	3.25	5.42	7.37	8.33	7.67	6.68	4.90	3.26	1.80	1.35	53.14
ETDF	-2.06	-1.28	-1.09	2.20	5.17	6.03	4.65	4.40	3.07	2.10	-.44	-1.69	27.61
MAI	2.56	1.72	1.33	.59	.30	.28	.39	.34	.37	.36	1.24	2.25	

PD = -.746 + .807 * PREC
RSQ=.9345

ALABAMA APPALACHIAN MOUNTAIN DIVISION — LAT 34 30 — 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	45.	47.	52.	62.	69.	77.	79.	79.	73.	62.	51.	45.	62.
MEAN R.H.	74.	72.	70.	66.	68.	71.	76.	76.	75.	70.	70.	72.	72.
MEAN PREC	5.54	4.56	6.36	4.89	3.44	4.02	4.95	3.93	3.10	2.81	4.00	5.20	52.80
PREC DEP	3.49	2.20	4.91	3.34	2.28	2.86	3.42	2.74	1.71	1.12	2.31	3.22	
POT ET	1.42	1.87	3.32	5.42	7.26	8.08	7.57	6.59	4.72	3.26	1.84	1.34	52.67
ETDF	-2.07	-.33	-1.59	2.08	4.98	5.22	4.15	3.85	3.01	2.14	-.47	-1.88	25.42
MAI	2.46	1.18	1.48	.62	.31	.35	.45	.42	.36	.34	1.26	2.41	

PD = -1.066 + .879 * PREC
RSQ=.8694

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

ALABAMA UPPER PLAINS DIVISION — LAT 33 40 — 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	45.	48.	54.	63.	71.	78.	81.	80.	74.	63.	52.	45.	63.
MEAN R.H.	75.	73.	70.	68.	70.	72.	76.	77.	75.	70.	70.	72.	72.
MEAN PREC	5.33	5.00	6.35	5.15	3.61	4.20	5.20	4.18	3.16	2.49	3.65	5.24	53.61
PREC DEP	3.54	3.15	4.97	3.38	2.29	2.99	3.72	2.76	1.82	.99	2.14	3.32	
POT ET	1.44	1.92	3.49	5.36	7.21	8.00	7.73	6.53	4.82	3.37	1.93	1.39	53.20
ETDF	-2.10	-1.23	-1.48	1.98	4.92	5.01	4.01	3.77	3.00	2.38	-.21	-1.93	25.08
MAI	2.46	1.64	1.42	.63	.32	.37	.48	.42	.38	.29	1.11	2.40	

PD = -1.139 + .909 * PREC
RSQ=.9556

ALABAMA EASTERN VALLEY DIVISION — LAT 33 30 — 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	46.	49.	52.	62.	70.	77.	80.	79.	63.	73.	51.	45.	62.
MEAN R.H.	75.	73.	70.	67.	68.	71.	74.	78.	79.	70.	70.	71.	72.
MEAN PREC	5.33	5.33	6.31	5.04	3.15	4.29	4.89	4.05	3.22	2.57	3.41	5.19	52.78
PREC DEP	3.47	3.75	4.84	3.23	1.81	3.04	3.34	2.74	1.68	.99	1.92	3.02	
POT ET	1.48	1.97	3.37	5.36	7.34	8.02	7.93	6.31	3.75	3.94	1.90	1.42	52.79
ETDF	-1.99	-1.78	-1.47	2.13	5.53	4.98	4.59	3.57	2.07	2.95	-.02	-1.60	25.81
MAI	2.34	1.90	1.44	.60	.25	.38	.42	.43	.45	.25	1.01	2.13	

PD = -1.199 + .914 * PREC
RSQ=.9486

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

ALABAMA PIEDMONT PLATEAU DIVISION LAT 33 0 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	47.	50.	55.	63.	70.	77.	79.	78.	73.	63.	52.	46.	63.
MEAN R.H.	77.	75.	70.	68.	70.	71.	76.	78.	76.	71.	70.	74.	73.
MEAN PREC	4.96	5.06	6.51	5.48	3.32	4.16	5.33	4.40	3.48	2.26	3.47	5.10	53.53
PREC DEP	3.26	3.52	5.03	3.45	2.00	3.08	3.94	3.02	1.96	.70	1.78	3.16	
POT ET	1.48	1.96	3.59	5.37	7.09	7.99	7.50	6.22	4.69	3.36	1.98	1.40	52.64
ETDF	-1.78	-1.56	-1.44	1.92	5.09	4.91	3.56	3.20	2.73	2.66	.20	-1.76	24.27
MAI	2.20	1.80	1.40	.64	.28	.39	.53	.49	.42	.21	.90	2.25	

PD = -1.315 + .947 * PREC
RSQ=.9501

ALABMA COASTAL PLAIN DIVISION LAT 31 30 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	51.	53.	58.	66.	73.	80.	80.	80.	77.	68.	57.	51.	66.
MEAN R.H.	78.	76.	72.	71.	71.	75.	78.	79.	79.	74.	73.	79.	75.
MEAN PREC	4.65	4.66	6.30	5.51	3.91	4.64	6.75	5.16	4.34	2.21	3.36	5.09	56.58
PREC DEP	3.08	3.19	4.10	3.56	2.33	3.30	5.28	3.57	2.77	.73	1.64	3.26	
POT ET	1.66	2.12	3.74	5.39	7.23	7.63	7.20	6.24	4.70	3.56	2.17	1.49	53.13
ETDF	-1.42	-1.07	-.36	1.83	4.90	4.33	1.92	2.67	1.93	2.83	.53	-1.77	20.93
MAI	1.85	1.50	1.10	.66	.32	.43	.73	.57	.59	.21	.76	2.18	

PD = -1.294 + .925 * PREC
RSQ=.9627

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

ALABAMA GULF DIVISION — LAT 30 40 — 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	52.	55.	60.	67.	74.	80.	81.	81.	77.	68.	58.	53.	67.
MEAN R.H.	80.	78.	73.	73.	74.	77.	80.	79.	79.	75.	73.	79.	77.
MEAN PREC	4.65	4.40	6.51	5.88	4.65	6.14	8.71	6.21	6.26	2.80	3.49	5.07	64.77
PREC DEP	2.97	2.86	3.89	3.23	2.74	4.00	6.18	4.42	3.66	.91	1.54	3.36	
POT ET	1.67	2.15	3.85	5.29	6.92	7.27	6.92	6.32	4.73	3.55	2.27	1.60	52.53
ETDF	-1.30	-.71	-.04	2.06	4.18	3.27	.74	1.90	1.07	2.64	.73	-1.76	16.58
MAI	1.78	1.33	1.01	.61	.40	.55	.89	.70	.77	.26	.68	2.09	

PD = -1.194 + .835 * PREC
RSQ=.9442

LITTLE ROCK ARKAMSAS — LAT 34 44 — 37 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	42.	46.	52.	63.	71.	79.	82.	82.	74.	64.	51.	44.	63.
MEAN R.H.	73.	72.	70.	68.	72.	72.	70.	70.	68.	69.	69.	72.	70.
MEAN PREC	4.75	4.31	4.78	4.99	5.01	3.35	3.39	3.04	3.38	2.66	3.94	4.04	47.64
PREC DEP	2.04	2.50	2.91	3.06	2.84	1.17	2.08	1.35	1.62	.88	2.06	2.61	
POT ET	1.33	1.82	3.31	5.34	7.00	8.17	8.81	7.66	5.40	3.40	1.85	1.29	55.39
ETDF	-.71	-.68	.40	2.28	4.16	7.00	6.73	6.31	3.78	2.52	-.21	-1.32	33.18
MAI	1.53	1.38	.88	.57	.41	.14	.24	.18	.30	.26	1.11	2.02	

PD = -1.067 + .796 * PREC
RSQ=.7963

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

ARKANSAS CENTRAL DIVISION — LAT 34 40 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	42.	45.	52.	62.	69.	77.	80.	80.	74.	64.	51.	44.	62.
MEAN R.H.	73.	72.	70.	68.	72.	72.	70.	70.	68.	69.	69.	72.	70.
MEAN PREC	4.87	4.36	4.94	5.43	5.71	4.21	3.76	3.15	3.32	3.25	4.37	4.38	51.75
PREC DEP	2.48	2.40	3.16	3.59	3.77	2.30	2.24	1.75	1.84	1.74	2.21	2.76	
POT ET	1.34	1.78	3.31	5.25	6.79	7.95	8.58	7.46	5.41	3.41	1.86	1.29	54.44
ETDF	-1.14	-.62	.15	1.66	3.02	5.65	6.34	5.71	3.57	1.67	-.35	-1.47	27.78
MAI	1.85	1.35	.95	.68	.55	.29	.26	.23	.34	.51	1.19	2.13	

PD = -.780 + .765 * PREC
RSQ=.8878

ARKANSAS NORTHWEST DIVISION — LAT 36 10 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	38.	42.	48.	60.	67.	75.	79.	79.	72.	62.	48.	41.	59.
MEAN R.H.	74.	70.	66.	66.	72.	72.	67.	68.	67.	66.	70.	72.	69.
MEAN PREC	2.57	3.13	3.53	4.59	6.08	5.14	3.59	3.31	4.08	3.57	3.25	2.57	45.41
PREC DEP	1.10	1.66	1.98	3.14	3.62	2.74	1.94	1.77	1.76	1.86	1.64	1.39	
POT ET	1.10	1.63	3.14	5.15	6.56	7.74	8.87	7.52	5.20	3.30	1.60	1.11	52.90
ETDF	.00	-.03	1.16	2.01	2.94	5.00	6.93	5.75	3.44	1.44	-.04	-.28	28.65
MAI	1.00	1.02	.63	.61	.55	.35	.22	.24	.34	.56	1.02	1.25	

PD = -.490 + .671 * PREC
RSQ=.8916

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

ARKANSAS NORTH CENTRAL DIVISION — LAT 36 0 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	38.	42.	49.	59.	67.	75.	79.	78.	72.	61.	48.	40.	59.
MEAN R.H.	75.	72.	67.	67.	70.	70.	68.	71.	66.	67.	70.	72.	70.
MEAN PREC	3.43	3.55	4.00	4.50	5.37	4.27	3.45	3.14	3.08	3.17	3.70	3.24	44.90
PREC DEP	1.48	1.94	2.17	3.06	3.44	2.20	2.26	1.78	1.47	1.66	1.90	1.78	
POT ET	1.09	1.58	3.17	5.00	6.80	8.02	8.74	7.08	5.30	3.22	1.62	1.09	52.72
ETDF	-.39	-.36	1.00	1.94	3.36	5.82	6.48	5.30	3.83	1.56	-.28	-.69	29.29
MAI	1.36	1.23	.68	.61	.51	.27	.26	.25	.28	.52	1.17	1.63	

PD = -.935 + .810 * PREC
RSQ=.8473

ARKANSAS NORTHEAST DIVISION — LAT 35 50 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	40.	43.	52.	61.	70.	78.	81.	80.	74.	63.	51.	42.	61.
MEAN R.H.	75.	74.	67.	66.	70.	71.	67.	73.	70.	69.	69.	74.	70.
MEAN PREC	4.88	4.22	4.84	4.46	4.71	3.75	3.73	3.23	2.96	3.20	4.15	4.08	48.21
PREC DEP	2.43	2.42	3.08	2.98	2.98	2.04	2.50	1.92	1.68	1.78	2.18	2.70	
POT ET	1.16	1.57	3.39	5.27	7.13	8.23	9.13	7.04	5.14	3.24	1.76	1.12	54.17
ETDF	-1.27	-.85	.31	2.29	4.15	6.19	6.63	5.12	3.46	1.46	-.42	-1.58	29.60
MAI	2.10	1.54	.91	.57	.42	.25	.27	.27	.33	.55	1.24	2.41	

PD = -.121 + .625 * PREC
RSQ=.7246

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

ARKANSAS WEST CENTRAL DIVISION — LAT 35 10 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	42.	46.	51.	62.	70.	78.	82.	81.	74.	63.	50.	43.	62.
MEAN R.H.	73.	70.	64.	67.	73.	71.	66.	67.	65.	67.	69.	70.	68.
MEAN PREC	3.85	4.08	4.44	5.10	5.99	4.57	3.82	3.47	3.63	3.55	3.83	3.68	50.01
PREC DEP	1.66	2.12	2.62	3.57	4.24	2.34	2.34	2.04	1.87	1.90	2.05	2.16	
POT ET	1.31	1.86	3.53	5.32	6.79	8.24	9.40	7.93	5.63	3.42	1.78	1.28	56.49
ETDF	-.35	-.26	.91	1.75	2.55	5.90	7.06	5.89	3.76	1.52	-.27	-.88	29.34
MAI	1.27	1.14	.74	.67	.62	.28	.25	.26	.33	.56	1.15	1.69	

PD = -1.539 + .947 * PREC

RSQ=.8817

ARKANSAS EAST CENTRAL DIVISION — LAT 34 50 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	42.	44.	53.	62.	70.	78.	81.	81.	74.	63.	51.	44.	62.
MEAN R.H.	75.	74.	67.	67.	70.	72.	70.	67.	72.	67.	68.	74.	70.
MEAN PREC	5.61	4.67	5.20	4.89	4.64	3.56	3.91	2.79	3.05	3.08	4.33	4.62	50.35
PREC DEP	3.02	2.72	3.64	3.30	2.90	2.06	2.32	1.50	1.84	1.56	2.46	2.90	
POT ET	1.28	1.67	3.53	5.33	7.18	8.07	8.70	7.93	5.05	3.45	1.87	1.24	55.27
ETDF	-1.74	-1.05	-.11	2.03	4.24	6.01	6.38	6.43	3.21	1.89	-.59	-1.66	30.19
MAI	2.36	1.63	1.03	.62	.41	.26	.27	.19	.36	.45	1.31	2.34	

PD = -.434 + .704 * PREC

RSQ=.8825

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

ARKANSAS SOUTHWEST DIVISION — LAT 33 40 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	45.	48.	55.	64.	71.	79.	82.	81.	75.	65.	53.	46.	64.
MEAN R.H.	73.	72.	65.	69.	74.	72.	68.	67.	65.	67.	66.	70.	69.
MEAN PREC	4.60	4.20	4.70	5.50	5.65	3.91	3.95	3.06	3.49	3.36	4.27	4.36	51.05
PREC DEP	2.27	2.45	3.08	3.57	3.68	1.84	2.46	1.50	1.82	1.65	2.16	2.47	
POT ET	1.49	1.95	3.85	5.36	6.72	8.11	9.04	7.93	5.79	3.65	2.10	1.47	57.45
ETDF	-.78	-.50	.77	1.79	3.04	6.27	6.58	6.43	3.97	2.00	-.06	-1.00	30.84
MAI	1.52	1.25	.80	.67	.55	.23	.27	.19	.31	.45	1.03	1.68	

