

**AVAILABLE CLIMATOLOGICAL INFORMATION
FOR THE KHORAT PLATEAU
NORTHEASTERN THAILAND**

by

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Since the end of the nineteenth century, when the threatened dissociation of the Khorat Plateau from the Kingdom through a diversion of its trade from Bangkok to Saigon prompted construction of a railway linking this area to the Thai capital, northeastern Thailand has received the particular attention of the central government. For it soon became clear that the railroad would be but a stimulant to economic progress here; that there would have to be formulated a comprehensive program if development was to be sustained. Unfortunately, the last half-century has seen a deterioration of conditions on the Plateau. During the early decades the administration simply could not finance projects of the dimensions necessary—an inability rather than an unwillingness; latterly, since the end of World War II, ever-increasing foreign aid—teams of experts as well as grants, credits and loans—has provided the means, but in so doing has pointed-up the woeful inadequacy of the information upon which to base an overall development. Perversely, as the need for applying remedies becomes ever more urgent, wisdom counsels a suspension of piecemeal activity pending the gathering together and analyzing of fundamental data.

Where nine out of ten households are officially classified agricultural, it may be safely assumed that vagaries of weather provide a universal basis for extended discussion. Following from this, and quite naturally, is the assumption that there is available a coherent body of climatological information. It is perhaps such unfortunate presumption that encourages proliferation of schemes of agricultural development prior to cold-blooded appraisal of available climatic data. In truth, schemes wholly dependent upon analysis of a cogent climatological record are completed in the face of the wholesale lack of this critical information. If the nature of the available climatic data and the conclusions possible therefrom—non-technical information—were provided at the outset, plans for development could not

but acquire a certain realism. In presenting this intelligence for the Khorat Plateau, then, it is hoped to illustrate also the value of such appraisal to all planning.

From the map 'Khorat Plateau, Climatic Stations 1965' it is immediately clear that the network of synoptic stations here is both regular and close—usually but 100 kilometres separating neighbouring installations. That this net is spread over gently undulating terrain sloping gradually from some 200 metres in the northwest to 50 metres in the southeast, makes this distribution even nicer; though, certainly, lacking stations in the broken ranges forming the western and southern rims of the plateau and in the swampy strip along the Mekong to the north, the network cannot be considered sufficient. The figures 'Graphic History of Synoptic Stations' and 'Available Climatic Data from Synoptic Stations' summarize information gleaned from monthly registers forwarded to the Meteorological Department in Bangkok. Most instruments are read and observations are made of cloud cover, height and type, visibility and noteworthy phenomena as dew, fog, lightning, thunder, haloes, rainbows and squall storms at 0100, 0400, 0700, 1000, 1300, 1600, 1900 and 2200 hours; non-recording raingages are read at 0700 hours. Table 1 'Available Climatic Data Other Than Those for Rainfall from Non-Synoptic Stations; Khorat Plateau' and table 2 'Available Rainfall Data from Non-Synoptic Stations; Khorat Plateau' summarize information gathered from several responsible agencies.¹ Hopefully, now, this information has been conveyed in a manner that obviates the need for discussion and it may be suggested immediately that sophisticated analyses of climatological data available for the Khorat Plateau not be undertaken at this time—this with-

¹ While it would be folly to insist upon the completeness of the information summarized in the map, graphs and tables, it is maintained that data outstanding are of no consequence. For the data upon which this presentation rests I am indebted to Dr. Kajit Bunjiti, Mr. Kasem Sukhapinda, Mr. Damrong Charernsuk, Mrs. Nualyai Smithuvan and Mr. Ruay Walanawin of the Meteorological Department, Mr. Sutep Tingsabhat and Mr. Uthai Indapaj of the Irrigation Department, Mr. Pongse Vongsaparana of the Public Welfare Department, Mr. Narong Grittawugul and Mr. Sopon Patana-pakdi of the Forestry Department, and Mr. Chanchai Wongthai of the National Energy Authority. In several instances it proved impossible to check on the continuity of records in that the officers of other responsible agencies were rather less cooperative; fortunately, but few installations are involved and information regarding these was forthcoming from the Meteorological Department.

out questioning the accuracy of these data. Indeed, the summarization here presented is most optimistic.

