ECF
3-2

GROWING SEASON REQUIREMENTS OF RAINFALL FOR CULTIVATED CROPS SUCH AS DRY BEANS IN NORTHEAST BRAZIL AND NUMBER OF YEARS IN 20 THAT SUCH REQUIREMENTS WERE MET IN VARIOUS MUNICIPIOS (§)

Adequate rainfall during the growing season, where irrigation water is not available, is important for successful growing of dry beans and other cultivated crops. Where the farmer is dependent upon rainfall as a source of moisture, it is important that such rainfall be adequate and dependable year after year for successful cultivated crop farming. The farmer cannot afford to lose many crops and stay in business and make a living. This is especially true where purchased inputs are involved, such as fertilizers, pesticides, etc., and the use of credit.

In a bulletin entitled " O Feijoeiro Comum" prepared by Mr. Clibas Vieira (published at Viçosa - Minas Gerais in 1967), Mr. Vieira states: "It is essential that no lack of water occurs to the crop during the flowering period and naturing period. In the first case, to prevent the falling of the flowers and small pods, and in the second case, to allow for a good filling of the pods. It is generally considered that 100 millimeters of rainfall per month is ideal."

Under the heading "Vegetative Cycle" in this bulletin, the following information is significant: Quote - "Table 32 gives information on the duration of the development sub-periods for 4 bean varieties in conformance with with observation made at Viçosa during several years.

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§ Statement and Tables compiled by Roy S. Beck, Agricultural Economics Advisor, Agriculture and Rural Development Division, USAID/Recife/Brazil, August 1970.

Source of Rainfall Data: Monthly Rainfall Measurements Data (Volumes I, II, and III), Division of Hydrology, Department of Natural Resources, Ministry of Interior, Brazil.

TABLE 32 - Duration, In Days, of Development Sub-periods For 4 Bean Varieties at Viçosa, Minas Gerais.

Sub-periods	(Sulphur) Enxôfre	Rico-23	Mant.- Fôsco-11	Prêto-60 Dias
	Days	Days	Days	Days
From seed sowing to the emergence (§)	5 to 6	5 to 6	5 to 6	5 to 6
From the emergence to the beginning of flowering	39 to 45	35 to 41	29 to 33	25 to 30
Flowering	± 20	± 20	± 15	± 12
From the beginning of flowering to the end of maturing phase	44 to 53	43 to 54	43 to 56	35 to 45
From the seed sowing to the end of the maturing phase (§)	88 to 98	85 to 96	80 to 90	70 to 77

(§) Considering that the beans were sown on humid soil

These same varieties, if planted in zones with other ecological conditions, may behave somewhat differently. The large majority of beans grown have approximately a 3-month vegetative cycle. "

Similarly, Mr. P. Miranda of the IPA (Pernambuco) Research Station indicated that a minimum of about 300 millimeters of rainfall was needed to grow a crop of dry beans over a 70 to 80 days growing season depending upon the variety.

In view of the foregoing information, it was decided to investigate how many years in 20 that various municipios met minimum requirements of 100 millimeters (about 4 inches) of rainfall per month for 3 consecutive months. Starting the investigation with data for Pernambuco it was found that only the Zona da Mata met these requirements 90 percent or more of the years. Except for Bom Jardim, those municipios indicated as "Agreste" fell far short of meeting such a standard, as did all of the municipios in the "Sertão".

It was then rationalized that possibly 50 millimeters of rainfall might be adequate the first month of planting, if followed by 2 consecutive months with 100 millimeters or more per month.

The following tables for the various States in Northeast Brazil (except Maranhão) show by municipio and rainfall station how many years in 20 that these stations had:

(a) 3 consecutive months per year with 100 millimeters or more of rainfall per month; and

(b) One month with 50 millimeters or more of rainfall, followed by 2 consecutive months with 100 millimeters or more of rainfall per month.

It should be noted that only one rainfall station was given for Maranhão. This station had more than 3 consecutive months with 100 millimeters or more of rainfall per month. Likewise, in Bahia, rainfall data were not provided in the municipios in the eastern costal area where adequacy of rainfall apparently is not a problem. In other words, rainfall data collecting stations have been concentrated in the interior areas where rainfall is limited.

It is doubtful if a farmer can afford to lose as many as one crop in ten (through crop failure) and stay in business and make a satisfactory living. In much of Northeast Brazil, especially in the Drought Polygon area, the risk of crop failure due to lack of dependability of adequate rainfall is considerably greater than this. Thus, cultivated crops such as corn and beans, requiring a minimum of 100 millimeters or more of rainfall per month over approximately a 3-month growing period would not be expected to be profitable commercial crops in such areas over a period of years. Such areas, if worth farming, would be better suited to crops with a short growing season or drouth tolerant crops, or livestock.

It is hoped that the following tables will be useful to research and extension workers and agricultural planners in developing programs in these areas.

Table I - P I A U Í

NUMBER OF YEARS DURING 20 YEAR PERIOD (1948-67) RAINFALL WAS 100 MILLIMETERS OR MORE PER MONTH FOR 3 CONSECUTIVE MONTHS OR 50 MILLIMETERS OR MORE DURING ONE MONTH FOLLOWED BY 2 CONSECUTIVE MONTHS WITH 100 MILLIMETERS OR MORE PER MONTH (BY RAINFALL STATIONS IN VARIOUS MUNICIPIOS)

Município	Rainfall Station	Altitude (Meters)	Years in 20 that Rainfall was: 100 mm or more per month for 3 consecutive months		50 mm or more one month followed by 2 consecutive months with 100 mm or more per month	
			Years	Percent	Years	Percent
Luis Correia	Luis Correia	10	15	75	17	85
Porto	Porto	32	19	95	20	100
Piracuruca	Piracuruca	80	19	95	19	95
Batalha	Batalha	80	19	95	20	100
Barras	Barras	75	18	90	20	100
Piripiri	Piripiri	160	19	95	19	95
Pedro II	Pedro II	580	14	70	16	80
União	União	50	20	100	20	100
José de Freitas	José de Freitas	130	19	95	20	100
Campo Maior	Campo Maior	125	20	100	20	100
Teresina	Teresina	72	17	85	19	95
Costelo do Piauí	Costelo do Piauí	250	15	75	18	90
Amarante	Amarante	72	16	80	20	100
Valencia do Piauí	Valencia do Piauí	295	16	80	20	100
Floriano	Floriano	85	13	65	18	90
Pio IX	Pio IX	550	6	30	7	35
Oeiras	Oeiras	170	14	70	17	85
Picos	Picos	195	8	40	9	45
Jaicos	Jaicos	255	4	20	4	20
Simplício Mendes	Simplício Mendes	319	7	35	10	50
S. João do Piauí	S. João do Piauí	244	2	10	6	30
Paulistana	Paulistana	350	1	5	6	30
S. Raimundo Nonato	S. Raimundo Nonato	386	4	20	9	45