PD = -1.229 + .856 * PREC
RSQ=.9006

ARKANSAS SOUTH CENTRAL DIVISION — LAT 33 30 — 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	44.	48.	55.	64.	71.	79.	82.	81.	76.	64.	52.	45.	63.
MEAN R.H.	75.	73.	67.	69.	74.	75.	71.	70.	69.	69.	67.	72.	71.
MEAN PREC	5.25	4.62	5.12	5.42	4.87	3.55	4.12	2.86	2.99	3.09	4.77	4.97	51.63
PREC DEP	3.07	2.86	3.80	3.54	3.33	1.88	2.40	1.46	1.66	1.24	2.63	3.08	
POT ET	1.41	1.93	3.74	5.36	6.71	7.65	8.59	7.56	5.53	3.50	2.04	1.40	55.43
ETDF	-1.66	-.93	-.06	1.82	3.38	5.77	6.19	6.10	3.87	2.26	-.59	-1.68	29.40
MAI	2.17	1.48	1.02	.66	.50	.25	.28	.19	.30	.35	1.29	2.21	

PD = -1.124 + .861 * PREC
RSQ=.9095

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

ARKANSAS SOUTHEAST DIVISION — LAT 33 40 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	45.	48.	55.	64.	72.	80.	82.	82.	76.	65.	53.	46.	64.
MEAN R.H.	76.	74.	68.	69.	73.	75.	72.	73.	70.	71.	68.	73.	72.
MEAN PREC	5.73	4.82	5.51	5.06	4.55	3.34	4.40	2.83	3.06	2.83	4.42	5.21	51.76
PREC DEP	3.37	3.18	4.16	3.32	2.80	1.58	2.58	1.60	1.62	1.18	2.52	3.16	
POT ET	1.41	1.88	3.68	5.36	6.94	7.76	8.45	7.26	5.43	3.42	2.03	1.39	55.04
ETDF	-1.96	-1.30	-.48	2.04	4.14	6.18	5.87	5.66	3.81	2.24	-.49	-1.77	29.96
MAI	2.39	1.69	1.13	.62	.40	.20	.31	.22	.30	.34	1.24	2.27	

PD = -1.040 + .841 * PREC
RSQ=.9215

LAKELAND FLORIDA — LAT 28 2 — 37 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	62.	63.	66.	72.	77.	81.	82.	82.	80.	74.	67.	62.	72.
MEAN R.H.	78.	75.	73.	72.	72.	75.	78.	79.	80.	79.	78.	79.	76.
MEAN PREC	2.17	2.68	3.95	3.09	3.40	7.05	7.82	7.30	6.22	2.59	1.56	1.89	49.72
PREC DEP	.88	1.04	2.16	.94	1.74	4.91	5.65	5.40	3.98	1.06	.34	.72	
POT ET	2.29	2.81	4.38	5.84	7.38	7.51	7.21	6.38	4.91	3.73	2.58	2.08	57.11
ETDF	1.41	1.77	2.22	4.90	5.64	2.60	1.56	.98	.93	2.67	2.24	1.36	28.29
MAI	.38	.37	.49	.16	.24	.65	.78	.85	.81	.28	.13	.35	

PD = -1.179 + .864 * PREC
RSQ=.9869

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

FLORIDA SOUTH CENTRAL DIVISION LAT 27 40 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	63.	64.	68.	73.	77.	80.	82.	82.	81.	76.	67.	64.	73.
MEAN R.H.	78.	75.	73.	72.	72.	75.	78.	79.	80.	79.	78.	79.	76.
MEAN PREC	2.09	2.64	3.59	3.38	3.54	7.27	8.14	7.63	7.79	4.14	1.77	1.86	53.84
PREC DEP	.94	1.20	1.84	1.86	2.22	5.11	6.66	6.02	5.95	2.42	.77	.86	
POT ET	2.36	2.88	4.54	5.93	7.37	7.39	7.20	6.37	4.98	3.86	2.60	2.18	57.66
ETDF	1.42	1.68	2.70	4.07	5.15	2.28	.54	.35	-.97	1.44	1.83	1.32	22.78
MAI	.40	.42	.41	.31	.30	.69	.93	.94	1.19	.63	.30	.39	

PD = -1.059 + .902 * PREC
RSQ=.9880

FLORIDA NORTHWEST DIVISION LAT 30 30 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	53.	55.	61.	67.	75.	80.	81.	81.	78.	69.	59.	53.	68.
MEAN R.H.	79.	75.	72.	70.	70.	75.	80.	79.	80.	77.	75.	80.	76.
MEAN PREC	3.79	4.12	5.54	4.92	4.16	5.31	7.96	7.09	6.15	2.60	2.92	3.85	58.41
PREC DEP	2.26	2.57	3.42	2.96	2.74	3.48	6.22	5.08	3.79	1.03	1.19	2.21	
POT ET	1.75	2.30	3.99	5.58	7.53	7.57	6.91	6.31	4.69	3.47	2.23	1.58	53.91
ETDF	-.51	-.27	.57	2.62	4.79	4.09	.69	1.23	.91	2.44	1.04	-.63	18.38
MAI	1.29	1.12	.86	.53	.36	.46	.90	.80	.81	.30	.53	1.40	

PD = -1.316 + .903 * PREC
RSQ=.9757

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

FLORIDA NORTH DIVISION — LAT 30 0 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	56.	58.	63.	69.	73.	80.	81.	81.	79.	70.	62.	56.	69.
MEAN R.H.	78.	75.	73.	70.	70.	74.	78.	79.	79.	78.	77.	79.	76.
MEAN PREC	2.53	3.24	4.02	3.44	3.35	6.13	7.62	6.90	6.55	4.40	1.95	2.52	52.65
PREC DEP	1.32	1.97	1.96	2.02	2.08	4.44	6.22	5.42	4.52	2.07	.90	1.02	
POT ET	1.93	2.46	4.08	5.76	7.30	7.69	7.22	6.31	4.89	3.48	2.29	1.74	55.15
ETDF	.61	.49	2.12	3.74	5.22	3.25	1.00	.89	.37	1.41	1.39	.72	21.21
MAI	.68	.80	.48	.35	.28	.58	.86	.86	.92	.60	.39	.59	

PD = -1.223 + .923 * PREC
RSQ=.9600

FLORIDA NORTH CENTRAL DIVISION — LAT 28 50 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	60.	62.	66.	71.	76.	80.	81.	81.	80.	73.	65.	60.	71.
MEAN R.H.	78.	75.	73.	72.	72.	75.	78.	78.	79.	79.	78.	79.	76.
MEAN PREC	2.10	2.72	3.92	3.39	3.40	7.07	8.16	7.12	7.21	4.27	1.85	2.03	53.24
PREC DEP	1.04	1.26	1.94	2.06	2.18	5.10	6.49	5.57	5.18	2.44	.75	.93	
POT ET	2.16	2.71	4.34	5.75	7.31	7.46	7.16	6.45	5.00	3.63	2.44	1.95	56.37
ETDF	1.12	1.45	2.40	3.69	5.13	2.36	.67	.88	-.18	1.19	1.69	1.02	21.61
MAI	.48	.46	.45	.36	.30	.68	.91	.86	1.04	.67	.31	.48	

PD = -1.019 + .886 * PREC
RSQ=.9847

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

FLORIDA EVERGLADES AND SW COAST DIVISION LAT 26 10 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	66.	68.	70.	74.	78.	81.	82.	83.	82.	78.	72.	68.	75.
MEAN R.H.	78.	75.	73.	72.	72.	75.	78.	80.	81.	80.	79.	79.	77.
MEAN PREC	1.63	1.91	2.65	2.98	4.32	8.29	8.18	7.47	8.47	4.39	1.53	1.42	53.24
PREC DEP	.64	.84	1.06	1.68	2.85	5.96	6.76	5.22	6.46	2.42	.72	.58	
POT ET	2.59	3.17	4.76	6.03	7.41	7.39	7.12	6.28	4.97	3.98	2.86	2.44	58.99
ETDF	1.95	2.33	3.70	4.35	4.56	1.43	.36	.06	-1.49	1.56	2.14	1.86	24.29
MAI	.25	.27	.22	.28	.38	.81	.95	.99	1.30	.61	.25	.24	

PD = -.896 + .882 * PREC

RSQ=.9822

FLORIDA LOWER EAST COAST DIVISION LAT 26 10 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	68.	68.	70.	74.	77.	80.	82.	82.	81.	78.	72.	69.	75.
MEAN R.H.	78.	75.	73.	72.	72.	75.	78.	80.	81.	80.	79.	79.	77.
MEAN PREC	2.16	2.02	2.82	3.90	5.49	7.43	6.65	6.82	9.47	8.15	2.84	2.17	59.92
PREC DEP	1.02	1.00	1.41	2.00	3.12	4.35	4.59	4.82	6.61	5.66	1.42	1.03	
POT ET	2.67	3.17	4.76	6.03	7.31	7.29	7.12	6.20	4.91	3.98	2.86	2.48	58.78
ETDF	1.65	2.17	3.35	4.03	4.19	2.94	2.53	1.38	-1.70	-1.68	1.44	1.45	25.13
MAI	.38	.32	.30	.33	.43	.60	.64	.78	1.35	1.42	.50	.42	

PD = -.703 + .759 * PREC

RSQ=.9824

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

FLORIDA KEYS DIVISION — LAT 24 40 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	70.	71.	73.	76.	80.	82.	84.	84.	83.	79.	74.	71.	77.
MEAN R.H.	80.	77.	73.	73.	73.	76.	78.	80.	82.	81.	80.	80.	78.
MEAN PREC	1.71	1.88	1.92	2.29	3.10	4.33	4.54	4.68	7.05	6.73	2.43	1.88	42.54
PREC DEP	.70	.52	.78	.96	1.38	2.32	2.94	3.21	4.75	4.02	.99	.80	
POT ET	2.75	3.28	5.05	6.09	7.40	7.24	7.21	6.34	4.95	4.03	2.99	2.62	59.95
ETDF	2.05	2.76	4.27	5.13	6.02	4.92	4.27	3.13	.20	.01	2.00	1.82	36.57
MAI	.25	.16	.15	.16	.19	.32	.41	.51	.96	1.00	.33	.31	

PD = -.734 + .756 * PREC
RSQ=.9770

ATLANTA GEORGIA — LAT 33 39 — 37 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	44.	47.	53.	62.	71.	78.	79.	79.	73.	64.	52.	44.	62.
MEAN R.H.	71.	69.	66.	62.	70.	67.	75.	77.	75.	70.	70.	73.	70.
MEAN PREC	4.48	4.72	5.52	4.59	3.21	4.04	4.83	3.61	3.15	2.51	3.16	4.52	48.34
PREC DEP	2.88	3.04	4.08	2.94	1.72	2.36	3.04	1.98	1.81	.61	1.42	2.62	
POT ET	1.51	2.01	3.65	5.61	7.21	8.68	7.68	6.45	4.76	3.43	1.93	1.33	54.27
ETDF	-1.37	-1.03	-.43	2.67	5.49	6.32	4.64	4.47	2.95	2.82	.51	-1.29	29.89
MAI	1.90	1.51	1.12	.52	.24	.27	.40	.31	.38	.18	.74	1.97	

PD = -1.711 + 1.014 * PREC
RSQ=.9657

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

GEORGIA NORTH CENTRAL DIVISION — LAT 34 20 — 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	43.	44.	50.	60.	68.	75.	77.	77.	72.	62.	50.	43.	60.
MEAN R.H.	71.	69.	66.	62.	70.	67.	75.	77.	75.	70.	70.	73.	70.
MEAN PREC	5.08	5.01	5.89	4.96	3.57	4.09	5.18	3.94	3.30	3.00	3.35	4.96	52.33
PREC DEP	3.37	3.28	4.44	3.25	2.30	2.85	3.62	2.59	1.96	.94	1.78	2.93	
POT ET	1.44	1.85	3.40	5.41	6.92	8.38	7.51	6.28	4.66	3.27	1.81	1.26	52.19
ETDF	-1.93	-1.43	-1.04	2.16	4.62	5.53	3.89	3.69	2.70	2.33	.03	-1.67	24.95
MAI	2.34	1.78	1.30	.60	.33	.34	.48	.41	.42	.29	.98	2.32	

PD = -1.416 + .961 * PREC
RSQ=.9155

GEORGIA NORTHWEST DIVISION — LAT 34 30 — 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	43.	46.	53.	61.	70.	77.	80.	79.	74.	63.	51.	44.	62.
MEAN R.H.	72.	69.	66.	63.	70.	69.	73.	76.	73.	70.	70.	73.	70.
MEAN PREC	5.24	4.49	6.04	4.82	3.60	3.99	4.74	4.04	3.27	2.81	3.51	5.03	51.58
PREC DEP	3.50	2.20	4.56	3.30	2.37	2.84	3.12	2.72	1.67	1.20	1.86	2.87	
POT ET	1.41	1.92	3.60	5.50	7.13	8.36	8.13	6.59	4.97	3.31	1.84	1.28	54.05
ETDF	-2.09	-.28	-.96	2.20	4.76	5.52	5.01	3.87	3.30	2.11	-.02	-1.59	26.78
MAI	2.49	1.14	1.27	.60	.33	.34	.38	.41	.34	.36	1.01	2.24	

PD = -1.231 + .911 * PREC
RSQ=.8705

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

GEORGIA NORTHEAST DIVISION — LAT 34 20 — 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	44.	45.	52.	61.	69.	76.	78.	77.	72.	62.	51.	44.	61.
MEAN R.H.	70.	67.	66.	60.	70.	67.	76.	77.	74.	70.	70.	71.	70.
MEAN PREC	5.24	4.70	6.03	4.96	3.59	4.35	5.38	4.68	3.70	3.25	3.62	5.11	54.61
PREC DEP	3.46	1.64	4.48	3.26	2.34	3.15	3.75	3.06	2.03	1.26	1.98	2.98	
POT ET	1.50	1.95	3.54	5.51	7.02	8.50	7.46	6.28	4.75	3.27	1.85	1.34	52.97
ETDF	-1.96	.31	-.94	2.25	4.68	5.35	3.71	3.22	2.72	2.01	-.13	-1.64	24.25
MAI	2.31	.84	1.26	.59	.33	.37	.50	.49	.43	.39	1.07	2.23	