Assuming that it is possible to reconcile observations from relocated or converted instruments, data are generally available for atmospheric pressure, temperature, humidity, precipitation, and non-instrumental observations from synoptic stations during the previous ten years only. Increases in the length of the record available for study—that is, beyond ten years—can be secured only at the expense of a number of stations and, generally, decreases in both reliability and the number of climatic elements for which there are data. A twenty year record, for example, is available from but eight of the twelve synoptic stations and of these only four provide data (though of questionable accuracy in instances) on most of the climatic simples. Particular studies will effect the most advantageous compromise between length and reliability of the record and areal coverage, but, whatever this settlement, the record available will be short-term and the assumptions necessary will be limiting.

Prolific as are the raingages, the situation is not markedly different for rainfall data. By far the greater number of raingages have been gathering information for little more than a decade, while the record from gages operated for longer periods is—with but few exceptions—both discontinuous and suspect prior to, and frequently even following, the assumption of responsibility for the collection of data from most of these gages by the Meteorological Department in 1951. Still, analysis of the rainfall of the past ten years or so, based on daily data from gages operated by the Meteorological and Irrigation Departments, seems a reasonable—if not an imperative—undertaking.

Clearly, climatic conditions on the Plateau must remain but little appreciated for some time and, therefore, the development of this predominantly agricultural area is to be accomplished in virtual ignorance of this most important consideration. This is to imply neither that projects entered into here will 'fail' nor that all development should cease until such time as the necessary climatic data are amassed; to the contrary, *any* development here will be of benefit—will 'succeed', and the improving of conditions should proceed apace. But care must be taken to insure against the realisation of plans so hazily based that potential development is irrevocably diminished.

**Table 1: Available Climatic Data Other Than Those For Rainfall
From Non-Synoptic Stations, Khorat Plateau¹**

<i>Type of Data² & Station</i>	<i>Location³</i>	<i>Period of Record</i>
<i>Temperature: Air & Water</i>		
Huey Mong	17°34'39"/ 102°20'19"	Oct 1956-present
Lam Pao, Lower	16°35'52"/ 103°27'15"	Jan 1963-Feb 1965
Lam Pao, Upper	16°47'30"/ 103°26'00"	Jul 1957-Jan 1963
Lam Phra Plerng	14°35'26"/ 101°50'37"	Apr 1956-Dec 1965
Lam Ta Kong	14°52'06"/ 101°33'53"	Aug 1963-present
Nam Chee, Nong Or	Chaiyaphum	Jul 1960-Aug 1964
Nam Oon	17°18'08"/ 103°45'25"	Sep 1963-present
Nam Pong	16°46'23"/ 102°37'39"	Apr 1956-Nov 1964
Nam Poong	17°39'01"/ 104°27'56"	Sep 1961-present
*Nam Pung	16°58.1'/ 103°59.0'	Jan 1965-present
Nam Yang	16°19'53"/ 104°01'21"	Sep 1961-present
<i>Temperature : Maximum & Minimum Air</i>		
oAmnat Charoen	15°51'32"/ 104°37'57"	May 1955-present
*Bamnet Narong	Chaiyaphum	Jun 1955-present
Ban Khwao	Chaiyaphum	Jul 1960-present
●Banmai Samrong Experimental	Nakhon Ratchasima	Feb 1954-present
*Ban Phaeng	Nakhon Panom	Dec 1957-present
*Ban Phue	Udon Thani	Aug 1954-present
+Bora Bu	Mahasarakham	Mar 1963-Dec 1964
Bhu Kra Tae	Nakhon Panom	May 1955-Jun 1957
*Bunthrik	14°45'24"/ 105°24'48"	Jun 1955-present
oBu Phai	Nakhon Ratchasima	Jun 1954-present
*Chanuman	16°12'58"/ 105°00'27"	Dec 1958-present
oChum Phae	Khon Kaen	Apr 1961-present