Of the 23 municípios for which rainfall data are available, these rainfall stations were located in the Northern and Eastern part of the State. Areas adjacent to Maranhão had more years with adequate rainfall for 3 consecutive months or more than did those in the eastern or southeastern part of the State. About one-third of the municípios had adequate rainfall for 3 consecutive months (100 mm or more per month) for 18 or more years out of 20. The municípios in the southeast area met this rainfall standard about one-fifth of the years (Table I)

Table II - C E A R Á

NUMBER OF YEARS DURING 20 YEAR PERIOD (1948-67) RAINFALL WAS 100 MILLIMETERS OR MORE PER MONTH FOR 3 CONSECUTIVE MONTHS OR 50 MILLIMETERS OR MORE DURING ONE MONTH FOLLOWED BY 2 CONSECUTIVE MONTHS WITH 100 MILLIMETERS OR MORE PER MONTH (BY RAINFALL STATIONS IN VARIOUS MUNICIPIOS)

Municipio	Rainfall Station	Altitude (Meters)	Years in 20 that Rainfall was: 100 mm or more per month for 3 consecutive months		50 mm or more one month followed by 2 consecutive months with 100 mm or more per month	
			Years	Percent	Years	Percent
Acarau	Acarau	7	18	90	18	90
Acarau	Tapera	90	14	70	16	80
Acopiara	Trussu	330	9	45	11	55
Acopiara	Taboleiro do Meio	270	10	50	15	75
Acopiara	Acopiara	250	7	35	12	60
Antonina do Norte	Antonina do Norte	270	17	85	17	85
Assare	Cachoeira	350	8	40	12	60
Assare	Assare	435	7	35	10	50
Aurora	Aurora	65	13	65	15	75
Aquiraz	Aquiraz	30	15	75	16	80
Araçoiaba	Araçoiaba	101	16	80	17	85
Araçoiaba	Vazantes	50	16	80	18	90
Aracatí	Aracatí	-	14	70	15	75
Aiuaba	Aiuaba	350	5	25	10	50
Araripe	Araripe	605	7	35	11	55
Baturité	Baturité	123	15	75	17	85
Beberibe	Itapeim	20	17	85	19	95
Boa Viagem	Jacompari	480	6	30	8	40
Boa Viagem	Boa Viagem	235	12	60	12	60
Boa Viagem	Santo Antonio	255	6	30	7	35
Barro	Cunças	480	11	55	15	75
Brejo Santo	Brejo Santo	490	13	65	16	80
Camocim	Camocim	5	15	75	17	85
Chaval	Chaval	14	16	80	16	80
Coreau	Várzea da Volta AÇ	85	15	75	17	85
Coreau	Araquem	200	14	70	16	80
Carire	Carire	157	12	60	15	75
Caucaia	Caucaia	32	17	85	18	90
Canindé	Parafuso	190	12	60	14	70
Canindé	Ubiraçú	300	10	50	15	75
Canindé	Salão AÇ	200	3	15	7	35
Canindé	Feijão	250	8	40	10	50
Caridade	Caridade	150	12	60	15	75
Cascavel	Cascavel	30	14	70	17	85

Table II - C E A R Á (continued)

Municipio	Rainfall Station	Altitude (Meters)	Years in 20 that Rainfall was: 100 mm or more per month for 3 consecutive months		50 mm or more one month followed by 2 consecutive months with 100 mm or more per month	
			Years	Percent	Years	Percent
Cascavel	Cristais	50	13	65	15	75
Crateus	Ibiapaba	257	6	30	11	55
Crateus	Crateus	275	9	45	10	50
Cococi	Cococi	360	5	25	9	45
Campos Sales	Itagua	540	2	10	5	25
Campo Sales	Poço de Pedra	530	3	15	5	25
Campo Sales	Campo Sales	551	7	35	10	50
Catarina	Catarina	490	4	20	9	45
Cedro	Várzea	224	11	55	14	70
Carius	Carius	230	10	50	16	80
Cairus	Caipu	310	13	65	16	80
Caririaçu	Caririaçu	710	18	90	18	90
Crato	Crato	421	16	80	18	90
Frecheirinhas	Frecheirinhas	100	15	75	18	90
Fortaleza	Fortaleza	26	18	90	19	95
Fortaleza	Fortaleza	30	15	75	16	80
Granja	GRANJA	9	18	90	20	100
Granja	Iboaçu	200	19	95	19	95
Guaraciaba do Norte	Guaraciaba do Nte	380	15	75	18	90
General Sampaio	General Sampaio AÇ	100	11	55	13	65
Guaiuba	Guaiuba	59	15	75	15	75
Guaramiranga	Guaramiranga	1000	18	90	18	90
Hidrolandia	Hidrolandia	200	10	50	13	65
Ibiapina	Ibiapina	885	18	90	20	100
Ipú	Bonito	170	12	60	17	85
Ipueiras	Ipueiras	238	11	55	12	60
Itapipoca	Amontada	180	12	60	14	70
Itapipoca	Itapipoca	98	16	80	17	85
Itapipoca	Miraima	70	12	60	16	80
Itapipoca	Assunção	150	18	90	18	90
Itapagé	Itapagé	280	11	55	15	75
Itapagé	Iratinga	180	12	60	14	70
Itapagé	Vertentes	190	10	50	15	75
Irauçuba	Irauçuba	± 0	5	25	8	40
Irauçuba	Juá	180	8	40	10	50
Itapagé	Tejuçoca	170	10	50	12	60
Itatira	Itatira	450	15	75	16	80
Itatira	Lagoa do Mato	270	6	30	9	45
Itapiuna	Caio Prado	111	14	70	17	85
Independencia	Independencia	380	7	35	13	65

Table II - C E A R Á (continued)