PD = -1.519 + .945 * PREC
RSQ=.7409

GEORGIA WEST CENTRAL DIVISION — LAT 33 0 — 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	46.	48.	55.	63.	71.	78.	80.	79.	75.	65.	54.	47.	63.
MEAN R.H.	75.	68.	67.	65.	70.	69.	77.	77.	75.	72.	70.	76.	72.
MEAN PREC	4.58	4.65	5.99	4.90	3.34	4.11	5.60	4.16	3.34	2.29	2.92	4.63	50.51
PREC DEP	2.97	3.12	4.49	3.22	1.96	3.12	4.32	3.11	2.06	.68	1.44	2.72	
POT ET	1.51	2.13	3.77	5.62	7.19	8.37	7.44	6.45	4.92	3.41	2.05	1.38	54.24
ETDF	-1.46	-.99	-.72	2.40	5.23	5.25	3.12	3.34	2.86	2.73	.61	-1.34	25.55
MAI	1.97	1.47	1.19	.57	.27	.37	.58	.48	.42	.20	.70	1.97	

PD = -1.368 + .982 * PREC
RSQ=.9431

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

GEORGIA CENTRAL DIVISION — LAT 32 50 — 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	46.	49.	55.	64.	72.	79.	81.	80.	76.	64.	54.	47.	64.
MEAN R.H.	75.	68.	67.	65.	70.	67.	77.	77.	77.	73.	70.	76.	72.
MEAN PREC	4.15	4.51	5.18	4.30	3.49	3.88	5.33	4.10	3.36	2.34	2.48	4.11	47.23
PREC DEP	2.54	2.82	3.62	2.74	2.08	2.89	4.30	3.03	2.11	.84	1.14	2.42	
POT ET	1.52	2.18	3.78	5.71	7.29	8.74	7.52	6.53	4.79	3.31	2.07	1.39	54.85
ETDF	-1.02	-.64	.16	2.97	5.21	5.85	3.22	3.50	2.68	2.47	.93	-1.03	27.01
MAI	1.67	1.29	.96	.48	.29	.33	.57	.46	.44	.25	.55	1.74	

PD = -1.399 + 1.002 * PREC
RSQ=.9288

GEORGIA EAST CENTRAL DIVISION — LAT 33 0 — 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	48.	49.	57.	64.	73.	79.	81.	81.	76.	65.	55.	48.	65.
MEAN R.H.	75.	69.	67.	65.	70.	67.	77.	78.	77.	75.	72.	76.	72.
MEAN PREC	3.38	4.06	4.48	3.82	3.33	3.94	4.98	4.59	3.82	2.51	2.21	3.46	44.58
PREC DEP	2.08	2.52	2.86	2.44	1.98	2.76	3.78	3.12	2.40	.76	1.00	2.02	
POT ET	1.58	2.14	3.91	5.71	7.40	8.75	7.53	6.47	4.79	3.23	2.02	1.41	54.94
ETDF	-.50	-.38	1.05	3.27	5.42	5.99	3.75	3.35	2.39	2.47	1.02	-.61	28.72
MAI	1.32	1.18	.73	.43	.27	.32	.50	.48	.50	.24	.49	1.43	

PD = -1.466 + 1.016 * PREC
RSQ=.9571

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

GEORGIA SOUTHWEST DIVISION LAT 31 20 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	51.	53.	60.	67.	75.	81.	82.	82.	78.	68.	57.	52.	67.
MEAN R.H.	77.	70.	69.	68.	70.	72.	79.	78.	78.	74.	74.	77.	74.
MEAN PREC	4.03	4.49	5.31	4.77	3.58	4.07	6.27	5.20	4.22	2.11	2.54	4.14	50.73
PREC DEP	2.46	2.83	3.40	3.08	2.20	3.39	5.22	4.04	2.64	.52	.97	2.34	
POT ET	1.71	2.38	4.09	5.75	7.56	8.17	7.21	6.55	4.88	3.57	2.14	1.60	55.61
ETDF	-.75	-.45	.69	2.67	5.36	4.78	1.99	2.51	2.24	3.05	1.17	-.74	24.46
MAI	1.44	1.19	.83	.54	.29	.42	.72	.62	.54	.15	.45	1.46	

PD = -1.705 + 1.056 * PREC
RSQ=.9257

GEORGIA SOUTH CENTRAL DIVISION LAT 31 20 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	51.	53.	59.	66.	74.	80.	81.	81.	77.	68.	58.	52.	67.
MEAN R.H.	77.	71.	70.	67.	70.	73.	78.	78.	78.	75.	75.	78.	74.
MEAN PREC	3.44	4.07	4.71	4.18	3.40	4.71	6.20	5.41	4.13	2.27	1.98	3.38	47.88
PREC DEP	2.12	2.40	2.83	2.59	2.17	3.42	4.79	4.20	2.64	.56	.82	1.80	
POT ET	1.71	2.34	3.95	5.75	7.45	7.92	7.29	6.47	4.82	3.50	2.14	1.57	54.90
ETDF	-.41	-.06	1.12	3.16	5.28	4.50	2.50	2.27	2.18	2.94	1.32	-.23	25.26
MAI	1.24	1.03	.72	.45	.29	.43	.66	.65	.55	.16	.38	1.15	

PD = -1.444 + .995 * PREC
RSQ=.9653

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

GEORGIA SOUTHEAST DIVISION — LAT 31 30 — 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	51.	53.	58.	66.	73.	79.	80.	80.	76.	67.	57.	51.	66.
MEAN R.H.	77.	72.	71.	69.	70.	74.	79.	79.	78.	77.	77.	79.	75.
MEAN PREC	2.71	3.36	3.95	3.26	3.28	5.36	6.93	6.25	6.24	3.09	1.79	2.76	48.98
PREC DEP	1.50	1.94	2.08	2.04	1.95	3.79	5.32	4.77	3.88	1.06	.92	1.36	
POT ET	1.70	2.29	3.81	5.57	7.35	7.68	7.04	6.24	4.74	3.30	2.00	1.49	53.21
ETDF	.20	.35	1.73	3.53	5.40	3.89	1.72	1.47	.86	2.24	1.08	.13	22.60
MAI	.88	.85	.55	.37	.27	.49	.76	.76	.82	.32	.46	.91	

PD = -.996 + .869 * PREC
RSQ=.9495

LEXINGTON KENTUCKY — LAT 38 2 — 37 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	34.	36.	44.	55.	64.	73.	76.	75.	69.	58.	44.	36.	55.
MEAN R.H.	72.	71.	69.	62.	70.	70.	75.	76.	72.	72.	72.	72.	71.
MEAN PREC	4.48	3.53	4.82	3.88	3.91	4.41	5.01	3.37	2.70	2.18	3.17	3.55	45.01
PREC DEP	2.38	2.19	3.07	2.63	2.32	2.92	3.24	2.31	1.58	1.26	2.02	2.16	
POT ET	.91	1.25	2.59	4.69	6.34	7.68	7.29	5.99	4.36	2.59	1.28	.86	45.83
ETDF	-1.47	-.94	-.48	2.06	4.02	4.76	4.05	3.68	2.78	1.33	-.74	-1.30	22.68
MAI	2.61	1.75	1.19	.56	.37	.38	.44	.39	.36	.49	1.58	2.51	

PD = -.098 + .650 * PREC
RSQ=.9075

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

KENTUCKY BLUE GRASS DIVISION — LAT 38 10 — 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	36.	37.	46.	55.	65.	74.	77.	76.	70.	58.	46.	37.	56.
MEAN R.H.	72.	71.	69.	62.	70.	70.	75.	76.	72.	72.	72.	72.	71.
MEAN PREC	4.37	3.56	4.97	3.87	3.90	4.33	4.70	3.53	2.99	2.24	3.17	3.26	44.89
PREC DEP	2.48	2.10	3.33	2.82	2.58	3.00	3.64	2.57	1.93	1.30	2.04	2.03	
POT ET	.96	1.28	2.69	4.68	6.43	7.78	7.38	6.06	4.41	2.58	1.33	.88	46.45
ETDF	-1.52	-.82	-.64	1.86	3.85	4.78	3.74	3.49	2.48	1.28	-.71	-1.15	21.47
MAI	2.59	1.64	1.24	.60	.40	.39	.49	.42	.44	.50	1.54	2.31	

PD = -.447 + .784 * PREC
RSQ=.8699

KENTUCKY WESTERN DIVISION — LAT 37 10 — 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	37.	40.	47.	58.	67.	75.	79.	78.	71.	60.	47.	39.	58.
MEAN R.H.	72.	71.	68.	62.	70.	70.	73.	75.	72.	72.	72.	72.	71.
MEAN PREC	4.69	3.92	5.44	4.09	4.13	3.86	3.97	3.37	3.25	2.46	3.69	3.69	46.56
PREC DEP	2.35	2.20	3.46	3.08	2.68	2.32	2.84	2.30	1.85	1.34	2.24	2.38	
POT ET	1.05	1.45	2.89	5.04	6.71	7.95	7.95	6.46	4.60	2.78	1.43	.99	49.31
ETDF	-1.30	-.75	-.57	1.96	4.03	5.63	5.11	4.16	2.75	1.44	-.81	-1.39	25.08
MAI	2.24	1.51	1.20	.61	.40	.29	.36	.36	.40	.48	1.56	2.40	

PD = -.055 + .638 * PREC
RSQ=.7196

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

KENTUCKY CENTRAL DIVISION — LAT 37 20 — 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	36.	37.	46.	56.	65.	73.	77.	76.	70.	58.	46.	37.	56.
MEAN R.H.	71.	71.	69.	62.	70.	70.	75.	76.	72.	72.	72.	72.	71.
MEAN PREC	4.82	3.91	5.31	3.95	3.98	4.28	4.28	3.43	3.10	2.41	3.51	3.77	46.75
PREC DEP	2.53	2.16	3.55	2.96	2.50	2.71	3.10	2.42	2.40	1.38	2.25	2.37	
POT ET	1.03	1.33	2.77	4.84	6.49	7.72	7.43	6.14	4.51	2.67	1.39	.93	47.26
ETDF	-1.50	-.83	-.78	1.88	3.99	5.01	4.33	3.72	2.11	1.29	-.86	-1.44	22.35
MAT	2.46	1.62	1.28	.61	.39	.35	.42	.39	.53	.52	1.62	2.55	

PD = .246 + .586 * PREC
RSQ=.6893

KENTUCKY EASTERN DIVISION — LAT 37 30 — 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	37.	39.	46.	56.	65.	73.	76.	75.	69.	58.	46.	38.	56.
MEAN R.H.	71.	71.	70.	61.	70.	70.	73.	77.	72.	72.	72.	72.	71.
MEAN PREC	4.36	4.05	4.89	3.79	3.90	4.28	4.93	3.68	2.85	2.27	3.20	3.57	45.77
PREC DEP	2.78	2.56	3.56	2.84	2.62	3.20	3.76	2.71	2.08	1.20	2.06	2.28	
POT ET	1.05	1.39	2.71	4.83	6.48	7.71	7.61	5.92	4.43	2.65	1.38	.94	47.09
ETDF	-1.73	-1.17	-.85	1.99	3.86	4.51	3.85	3.21	2.35	1.45	-.68	-1.34	21.21
MAT	2.66	1.84	1.31	.59	.40	.41	.49	.46	.47	.45	1.50	2.42	

PD = -.611 + .852 * PREC
RSQ=.9174

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

BATON ROUGE LOUISIANA — LAT 30 32 — 37 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	54.	56.	61.	68.	75.	81.	82.	82.	78.	69.	59.	54.	68.
MEAN R.H.	78.	77.	70.	75.	76.	75.	75.	75.	75.	72.	71.	75.	74.
MEAN PREC	4.87	4.83	4.70	5.01	4.56	4.05	6.53	5.14	3.68	2.56	3.99	5.02	54.94
PREC DEP	3.28	2.92	2.48	3.00	2.49	2.02	4.36	3.18	1.84	.72	1.57	3.46	
POT ET	1.83	2.25	4.13	5.17	6.73	7.67	7.83	6.98	5.24	3.82	2.40	1.79	55.85
ETDF	-1.45	-.67	1.65	2.17	4.24	5.65	3.47	3.80	3.40	3.10	.83	-1.67	28.32
MAI	1.80	1.30	.60	.58	.37	.26	.56	.46	.35	.19	.65	1.93	

PD = -1.876 + .980 * PREC
RSQ=.9362

LOUISIANA EAST CENTRAL DIVISION — LAT 30 30 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	53.	55.	61.	68.	74.	80.	81.	81.	78.	68.	59.	53.	68.
MEAN R.H.	78.	77.	70.	75.	76.	75.	75.	75.	75.	72.	71.	75.	74.
MEAN PREC	4.87	4.94	5.91	5.26	5.17	4.94	6.67	5.31	4.29	2.80	4.11	5.67	59.93
PREC DEP	3.46	3.46	3.42	3.57	3.12	2.90	4.98	3.97	2.38	1.04	1.91	3.87	
POT ET	1.79	2.21	4.13	5.17	6.64	7.57	7.72	6.89	5.24	3.77	2.40	1.76	55.31
ETDF	-1.67	-1.25	.71	1.60	3.52	4.67	2.74	2.92	2.86	2.73	.49	-2.11	22.25
MAI	1.93	1.57	.83	.69	.47	.38	.64	.58	.45	.28	.79	2.20	

PD = -1.805 + .997 * PREC
RSQ=.8922

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

LOUISIANA NORTHWEST DIVISION — LAT 32 20 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	48.	51.	56.	66.	74.	81.	84.	83.	77.	67.	56.	49.	66.
MEAN R.H.	75.	73.	67.	76.	75.	74.	70.	69.	68.	68.	67.	70.	71.
MEAN PREC	5.19	4.42	4.45	4.97	5.02	3.18	3.96	2.99	2.63	2.78	4.60	5.13	49.32
PREC DEP	3.20	2.94	3.14	3.26	3.02	1.18	2.14	1.58	1.30	1.02	2.42	2.96	
POT ET	1.62	2.12	3.87	4.89	6.83	7.93	8.90	7.88	5.76	3.82	2.29	1.66	57.57
ETDF	-1.58	-.82	.73	1.63	3.81	6.75	6.76	6.30	4.46	2.80	-.13	-1.30	33.25
MAI	1.98	1.39	.81	.67	.44	.15	.24	.20	.23	.27	1.06	1.79	