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◦Det Udom	14°54'06"/ 105°05'01"	May 1955-present
Huey Kah Kang	Mahasarakham	Mar 1955-Oct 1957
Huey Mak Khang	Udon Thani	Aug 1956-Nov 1957
Huey Mong	17°34'39"/ 102°20'19"/	Jun 1960-present
*Huey Nam Lai	17°29.2'/ 101°46.6'	Aug 1962-present
Huey Nam Man	Loei	Jan 1956-Feb 1958
Huey Sai Khamin	Sakon Nakhon	Jan 1956-Mar 1958
Irrigation Office	Buriram	Apr 1956-Jan 1958
Irrigation Office	Kalasin	Jan 1955-Mar 1958
Irrigation Office	Khon Kaen	Mar 1955-Apr 1957
Irrigation Office	Nong Khai	Mar 1955-Mar 1958
*Kham Cha-Ee	Nakhon Panom	Jun 1955-present
◦Kham Khuan Kaeo	15°39'13"/ 104°18'34"	May 1955-present
◦Khemarat	16°02'27"/ 105°13'44"	May 1959-present
◦Khong Chiam	15°19'04"/ 105°29'55"	May 1955-present
*Khon Sawan	Chaiyaphum	Dec 1957-present
◦Khuangnai	15°23'16"/ 104°33'15"	May 1955-present
*Kranuan	Khon Kaen	Jul 1956-present
◦Kuchinarai	16°32'10"/ 104°03'33"	Sep 1961-present
*Lam Chern	16°38.4'/ 101°47.6'	May 1962-present
*Lam Dom Noi	15°12'/ 105°26'	Oct 1960-present
*Lam Dom Yai	14°53.9'/ 105°04.8'	Jan 1961-present
Lam Pao, Lower	16°35'52"/ 103°27'15"	Jul 1963-present
Lam Pao, Upper	16°47'30"/ 103°26'00"	May 1957-present
Lam Phra Plerng	14°35'26"/ 101°50'37"	Oct 1960-present
Lam Ta Kong	14°52'06"/ 101°33'53"	Nov 1963-present
*Lam Ta Krong (Ban Bung Toei)	14°32.9'/ 101°27.9'	Nov 1963-present
*Lam Ta Krong (Kao Yai)	14°26.4'/ 101°22.2'	? 1963-present

●Loeng Nok Tha	Ubon Ratchathani	May 1955-present
●Maha Chana Chai	15°31'48"/ 104°15'02"	May 1955-present
Mok Lek	Nakhon Ratchasima	Aug 1962-present
●Muang Sam Sib	15°30'34"/ 104°43'51"	May 1955-present
Nam Oon	17°18'08"/ 103°45'25"	Aug 1963-present
●Nam Phong	Khon Kaen	Aug 1951-present
Nam Poong	17°39'01"/ 104°27'56"	Sep 1961-present
*Nam Pung	16°58.1'/ 103°59.0'	Jan 1965-present
*Nam San	17°25.9'/ 101°16.2'	Feb 1964-present
Nam Yang	16°19'53"/ 104°01'21"	Sep 1961-present
●Na Phai Experimental	Chaiyaphum	Nov 1961-present
Nikom Ban Kruad	Buriram	Mar 1961-present
Nikom Chieng Phin	Udon Thani	Jan 1961-present
Nikom Mukdahan	Nakhon Panom	Jan 1959-present
Nikom Phimai	Nakhon Ratchasima	Feb 1961-present
Nikom Phon Phisai	Nong Khai	Jan 1959-present
Nikom Prasat	Surin	May 1961-present
Nikom Prue Yai	Sisaket	Feb 1961-present
Nong Pla Thao	Chaiyaphum	Feb 1955-Mar 1957
+Nong Teng	Nakhon Ratchasima	Jan 1954-Dec 1961 Discontinuous 1954- 57, no data 1958-60, discontinuous 1961
Nong Yama	Roi Et	Apr 1955-Apr 1958
*Non Sang	Udon Thani	Jan 1961-present
+Pak Chong Plantation	Nakhon Ratchasima	Dec 1958-Dec 1960 Discontinuous 1959- 60
●Pak Chong Serum Experimental	Nakhon Ratchasima	Jun 1952-present
+Pang Sok	Nakhon Ratchasima	Jan 1960-Dec 1961
+Pa Nok Khao	Khon Kaen	Jan 1957-present Discontinuous 1958- 59, no data 1960
●Phayakaphum Phisai	Maharakham	Apr 1961-present
●Phibun Mangsahan	15°14'27"/ 105°14'25"	May 1955-present