Municipio	Rainfall Station	Altitude (Meters)	Years in 20 that Rainfall was: 100 mm or more per month for 3 consecutive months		50 mm or more one month followed by 2 consecutive months with 100 mm or more per month	
			Years	Percent	Years	Percent
Independencia	Coutinho	380	5	25	9	45
Independencia	Iapi	340	4	20	7	35
Iracema	Ema AÇ	210	11	55	14	70
Iguatú	Maracaja	210	8	40	11	55
Iguatú	Suassurana	230	8	40	14	70
Iguatú	Iguatú	213	11	55	16	80
Igo	Lima Campos	180	13	65	15	75
Ico	Ico	160	8	40	14	70
Jaguaruana	Jaguaruana	15	8	40	12	60
Jaguaretama	Mendubim	170	10	50	10	50
Jaguaretama	Carnaubas	90	9	45	12	60
João do Jaguaribe	João do Jaguaribe	60	10	50	11	55
Jaguaribara	Velame AÇ	80	8	40	11	55
Jaguaribe	Nova Floresta AÇ	170	14	70	16	80
Jaguaribe	Jaguaribe	120	6	30	7	35
Jaguaribe	Feiticeiro	180	12	60	17	75
Jaguaribe	Curral Novo	90	8	40	12	60
Jardim	Jardim	630	9	45	13	65
Jati	Jati	470	7	35	11	55
Limoeiro do Norte	Limoeiro do Norte	35	13	65	15	75
Lavras da Mangareira	Lavras da Mangareira	247	12	60	12	60
Lavras da Mangareira	Arrojado	240	14	70	16	80
Lavras da Mangareira	Patos	270	11	55	13	65
Meruoca	Meruoca	450	18	90	19	95
Massapê	Ipaguaçu	75	14	70	15	75
Mocambo	Mocambo	150	17	85	18	90
Monsenhor Tabosa	Espírito Santo	310	4	20	4	20
Monsenhor Tabosa	Monsenhor Tabosa	410	5	25	7	35
Maranguape	Maranguape	67	17	85	18	90
Mulungú	Mulungú	1050	18	90	18	90
Morada Nova	Sitia	80	10	50	14	70
Morada Nova	Catita	120	13	65	15	75
Morada Nova	Morada Nova	50	9	45	11	55
Monbaça	S. Jeronimo Faz	300	6	30	10	50
Monbaça	Monbaça	223	9	45	11	55
Monbaça	Catolé	350	7	35	9	45
Milhã	Milhã	180	5	25	9	45
Missão Velha	Missão Velha	352	14	70	17	85
Mauriti	Anaua	600	6	30	7	35
Milagres	Milagres	371	12	60	14	70

Table II - C E A R Á (Continued)

Municipio	Rainfall Station	Altitude (meters)	Years in 20 that Rainfall was: 100 mm or more per month for 3 consecutive months		50 mm or more one month followed by 2 consecutive months with 100 mm or more per month	
			Years	Percent	Years	Percent
Nova Russas	Nova Russas	241	8	40	10	50
Novo Oriente	Novo Oriente	328	7	35	9	45
Oros	Oros	188	11	55	13	65
Poranga	Poranga	700	15	75	17	85
Paracuru	Paracuru	10	14	70	15	75
Pacatuba	Pacatuba	54	15	75	18	90
Paramoti	Paramoti	160	8	40	11	55
Paramoti	Salvação	200	9	45	15	75
Pacoti	Aratuba	600	18	90	20	100
Pacatuba	Riachão	60	13	65	15	75
Pacatuba	Bau	59	17	85	18	90
Pacoti	Pacoti	800	20	100	20	100
Pacajus	Chorozinho	42	13	65	14	70
Palhano	Palhano	20	8	40	12	60
Parambu	Parambu	470	3	15	7	35
Potengi	Potengi	480	10	50	11	55
Pedra Branca	Riachão do Banabuiu	380	6	30	9	45
Pedra Branca	Pedra Branca	480	13	65	15	75
Pedra Branca	Troia	320	5	25	9	45
Pedra Branca	Mineirolandia	310	10	50	12	60
Piquet Carneiro	Ibicuá	273	11	55	14	70
Pirabibu	Monte Alegre	160	8	40	9	45
Pereiro	Pereiro	220	13	65	17	85
Porteiras	Porteiras	520	9	45	15	75
Quixadá	Pompeu Sobrinho	190	9	45	10	50
Quixadá	Queimadas	200	9	45	11	55
Quixadá	D. Mauricio	300	13	65	14	70
Quixadá	Custodio	245	11	55	14	70
Quixadá	Cedro AÇ	190	11	55	11	55
Quixadá	Olho D'Água	150	10	50	13	65
Quixadá	Daniel De Queiroz	185	8	40	12	60
Quixadá	Salva Vida	150	11	55	15	75
Quixeramobim	Coroatá	90	9	45	10	50
Quixeramobim	Quixeramobim	187	13	65	14	70
Quixeramobim	Uruque	214	13	65	14	70
Quixadá	Jardim Faz	200	10	50	12	60
Quixadá	Boqueirão Pedras Brancas	200	14	70	15	75
Quixeramobim	Prudente de Morais	180	13	65	13	65
Reriutaba	Reriutaba	148	11	55	14	70

Table II - C E A R Á (continued)

Municipio	Rainfall Station	Altitude (meters)	Years in 20 that Rainfall was: 100 mm or more per month for 3 consecutive months		50 mm or more one month followed by 2 consecutive months with 100 mm or more per month	
			Years	Percent	Years	Percent
Reriutaba	Araras	100	15	75	16	80
Redenção	Acarape do Meio AÇ	250	16	80	19	95
Redenção	Acarape	76	13	65	16	80
Redenção	Antonio Diogo	171	12	60	18	90
Russas	Stº Antº de Russas	40	11	55	13	65
Senhor SA	Tucunduba	800	15	75	17	85
Santana do Acarau	São Vicente	110	12	60	14	70
Sobral	Ayres de Souza	80	12	60	14	70
Sobral	Sobral	110	12	60	15	75
Sobral	Sobral	75	12	60	14	70
Sobral	Patos	150	7	35	8	40
Sobral	Forquilha	85	10	50	13	65
Sobral	Aracatiaçu	190	7	35	8	40
São Benedito	São Benedito	903	19	95	20	100
São Benedito	Graça	190	16	80	19	95
Santa Quitéria	Santa Quitéria	190	11	55	14	70
São Luiz do Curu	São Luiz do Curu	35	11	55	16	80
S. Gonçalo Amarante	S. Gonçalo Amarante	84	16	80	17	85
Sobral	Santa Maria	180	6	30	8	40
Senador Pompeu	Boqueirão do Pato	175	11	55	14	70
Senador Pompeu	Senador Pompeu	173	10	50	12	60
Solonopolis	Itabatinga	170	7	35	11	55
Solonopolis	Itataira	100	9	45	11	55
Solonopolis	Riacho de Sangue AÇ	160	10	50	13	65
Saboeiro	Flamengo	280	10	50	13	65
Saboeiro	Saboeiro	275	4	20	11	55
Santana do Cariri	Santana do Cariri	480	12	60	15	75
Tiangua	Tiangua	795	17	85	19	95
Tamboril	Sucesso	323	8	40	14	70
Tamboril	Curatis	380	5	25	5	25
Tamboril	Tamboril	360	7	35	8	40
Trairi	Mundau	5	17	85	18	90
Taua	Taua	356	4	20	8	40
Taua	Santo Antonio	420	1	5	4	20
Taua	Marrecas	330	3	15	5	25
Taua	Arneiroz	325	3	15	9	45
Taua	Marruas	490	8	40	10	50
Uruoca	Uruoca	82	15	75	15	75
Ubajara	Ubajara	870	18	90	20	100
Uruburetama	Cemoaba	80	12	60	14	70

Table II - C E A R Á (continued)

Municipio	Rainfall Station	Altitude (Meters)	Years in 20 that Rainfall was: 100 mm or more per month for 3 consecutive months		50 mm or more one month followed by 2 consecutive months with 100 mm or more per month	
			Years	Percent	Years	Percent
Uruburetama	Uruburetama	330	16	80	18	90
Umari	Umari	350	9	45	13	65
Viçosa do Ceará	Viçosa do Ceará	685	19	95	20	100
Várzea Alegre	Várzea Alegre	345	14	70	18	90

Rainfall data examined for 20 years for 197 rainfall stations showed that 13, or 7 percent, had 100 mm or more rainfall per month for 3 consecutive months for 90 percent or more of the 20-year period.