PD = -1.125 + .845 * PREC
RSQ=.8957

LOUISIANA NORTH CENTRAL DIVISION — LAT 32 20 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	48.	50.	58.	65.	72.	80.	82.	82.	77.	67.	56.	48.	65.
MEAN R.H.	75.	74.	68.	70.	75.	75.	73.	70.	70.	70.	68.	72.	72.
MEAN PREC	5.80	4.91	4.91	5.15	5.18	3.98	5.02	3.21	2.93	2.82	4.47	5.48	53.86
PREC DEP	3.75	3.36	3.74	3.42	3.29	1.92	3.00	1.94	1.37	.94	2.36	3.36	
POT ET	1.62	2.03	3.96	5.38	6.64	7.68	8.23	7.65	5.58	3.70	2.25	1.57	56.29
ETDF	-2.13	-1.33	.22	1.96	3.35	5.76	5.23	5.71	4.21	2.76	-.11	-1.79	29.20
MAI	2.32	1.65	.95	.64	.50	.25	.36	.25	.25	.25	1.05	2.15	

PD = -1.315 + .896 * PREC
RSQ=.8952

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

LOUISIANA NORTHEAST DIVISION — LAT 32 30 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	49.	51.	58.	65.	72.	79.	81.	81.	76.	65.	55.	49.	65.
MEAN R.H.	76.	75.	68.	70.	75.	76.	74.	73.	73.	71.	69.	74.	73.
MEAN PREC	5.60	5.28	5.51	4.97	4.61	3.77	4.59	3.15	2.61	2.37	4.67	5.37	52.50
PREC DEP	3.42	3.44	4.34	3.05	2.82	2.04	2.66	1.84	1.18	.76	2.08	3.53	
POT ET	1.61	2.03	3.95	5.38	6.65	7.44	7.98	7.17	5.21	3.51	2.16	1.53	54.62
ETDF	-1.81	-1.41	-.39	2.33	3.83	5.40	5.32	5.33	4.03	2.75	.08	-2.00	29.07
MAI	2.13	1.70	1.10	.57	.42	.27	.33	.26	.23	.22	.96	2.31	

PD = -1.211 + .870 * PREC
RSQ=.8863

LOUISIANA WEST CENTRAL DIVISION — LAT 31 30 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	51.	54.	59.	66.	73.	79.	81.	82.	77.	67.	57.	52.	66.
MEAN R.H.	76.	76.	70.	75.	77.	75.	77.	73.	73.	70.	72.	75.	74.
MEAN PREC	5.42	4.77	4.57	5.13	5.57	4.07	4.60	3.57	3.19	2.89	4.70	5.34	53.82
PREC DEP	3.48	3.10	3.28	2.84	2.98	1.39	2.72	2.01	1.60	.86	2.26	3.44	
POT ET	1.74	2.16	3.94	5.00	6.44	7.53	7.46	7.26	5.33	3.76	2.21	1.66	54.49
ETDF	-1.74	-.94	.66	2.16	3.46	6.14	4.74	5.25	3.73	2.90	-.05	-1.78	29.04
MAI	2.00	1.43	.83	.57	.46	.18	.36	.28	.30	.23	1.02	2.07	

PD = -1.353 + .858 * PREC
RSQ=.7671

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

LOUISIANA CENTRAL DIVISION — LAT 31 0 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	51.	54.	60.	66.	73.	79.	81.	80.	76.	67.	58.	52.	66.
MEAN R.H.	77.	77.	70.	75.	77.	77.	77.	75.	75.	72.	73.	75.	75.
MEAN PREC	5.64	4.91	5.28	5.32	5.83	4.54	5.55	4.44	3.64	2.99	4.60	5.75	58.49
PREC DEP	3.82	3.36	3.51	3.40	3.28	2.46	3.83	2.70	2.09	1.20	2.22	4.15	
POT ET	1.73	2.14	4.04	5.01	6.42	7.19	7.43	6.80	5.08	3.67	2.24	1.69	53.47
ETDF	-2.09	-1.22	.53	1.61	3.14	4.73	3.60	4.10	2.99	2.47	.02	-2.46	23.21
MAI	2.20	1.57	.87	.68	.51	.34	.52	.40	.41	.33	.99	2.45	

PD = -1.509 + .925 * PREC
RSQ=.8736

LOUISIANA SOUTHWEST DIVISION — LAT 30 10 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	53.	56.	60.	68.	75.	81.	83.	82.	78.	70.	60.	54.	68.
MEAN R.H.	79.	78.	75.	78.	78.	78.	79.	79.	79.	73.	75.	79.	77.
MEAN PREC	5.24	4.58	4.27	4.41	5.35	4.79	6.59	5.46	4.42	3.16	4.53	5.46	58.26
PREC DEP	3.43	2.97	2.43	3.30	2.78	2.17	4.49	3.34	2.53	1.22	2.50	3.89	
POT ET	1.77	2.22	3.73	4.86	6.44	7.17	7.25	6.39	4.82	3.84	2.30	1.67	52.44
ETDF	-1.66	-.75	1.30	1.56	3.66	5.00	2.76	3.05	2.29	2.62	-.20	-2.22	22.22
MAI	1.93	1.34	.65	.68	.43	.30	.62	.52	.53	.32	1.09	2.33	

PD = -1.388 + .888 * PREC
RSQ=.7772

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

LOUISIANA SOUTH CENTRAL DIVISION — LAT 30 0 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	54.	56.	62.	68.	75.	80.	82.	82.	78.	69.	60.	55.	68.
MEAN R.H.	78.	78.	75.	78.	78.	77.	79.	79.	79.	75.	75.	78.	77.
MEAN PREC	4.58	4.61	4.57	4.55	4.80	5.44	7.60	6.44	5.35	2.98	4.02	5.28	60.32
PREC DEP	3.04	3.10	2.23	3.21	3.01	3.28	5.64	4.44	3.18	1.08	1.85	3.72	
POT ET	1.86	2.23	3.86	4.86	6.43	7.23	7.15	6.39	4.82	3.65	2.31	1.75	52.54
ETDF	-1.18	-.87	1.63	1.65	3.42	3.95	1.51	1.95	1.64	2.57	.46	-1.97	18.78
MAI	1.63	1.39	.58	.66	.47	.45	.79	.69	.66	.30	.80	2.12	

PD = -1.692 + .963 * PREC
RSQ=.9193

LOUISIANA SOUTHEAST DIVISION — LAT 29 40 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	55.	58.	63.	69.	76.	81.	83.	83.	80.	72.	62.	56.	70.
MEAN R.H.	79.	78.	75.	78.	78.	77.	79.	79.	79.	75.	75.	78.	77.
MEAN PREC	4.26	4.51	5.14	4.72	4.69	5.26	7.52	6.66	6.63	3.30	3.92	4.75	61.36
PREC DEP	2.82	2.89	2.66	3.12	2.86	3.13	5.96	5.06	4.26	1.20	1.70	3.24	
POT ET	1.87	2.33	3.94	4.94	6.51	7.30	7.22	6.47	4.96	3.84	2.41	1.81	53.61
ETDF	-.95	-.56	1.28	1.82	3.65	4.17	1.26	1.41	.70	2.64	.71	-1.43	17.65
MAI	1.50	1.24	.67	.63	.44	.43	.83	.78	.86	.31	.70	1.79	

PD = -1.998 + 1.025 * PREC
RSQ=.9227

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

MERIDIAN MISSISSIPPI — LAT 32 20 — 37 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	48.	51.	56.	64.	72.	79.	81.	81.	76.	65.	54.	48.	65.
MEAN R.H.	78.	76.	70.	74.	75.	77.	77.	77.	75.	73.	72.	77.	75.
MEAN PREC	4.77	5.30	6.23	5.19	3.94	4.14	5.84	3.51	3.00	2.16	3.45	5.64	53.17
PREC DEP	2.82	3.20	4.10	2.88	1.81	2.68	3.10	2.00	1.57	.48	1.60	3.88	
POT ET	1.52	1.99	3.69	4.93	6.64	7.27	7.50	6.62	5.02	3.40	2.03	1.42	52.04
ETDF	-1.30	-1.21	-.41	2.05	4.83	4.59	4.40	4.62	3.45	2.92	.43	-2.46	27.29
MAI	1.86	1.60	1.11	.58	.27	.37	.41	.30	.31	.14	.79	2.73	

PD = -1.027 + .798 * PREC
RSQ=.9219

MISSISSIPPI SOUTHEAST DIVISION — LAT 31 50 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	49.	51.	58.	66.	72.	80.	81.	81.	77.	67.	56.	50.	66.
MEAN R.H.	78.	76.	70.	74.	75.	77.	77.	77.	75.	73.	72.	77.	75.
MEAN PREC	4.89	5.09	6.57	5.39	4.49	4.30	6.77	4.22	3.82	2.49	3.90	5.37	57.30
PREC DEP	3.44	3.67	4.50	3.66	2.67	2.92	4.78	2.99	2.16	.90	1.92	3.56	
POT ET	1.58	2.02	3.86	5.10	6.63	7.34	7.48	6.61	5.11	3.55	2.14	1.51	52.92
ETDF	-1.86	-1.65	-.64	1.44	3.96	4.42	2.70	3.62	2.95	2.65	.22	-2.05	21.96
MAI	2.18	1.82	1.17	.72	.40	.40	.64	.45	.42	.25	.90	2.36	

PD = -1.176 + .895 * PREC
RSQ=.9521

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

MISSISSIPPI UPPER DELTA DIVISION — LAT 34 10 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	44.	47.	55.	64.	72.	79.	82.	82.	76.	65.	53.	46.	64.
MEAN R.H.	75.	75.	68.	68.	72.	75.	73.	75.	72.	72.	68.	73.	72.
MEAN PREC	6.06	5.04	5.97	4.89	4.22	3.58	3.93	2.38	2.98	2.60	4.46	4.95	50.96
PREC DEP	3.44	3.16	4.24	3.27	2.48	2.16	2.20	1.33	1.36	.94	2.50	2.94	
POT ET	1.38	1.78	3.65	5.44	7.09	7.69	8.33	6.99	5.22	3.33	2.00	1.36	54.25
ETDF	-2.06	-1.38	-.59	2.17	4.61	5.53	6.13	5.66	3.86	2.39	-.50	-1.58	30.34
MAI	2.50	1.77	1.16	.60	.35	.28	.26	.19	.26	.28	1.25	2.16	

PD = -.814 + .781 * PREC
RSQ=.9254

MISSISSIPPI NORTH CENTRAL DIVISION — LAT 34 20 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	44.	46.	54.	63.	70.	78.	81.	80.	75.	64.	52.	45.	63.
MEAN R.H.	76.	75.	66.	66.	68.	75.	71.	75.	72.	70.	68.	73.	71.
MEAN PREC	6.03	5.18	5.80	5.05	4.07	3.78	4.20	3.07	3.35	2.79	4.60	5.17	53.09
PREC DEP	3.50	3.24	4.13	3.47	2.70	2.01	2.56	1.90	1.81	1.39	2.70	3.10	
POT ET	1.34	1.74	3.68	5.51	7.36	7.60	8.53	6.81	5.14	3.38	1.95	1.32	54.36
ETDF	-2.16	-1.50	-.45	2.04	4.66	5.59	5.97	4.91	3.33	1.99	-.75	-1.78	28.50
MAI	2.61	1.87	1.12	.63	.37	.26	.30	.28	.35	.41	1.39	2.35	

PD = -.571 + .741 * PREC
RSQ=.9147

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

MISSISSIPPI NORTHEST DIVISION — LAT 34 30 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	42.	44.	52.	61.	69.	77.	80.	79.	74.	63.	51.	43.	61.
MEAN R.H.	76.	75.	66.	66.	68.	70.	72.	75.	70.	70.	69.	74.	71.
MEAN PREC	5.91	5.39	6.02	4.80	3.96	3.84	4.35	3.07	3.28	2.76	4.57	5.17	53.12
PREC DEP	3.60	3.35	4.34	3.54	2.64	2.24	3.02	1.78	1.44	1.26	2.50	3.22	
POT ET	1.27	1.65	3.53	5.33	7.26	8.22	8.28	6.72	5.24	3.31	1.97	1.23	53.92
ETDF	-2.33	-1.70	-.81	1.79	4.62	5.98	5.26	4.94	3.80	2.05	-.63	-1.99	28.45
MAI	2.83	2.03	1.23	.66	.36	.27	.36	.26	.27	.38	1.34	2.62	

PD = -.903 + .824 * PREC

RSQ=.8976

MISSISSIPPI LOWER DELTA DIVISION — LAT 33 10 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	47.	50.	56.	65.	73.	80.	82.	82.	76.	66.	54.	48.	65.
MEAN R.H.	76.	76.	69.	74.	77.	75.	76.	74.	72.	72.	72.	75.	74.
MEAN PREC	5.61	5.05	5.63	5.05	3.86	3.76	4.22	2.78	2.85	2.52	4.54	5.23	51.10
PREC DEP	3.33	3.36	4.34	3.32	2.32	2.06	2.52	1.72	1.30	1.10	2.48	3.26	
POT ET	1.50	1.91	3.71	5.00	6.49	7.73	7.80	7.13	5.27	3.46	1.97	1.43	53.40
ETDF	-1.83	-1.45	-.63	1.68	4.17	5.67	5.28	5.41	3.97	2.36	-.51	-1.83	28.54
MAI	2.22	1.76	1.17	.66	.36	.27	.32	.24	.25	.32	1.26	2.28	

PD = -.942 + .830 * PREC

RSQ=.9179

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

MISSISSIPPI CENTRAL DIVISION — LAT 33 0 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	48.	50.	57.	65.	72.	79.	81.	81.	76.	66.	55.	49.	65.
MEAN R.H.	77.	76.	68.	69.	73.	76.	75.	75.	74.	70.	70.	76.	73.
MEAN PREC	5.51	5.22	5.95	4.72	4.03	3.74	5.21	3.25	2.81	2.31	4.14	5.17	52.06
PREC DEP	3.32	3.53	4.54	3.18	2.70	2.34	3.31	2.22	1.56	.95	2.06	3.52	
POT ET	1.51	1.92	3.85	5.46	6.92	7.47	7.85	6.90	5.09	3.59	2.09	1.44	54.10
ETDF	-1.81	-1.61	-.69	2.28	4.22	5.13	4.54	4.68	3.53	2.64	.03	-2.08	27.06
MAI	2.20	1.84	1.18	.58	.39	.31	.42	.32	.31	.26	.98	2.44	