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●Phimai Experimental	Nakhon Ratchasima	Jul 1962-present
○Phon	15°49'07"/ 102°36'15"	Apr 1960-present
+Phukradung	Loei	Sep 1962-present
+Phu Phan National Park	Ubon Ratchathani	Jan 1961-Dec 1965 Discontinuous 1961 ? 1946-present
●Phut Thai Song	15°32'35"/	
Silk Worm Experimental	103°00'07"	
Pong Neeb	16°46'23"/ 102°37'39"	Apr 1957-Mar 1964
*Pong Neeb	16°48.8'/ 102°35.1'	Jun 1960-June 1965
*Prasat	Surin	Dec 1957-present
●Roi Et Experimental	Roi Et	Jun 1952-present
○Sisaket	Sisaket	Sep 1964-present
*Si Songkhram	Nakhon Panom	Jul 1954-present
●Surin Rice Experimental	Surin	Jan 1962-present
●Tha Phra Experimental	16°20'20"/ 102°48'30"	Aug 1955-present
Tha Sabaeng	16°01'59"/ 103°54'38"	Aug 1955-Mar 1958
○Trakan Phut Phon	15°35'46"/ 105°01'37"	May 1955-present
●Ubon Ratchathani Experimental	Ubon Ratchathani	May 1957-present
●Ubon Ratchathani Silk Worm Experimental	Ubon Ratchathani	Jan 1959-present
○Warin Chamrap	15°11'58"/ 104°51'51"	May 1955-present
*Waritchaphum	Sakon Nakhon	Jun 1955-present
○Yasothon	15°47'41"/ 104°08'39"	May 1955-present
<i>Wind : Direction & Speed</i>		
Bhu Kra Tae	Nakhon Phanom	Apr 1956-Dec 1957
Huey Nam Man	Loei	Jan 1956-Jan 1957
Nong Yama	Roi Et	Apr 1955-Feb 1957
<i>Evaporation : *Piché; +Pan</i>		
Ban Khwao	Chaiyaphum	+Nov 1960-present
*Ban Nong Mck	Nakhon Phanom	+Jan 1963-Dec 1963?
Bhu Kra Tae	Nakhon Phanom	*May 1955-Dec 1957
Huey Kah Kang	Maharakham	*Mar 1955-Oct 1957
Huey Mak Khang	Udon Thani	*Aug 1956-Nov 1957
Huey Nam Kam	Sisaket	*Feb 1957-Feb 1958

*Huey Nam Lai	17°29.2'/ 101°46.6'	+Jan 1962-Dec 1964 ? Discontinuous 1962-64
Huey Nam Man	Loei	*Jan 1956-Feb 1958
Huey Sai Khamin	Sakon Nakhon	*Jan 1956-Mar 1958
Irrigation Office	Buriram	*Apr 1956-Jan 1958
Irrigation Office	Kalasin	*Feb 1955-Mar 1958
Irrigation Office	Khon Kaen	*Mar 1955-Apr 1957
Irrigation Office	Nakhon Ratchasima	*Feb 1955-Dec 1958
Irrigation Office	Nong Khai	+Apr 1958-Oct 1961
*Lam Charn	16°38.4'/ 101°47.6'	*Mar 1955-Mar 1958 *Jan 1964-present
*Lam Dom Noi	15°12'/ 105°26'	+May 1962-present Discontinuous 1962-64 ?
*Lam Dom Yai	14°53.9'/ 105°04.8'	+May 1962-present Discontinuous 1963-64
Lam Phra Plerng	14°35'26''/ 101°50'37''	*May 1955-Mar 1956 +Oct 1960-present
*Lam Plai Mas	Nakhon Ratchasima	+Jul 1962-Mar 1963 Discontinuous 1962
Lam Ta Kong	14°52'06''/ 101°33'53''	+Nov 1963-present
*Lam Ta Krong (Ban Bung Toei)	14°32.9'/ 101°27.9'	+May 1963-present
*Lam Ta Krong (Kao Yai)	14°26.4'/ 101°22.2'	*Jun 1965-present
*Mekong at Mukdahan	16°32.3'/ 104°44.2'	+Jan 1965-present
Nam Chee	16°01'59''/ 103°54'38''	*Aug 1955-May 1958 +Jan 1956-Feb 1958
Nam Oon	17°18'08''/ 103°45'25''	+Nov 1963-present
Nam Pao, Lower	16°35'52''/ 103°27'15''	+May 1965-present
Nam Pao, Upper	16°47'30''/ 103°26'00''	*May 1957-Jan 1959 +Feb 1959-present
Nam Pong	16°46'23''/ 102°37'39''	*Apr 1957-Oct 1959
*Nam Pung	16°58.1'/ 103°59.0'	+Feb 1963-present
*Nam San	17°25.9'/ 101°16.2'	+Feb 1964-present

Nong Pla Thao	Chaiyaphum	*Feb 1955-Mar 1957
Nong Yama	Roi Et	*Apr 1955-Apr 1958
		+Feb 1956-Apr 1957
*Pong Neeb	16°48.8' / 102°35.1'	+Jun 1960-Jun 1965 Discontinuous 1962 & 1964
<i>Humidity</i>		
*Lam Charn	16°38.4' / 101°47.6'	Feb 1965-present
*Lam Ta Krong (Ban Bung Toei)	14°32.9' / 101°27.9'	Jun 1965-present
*Lam Ta Krong (Kao Yai)	14°26.4' / 101°22.2'	Jun 1965-present
*Nam Pung	16°58.1' / 103°59.0'	Jan 1965-present
*Nam San	17°25.9' / 101°16.2'	Jan 1965-present