About 12 percent of the stations had rainfall adequate to meet this standard less than one-third of the years. About 44 percent met the standard 50 percent or less of the years (Table II).

R.S.Beck/gn.
NEAR/USAID/
August 27, 1970

Table III - Rio Grande do Norte

NUMBER OF YEARS DURING 20 YEAR PERIOD (1948-67) RAINFALL WAS 100 MILLIMETERS OR MORE PER MONTH FOR 3 CONSECUTIVE MONTHS OR 50 MILLIMETERS OR MORE DURING ONE MONTH FOLLOWED BY 2 CONSECUTIVE MONTHS WITH 100 MILLIMETERS OR MORE PER MONTH (BY RAINFALL STATIONS IN VARIOUS MUNICIPIOS)

Municipio	Rainfall Station	Altitude (Meters)	Years in 20 that Rainfall was: 100 mm or more per month for 3 consecutive months		50 mm or more one month followed by 2 consecutive months with 100 mm or more per month	
			Years	Percent	Years	Percent
Areia Branca	Areia Branca	5	5	25	7	35
Alfonso Bezerra	Alfonso Bezerra	80	3	15	7	35
Apodí	Pedra de Abelhas	70	10	50	12	60
Apodí	Apodí	305	13	65	15	75
Augusto Severo	Augusto Severo	65	14	70	15	75
Açú	Açú	68	6	30	7	35
Angicos	Angicos	109	4	20	7	35
Alexandria	Alexandria	315	10	50	13	65
Augusto Severo	Maracanau	320	15	75	15	75
Acarí	Gargalheira	330	4	20	6	30
Brejo da Cruz	Belém	190	8	40	12	60
Caraúbas	Caraúbas	146	5	25	6	30
Cerro Corá	Recanto	400	2	10	2	10
Ceará Mirim	Ceará Mirim	40	14	70	16	80
Caicó	Mundo Novo	180	9	45	11	55
Caicó	Caicó	143	6	30	7	35
Caicó	Itans	140	6	30	9	45
Currais Novos	Currais Novos	350	3	15	4	20
Cruzeta	Cruzeta	140	3	15	8	40
Cerro Corá	Cerro Corá	590	3	15	4	20
Canguaretama	Canguaretama	?	17	85	18	90
Carnaúbas Dantas	Riacho Fundo	500	2	10	3	15
Florania	Florania	210	7	35	10	50
Gov. Dix-Sept.Rosado	Gov.Dix-Sept.Rosado	36	11	55	13	65
Itaú	Malhada Vermelha	72	4	20	6	30
João Câmara	Queimada	180	0	0	0	0
João Câmara	João Câmara	140	6	30	8	40
João Dias	João Dias	310	13	65	15	75
Jurucutú	Jurucutú	75	14	70	16	80
Jardim do Seridó	Jardim do Seridó	220	4	20	8	40
Jardim do Seridó	Umari Preto	280	8	40	11	55
Lajes	Jardim de Angicos	150	3	15	3	15
Luiz Gomes	Luiz Gomes	640	12	60	15	75
Mossoró	Mossoró	15	8	40	11	55
Mossoró	Hipólito	230	5	25	8	40
Macaíba	Macaíba	50	10	50	17	85
Marcelino Vieira	Marcelino Vieira	195	12	60	14	70
Lajes	Lajes	198	2	10	4	20

Table III - Rio Grande do Norte (continued)

Município	Rainfall Station	Altitude (Meters)	Years in 20 that Rainfall was: 100 mm or more per month for 3 consecutive months		50 mm or more one month followed by 2 consecutive months with 100 mm or more per month	
			Years	Percent	Years	Percent
Martins	Martins	645	17	85	18	90
Martins	Lucrecia	235	10	50	13	65
Natal	Natal	8	16	80	17	85
Nova Cruz	Nova Cruz	90	5	25	5	25
Ouro Branco	Ouro Branco	195	6	30	11	55
Pendencias	Pendencias	20	6	30	8	40
Porto Alegre	Taboleiro Grande	180	13	65	16	80
Parau	Parau	38	4	20	7	35
Pedro Avelino	Pedro Avelino	97	1	5	4	20
Pau dos Ferros	Pau dos Ferros	175	11	55	11	55
Patú	Patú	305	15	75	15	75
Pedro Velho	Pedro Velho	30	14	70	19	95
Parelhas	Parelhas	325	2	10	4	20
Parelhas	Equador	500	0	0	0	0
Santana dos Matos	Pixore de Baixo	122	3	15	4	20
São Rafael	São Rafael	71	4	20	4	20
Santana dos Matos	Santana dos Matos	140	9	45	15	75
São Tomé	São Tomé	175	0	0	1	5
S. Paulo do Potengí	S. Paulo do Potengí	97	2	10	2	10
São Miguel	São Miguel	605	10	50	10	50
São Vicente	São Vicente	320	6	30	6	30
Santa Cruz	Serra Doutor	520	2	10	5	25
Santa Cruz	Santa Cruz	240	0	0	0	0
Serra Caiada	Serra Caiada	110	1	5	2	10
S. José de Mipibú	S. José de Mipibú	50	18	90	19	95
Santo Antônio	Santo Antônio	95	8	40	13	65
S. João do Sabogí	S. João do Sabogí	175	5	25	6	30
Serra Negra do Norte	Serra Negra do Nte	160	7	35	10	50
Touros	Touros	4	10	50	15	75
Taipu	Taipu	50	5	25	7	35
Upanema	Upanema	45	6	30	8	40

Of 69 rainfall stations, only one had rainfall of 100 mm or more per month for 3 consecutive months for 90 percent of the 20 years studied. Fifty-two (75 percent) met the standard one-half or less of the time during the 20-year period (Table III).