PD = -.821 + .828 * PREC
RSQ=.9172

MISSISSIPPI EAST CENTRAL DIVISION — LAT 33 20 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	46.	48.	56.	63.	71.	78.	80.	80.	76.	65.	54.	47.	64.
MEAN R.H.	76.	75.	68.	68.	71.	75.	75.	75.	74.	72.	70.	77.	73.
MEAN PREC	5.44	5.52	5.93	4.47	3.76	3.48	5.27	3.20	3.10	2.54	3.93	4.84	51.48
PREC DEP	3.18	3.66	4.56	3.01	2.62	2.16	3.39	2.14	1.69	1.07	2.06	3.36	
POT ET	1.46	1.86	3.76	5.37	7.08	7.54	7.77	6.81	5.07	3.39	2.03	1.33	53.48
ETDF	-1.72	-1.80	-.80	2.36	4.46	5.38	4.38	4.67	3.38	2.32	-.03	-2.03	26.95
MAI	2.18	1.96	1.21	.56	.37	.29	.44	.31	.33	.32	1.01	2.52	

PD = -.820 + .830 * PREC
RSQ=.9074

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

MISSISSIPPI SOUTHWEST DIVISION — LAT 31 40 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	48.	51.	58.	65.	72.	78.	81.	80.	76.	65.	55.	49.	65.
MEAN R.H.	77.	76.	71.	75.	76.	77.	77.	77.	75.	73.	71.	76.	75.
MEAN PREC	5.44	5.21	5.94	5.15	4.77	4.17	5.14	3.70	2.99	2.32	4.21	5.59	54.63
PREC DEP	3.56	3.59	4.28	3.15	2.94	2.56	3.42	2.54	1.69	1.00	1.91	4.12	
POT ET	1.59	2.03	3.80	4.92	6.49	7.14	7.47	6.53	5.05	3.45	2.15	1.52	52.14
ETDF	-1.97	-1.56	-.48	1.77	3.55	4.58	4.05	3.99	3.36	2.45	.24	-2.60	23.99
MAT	2.24	1.77	1.13	.64	.45	.36	.46	.39	.33	.29	.89	2.71	

PD = -1.045 + .866 * PREC
RSQ=.9177

MISSISSIPPI SOUTH CENTRAL DIVISION — LAT 31 30 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	49.	53.	57.	65.	73.	79.	81.	80.	76.	65.	55.	50.	65.
MEAN R.H.	77.	76.	72.	76.	75.	78.	77.	77.	75.	72.	74.	77.	75.
MEAN PREC	5.15	5.17	6.24	5.44	4.81	4.57	6.12	4.26	3.88	2.62	3.71	5.58	57.55
PREC DEP	3.43	3.70	3.92	3.35	2.75	2.35	3.83	2.98	2.02	1.14	1.74	3.85	
POT ET	1.63	2.12	3.68	4.83	6.71	7.06	7.46	6.53	5.05	3.52	2.05	1.53	52.18
ETDF	-1.80	-1.58	-.24	1.48	3.96	4.71	3.63	3.55	3.04	2.38	.31	-2.32	23.06
MAT	2.10	1.75	1.07	.69	.41	.33	.51	.46	.40	.32	.85	2.52	

PD = -1.080 + .834 * PREC
RSQ=.8984

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

MISSISSIPPI COASTAL DIVISION — LAT 30 40 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	53.	55.	61.	68.	75.	81.	82.	82.	79.	70.	60.	54.	68.
MEAN R.H.	79.	78.	75.	78.	76.	78.	78.	78.	78.	75.	74.	78.	77.
MEAN PREC	4.31	4.59	6.23	5.38	4.82	5.17	7.81	5.94	5.90	2.67	3.71	5.21	61.74
PREC DEP	2.82	3.00	3.46	3.24	2.69	3.14	5.49	4.26	3.08	.74	1.55	3.51	
POT ET	1.74	2.15	3.77	4.85	6.74	7.20	7.35	6.55	4.97	3.66	2.30	1.67	52.96
ETDF	-1.08	-.85	.31	1.61	4.05	4.06	1.86	2.29	1.89	2.92	.75	-1.84	19.74
MAI	1.62	1.39	.92	.67	.40	.44	.75	.65	.62	.20	.67	2.10	

PD = -1.347 + .861 * PREC
RSQ=.8947

SPRINGFIELD MISSOURI — LAT 37 14 — 37 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	33.	37.	43.	56.	65.	74.	77.	77.	70.	59.	44.	36.	56.
MEAN R.H.	72.	70.	65.	65.	71.	72.	65.	69.	64.	65.	70.	72.	68.
MEAN PREC	1.84	2.21	2.93	4.19	4.99	4.83	3.55	3.05	3.79	3.22	2.45	2.30	39.35
PREC DEP	.70	1.22	1.68	2.56	3.15	2.50	1.82	1.41	1.59	1.68	1.22	1.09	
POT ET	.93	1.36	2.75	4.76	6.39	7.57	8.80	7.09	5.13	3.05	1.38	.91	50.14
ETDF	.23	.14	1.07	2.20	3.24	5.07	6.98	5.68	3.54	1.37	.16	-.18	29.70
MAI	.75	.90	.61	.54	.49	.33	.21	.20	.31	.55	.88	1.20	

PD = -.415 + .651 * PREC
RSQ=.9002

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

MISSOURI WEST OZARKS DIVISION — LAT 37 10 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	33.	37.	43.	56.	65.	74.	77.	77.	70.	59.	44.	36.	56.
MEAN R.H.	72.	70.	65.	65.	71.	72.	65.	69.	64.	65.	70.	72.	68.
MEAN PREC	2.15	2.39	3.05	4.14	5.41	4.95	3.56	3.19	3.91	3.65	2.82	2.27	41.49
PREC DEP	.97	1.44	1.82	2.78	3.40	2.52	2.05	1.86	1.84	2.06	1.41	1.26	
POT ET	.93	1.36	2.76	4.77	6.39	7.58	8.81	7.10	5.14	3.06	1.39	.91	50.20
ETDF	-.04	-.08	.94	1.99	2.99	5.06	6.76	5.24	3.30	1.00	-.02	-.35	27.27
MAI	1.04	1.06	.66	.58	.53	.33	.23	.26	.36	.67	1.02	1.38	

PD = -.213 + .626 * PREC
RSQ=.8841

MISSOURI PRAIRIE DIVISION — LAT 39 50 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	27.	30.	41.	53.	64.	73.	78.	76.	68.	57.	42.	31.	53.
MEAN R.H.	72.	70.	68.	63.	68.	71.	63.	64.	65.	68.	70.	72.	68.
MEAN PREC	1.40	1.33	2.37	3.21	4.50	5.43	3.43	4.06	3.53	2.63	1.93	1.54	35.36
PREC DEP	.72	.83	1.34	2.32	3.52	3.38	2.02	2.56	1.73	1.28	.76	.90	
POT ET	.64	.97	2.30	4.35	6.40	7.43	8.85	7.22	4.57	2.52	1.13	.65	47.04
ETDF	-.08	.14	.96	2.03	2.88	4.05	6.83	4.66	2.84	1.24	.37	-.25	26.01
MAI	1.12	.86	.58	.53	.55	.45	.23	.35	.38	.51	.67	1.38	

PD = -.344 + .721 * PREC
RSQ=.9076

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

MISSOURI NORTHEAST PRAIRIE DIVISION LAT 39 30 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	28.	31.	41.	54.	64.	74.	78.	76.	69.	57.	43.	32.	54.
MEAN R.H.	74.	72.	69.	64.	67.	70.	64.	72.	67.	67.	70.	74.	69.
MEAN PREC	1.83	1.79	2.83	3.51	4.20	4.61	3.47	3.50	3.29	2.95	2.47	1.92	36.37
PREC DEP	1.02	1.10	1.80	2.50	2.86	2.98	1.95	2.14	1.56	1.68	1.38	1.15	
POT ET	.66	.99	2.29	4.44	6.53	7.69	8.85	6.40	4.55	2.60	1.18	.67	46.85
ETDF	-.36	-.11	.49	1.94	3.67	4.71	6.90	4.26	2.99	.92	-.20	-.48	25.88
MAI	1.55	1.12	.79	.56	.44	.39	.22	.33	.34	.65	1.16	1.73	

PD = -.269 + .697 * PREC
RSQ=.9081

MISSOURI WEST PLAINS DIVISION LAT 38 20 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	33.	36.	46.	57.	66.	75.	79.	78.	71.	60.	47.	36.	57.
MEAN R.H.	73.	70.	66.	63.	68.	70.	64.	64.	65.	65.	69.	72.	67.
MEAN PREC	1.76	1.89	2.61	3.66	4.93	5.07	3.38	3.84	4.01	3.40	2.41	1.91	38.87
PREC DEP	.94	1.16	1.64	2.40	3.48	2.68	1.84	2.20	1.80	1.76	1.12	1.14	
POT ET	.85	1.26	2.81	4.83	6.73	7.88	9.07	7.61	4.98	2.97	1.41	.84	51.25
ETDF	-.09	.10	1.17	2.43	3.25	5.20	7.23	5.41	3.18	1.21	.29	-.30	29.47
MAI	1.10	.92	.58	.50	.52	.34	.20	.29	.36	.59	.79	1.35	

PD = -.113 + .605 * PREC
RSQ=.8460

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

MISSOURI EAST OZARKS DIVISION — LAT 37 30 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	33.	35.	44.	56.	64.	72.	76.	75.	68.	57.	44.	35.	55.
MEAN R.H.	74.	74.	67.	65.	70.	70.	67.	69.	69.	69.	70.	74.	70.
MEAN PREC	2.98	2.85	3.76	4.32	5.01	4.43	3.35	3.42	3.42	3.32	3.44	2.83	43.13
PREC DEP	1.32	1.64	2.30	2.93	3.14	2.42	2.27	2.18	1.90	1.89	1.96	1.64	
POT ET	.88	1.18	2.71	4.74	6.38	7.60	8.41	6.87	4.59	2.74	1.36	.84	48.30
ETDF	-.44	-.46	.41	1.81	3.24	5.18	6.14	4.69	2.69	.85	-.60	-.80	25.01
MAI	1.50	1.39	.85	.62	.49	.32	.27	.32	.41	.69	1.44	1.96	

PD = -.465 + .723 * PREC
RSQ=.8488

MISSOURI BOOTHEEL DIVISION — LAT 36 40 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	37.	41.	47.	59.	69.	78.	80.	79.	72.	61.	47.	38.	59.
MEAN R.H.	75.	74.	67.	65.	70.	70.	67.	70.	70.	69.	70.	74.	70.
MEAN PREC	4.33	3.71	4.86	4.29	4.46	3.94	3.34	3.19	3.41	3.12	3.89	3.67	46.21
PREC DEP	2.04	2.12	2.90	2.88	2.79	2.06	2.20	1.88	1.84	1.82	2.06	2.34	
POT ET	1.02	1.44	2.98	5.08	6.96	8.32	8.94	7.23	4.89	3.04	1.53	.96	52.39
ETDF	-1.02	-.68	.08	2.20	4.17	6.26	6.74	5.35	3.05	1.22	-.53	-1.38	29.07
MAI	2.00	1.47	.97	.57	.40	.25	.25	.26	.38	.60	1.35	2.44	

PD = .023 + .577 * PREC
RSQ=.6296

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

GREENSBORO NORTH CAROLINA — LAT 36 5 — 37 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	40.	41.	48.	58.	67.	75.	77.	76.	70.	59.	48.	40.	58.
MEAN R.H.	72.	69.	65.	62.	70.	70.	72.	77.	75.	70.	70.	71.	70.
MEAN PREC	3.40	3.38	3.71	3.28	3.18	3.73	4.71	4.54	3.54	2.69	2.68	3.19	42.03
PREC DEP	2.21	2.30	2.50	2.29	1.81	2.12	3.16	2.53	1.34	1.08	1.38	1.92	
POT ET	1.21	1.62	3.19	5.14	6.79	8.02	7.96	6.13	4.40	2.95	1.61	1.11	50.14
ETDF	-1.00	-.68	.69	2.85	4.98	5.90	4.80	3.60	3.06	1.87	.23	-.81	27.99
MAI	1.83	1.42	.78	.45	.27	.26	.40	.41	.30	.37	.86	1.73	

PD = -.652 + .772 * PREC
RSQ=.6690

NORTH CAROLINA NORTHERN PIEDMONT DIVISION — LAT 36 10 — 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	43.	44.	50.	61.	69.	76.	79.	77.	71.	61.	50.	42.	60.
MEAN R.H.	72.	69.	65.	62.	70.	70.	72.	77.	75.	70.	70.	71.	70.
MEAN PREC	3.52	3.51	3.89	3.62	3.41	4.01	5.20	4.68	3.71	2.77	3.05	3.24	44.61
PREC DEP	2.32	2.44	2.92	2.68	2.23	2.84	3.77	3.06	1.92	1.36	1.58	1.98	
POT ET	1.30	1.73	3.32	5.41	7.00	8.12	8.17	6.21	4.46	3.05	1.67	1.16	51.59
ETDF	-1.02	-.71	.40	2.73	4.77	5.28	4.40	3.15	2.54	1.69	.09	-.82	25.04
MAI	1.79	1.41	.88	.50	.32	.35	.46	.49	.43	.45	.95	1.71	

PD = -1.037 + .931 * PREC
RSQ=.8592

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

NORTH CAROLINA SOUTHERN MOUNTAIN DIVISION LAT 35 30 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	39.	40.	47.	55.	63.	71.	73.	72.	67.	57.	46.	39.	56.
MEAN R.H.	70.	69.	68.	60.	70.	70.	74.	77.	73.	70.	70.	72.	70.
MEAN PREC	4.75	4.46	5.68	4.54	3.88	4.54	5.82	5.49	3.84	3.63	3.57	4.59	54.79
PREC DEP	3.13	2.06	4.34	3.39	2.72	3.26	4.40	3.69	2.27	1.52	2.20	2.76	
POT ET	1.26	1.62	3.04	4.92	6.41	7.60	7.29	5.85	4.44	2.91	1.59	1.10	48.04
ETDF	-1.87	-.44	-1.30	1.53	3.69	4.34	2.89	2.16	2.17	1.39	-.61	-1.66	18.18
MAI	2.48	1.27	1.43	.69	.42	.43	.60	.63	.51	.52	1.38	2.51	

PD = -1.803 + 1.047 * PREC
RSQ=.8158

NORTH CAROLINA NORTHERN MOUNTAINS DIVISION LAT 36 30 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	38.	40.	47.	56.	65.	72.	76.	74.	69.	58.	47.	39.	57.
MEAN R.H.	70.	69.	68.	60.	70.	70.	71.	77.	74.	70.	70.	71.	70.
MEAN PREC	3.89	4.05	4.90	4.22	4.13	4.42	5.70	5.50	4.01	3.53	3.45	3.75	51.55
PREC DEP	2.68	2.94	3.75	3.14	2.94	3.14	4.32	3.38	2.21	1.63	2.04	2.33	
POT ET	1.16	1.55	2.95	4.92	6.55	7.66	7.96	5.93	4.38	2.85	1.54	1.05	48.50
ETDF	-1.52	-1.39	-.80	1.78	3.61	4.52	3.64	2.55	2.17	1.22	-.50	-1.28	19.49
MAI	2.31	1.90	1.27	.64	.45	.41	.54	.57	.51	.57	1.32	2.21	