- 1) Installations with more sophisticated instruments are being sited throughout the Plateau as the importance of a variety of climatological data to development here becomes ever more obvious. Three agencies are most actively engaged in setting-up stations that will return the necessary information--particularly data on evaporation, temperature and humidity as well as rainfall : the Meteorological Department, the Irrigation Department and the National Energy Authority. Should the immediate plans of these organizations materialize, an additional twenty-five to thirty multi-instrument stations will be operating in the Northeast by the end of 1966. Included will be six 'Hydrometeorological Stations' and six 'Agrometeorological Stations' installed and manned by the Meteorological Department. Four of the Hydrometeorological Stations (at Amphur Kosum Phisai, Mahasarakham; Amphur Tha Thum, Surin; Amphur Chokchai, Nakhon Ratchasima; and Amphur Nangrong, Buriram) are to be equipped with an evaporation pan (class A, still well), maximum and minimum thermometers, a psychrometer, a microbarograph and a thermograph in addition to several raingages--see notes to table 2; two of these stations (at Amphur Chonnabot, Khon Kaen and Amphur Chatturat, Chaiyaphum) are to have maximum and minimum thermometers and a psychrometer in addition to raingages--see notes to table 2. Each Agrometeorological Station (at Pak Chong, Nakhon Ratchasima; Tha Phra, Khon Kaen; Ubon Ratchathani, Ubon Ratchathani; Sakon Nakhon, Sakon Nakhon; Surin, Surin; and Loei, Loei) is to be equipped with a barometer, a microbarometer, a thermo-hygrograph, maximum and minimum thermo-

meters, dry-and wet-bulb thermometers, a grass minimum thermometer, a psychrometer, a sunshine recorder, an evaporation pan (class A), a dew gage and soil thermometers at 1, $2\frac{1}{4}$, 4 and 8 inches in addition to raingages--see notes to table 2.

- 2) The Irrigation Department is the single most important agency collecting other-than-rainfall data at non-synoptic stations on the Plateau, but the Public Welfare Department at stations in Self-Help Settlements--those prefixed by 'Nikom'--gathers some information, as does the Forestry Department at stations in national parks, experimental plots and plantations--those prefixed by +; the National Energy Authority at stations sited at power sources or potential power sources--those prefixed by *; the Ministry of Agriculture at stations in experimental plots--those prefixed by ●; and the Meteorological Department at several stations--those prefixed by ○.
- 3) Wherever possible locations are given by latitude and longitude--north and east respectively; failing this, the province is indicated.

**Table 2: Available Rainfall Data From Non-Synoptic Stations,
Khorat Plateau¹**

N.B. Abbreviations used :

- Agr . . . Ministry of Agriculture
- d . . . discontinuous record
- Exp . . . Experimental
- Fst . . . Forestry Department
- Irg . . . Irrigation Department
- Met . . . Meteorological Department
- NEA . . . National Energy Authority
- S-H . . . Self-Help Settlement
- Tbc . . . Tobacco Monopoly
- TTS . . . Teacher Training School
- + . . . recording gage

<i>Province & Station</i>	<i>Operating Agency</i>	<i>Starting Date</i>	<i>Record²</i>
<i>Buriram</i>			
Agr School	Agr	?	Discontinued : 1932-35, d1936, 1937.
Buriram	Met	Aug 1951	Prior Agr gage : d1906, 1907-31, d1932, 1933-38, d1939, 1940, d1941, 1942-43, d1944, 1945-46, d1947-48, 1949-50, d1951.
Buriram Irg	Irg	Aug 1960	
Huey Jorakhe Mak	Irg	Apr 1963	
Huey Khi Nhu	Irg	Oct 1961	
Huey Talat	Irg	Jul 1957	
Huey Yai	Irg	Jun 1962	
Kok Matum Agr School	Agr	?	Discontinued : 1932-33, d1934, 1935-36.
Lahan Sai	Met	Jul 1965	
Lam Plai Mat	Met	Aug 1951	d1951.
Nang Rong	Met	Jun 1951 +Dec 1960	d 1951, d 1954-55; +d 1961. Prior Agr gage : d1908, 1909-10, d1911, 1912-20, d1921, no data 1922, d1923, 1924-32, d1933, no data 1934-38, d1939, 1940, d1941, 1942-43, d1944, no data 1945-46, d1947-48, no data 1949-51.
Nikom Ban Kruad	S-H	Mar 1961	