Table IV - PARÍBA

NUMBER OF YEARS DURING 20 YEAR PERIOD (1948-67) RAINFALL WAS 100 MILLIMETERS OR MORE PER MONTH FOR 3 CONSECUTIVE MONTHS OR 50 MILLIMETERS OR MORE DURING ONE MONTH FOLLOWED BY 2 CONSECUTIVE MONTHS WITH 100 MILLIMETERS OR MORE PER MONTH (BY RAINFALL STATIONS IN VARIOUS MUNICIPIOS)

Município	Rainfall Station	Altitude (Meters)	Years in 20 that Rainfall was: 100 mm or more per month for 3 consecutive months		50 mm or more one month followed by 2 consecutive months with 100 mm or more per month	
			Years	Percent	Years	Percent
Antenor Navarro	Barra Juá	500	6	30	11	55
Antenor Navarro	Pilões	255	8	40	13	65
Antenor Navarro	Antenor Navarro	240	14	70	15	75
Araruna	Araruna	580	5	25	11	55
Areia	Areia	445	17	85	18	90
Aguiar	Aguiar	280	9	45	13	65
Alagoa Grande	Alagoa Grande	180	10	50	13	65
Alagoa	Alagoa Nova	500	11	5.	15	75
Água Branca	Água Branca	710	7	35	9	45
Alhandra	Alhandra	49	19	95	19	95
Brejo da Cruz	Brejo da Cruz	190	8	40	9	45
Barra de Santa Rosa	Barra de Santa Rosa	440	1	5	2	10
Bananeiras	Bananeiras	552	14	70	16	80
Bonito de Santa Fé	Bonito de Santa Fé	575	7	35	11	55
Catolé do Rocha	Catolé do Rocha	250	9	45	12	60
Cajazeiras	Cajazeiras	291	9	45	11	55
Cajazeiras	Engenheiro Avidos	250	10	50	12	60
Condado	Condado	260	8	40	9	45
Conceição	Dom Jesús	470	7	35	11	55
Curemas	Curemas	220	7	35	10	50
Catingueiras	Catingueiras	290	9	45	12	60
Campina Grande	Boa Vista	490	0	0	0	0
Cabaceiras	Cabaceiras	390	1	5	1	5
Campina Grande	Campina Grande	508	10	50	11	55
Cruz do Espírito Stº	Cruz do Espírito Stº	20	18	90	19	95
Conceição	Conceição	370	9	45	11	55
Camoio	Bodocongó	350	0	0	1	5
Guarabeira	Guarabeira	89	15	75	17	85
Itaporanga	Itaporanga	230	8	40	14	70
Ingá	Ingá	144	3	15	5	25
Itabaiana	Itabaiana	45	3	15	7	35
Jofely	Jofely	624	0	0	0	0
João Pessoa	João Pessoa	5	20	100	20	100
Malta	Malta	340	7	35	9	45

Table IV - PARAÍBA - (Continued)

Município	Rainfall Station	Altitude (meters)	Years in 20 that Rainfall was: 100 mm or more per month for 3 consecutive months		50 mm or more one month followed by 2 consecutive months with 100 mm or more per month	
			Years	Percent	Years	Percent
Mamanguape	Mamanguape	54	15	75	17	85
Mulungú	Mulungú	100	7	35	7	35
Monteiro	Monteiro	590	2	10	2	10
Nazarezinho	Nazarezinho	265	8	40	11	55
Nazarezinho	Timbaúba	520	7	35	10	50
Pombal	Pombal	178	10	50	13	65
Picuí	Picuí	450	0	0	0	0
Pedra Lavrada	Pedra Lavrada	525	2	10	2	10
Piancó	Nova Linda	315	8	40	13	65
Piancó	Piancó	250	4	20	4	20
Piancó	Olho D'água	275	8	40	13	65
Patos	Patos	250	8	40	11	55
Patos	Porcos	270	9	45	13	65
Patos	Salgadinho	410	2	10	2	10
Pilar	Recreio	35	8	40	11	55
Princesa Isabel	Manaira	605	6	30	8	40
Princesa Isabel	Princesa Isabel	660	7	35	10	50
Souza	Souza	200	10	50	11	55
Souza	São Gonçalo	235	8	40	13	65
Santa Luzia	Santa Luzia	290	4	20	9	45
Soledade	Olevido	545	2	10	3	15
Serraria	Serraria	360	17	85	19	95
S. José de Piranhas	Arapua	500	10	50	15	75
S. José de Piranhas	S. José de Piranhas	300	12	60	17	85
Soledade	Soledade	560	1	5	1	5
S. João do Carirí	S. João do Carirí	445	1	5	1	5
S. João do Carirí	Carnaúbas	460	2	10	3	15
Sapé	Sapé	125	13	65	16	80
Sumé	Sumé	510	2	10	5	25
S. João do Tigre	S. João do Tigre	616	1	5	1	5
Santa Rita	Santa Rita	16	19	95	20	100
Teixeira	Teixeira	770	6	30	6	30
Teixeira	Mãe D'água de Dentro	370	8	40	8	40
Teixeira	Imaculada	750	4	20	4	20
Taperoá	Taperoá	500	1	5	3	15
Umbuzeiro	Umbuzeiro	553	12	60	15	75

Four (6%) of the 70 rainfall stations had rainfall of 100 mm or more per month for 3 consecutive months for 90% or more of the 20-year period. These stations were in the coastal region. Fifty-seven (8%) of the stations met the 3 consecutive month's standard for one-half or less of the 20-year period (Table IV).

Table V - PERNAMBUCO

NUMBER OF YEARS DURING 20 YEAR PERIOD (1948-67) RAINFALL WAS 100 MILLIMETERS OR MORE PER MONTH FOR 3 CONSECUTIVE MONTHS OR 50 MILLIMETERS OR MORE DURING ONE MONTH FOLLOWED BY 2 CONSECUTIVE MONTHS WITH 100 MILLIMETERS OR MORE PER MONTH (BY RAINFALL STATIONS IN VARIOUS MUNICIPIOS)

Município	Rainfall Station	Altitude (Meters)	Years in 20 that Rainfall was: 100 mm or more per month for 3 consecutive months		50 mm or more one month followed by 2 consecutive months with 100 mm or more per month	
			Years	Percent	Years	Percent
Araripina	Araripina	620	8	40	10	50
Afogados Ingazeira	Afogados Ingazeira	525	3	15	5	25
Arcoverde	Arcoverde	663	2	10	6	30
Águas Belas	Águas Belas	376	6	30	8	40
Bodocó	Feitoria	605	7	35	7	35
Bom Jardim	Bom Jardim	325	18	90	19	95
Brejo da Madre Deus	Brejo da Madre Deus	646	4	20	11	55
Belêm do S.Francisco	Belêm do S.Francisco	305	1	5	2	10
Buíque	Buíque	798	13	65	15	75
Bom Conselho	Bom Conselho	654	3	15	5	25
Carpina	Carpina	184	12	60	14	70
Custódia	Betânia	431	2	10	3	15
Custódia	Custódia	542	7	35	11	55
Caruarú	Caruarú	545	0	0	1	5
Cabrobó	Cabrobó	350	2	10	3	15
Correntes	Correntes	391	9	45	10	50
Exú	Exú	510	6	30	11	55
Escada	Escada	93	19	95	20	100
Floresta	Floresta	317	0	0	3	15
Floresta	Airi	361	2	10	3	15
Floresta	Sítio Novo	400	0	0	0	0
Flores	Flores	460	5	25	8	40
Gravatá	Gravatá	447	1	5	1	5
Garanhuns	Garanhuns	866	9	45	13	65
Ingá	Jeritaco	445	1	5	1	5
Inajá	Moxotó	431	0	0	0	0
Inajá	Inajá	355	0	0	0	0
Limoeiro	Limoeiro	138	11	55	14	70
Ouricurí	Barra de São Pedro	444	7	35	8	40
Ouricurí	Ouricurí	432	4	20	6	30
Ouricurí	Santa Filomena	534	3	15	3	15
Ouricurí	Santa Cruz	489	2	10	6	30