PD = -1.149 + .937 * PREC
RSQ=.8019

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

NORTH CAROLINA PIEDMONT DIVISION — LAT 35 40 — 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	43.	45.	51.	61.	69.	76.	78.	77.	72.	62.	51.	43.	61.
MEAN R.H.	72.	69.	65.	64.	70.	70.	73.	77.	75.	70.	70.	72.	71.
MEAN PREC	3.73	3.73	4.25	3.72	3.60	4.02	5.60	4.93	3.86	2.98	3.09	3.49	47.00
PREC DEP	2.46	2.52	3.20	2.84	2.34	2.72	4.14	3.40	2.04	1.47	1.62	2.11	
POT ET	1.33	1.81	3.44	5.44	7.03	8.15	7.95	6.26	4.58	3.16	1.75	1.20	52.11
ETDF	-1.13	-.71	.24	2.60	4.69	5.43	3.81	2.86	2.54	1.69	.13	-.91	23.99
MAI	1.84	1.39	.93	.52	.33	.33	.52	.54	.45	.47	.92	1.75	

PD = -1.255 + .977 * PREC
RSQ=.8971

NORTH CAROLINA SOURTHERN PIEDMONT DIVISION — LAT 35 10 — 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	42.	45.	50.	61.	70.	77.	79.	78.	72.	62.	51.	43.	61.
MEAN R.H.	72.	69.	65.	64.	70.	70.	74.	77.	75.	70.	70.	72.	71.
MEAN PREC	3.64	3.79	4.40	3.81	3.33	4.10	5.67	4.94	3.87	2.92	2.88	3.49	46.84
PREC DEP	2.44	2.42	3.29	2.81	2.14	2.96	4.20	3.54	2.00	1.32	1.44	2.10	
POT ET	1.33	1.85	3.41	5.47	7.15	8.26	7.91	6.37	4.62	3.21	1.79	1.24	52.61
ETDF	-1.11	-.57	.12	2.66	5.01	5.30	3.71	2.83	2.62	1.89	.35	-.86	24.49
MAI	1.83	1.31	.96	.51	.30	.36	.53	.56	.43	.41	.80	1.70	

PD = -1.407 + 1.015 * PREC
RSQ=.9205

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

NORTH CAROLINA SOUTHERN COASTAL PLAIN DIVISION LAT 34 50 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	47.	48.	54.	62.	70.	77.	79.	78.	74.	64.	54.	46.	63.
MEAN R.H.	76.	71.	71.	70.	72.	72.	78.	78.	78.	77.	76.	77.	75.
MEAN PREC	3.20	3.64	3.92	3.26	3.59	4.85	6.94	5.86	5.11	2.80	3.01	3.15	49.33
PREC DEP	2.18	2.28	2.74	2.14	2.43	3.38	4.94	4.49	3.08	1.16	1.60	1.90	
POT ET	1.41	1.93	3.38	5.08	6.90	7.96	7.26	6.23	4.47	2.92	1.72	1.22	50.48
ETDF	-.77	-.35	.64	2.94	4.47	4.58	2.32	1.74	1.39	1.76	.12	-.68	19.97
MAI	1.55	1.18	.81	.42	.35	.42	.68	.72	.69	.40	.97	1.56	

PD = -.771 + .843 * PREC

RSQ=.9488

NORTH CAROLINA CENTRAL COASTAL PLAIN DIVISION LAT 35 20 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	45.	46.	53.	62.	70.	77.	80.	79.	74.	64.	53.	45.	62.
MEAN R.H.	77.	72.	72.	71.	73.	73.	78.	78.	78.	78.	77.	78.	75.
MEAN PREC	3.52	3.78	3.75	3.40	3.71	4.86	7.00	6.08	5.28	3.07	3.41	3.40	51.26
PREC DEP	2.48	2.50	2.90	2.38	2.64	3.31	4.86	4.40	3.20	1.42	1.92	2.13	
POT ET	1.29	1.79	3.23	4.99	6.79	7.85	7.38	6.31	4.45	2.83	1.62	1.14	49.66
ETDF	-1.19	-.71	.33	2.61	4.15	4.54	2.52	1.91	1.25	1.41	-.30	-.99	18.72
MAI	1.92	1.40	.90	.48	.39	.42	.66	.70	.72	.50	1.18	1.87	

PD = -.390 + .757 * PREC

RSQ=.9181

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

NORTH CAROLINA NORTHERN COASTAL PLAIN DIVISION LAT 36 0 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	44.	46.	51.	61.	68.	75.	78.	78.	72.	63.	53.	44.	61.
MEAN R.H.	80.	73.	73.	72.	74.	75.	79.	79.	79.	79.	78.	79.	77.
MEAN PREC	3.59	3.70	3.76	3.29	3.51	4.27	6.19	5.86	4.68	3.02	3.29	3.29	48.45
PREC DEP	2.56	2.45	2.84	2.38	2.40	2.96	4.40	4.12	3.02	1.50	1.82	2.20	
POT ET	1.13	1.70	2.99	4.77	6.43	7.32	6.99	6.03	4.16	2.65	1.53	1.05	46.75
ETDF	-1.43	-.75	.15	2.39	4.03	4.36	2.59	1.91	1.14	1.15	-.29	-1.15	17.72
MAI	2.26	1.44	.95	.50	.37	.40	.63	.68	.73	.57	1.19	2.10	

PD = -.451 + .786 * PREC

RSQ=.9302

COLUMBIA SOUTH CAROLINA LAT 34 0 37 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	47.	49.	55.	64.	72.	79.	81.	80.	75.	65.	55.	47.	64.
MEAN R.H.	75.	68.	68.	65.	70.	70.	77.	77.	77.	75.	70.	74.	72.
MEAN PREC	3.11	3.76	4.05	3.69	3.34	3.61	5.42	5.68	3.92	2.24	2.23	3.17	44.22
PREC DEP	1.82	2.08	2.66	2.36	1.70	2.16	3.22	3.04	1.96	1.56	1.02	1.74	
POT ET	1.48	2.11	3.66	5.69	7.33	8.41	7.58	6.54	4.68	3.16	2.02	1.38	54.04
ETDF	-.34	.03	1.00	3.33	5.63	6.25	4.36	3.50	2.72	1.60	1.00	-.36	29.42
MAI	1.23	.98	.73	.41	.23	.26	.42	.47	.42	.49	.50	1.27	

PD = .034 + .563 * PREC

RSQ=.8798

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

SOUTH CAROLINA CENTRAL DIVISION — LAT 33 40 — 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	48.	50.	56.	64.	72.	79.	81.	80.	76.	65.	55.	48.	64.
MEAN R.H.	75.	68.	68.	65.	70.	70.	77.	77.	77.	75.	70.	74.	72.
MEAN PREC	2.95	3.73	4.02	3.65	3.17	4.29	5.60	5.37	4.11	2.50	2.36	3.13	44.88
PREC DEP	1.81	2.02	2.65	2.40	1.93	2.96	3.94	3.59	2.52	.92	1.16	1.76	
POT ET	1.54	2.18	3.75	5.70	7.32	8.39	7.56	6.53	4.76	3.18	2.05	1.43	54.37
ETDF	-.27	.16	1.10	3.30	5.39	5.43	3.62	2.94	2.24	2.26	.89	-.33	27.32
MAI	1.18	.93	.71	.42	.26	.35	.52	.55	.53	.29	.57	1.23	

PD = -.942 + .868 * PREC
RSQ=.9635

SOUTH CAROLINA MOUNTAIN DIVISION — LAT 35 0 — 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	44.	45.	50.	59.	67.	73.	74.	74.	68.	60.	50.	43.	59.
MEAN R.H.	70.	68.	68.	62.	68.	65.	75.	75.	75.	70.	70.	70.	70.
MEAN PREC	6.23	4.84	6.98	5.76	4.83	5.55	7.22	7.12	4.96	4.99	4.81	6.50	69.79
PREC DEP	3.76	2.71	5.06	3.89	3.06	3.60	4.38	4.32	2.70	1.83	2.80	3.58	
POT ET	1.46	1.88	3.27	5.31	7.06	8.43	7.24	6.28	4.36	3.11	1.77	1.29	51.46
ETDF	-2.30	-.83	-1.79	1.42	4.00	4.83	2.86	1.96	1.66	1.28	-1.03	-2.29	18.01
MAI	2.58	1.44	1.55	.73	.43	.43	.61	.69	.62	.59	1.58	2.78	

PD = -1.256 + .813 * PREC
RSQ=.7547

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

SOUTH CAROLINA NORTHWEST DIVISION LAT 34 40 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	44.	46.	53.	62.	70.	78.	80.	79.	64.	63.	51.	44.	61.
MEAN R.H.	72.	68.	68.	64.	70.	70.	77.	77.	77.	70.	71.	70.	71.
MEAN PREC	4.54	4.54	5.52	4.38	3.31	4.00	5.00	4.76	3.52	3.24	3.21	4.49	50.51
PREC DEP	3.00	2.96	4.05	2.85	2.06	2.82	3.74	3.25	1.70	1.30	1.75	2.66	
POT ET	1.43	1.95	3.49	5.57	7.14	8.34	7.51	6.45	3.94	3.30	1.79	1.34	52.26
ETDF	-1.57	-1.01	-.56	2.72	5.08	5.52	3.77	3.20	2.24	2.00	.04	-1.32	24.59
MAI	2.10	1.52	1.16	.51	.29	.34	.50	.50	.43	.39	.98	1.98	

PD = -1.802 + 1.064 * PREC
RSQ=.9215

SOUTH CAROLINA NORTH CENTRAL DIVISION LAT 34 40 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	43.	46.	52.	62.	70.	77.	80.	78.	73.	63.	52.	44.	62.
MEAN R.H.	76.	68.	69.	65.	70.	70.	75.	77.	77.	76.	71.	74.	72.
MEAN PREC	3.79	3.82	4.45	3.93	3.06	3.86	5.54	4.82	3.77	2.63	2.74	3.57	45.98
PREC DEP	2.46	2.34	3.08	2.79	1.76	2.69	3.22	3.93	1.96	1.03	1.30	2.09	
POT ET	1.29	1.95	3.37	5.49	7.14	8.23	7.83	6.37	4.52	2.95	1.83	1.25	52.22
ETDF	-1.17	-.39	.29	2.70	5.38	5.54	4.61	2.44	2.56	1.92	.53	-.84	25.97
MAI	1.90	1.20	.91	.51	.25	.33	.41	.62	.43	.35	.71	1.67	

PD = -1.058 + .899 * PREC
RSQ=.8181

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

SOUTH CAROLINA NORTHEAST DIVISION LAT 34 0 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	47.	49.	53.	63.	71.	77.	80.	79.	74.	64.	54.	46.	63.
MEAN R.H.	77.	71.	70.	70.	70.	72.	78.	78.	78.	78.	76.	77.	75.
MEAN PREC	2.98	3.67	4.02	3.44	3.17	4.78	6.19	5.46	4.76	2.57	2.59	3.00	46.63
PREC DEP	1.94	2.02	2.67	2.24	2.12	3.41	4.78	4.06	2.90	.86	1.32	1.72	
POT ET	1.42	2.01	3.41	5.18	7.22	7.91	7.32	6.31	4.51	2.91	1.77	1.27	51.26
ETDF	-.52	-.01	.74	2.94	5.10	4.50	2.54	2.25	1.61	2.05	.45	-.45	22.20
MAI	1.36	1.00	.78	.43	.29	.43	.65	.64	.64	.30	.74	1.36	

PD = -1.159 + .943 * PREC
RSQ=.9544

SOUTH CAROLINA WEST CENTRAL DIVISION LAT 33 50 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	46.	48.	55.	63.	71.	78.	80.	80.	75.	63.	53.	46.	63.
MEAN R.H.	75.	68.	69.	65.	70.	70.	77.	77.	77.	75.	70.	74.	72.
MEAN PREC	4.00	4.17	4.86	4.13	3.28	3.79	4.80	4.39	3.64	2.58	2.53	3.86	46.03
PREC DEP	2.62	2.58	3.34	2.68	1.80	2.71	3.60	2.92	1.92	.90	1.14	2.30	
POT ET	1.46	2.08	3.61	5.60	7.22	8.29	7.48	6.53	4.69	3.07	1.96	1.36	53.34
ETDF	-1.16	-.50	.27	2.92	5.42	5.58	3.88	3.61	2.77	2.17	.82	-.94	27.43
MAI	1.79	1.24	.93	.48	.25	.33	.48	.45	.41	.29	.58	1.70	

PD = -1.699 + 1.062 * PREC
RSQ=.9524

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

SOUTH CAROLINA SOUTHERN DIVISION — LAT 33 0 — 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	49.	51.	57.	64.	72.	78.	80.	80.	76.	66.	56.	49.	65.
MEAN R.H.	77.	72.	70.	70.	70.	72.	78.	79.	79.	79.	76.	76.	75.
MEAN PREC	2.75	3.57	4.02	3.12	3.54	5.09	6.73	6.16	5.04	2.81	2.15	2.75	47.73
PREC DEP	1.66	1.94	2.18	1.98	2.22	3.36	4.90	4.38	3.08	1.18	1.16	1.52	
POT ET	1.54	2.12	3.73	5.29	7.30	7.96	7.27	6.24	4.57	3.00	1.91	1.44	52.37
ETDF	-.12	.18	1.55	3.31	5.08	4.60	2.37	1.86	1.49	1.82	.75	-.08	23.01
MAI	1.07	.92	.58	.37	.30	.42	.67	.70	.67	.39	.61	1.06	

PD = -.799 + .820 * PREC
RSQ=.9693

NSAHVILLE TENNESSEE — LAT 36 7 — 37 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	39.	42.	50.	60.	69.	78.	80.	80.	73.	63.	50.	42.	60.
MEAN R.H.	74.	73.	68.	68.	68.	70.	70.	75.	70.	70.	72.	74.	71.
MEAN PREC	5.07	4.48	5.30	3.95	3.81	3.27	3.81	3.03	2.99	2.11	3.23	4.16	45.21
PREC DEP	2.63	2.65	3.52	2.82	2.29	1.74	2.24	1.80	1.51	.86	1.91	2.54	
POT ET	1.13	1.55	3.18	5.00	7.23	8.35	8.57	6.74	5.03	3.16	1.62	1.10	52.65
ETDF	-1.50	-1.10	-.34	2.18	4.94	6.61	6.33	4.94	3.52	2.30	-.29	-1.44	30.81
MAI	2.32	1.72	1.11	.56	.32	.21	.26	.27	.30	.27	1.18	2.31	