Nong Ta Lok	Irg	Jul	1954	
Nong Ta Mu	Irg	Apr	1963	
Phut Thai Song	Met	Aug	1951	Prior Agr gage: d1908, 1909-11, d1912, 1913-17, d1918, 1919-35, d1936, 1937-42, no data 1943, 1944, d1945, d1946-47, no data 1948-49, d1950-51.
Phut Thai Song Silk Worm Exp	Agr	?	1946	Record unavailable believed discontinuous.
Prakhon Chai	Met	Aug	1951	d1951-52. Prior Agr gage: d1921, 1922-40, no data 1941, 1942-45, d1946-48, no data 1949, d1950-51.
Satuk	Met	Aug	1951	d1951, d1964. Prior Agr gage: d1948, no data 1949, d1950, no data 1951.
<i>Chaiyaphum</i>				
Bamnet Narong	NEA	Jun	1955	Prior Agr gage: d1922, 1923-35, d1936, 1937-39, d1940, no data 1941, d1942-43, no data 1944-54, d1955.
Ban Khwao	Irg	+Jul	1960	
Ban Khwao	Met	Aug	1965	
Chaiyaphum Exp	Agr	Jul	1951	Discontinued Aug 1956. Prior Agr gage: d1906, 1907-24, d1925, 1926-43, d1944, 1945-50, d1951.
Chatturat	Met	Jul	1953	Prior Agr gage: d1908, 1909-26, d1927-28, 1929-35, d1936, 1937, d1938, 1939-40, d1941-44, no data 1945-52, d1953.
Huey Basan	Irg	Sep	1956	
Huey Hin Lab Meed	Irg	May	1961	
Huey Som Poy	Irg	May	1961	
Huey Thong Lang	Irg	Apr	1961	
Irg Office	Irg	Apr	1954	d1959.
Kang Kraw	NEA	Aug	1965	
Kaset Sombun	Met	Jul	1953	Prior Agr gage: d1922, 1923-41, no data 1942-52, d1953.
Khon Sawan	NEA	Aug	1965	Prior Met gage: d1957, 1958-59, d1960, 1961-65.
Na Phai Exp	Agr	Nov	1961	Record unavailable believed discontinuous.

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Nong Pla Thao	Irg	Apr 1961	
Phukhico	Met	Jul 1953	d1955. Prior Agr gage : d1912, 1913-16, d1917-18, 1919-21, d1922, 1923-27, d1928-33, 1934-38, d1939-43, no data 1944-52, d1953.
<i>Kalasin</i>			
Bung A-ram	Irg	Jun 1961	
Huey Pho	Irg	Jun 1956	
Huey Sithon	Irg	Apr 1957	
Kalasin	Met	Mar 1944	No data 1949, d1950-51. Prior Agr gage : d1914, 1915-22, d1923-24, 1925-27, d1928-29, 1930-36, d1937-38, 1939-41, d1942, 1943-44.
Kalasin Exp	Agr	Nov 1961	Record unavailable believed discontinuous.
Kamalasai	Met	Aug 1951	d1951, d1960. Prior Agr gage : d1932, 1933-39, no data 1940-42, d1943-44, 1945-47, d1948, no data 1949-50, d1951.
Kuchinarai	Met	Aug 1951 +Mar 1962	d1951, d1953, d1957. Prior Agr gage : d1932, 1933-37, d1938, 1939, no data 1940-42, d1943, no data 1944-47, d1948, no data 1949, 1950, d1951.
Lam Pao, Lower	Irg	+Mar 1963	
Lam Pao, Upper	Irg	Apr 1962	
Nam Yong	NEA	Jun 1963	
Nong Ban Sa	Irg	Jul 1961	
Nong Mha Jok	Irg	Jul 1961	
Nong Ya Ma	Irg	Apr 1956	
Rong Kaset	Irg	Jun 1961	
Sahatsakhan	Met	Aug 1951	d1951, d1960. Prior Agr gage : d1922, 1923-38, d1939, 1940-42, d1943-44, no data 1945-51.
Yang Talat	Met	Aug 1951	d1960. Prior Agr gage : d1922, 1923-43, d1935-36, 1937-40, d1941-44, no data 1945-50, d1951.