Table V - PERNAMBUCO (continued)

Município	Rainfall Station	Altitude (Meters)	Years in 20 that Rainfall was: 100 mm or more per month for 3 consecutive months		50 mm or more one month followed by 2 consecutive months with 100 mm or more per month	
			Years	Percent	Years	Percent
Petrolina	Arizona	500	0	0	4	20
Petrolina	Pau Ferro	385	0	0	2	10
Petrolina	Petrolina	376	0	0	1	5
Parnamirim	Parnamirim	379	5	25	7	35
Pesqueira	Pesqueira	650	2	10	4	20
Petrolândia	Icó	290	0	0	0	0
Panelas	Panelas	620	2	10	5	25
Palmares	Palmares	109	20	100	20	100
Petrolândia	Petrolândia	282	0	0	0	0
Rio Formoso	Rio Formoso	39	20	100	20	100
Recife	Recife	5	20	100	20	100
Sta. Mª da Boa Vista	Sta. Mª da Boa Vista	452	1	5	1	5
Sta. Mª da Boa Vista	Jutaí	361	2	10	5	25
Sta. Mª da Boa Vista	Malhada Real	345	2	10	4	20
São José do Egito	São José do Egito	575	1	5	4	20
Serrita	Sítio dos Moreiras	750	4	20	5	25
Serrita	Serrita	425	0	0	4	20
S. José do Belmonte	S. José do Belmonte	460	5	25	8	40
Serra Talhada	Serra Talhada	435	2	10	2	10
Surubim	Surubim	380	2	10	4	20
Salgueiro	Salgueiro	415	0	0	3	15
Salgueiro	Conceição das Creoulas	480	3	15	4	20
Serra Talhada	Malhado da Areia	365	2	10	4	20
Sertania	Sertania	605	1	5	4	20
Sertania	Algodões	507	3	15	5	25
São Caetano	São Caetano	552	0	0	1	5
São Bento do Una	São Bento do Una	645	2	10	3	15
També	També	190	19	95	20	100
Triunfo	Triunfo	1010	13	65	15	75
Taquaratinga do Norte	Taquaratinga do Norte	785	8	40	12	60
Timbaúba	Timbaúba	190	11	55	16	80
Tacaratú	Tacaratú	550	7	35	9	45
Vertentes	Vertentes	401	2	10	6	30
Vitória de Santo Antão	Vitória de Stº Antão	137	5	25	7	35

Six (9 percent) of the 66 rainfall stations had rainfall of 100 mm or more per month for 3 consecutive months for 90 percent or more of the 20-year period. These stations were in the Zona da Mata, except for Bom Jardim in the Agreste. Fifty-five stations, 83 percent, met the standard not more than 50 percent of the years during the 20-year period (Table V).

Table VI - A L A G O A S

NUMBER OF YEARS DURING 20 YEAR PERIOD (1948-67) RAINFALL WAS 100 MILLIMETERS OR MORE PER MONTH FOR 3 CONSECUTIVE MONTHS OR 50 MILLIMETERS OR MORE DURING ONE MONTH FOLLOWED BY 2 CONSECUTIVE MONTHS WITH 100 MILLIMETERS OR MORE PER MONTH (BY RAINFALL STATIONS IN VARIOUS MUNICIPIOS)

Município	Rainfall Station	Altitude (Meters)	Years in 20 that Rainfall was: 100 mm or more per month for 3 consecutive months		50 mm or more one month followed by 2 consecutive months with 100 mm or more per month.	
			Years	Percent	Years	Percent
Água Branca	Água Branca	510	13	65	13	65
Atalaia	Atalaia	54	20	100	20	100
Anadia	Anadia	105	18	90	19	95
Colonia Leopoldina	Colonia Leopoldina	166	12	60	12	60
Coruripe	Coruripe	10	19	95	19	95
Delmiro Gouveia	Delmiro Gouveia	256	1	5	3	15
Junqueiro	Junqueiro	120	17	85	19	95
Limoeiro de Anadia	Limoeiro de Anadia	150	12	60	18	90
Lagoa da Canoa	Lagoa da Canoa	235	14	70	17	85
Mata Grande	Mata Grande	633	11	55	14	70
Mata Grande	Cópia da Igrejinha	280	6	30	13	65
Major Isidoro	Major Isidoro	217	6	30	10	50
Maceió	Maceió	33	15	75	19	95
Palmeira dos Índios	Palmeira dos Índios	342	17	85	18	90
Passo de Camaragibe	Boa Escolha	198	16	80	17	85
Porto Calvo	Porto Calvo	54	11	55	12	60
Piranhas	Piranhas	47	0	0	2	10
Pão de Açucar	Pão de Açucar	45	0	0	1	5
Porto Real do Colégio	Porto Real do Colégio	30	10	50	13	65
Penedo	Penedo	28	14	70	15	75
Piacabussu	Piacabussu	10	18	90	20	100
Poço das Trincheiras	Poço das Trincheiras	255	11	55	14	70
Quebrangulo	Quebrangulo	411	20	100	20	100
Santana do Ipanema	Santana do Ipanema	250	9	45	14	70
S. Luiz do Quitunde	S. Luiz do Quitunde	4	15	75	16	80
S. Miguel dos Campos	S. Miguel dos Campos	12	20	100	20	100
Traipu	Traipu	40	9	45	11	55
União dos Palmares	União dos Palmares	155	15	75	17	85
Viçosa	Viçosa	300	18	90	18	90

Of the 29 rainfall stations for which 20 years of rainfall record information is available, 5 (or 17%) had 100 mm or more rainfall per month for 3 or more consecutive months for 90% or more of the 20 years. About 28% (8 stations) met the standard not more than one-half of the 20 years. Thirteen stations (45%) met the standard 75% or more of the years (Table VI).