PD = -.498 + .719 * PREC
RSQ=.8828

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

TENNESSEE MIDDLE DIVISION — LAT 35 50 — 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	40.	42.	50.	59.	68.	76.	78.	78.	72.	60.	49.	42.	59.
MEAN R.H.	74.	73.	68.	68.	68.	70.	70.	75.	70.	70.	72.	74.	71.
MEAN PREC	5.71	4.63	5.73	4.42	3.92	3.82	4.30	3.44	3.16	2.52	3.96	4.58	50.19
PREC DEP	3.17	2.20	4.24	3.34	2.53	2.62	3.22	2.36	1.90	1.24	2.50	2.86	
POT ET	1.18	1.56	3.21	4.94	7.14	8.14	8.37	6.59	5.00	3.03	1.61	1.12	51.90
ETDF	-1.99	-.64	-1.03	1.60	4.61	5.52	5.15	4.21	3.10	1.79	-.89	-1.74	25.98
MAI	2.68	1.41	1.32	.68	.35	.32	.38	.36	.38	.41	1.55	2.55	

PD = -.209 + .692 * PREC
RSQ=.7194

TENNESSEE EASTERN DIVISION — LAT 36 0 — 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	41.	44.	50.	60.	68.	76.	79.	78.	71.	60.	48.	40.	60.
MEAN R.H.	72.	71.	65.	66.	67.	68.	74.	74.	73.	70.	70.	74.	70.
MEAN PREC	4.73	4.81	5.32	4.00	3.64	3.83	5.30	4.02	2.91	2.63	3.38	4.28	48.85
PREC DEP	3.06	3.27	3.98	3.00	2.67	2.86	4.10	3.02	1.92	1.29	2.10	2.71	
POT ET	1.25	1.69	3.34	5.16	7.24	8.40	7.68	6.71	4.65	3.01	1.62	1.05	52.00
ETDF	-1.81	-1.58	-.64	2.16	4.57	5.54	3.70	3.69	2.73	1.72	-.48	-1.65	24.20
MAI	2.45	1.94	1.19	.58	.37	.34	.72	.45	.41	.43	1.30	2.37	

PD = -.755 + .881 * PREC
RSQ= .9125

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

TENNESSEE CUMBERLAND PLATEAU DIVISION — LAT 35 50 — 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	37.	39.	45.	55.	63.	71.	74.	73.	68.	57.	45.	38.	55.
MEAN R.H.	70.	70.	65.	66.	67.	68.	72.	74.	70.	71.	70.	71.	69.
MEAN PREC	5.70	4.54	6.01	4.52	3.92	4.34	5.09	3.96	3.42	2.69	4.07	5.16	53.42
PREC DEP	3.39	2.59	4.57	3.33	2.72	2.94	3.75	2.90	2.10	1.22	2.60	3.30	
POT ET	1.17	1.53	3.01	4.73	6.70	7.84	7.65	6.28	4.71	2.83	1.53	1.07	49.05
ETDF	-2.22	-1.06	-1.56	1.40	3.98	4.90	3.90	3.38	2.61	1.61	-1.07	-2.23	21.78
MAI	2.89	1.69	1.52	.70	.41	.38	.49	.46	.45	.43	1.70	3.09	

PD = -.713 + .823 * PREC

RSQ=.8534

TENNESSEE WESTERN DIVISION — LAT 35 40 — 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	40.	43.	50.	60.	69.	77.	80.	79.	72.	62.	50.	42.	60.
MEAN R.H.	76.	75.	68.	68.	69.	70.	68.	75.	70.	70.	69.	75.	71.
MEAN PREC	5.57	4.16	5.54	4.51	4.11	3.90	4.06	3.06	3.40	2.61	4.21	4.43	49.56
PREC DEP	2.74	1.94	3.96	3.30	2.54	2.29	2.86	1.92	1.74	1.05	2.50	2.74	
POT ET	1.15	1.55	3.22	5.04	7.15	8.26	8.88	6.70	5.02	3.16	1.74	1.11	52.99
ETDF	-1.59	-.39	-.74	1.74	4.51	5.97	6.02	4.78	3.28	2.11	-.76	-1.63	28.41
MAI	2.39	1.25	1.23	.65	.37	.28	.32	.29	.35	.33	1.43	2.47	

PD = -.575 + .738 * PREC

RSQ=.7106

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

RICHMOND VIRGINIA — LAT 37 30 — 30 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	39.	40.	47.	57.	66.	74.	78.	76.	70.	59.	48.	4[illegible]	58.
MEAN R.H.	70.	68.	65.	65.	77.	73.	73.	78.	78.	73.	71.	70.	72.
MEAN PREC	3.03	3.06	3.37	2.84	3.50	3.87	5.62	5.19	3.62	3.07	3.22	3.07	43.46
PREC DEP	2.08	2.12	2.38	1.88	2.15	2.34	2.94	2.47	2.10	1.51	1.58	2.02	
POT ET	1.12	1.50	2.99	4.83	5.76	7.42	7.82	5.87	3.98	2.65	1.46	1.03	46.44
ETDF	-.96	-.62	.61	2.95	3.61	5.08	4.88	3.40	1.88	1.14	-.12	-.99	23.55
MAI	1.85	1.41	.80	.39	.37	.32	.38	.42	.53	.57	1.08	1.96	

PD = .876 + .346 * PREC
RSQ=.6308

VIRGINIA EASTERN PIEDMONT DIVISION — LAT 37 30 — 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	38.	40.	45.	58.	65.	73.	77.	76.	69.	58.	47.	38.	57.
MEAN R.H.	70.	68.	65.	65.	77.	73.	73.	78.	78.	73.	71.	70.	72.
MEAN PREC	3.45	3.09	3.77	3.41	3.54	3.79	4.89	4.62	3.54	2.86	3.04	3.04	43.04
PREC DEP	2.28	2.26	2.84	2.35	2.26	2.72	3.41	2.78	2.12	1.53	1.60	1.92	
POT ET	1.09	1.50	2.86	4.91	5.67	7.32	7.71	5.87	3.92	2.60	1.43	.98	45.88
ETDF	-1.19	-.76	.02	2.56	3.41	4.60	4.30	3.09	1.80	1.07	-.17	-.94	20.86
MAI	2.09	1.50	.99	.48	.40	.37	.44	.47	.54	.59	1.12	1.96	

PD = -.435 + .773 * PREC
RSQ=.8034

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

VIRGINA TIDEWATER DIVISION — LAT 37 20 — 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	40.	41.	49.	58.	66.	74.	77.	76.	70.	60.	50.	41.	58.
MEAN R.H.	77.	70.	70.	78.	79.	77.	78.	78.	79.	79.	77.	78.	77.
MEAN PREC	3.40	3.12	3.58	3.15	3.51	3.81	5.23	5.11	3.89	3.03	2.98	2.85	43.66
PREC DEP	2.38	2.27	2.75	2.28	2.20	2.76	3.71	3.28	2.33	1.70	1.67	1.94	
POT ET	1.02	1.50	2.90	3.91	5.52	6.86	6.97	5.88	3.91	2.39	1.37	.91	43.16
ETDF	-1.36	-.77	.15	1.63	3.32	4.10	3.26	2.60	1.58	.69	-.30	-1.03	17.34
MAI	2.34	1.51	.95	.58	.40	.40	.53	.56	.60	.71	1.22	2.12	

PD = -.144 + .710 * PREC
RSQ=.8499

VIRGINIA WESTERN PIEDMONT DIVISION — LAT 37 10 — 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	38.	40.	46.	57.	65.	72.	76.	75.	68.	58.	47.	38.	57.
MEAN R.H.	70.	68.	62.	60.	72.	70.	70.	78.	78.	73.	70.	70.	70.
MEAN PREC	3.37	3.17	3.98	3.58	3.79	4.03	4.76	4.49	3.95	3.03	3.03	3.24	44.42
PREC DEP	2.21	2.20	2.92	2.61	2.61	2.86	3.70	2.77	2.00	1.56	1.64	2.02	
POT ET	1.11	1.53	3.01	4.95	6.28	7.62	8.05	5.82	3.90	2.64	1.49	1.00	47.39
ETDF	-1.10	-.67	.09	2.34	3.67	4.76	4.35	3.05	1.90	1.08	-.15	-1.02	21.23
MAI	1.98	1.44	.97	.53	.42	.38	.46	.48	.51	.59	1.10	2.02	

PD = -1.021 + .931 * PREC
RSQ=.7526

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

VIRGINIA NORTHERN DIVISION — LAT 38 40 — 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	36.	38.	43.	55.	63.	70.	74.	72.	66.	57.	46.	36.	55.
MEAN R.H.	70.	68.	60.	60.	71.	70.	70.	78.	75.	70.	70.	70.	69.
MEAN PREC	2.79	2.50	3.45	3.30	3.89	3.66	4.11	4.37	3.36	3.23	2.94	2.74	40.34
PREC DEP	1.86	1.74	2.46	2.23	2.56	2.78	2.84	2.81	2.14	1.44	1.60	1.65	
POT ET	.96	1.35	2.68	4.63	6.08	7.31	7.71	5.44	3.87	2.57	1.33	.85	44.79
ETDF	-.90	-.39	.22	2.40	3.52	4.53	4.87	2.63	1.73	1.13	-.27	-.80	21.03
MAI	1.93	1.29	.92	.48	.42	.38	.37	.52	.55	.56	1.20	1.93	

PD = -.400 + .766 * PREC
RSQ=.7354

VIRGINIA CENTRAL MOUNTAIN DIVISION — LAT 38 0 — 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	35.	37.	44.	54.	63.	71.	75.	73.	67.	56.	44.	36.	55.
MEAN R.H.	70.	70.	65.	70.	70.	70.	75.	77.	77.	70.	70.	70.	71.
MEAN PREC	2.85	2.71	3.54	3.04	3.68	3.74	4.18	4.22	3.29	2.96	2.69	2.78	39.68
PREC DEP	1.84	1.80	2.55	2.14	2.52	2.86	3.18	2.58	1.94	1.40	1.57	1.77	
POT ET	.97	1.31	2.75	4.19	6.24	7.46	7.19	5.71	3.84	2.59	1.32	.89	44.47
ETDF	-.87	-.49	.20	2.05	3.72	4.60	4.01	3.13	1.90	1.19	-.25	-.88	20.79
MAI	1.89	1.37	.93	.51	.40	.38	.44	.45	.51	.54	1.19	1.98	

PD = -.751 + .886 * PREC
RSQ=.7968

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

VIRGINIA SOUTHWESTERN MOUNTAIN DIVISION LAT 37 0 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	35.	36.	43.	52.	61.	68.	71.	70.	65.	54.	43.	36.	53.
MEAN R.H.	72.	68.	68.	65.	70.	68.	72.	75.	75.	68.	72.	71.	70.
MEAN PREC	3.57	3.54	4.25	3.38	3.81	3.92	4.87	4.18	3.06	2.54	2.76	3.23	43.11
PREC DEP	2.43	2.51	3.23	2.46	2.64	3.04	3.92	2.98	1.94	1.30	1.88	2.13	
POT ET	1.00	1.38	2.65	4.44	6.10	7.43	7.25	5.79	3.98	2.69	1.32	.94	44.97
ETDF	-1.43	-1.13	-.58	1.98	3.46	4.39	3.33	2.81	2.04	1.39	-.56	-1.19	19.40
MAI	2.43	1.82	1.22	.55	.43	.41	.54	.51	.49	.48	1.42	2.27	

PD = -1.185 + 1.036 * PREC
RSQ=.9687

CHARLESTON WEST VIRGINIA LAT 38 22 37 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	37.	39.	46.	56.	65.	73.	77.	76.	70.	59.	47.	38.	57.
MEAN R.H.	72.	72.	68.	68.	69.	70.	78.	78.	75.	70.	70.	72.	72.
MEAN PREC	3.64	3.25	3.92	3.44	3.48	3.32	5.30	3.54	2.64	2.24	2.73	2.82	40.32
PREC DEP	1.20	1.12	1.36	1.63	1.57	1.13	1.73	1.13	.83	.64	.88	1.28	
POT ET	.97	1.32	2.72	4.45	6.52	7.66	6.91	5.79	4.15	2.69	1.39	.89	45.45
ETDF	-.23	.20	1.36	2.82	4.95	6.53	5.18	4.66	3.32	2.05	.51	-.39	31.57
MAI	1.23	.85	.50	.37	.24	.15	.25	.20	.20	.24	.63	1.44	

PD = .078 + .336 * PREC
RSQ=.6283

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

WEST VIRGINIA SOUTHWESTERN DIVISION LAT 38 20 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	34.	36.	43.	54.	64.	71.	75.	74.	67.	56.	44.	35.	54.
MEAN R.H.	72.	72.	68.	68.	69.	70.	78.	78.	75.	70.	70.	72.	72.
MEAN PREC	3.65	3.29	4.29	3.54	3.70	4.08	5.02	3.68	2.89	2.27	2.81	2.98	42.20
PREC DEP	2.45	2.18	3.17	2.57	2.47	3.14	3.83	2.68	1.96	1.20	1.84	1.89	
POT ET	.90	1.21	2.54	4.29	6.42	7.44	6.72	5.63	3.97	2.56	1.30	.82	43.80
ETDF	-1.55	-.97	-.63	1.72	3.95	4.30	2.89	2.95	2.01	1.36	-.54	-1.07	19.18
MAI	2.74	1.80	1.25	.60	.38	.42	.57	.48	.49	.47	1.42	2.30	

PD = -.884 + .947 * PREC
RSQ=.9808

WEST VIRGINIA NORTHWESTERN DIVISION LAT 39 30 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	32.	33.	40.	52.	61.	70.	73.	72.	65.	55.	42.	33.	52.
MEAN R.H.	75.	75.	68.	70.	68.	70.	70.	74.	70.	70.	70.	75.	71.
MEAN PREC	3.28	2.82	3.90	3.61	3.80	4.34	4.30	3.88	3.00	2.40	2.70	2.82	40.85
PREC DEP	2.09	1.88	2.73	2.64	2.63	3.20	3.28	2.64	1.97	1.38	1.84	1.89	
POT ET	.74	.99	2.27	3.90	6.12	7.26	7.54	5.83	4.08	2.39	1.16	.67	42.95
ETDF	-1.35	-.89	-.46	1.26	3.49	4.06	4.26	3.19	2.11	1.01	-.68	-1.22	19.38
MAI	2.83	1.90	1.20	.68	.43	.44	.43	.45	.48	.58	1.59	2.81	