<i>Khon Kaen</i>			
Ban Phai	Met	Aug 1951	d1951-52, no data 1956-59, d1960.
Chonnabot	Met	Jul 1952	d1964-65. Prior Agr gage : d1907-09, 1910-11, d1912, 1913-17, d1918, 1919-38, d1939-40, no data 1941, 1942-44, d1945, no data 1946, d1947, no data 1948-49, 1950, d1951-52.
Chum Phac	Met	Aug 1951 +Apr 1961	+d1960-61. Prior Agr gage : d1944-45, 1946-47, d1948, no data 1949, d1950, no data 1951.
Huey Sai	Irg	Jul 1963	
Huey Sicw	Irg	May 1960	
Huey Yai	Irg	Apr 1959	
Huey Yang	Irg	Mar 1957	
Irg Office	Irg	Apr 1955	
Khon Kaen	Agr	? 1907	Discontinued : 1907-40, no data 1941, 1942.
Khon Kaen Exp	Agr	Oct 1962	Record unavailable believed discontinued.
Kok Muang	Irg	Mar 1957	d1957.
Kranuan	NEA	Jul 1956	d1958.
Lah Loeng Wai	Irg	Jun 1961	
Lam Chern	NEA	May 1962	
Mancha Khiri	Met	Aug 1951	d 1960-63. Prior Agr gage : d 1914, 1915-28, d 1929-31, 1932-35, d1936, 1937-41, d1942, no data 1943, d1944-48, no data 1949-51.
Nam Phong	Met	Aug 1951	Prior Agr gage : d1912-13, 1914-26, d1927, 1928, d1929, 1930-34, d1935-36, 1937-39, d1940, 1941, d1942-43, no data 1944-45, d1946, 1947-50, d1951.
Nam Poong	NEA	Jan 1962	Discontinued Jun 1965.
Na Nong Thum	NEA	Aug 1965	
Nong Rue	NEA	Aug 1965	
Pa Nok Khao	Fst	Jan 1957	d1958-59, no data 1960.
Phon	Met	Aug 1951 +Apr 1961	+d1960-61. Prior Agr gage : d1915, 1916-28, d1929-30, 1931-42, d1943, 1944, d1945-46, 1957-48, no data 1949-50, d1951.

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Phu Wiang	Met	Aug 1951	d1962-63. Prior Agr gage: d1909, 1910-40, d1941, 1942, d1943-44, no data 1945-49, d1950-51.
Pong Neeb	Irg	Apr 1957 +Apr 1957	+No data forwarded to head office.
Pong Neeb	NEA	Jun 1960 ?	d1962, discontinued Jun 1965.
Soke Ruak	Irg	Mar 1957	
Soke Sam-ang	Irg	Jul 1961	
Tha Phra Exp	Agr	Aug 1955	d1955-56, d1959. Record from 1960 unavailable believed discontinuous.
<i>Loei</i>			
Chiangkhan	Met	Aug 1951	No data 1953, d1956-57. Prior Agr gage: d1913, 1914-28, d1929, 1930-40, d1941-44, no data 1945, d1946, no data 1947, d1948, no data 1949, d1950-51.
Dan Du	NEA	Jan 1965	
Dan Sai	Met	Aug 1951	No data 1953. Prior Agr gage: d1908, 1909-11, d1912, 1913-42, d1943, no data 1944, d1945-46, no data 1947-51.
Huey E-lert	Irg	Aug 1954	
Huey Nam Lai	NEA	Jan 1962 ?	d1963 ?-64.
Huey Nam Man	Irg	Apr 1950	
Huey Nam Phao	Irg	Feb 1957	d1957, d1960.
Huey Nam Wak	Irg	Apr 1955	
Huey Noi	Irg	Apr 1956	
Loei	Agr	? 1907	Discontinued: 1907-38, d1939, 1940-43, d1944-45, no data 1946, 1947-52.
Loei Exp	Agr	?	Record unavailable believed discontinuous.
Nam San	NEA	Feb 1964	
Paun Pu	NEA	Aug 1965	
Phukradung	Met	+Sep 1962	
See Tan	NEA	Aug 1965	
Sri Chiangmai	Met	Jul 1965	
Tha Li	Met	Aug 1951	No data 1953, d1956, d1960. Prior Agr gage: d1907, 1908-27, d1928-29, 1930-32, d1933, 1934-37, d1938, 1939, d1940-46, no data 1947, d1948, no data 1949-51.