Table VII - SERGIPE

NUMBER OF YEARS DURING 20 YEAR PERIOD (1948-67) RAINFALL WAS 100 MILLIMETERS OR MORE PER MONTH FRO 3 CONSECUTIVE MONTHS OR 50 MILLIMETERS OR MORE DURING ONE MONTH FOLLOWED BY 2 CONSECUTIVE MONTHS WITH 100 MILLIMETERS OR MORE PER MONTH (BY FAINFALL STATIONS IN VARIOUS MUNICIPIOS)

Município	Rainfall Station	Altitude (Meters)	Years in 20 that Rainfall was: 100 mm or more per month for 3 consecutive months		50 mm or more one month followed by 2 consecutive months with 100 mm or more per month	
			Years	Percent	Years	Percent
Aquidatá	Aquidatá	217	9	45	10	50
Aracajá	Aracajá	3	17	85	18	90
Canindé S.Francisco	Canindé S.Francisco	130	1	5	2	10
Estância	Estância	53	18	90	20	100
Frei Paulo	Frei Paulo	272	7	35	11	55
Frei Paulo	Mocambo	204	7	35	9	45
Itabaiana	Itabaiana	186	10	50	11	55
Itabaianinha	Itabaianinha	225	10	50	10	50
Itaporanga Dajuda	Itaporanga Dajuda	10	19	95	20	100
Japaratuba	Japaratuba	79	14	70	16	80
Lagarto	Lagarto	183	13	65	15	75
Laranjeiras	Laranjeiras	9	16	80	18	90
N. Sra. da Gloria	N.Sra. da Gloria	290	4	20	9	45
N. Sra. das Dores	N.Sra. das Dores	200	17	85	20	100
Poço Redondo	Curralinho	80	9	45	9	45
Poço Verde	Poço Verde	300	7	35	9	45
Porto da Folha	Ilha do Ouro	40	0	0	2	10
Porto da Folha	Porto da Folha	45	2	10	3	15
Propriá	Propriá	17	10	50	11	55
Pacztuba	Pacatuba	20	17	85	19	95
Riachão de Dantas	Bonfim	230	6	30	9	45
Simão Dias	Simão Dias	283	9	45	12	60
Salgado	Belém	100	20	100	20	100
Tobias Barreto	Tobias Barreto	157	2	10	3	15

Of the 24 rainfall stations, 3 (12 percent) had rainfall for 3 consecutive months of 100 mm or more per month for 90 percent or more of the 20-year period. Fifteen stations (62 percent) met the standard one-half or less of the 20 years. Seven stations (29 percent) met the standard 75 percent or more of the years (Table VII).

Table VIII - B A H I A

NUMBER OF YEARS DURING 20 YEAR PERIOD (1948-67) RAINFALL WAS 100 MILLIMETERS OR MORE PER MONTH FOR 3 CONSECUTIVE MONTHS OR 50 MILLIMETERS OR MORE DURING ONE MONTH FOLLOWED BY 2 CONSECUTIVE MONTHS WITH 100 MILLIMETERS OR MORE PER MONTH (BY RAINFALL STATIONS IN VARIOUS MUNICIPIOS)

Municipio	Rainfall Station	Altitude (Meters)	Years in 20 that Rainfall was: 100 mm or more per month for 3 consecutive months		50 mm or more one month followed by 2 consecutive months with 100 mm or more per month	
			Years	Percent	Years	Percent
Andarí	Andarí	386	8	40	11	55
Aracatú	Aracatú	800	0	0	2	10
Arací	Arací	212	2	10	3	15
Barra	Boqueirão	450	6	30	9	45
Barra	Barra	410	6	30	8	40
Barra do Mendes	Barra do Mendes	706	2	10	3	15
Barreiras	Barreiras	435	13	65	16	80
Brejolandia	Brejolandia	531	6	30	8	40
Brotas de Macaúbas	Brotas de Macaúbas	1151	3	15	3	15
Bonimal	Bonimal	945	4	20	5	25
Boa Vista do Tupim	Boa Vista do Tupim	300	2	10	4	20
Bom Jesus da Lapa	Bom Jesus da Lapa	435	8	40	10	50
Bom Jseus da Lapa	Sítio do Mato	420	1	5	6	30
Bom Jesus da Lapa	Batalha	450	5	25	10	50
Barra da Estiva	Barra da Estiva	1053	8	40	11	55
Brumado	Brumado	457	2	10	3	15
Cotegipe	Cotegipe	484	9	45	11	55
Correntina	Correntina	579	6	30	14	70
Correntina	S. Sebastião dos Gatos	550	15	75	17	85
Casa Nova	Casa Nova	380	1	5	2	10
Curaçá	Curaçá	341	1	5	2	10
Curaçá	Barro Vermelho	400	0	0	2	10
Curaçá	Patamute	400	0	0	0	0
Chorrocho	Chorrocho	317	0	0	1	5
Chorrocho	Várzea da Ema	380	1	5	4	20
Campo Formoso	São Tomé	550	1	5	2	10
Cotegipe	Tagua	459	11	55	12	60
Coribe	Coribe	658	2	10	3	15
Contendas do Sincora	Contendas do Sincora	286	2	10	2	10
Côcos	Côcos	546	9	45	13	65
Carinhanha	Carinhanha	452	6	30	7	35
Caetite	Caetite	826	7	35	10	50
Cacule	Cacule	586	6	30	6	30

Table VIII - B A H I A (continued)

Município	Rainfall Station	Altitude (Meters)	Years in 20 that Rainfall was: 100 mm or more per month for 3 consecutive months		50 mm or more one month followed by 2 consecutive months with 100 mm or more per month	
			Years	Percent	Years	Percent
Condeuba	Pres.Janio Quadros	700	4	20	6	30
Condeuba	Condeuba	695	4	20	8	40
Cansanção	Cansanção	359	1	5	3	15
Cícero Dantas	Cícero Dantas	420	8	40	9	45
Conceição do Coite	Salgadelha	350	1	5	1	5
Conde	Conde	20	18	90	19	95
Conceição de Feira	Bananeiras	200	8	40	13	65
Castro Alves	Castro Alves	265	3	15	7	35
Euclides da Cunha	Euclides da Cunha	523	2	10	5	25
Euclides da Cunha	Canudos	350	0	0	0	0
Esplanada	Esplanada	181	12	60	14	70
Formoso do Rio Preto	Formoso do Rio Preto	491	9	45	12	60
Feira de Santana	Feira de Santana	257	5	25	6	30
Gloria	Gloria	247	0	0	1	5
Gentio do Ouro Santo	Inácio	520	4	20	7	35
Gutinga	Bonito	967	1	5	5	25
Guanambí	Lagoa dos Cochos	500	7	35	9	45
Guanambí	Guanambí	483	5	25	8	40
Guanambí	Ceraima	500	5	25	7	35
Ibipetuba	Mansidão	536	11	55	15	75
Irecê	Jaguarací	450	1	5	1	5
Ibipetuba	Ibipetuba	434	5	25	13	65
Irecê	Irecê	722	6	30	8	40
Ipupiara	Ipupiara	732	5	25	6	30
Ibotirama	Ibotirama	450	8	40	11	55
Itaberaba	São João	250	3	15	5	25
Ibitiara	Ibitiara	871	4	20	7	35
Ibiquera	Ibiquera	560	2	10	4	20
Itaete	Itaete	334	2	10	4	20
Itaberaba	Itaberaba	270	6	30	6	30
Iaçú	João Amaro	249	1	5	2	10
Iramaia	Novo Acre	590	5	25	5	25
Igaporã	Igaporã	766	2	10	7	35
Ituaçú	Ituaçú	527	3	15	5	25
Itiuba	Itiuba	373	0	0	2	10
Itapacuru	Itapacuru	153	4	20	4	20
Inhambupe	Inhambupe	180	6	30	7	35
Ipira	Ipira	299	1	5	3	15
Irara	Irara	283	7	35	13	65
Juazeiro	Juazeiro	371	0	0	0	0
Juazeiro	Juremal	425	0	0	1	5