PD = -.676 + .888 * PREC
RSQ=.9727

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

WEST VIRGINIA NORTH CENTRAL DIVISION LAT 39 0 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	35.	35.	43.	53.	63.	71.	75.	73.	67.	56.	44.	36.	54.
MEAN R.H.	75.	75.	68.	70.	68.	70.	70.	74.	70.	70.	70.	75.	71.
MEAN PREC	3.74	3.23	4.21	3.75	4.06	4.73	4.81	4.41	3.33	2.74	2.98	3.30	45.29
PREC DEP	2.56	2.36	3.14	2.84	2.80	3.56	3.77	3.06	2.28	1.52	2.01	2.20	
POT ET	.84	1.08	2.49	4.02	6.36	7.40	7.80	5.97	4.27	2.49	1.25	.76	44.72
ETDF	-1.72	-1.28	-.65	1.18	3.56	3.84	4.03	2.91	1.99	.97	-.76	-1.44	18.47
MAI	3.06	2.19	1.26	.71	.44	.48	.48	.51	.53	.61	1.61	2.89	

PD = -.858 + .936 * PREC
RSQ=.9558

WESTVIRGINIA CENTRAL DIVISION LAT 38 30 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	32.	33.	40.	50.	58.	66.	70.	68.	62.	52.	40.	32.	50.
MEAN R.H.	72.	70.	70.	70.	70.	72.	78.	78.	78.	72.	70.	72.	73.
MEAN PREC	4.11	3.83	4.85	4.07	4.56	4.88	5.40	4.75	3.42	3.13	3.19	3.62	49.81
PREC DEP	3.09	2.98	3.84	3.26	3.34	3.95	4.28	3.48	2.46	1.84	2.33	2.61	
POT ET	.83	1.14	2.27	3.83	5.69	6.66	6.25	5.14	3.42	2.27	1.17	.74	39.42
ETDF	-2.26	-1.84	-1.57	.57	2.35	2.71	1.97	1.66	.96	.43	-1.16	-1.37	10.65
MAI	3.71	2.61	1.69	.85	.59	.59	.69	.68	.72	.81	2.00	3.52	

PD = -.834 + .953 * PREC
RSQ=.9509

TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILABILITY FOR THE SOUTHEAST

WEST VIRGINIA SOUTHERN DIVISION LAT 37 40 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	30.	32.	37.	48.	57.	64.	68.	67.	61.	51.	39.	32.	49.
MEAN R.H.	72.	70.	70.	70.	70.	72.	78.	78.	78.	72.	70.	72.	73.
MEAN PREC	3.13	3.09	3.99	3.07	3.59	3.70	4.38	3.72	2.74	2.27	2.46	2.80	38.94
PREC DEP	2.05	2.22	2.94	2.18	2.58	2.78	3.29	2.66	1.80	1.18	1.69	1.90	
POT ET	.82	1.15	2.16	3.73	5.65	6.49	6.11	5.13	3.44	2.31	1.19	.78	38.97
ETDF	-1.23	-1.07	-.78	1.55	3.07	3.71	2.82	2.47	1.64	1.13	-.50	-1.12	16.39
MAI	2.49	1.93	1.36	.58	.46	.43	.54	.52	.52	.51	1.42	2.42	

PD = -.732 + .926 * PREC
RSQ=.9754

WEST VIRGINIA NORTHEASTERN DIVISION LAT 39 10 35 YEARS

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	SUM OR AV.
MEAN TEMP	34.	36.	42.	54.	63.	71.	74.	73.	66.	56.	44.	36.	54.
MEAN R.H.	70.	72.	70.	67.	70.	72.	79.	79.	77.	72.	70.	71.	72.
MEAN PREC	2.36	2.14	3.17	2.96	3.45	3.58	3.57	3.80	2.79	2.86	2.32	2.21	35.21
PREC DEP	1.56	1.44	2.20	2.04	2.39	2.80	2.70	2.39	1.76	1.36	1.38	1.38	
POT ET	.88	1.17	2.34	4.29	6.15	7.14	6.42	5.35	3.66	2.39	1.24	.81	41.82
ETDF	-.68	-.27	.14	2.25	3.76	4.34	3.72	2.96	1.90	1.03	-.14	-.57	20.08
MAI	1.77	1.23	.94	.48	.39	.39	.42	.45	.48	.57	1.12	1.70	

PD = -.500 + .835 * PREC
RSQ=.8270

TABEL 2 POTENTIAL EVAPOTRANSPIRATION FACTOR IN INCHES PER MONTH , MF

NORTH LAT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
					MONTH							
50	.012	.019	.040	.063	.090	.100	.098	.076	.048	.028	.014	.010
49	.013	.021	.042	.065	.092	.102	.100	.078	.050	.029	.015	.011
48	.014	.022	.044	.067	.094	.103	.101	.080	.052	.031	.017	.012
47	.016	.024	.046	.069	.096	.105	.103	.082	.054	.033	.018	.013
46	.017	.026	.048	.071	.097	.106	.105	.084	.056	.035	.020	.015
45	.019	.027	.050	.073	.099	.108	.106	.086	.058	.037	.021	.016
44	.021	.029	.052	.075	.101	.109	.108	.088	.060	.039	.023	.018
43	.022	.031	.054	.077	.102	.110	.109	.090	.062	.041	.025	.019
42	.024	.032	.056	.079	.104	.111	.110	.091	.064	.043	.026	.021
41	.026	.034	.058	.081	.105	.113	.112	.093	.066	.045	.028	.022
40	.027	.036	.060	.083	.107	.114	.113	.095	.068	.047	.030	.024
39	.029	.038	.063	.084	.108	.115	.114	.097	.070	.049	.032	.026
38	.031	.040	.065	.086	.109	.116	.115	.098	.072	.051	.034	.028
37	.033	.042	.067	.088	.111	.117	.116	.100	.074	.053	.036	.030
36	.035	.044	.069	.089	.112	.117	.117	.101	.076	.056	.038	.032
35	.037	.045	.070	.091	.112	.118	.118	.102	.077	.057	.039	.033
34	.039	.046	.071	.091	.112	.117	.117	.102	.078	.059	.041	.035
33	.040	.048	.073	.091	.111	.116	.116	.102	.079	.060	.042	.037
32	.042	.049	.074	.091	.111	.115	.116	.102	.080	.061	.044	.038
31	.043	.050	.074	.092	.110	.114	.115	.102	.080	.063	.045	.040
30	.045	.052	.075	.092	.110	.113	.114	.102	.081	.064	.047	.041
29	.046	.053	.076	.092	.109	.112	.113	.102	.082	.065	.048	.043
28	.048	.054	.077	.092	.109	.111	.112	.102	.082	.066	.050	.044
27	.049	.055	.078	.093	.108	.110	.112	.102	.083	.067	.051	.046
26	.051	.056	.079	.093	.108	.109	.111	.101	.083	.069	.052	.048
25	.052	.058	.080	.093	.107	.108	.110	.101	.084	.070	.054	.049
24	.054	.059	.081	.093	.106	.107	.109	.101	.084	.071	.055	.051

APPENDIX II - COMPUTER PROGRAM USED

```
      DIMENSION NAME(8),TM(13),HM(13),PREC(13),PD(12),DEC(12),ES(12),DM(
     112),Z(12),OM(12),DL(12),RLD(12),CH(12),RMM(12),ETP(13),ETDF(13),MA
     2I(13),DF(13),TC(12)
      REAL MAI
      DATA (DM(M), M=1,12)/31.,28.,31.,30.,31.,30.,31.,31.,30.,31.,30.,
     131./
C     DM IS NUMBER OF DAYS IN THE MONTH
      DATA (DEC(M),M=1,12)/-.3656,-.2365,-.04682,.1607,.3247,.4017,
     $.3699,.2360,.03995,-.1669,-.3291,-.4021/
C     DEC IS DECLINATION IN RADIANS
      DATA (ES(M),M=1,12)/.97104,.98136,.99653,1.01313,1.02625,1.03241,1
     $.02987,1.01916,1.00347,.98693,.97369,.96812/
C     ES IS MEAN MONTHLY DISTANCE OF THE SUN TO THE EARTH DIVIDED BY THE
C     MEAN ANUAL DIATANCE
      JJ=0
    2 READ(5,100,END=261) NAME,LD,LDM,NYR
C     NAME IS STATION OR DIVISION
C     LD IS LATITUDE IN DEGREES   LDM IS LATITUDE IN MINUTES
C     NYR IS NUMBER OF YEARS OF RECORD
  100 FORMAT(9X,8A6,3X,I2,I3,2X,I2)
      READ(5,120)(TM(M),M=1,12)
C     TM IS MEAN TEMPERATURE IN DEGREES FAHRENHEIT
      READ(5,120)(HM(M),M=1,12)
C     HM IS MEAN RELATIVE HUMIDITY IN PERCENT
      READ(5,121)(PREC(M),M=1,12)
C     PREC IS MEAN PRECIPITATION IN INCHES
      READ(5,121)(PD(M),M=1,12)
C     PD IS THE 75 PERCENT PROBABILITY OF PRECIPITATION
  120 FORMAT(5X,12F5.0)
  121 FORMAT(5X,12F5.2)
```

APPENDIX II (continued)

```
      JJ=JJ+1
      XLA=(FLOAT(LD)+FLOAT(LDM)/60.)
C     XLA IS LATITUDE IN DEGREES AND DECIMALS
      XLR=(FLOAT(LD)+FLOAT(LDM)/60.)/57.2958
C     XLR IS LATITUDE IN RADIANS
  205 FORMAT(1H0 /////)
      IF(MOD(JJ,2).EQ.1) WRITE(6,205)
  102 FORMAT(1H1,'TABLE 1 ANALYSIS OF PRECIPITATION AND MOISTURE AVAILAB
     1ILITY FOR THE SOUTHEAST                                    ')
      IF(MOD(JJ,2).EQ.1) WRITE(6,102)
      IF(MOD(JJ,2).EQ.1) WRITE(6,203)
      PRINT 101,NAME,LD,LDM,NYR
  101 FORMAT(' ' / 8X,8A6,'      LAT'I4,I3,6X,                I3,' YEARS',/
     1 '0            JAN    FEB    MAR    APR    MAY    JUN    JUL    AUG    SEP
     2  OCT    NOV    DEC   SUM OR AV.    ')
      TM(13)=0
      HM(13)=0
      PREC(13)=0
      ETP(13)=0
      DF(13)=0
      SPM=0
      SDD=0
      SSPM=0
      SSDD=0
      XP=0
      XN=12.
      DO 3 M=1,12
      SPM=SPM+PREC(M)
      SDD=SDD+PD(M)
      XP=XP+PREC(M)*PD(M)
      SSPM=SSPM+PREC(M)*PREC(M)
```

APPENDIX II (continued)

```
      SSDD=SSDD+PD(M)*PD(M)
      TC(M)=(TM(M)-32.)/1.8
      Z(M)=-TAN(XLR)*TAN(DEC(M))
      OM(M)=ACOS(Z(M))
      DL(M)=OM(M)/.1309
C     DL IS DAY LENGTH IN HOURS (SUNRISE TO SUNSET)
      RLD(M)=916.732*(OM(M)*SIN(XLR)*SIN(DEC(M))+COS(XLR)*COS(DEC(M))*SI
     1N(OM(M)))/FS(M)
      RMM(M)=DM(M)*10.*RLD(M)/(595.9-.55*TC(M))
C     RMM IS EXTRATERRESTRIAL RADIATION IN MM PER MONTH
      CH(M)=.166*SQRT(100.-HM(M))
      IF(CH(M).GT.1.) CH(M)=1.
      CLA=.17*SQRT(70.-ABS(XLA))
      IF(CLA.GT.1.00) CLA=1.00
      ETP(M)=.0000158*RMM(M)*DL(M)*TM(M)*CH(M)*CLA
C     ETP IS POTENTIAL EVAPOTRANSPIRATION IN INCHES
      ETDF(M)=ETP(M)-PD(M)
      MAI(M)=PD(M)/ETP(M)
      IF(ETDF(M).GT.0.01) DF(M)=ETDF(M)
      IF(ETDF(M).LE.0.01)DF(M)=0
      DF(13)=DF(13)+DF(M)
      TM(13)=TM(13)+TM(M)
      HM(13)=HM(13)+HM(M)
      PREC(13)=PREC(13)+PREC(M)
      ETP(13)=ETP(13)+ETP(M)
    3 CONTINUE
      TOP=XN*XP-SPM*SDD
      BOTTOM=XN*SSPM-SPM*SPM
      YBAR=SDD/XN
      XBAR=SPM/XN
```

APPENDIX II (continued)

```
      BETA=TOP/BOTTOM
      ALPHA=YBAR-BETA*XBAR
      RSQ=(TOP*TOP)/(BOTTOM*(XN*SSDD-SDD*SDD))
      TM(13)=TM(13)/12.
      HM(13)=HM(13)/12.
      ETDF(13)=DF(13)
      PRINT 103,(TM(M),M=1,13)
  103 FORMAT(' MEAN TEMP', 12F6.0,F8.0)
      PRINT 104,(HM(M),M=1,13)
  104 FORMAT(' MEAN R.H.', 12F6.0,F8.0)
      PRINT 105,(PREC(M),M=1,13)
  105 FORMAT(' MEAN PREC', 12F6.2,F8.2)
      PRINT 106,(PD(M),M=1,12)
  106 FORMAT(' PREC DEP ' ,12F6.2)
      PRINT 107,(ETP(M),M=1,13)
  107 FORMAT(' POT ET    ', 12F6.2,F8.2)
      PRINT 108,(ETDF(M),M=1,13)
  108 FORMAT(' ETDF      ' ,12F6.2,F8.2)
  109 FORMAT(' MAI       ', 12F6.2)
      PRINT 109,(MAI(M),M=1,12)
      WRITE(6,301)ALPHA,BETA
  301 FORMAT(20X,'PD =',F7.3,' +' ,F7.3,' * PREC')
      WRITE(6,302)RSQ
  302 FORMAT(20X,'RSQ=',F5.4)
  203 FORMAT(1H ,'-----------------------------------------------------
     1-----------------------------------------------------------------
      WRITE(6,203)
      GO TO 2
  261 STOP
      END
```