Table VIII - BAHIA (continued)

Município	Rainfall Station	Altitude (Meters)	Years in 20 that Rainfall was: 100 mm or more per month for 3 consecutive months		50 mm or more one month followed by 2 consecutive months with 100 mm or more per month	
			Years	Percent	Years	Percent
Jaguarari	Barrinha	500	3	15	4	20
Jaguarari	Jaguarari	660	0	0	0	0
Jacobina	Jacobina	460	3	15	4	20
Jacobina	Rio do Peixe	370	1	5	1	5
Jequié	Jequié	199	0	0	0	0
Jaguarari	Santa Rosa	580	1	5	1	5
Jeremoaba	Jeremoaba	275	3	15	4	20
Lajedinho	Lajedinho	480	1	5	2	10
Lençois	Lençois	394	7	35	9	45
Livramento do Brumado	São Timoteo	700	4	20	7	35
Morpara	Morpara	415	6	30	8	40
Morro do Chapeu	Morro do Chapeu	1012	2	10	3	15
Morro do Chapeu	Ventura	800	2	10	4	20
Monte Alegre da Bahia	Monte Alegre da Ba.	424	1	5	2	10
Mundo Novo	Mundo Novo	484	5	25	8	40
Macajuba	Macajuba	449	1	5	3	15
Macaubas	Macaubas	656	2	10	6	30
Macaubas	Macaubas	600	4	20	9	45
Macaubas	Lagoa Clara	751	1	5	2	10
Marcionilio Souza	Machado Portela	300	3	15	4	20
Maracas	Maracas	970	3	15	3	15
Malhada	Parateca	446	5	25	6	30
Maracas	Porto Alegre	220	2	10	2	10
Malhada da Pedra	Malhada da Pedra	470	2	10	3	15
Monte Santo	Monte Santo	489	4	20	4	20
Muritiba	Muritiba	232	13	65	15	75
Nova Soure	Nova Soure	136	4	20	6	30
Oliveira dos Bre - jinhos	Bom Sossego	490	3	15	7	35
Oliveira dos Brejinhos	Oliveira dos Brejinhos	553	7	35	10	50
Pilão Arcado	Salininha	430	3	15	3	15
Pilão Arcado	Pilão Arcado	358	5	25	7	35
Pidobaçú	Pindobaçú	600	4	20	5	25
Piritiba	França	480	2	10	3	15
Paraínga	Paulista	500	3	15	6	30
Paraguaçú	Rui Barbosa	395	2	10	2	10
Paratinga	Paratinga	420	4	20	6	30
Paramirim	Paramirim	593	2	10	5	25
Piantê	Piatã	1236	8	40	10	50
Palmas de Monte Alto	Palmas de Monte Alto	600	5	25	7	35

Table VIII - B A H I A (continued)

Município	Rainfall Station	Altitude (Meters)	Years in 20 that Rainfall was: 100 mm or more per month for 3 consecutive months		50 mm or more one month followed by 2 consecutive months with 100 mm or more per month	
			Years	Percent	Years	Percent
Pindai	Guirapa	800	4	20	7	35
Pindai	Pindai	590	2	10	4	20
Poções	Poções	759	2	10	3	15
Pedro Alexandre	Pedro Alexandre	320	5	25	6	30
Pedro Alexandre	Cipó de Leite	350	0	0	0	0
Paripirãnga	Paripiranga	430	7	35	9	45
Queimadas	Monteiro	280	0	0	1	5
Queimadas	Queimadas	273	2	10	2	10
Quijingue	Quijingue	380	2	10	3	15
Remanso	Salina do Brejo	400	2	10	3	15
Remanso	Remanso	378	1	5	2	10
Riachão das Neves	Caripare	505	8	40	14	70
Riacho de Santana	Riacho de Santana	627	5	25	7	35
Rio de Contas	Rio de Contas	1002	1	5	5	25
Ribeira do Pombal	Mirandela	253	1	5	4	20
Ribeira do Pombal	Ribeira do Pombal	228	0	0	1	5
Rio Real	Rio Real	220	10	50	14	70
Riachão do Jacuipe	Riachão do Jacuipe	217	1	5	2	10
Sento Se	Favela	520	0	0	3	15
Sento Se	Sento Se	380	2	10	3	15
Sento Se	São Pedro	590	0	0	0	0
São Desiderio	Sitio Grande	536	13	65	16	80
Sento Se	Campo Largo	950	5	25	7	35
Senhor do Bonfim	Senhor do Bonfim	554	3	15	5	25
Saude	Saude	535	8	40	9	45
Seabra	Seabra	875	5	25	6	30
Santana	Santana	580	6	30	11	55
Serra Dourada	Serra Dourada	497	4	20	5	25
Sta. Maria da Vitória	Sta. Maria da Vitória	431	11	55	15	75
Sebastião Laranjeiras	Mandiroba	456	6	30	8	40
Serrinha	Serrinha	377	4	20	6	30
Santa Terezinha	Santa Terezinha	198	2	10	2	10
São Felix	São Felix	230	8	40	10	50
Stº Antonio de Jesus	Stº Antonio de Jesus	215	9	45	14	70
Tabocas do Brejo Velho	Marquita	750	6	30	11	55
Tucano	Tucano	209	1	5	1	5
Uaua	Uaua	439	0	0	1	5
Urandí	Urandí	637	5	25	6	30
Ubaira	Ubaira	316	7	35	10	50

Table VIII - B A H I A (continued)

Município	Rainfall Station	Altitude (Meters)	Years in 20 that Rainfall was: 100 mm or more per month for 3 consecutive months		50 mm or more one month followed by 2 consecutive months with 100 mm or more per month	
			Years	Percent	Years	Percent
Vitória da Conquista	Vitória da Conquista	928	1	5	2	10
Valente	Valente	350	1	5	1	5
Wagner	Wagner	466	3	15	3	15
Xique Xique	Xique Xique	403	3	15	6	30

In Bahia it appears that data were available only for rainfall stations in the less humid interior areas and not in the eastern and southeastern costal areas, where rainfall is greater. Thus, the data do not provide information relative to the municipios which likely would meet the standard of 100 mm or more rainfall per month for 3 consecutive months. However, the data do show that for 156 rainfall stations in the "interior", 148 (95 percent) met the standard of 100 mm or more rainfall per month for 3 consecutive months for 50 percent or less of the 20-year period under observation (Table 8).