Wang Saphung	Met	Aug 1951	No data 1953-54, d1959. Prior Agr gage: d1907, 1908-11, d1912, 1913-16, d1917, 1918-39, no data 1940-51.
<i>Maharakham</i>			
Bora Bu	Met	Aug 1951	d1956. Prior Agr gage: d1922, 1923-29, d1930, 1931-32, d1933, 1934-40, no data 1941, 1942, d1943, 1944, d1945-51.
Bora Bu	Fst	Mar 1963	Discontinued Dec 1964.
Ekasatsuntorn	Irg	Apr 1955	
Huey Chieng Kam	Irg	Jun 1955	
Huey Chok Khwang	Irg	Jun 1961	
Huey Kah Kang	Irg	Jul 1956	
Huey Kha Kang	Irg	Mar 1955	d1955, d1959.
Huey Kudlad	Irg	? 1957	d1959-60. Data not forwarded to head office.
Huey Pai	Irg	Apr 1955	Record unavailable believed discontinuous.
Huey Pra Dao	Irg	Jun 1961	
Kaeng Loeng Chan	Irg	Jun 1955	
Kanthara Wichai	Met	Aug 1951	Prior Agr gage: d1922, 1923-28, d1929, 1930-40, d1941-44, no data 1945, d1946-47, no data 1948-51.
Klongpho	Irg	? 1957	Data not forwarded to head office.
Kosum Phisai	Met	Aug 1951	d1951, d1960-62. Prior Agr gage: d1922, 1923-38, d1939-42, 1943, d1944, no data 1945, d1946-48, no data 1949-50, d1951.
Lamroeng	Irg	? 1957	Data not forwarded to head office.
Maharakham	Met	Aug 1951	Prior Agr gage: d1914, 1915-44, d1945, no data 1946-50, d1951.
Nong Boh	Irg	Apr 1955	
Nong Devaraj	Irg	Aug 1964	
Nong Hai	Irg	Jul 1956	
Nong Kae Dam	Irg	Jun 1955	
Nong Koo Khad	Irg	Apr 1957	
Nong Krathoom	Irg	Jun 1961	

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Normal School	Agr	?	Discontinued : 1933-36, no data 1937, d1938-39.
Phayakaphum Phisai	Met	Aug 1951 +Apr 1961	d1961. Prior Agr gage : d1922, 1923-41, d1942-44, 1945-46, d1947-48, no data 1949-51.
Rong Hua Chang	Irg	Apr 1955	
Waew Payak Kan	Irg	Jun 1951	
Wapi Pathum	Met	Aug 1951	Prior Agr gage : d1922, 1923-25, d1926, 1927-38, d1939-43, no data 1944-45, d1946, no data 1947-51.
<i>Nakhon Phanom</i>			
Ban Phaeng	NEA	Dec 1957	
Bhu Kra Tae	Irg	Jan 1964	
Da Mang Ee Exp	Fst	Jan 1954	d1958-59.
Huey Bang Sai	NEA	Oct 1960	d1960-62 ?, d1964, discontinued 1965 ?
Huey Khilek	Irg	Feb 1964	
Huey Som Ong	Irg	Aug 1960	
Huey Sri Kune	Irg	Jul 1961	
Irg Office	Irg	Aug 1960	
Kham Cha-Ee	NEA	Jun 1955	
Mekong at Mukdahan	NEA	Jan 1965	
Na Kae	Met	Aug 1951	d1956, d1964. Prior Agr gage : d1907, 1908-11, d1912, 1913-20, d1921, no data 1922-31, 1932-39, d1940, no data 1941-42, d1943-45, 1946, d1947-51.
Nakhon Phanom Exp	Agr	Dec 1961	Record unavailable believed discontinuous.
Nikom Mukdahan	S-H	Jan 1959	
Si Songkhram	NEA	Jul 1954	d1964.
That Phanom	Met	Aug 1951	d1963-64. Prior Agr gage : d1909, 1910-11, d1912, 1913-29, d1930, 1931-40, d1941, 1942, d1943-45, 1946-48, d1949-50, no data 1951.
That U-ten	Met	Aug 1951	Prior Agr gage : d1907, 1908-11, d1912, 1913-41, d1942, 1943-47, d1948-49, no data 1950-51.

Nakhon Ratchasima

Ban Joho	Irg	Jun 1956	
Ban Kan Phom	Irg	Jul 1956	
Ban Khoi Ngam	Irg	Jul 1956	
Bankokefaek	Irg	Jul 1956	
Bankonchume	Irg	Jun 1956	
Banmai Samrong Exp	Agr	Jun 1952	Record unavailable believed discontinuous. Prior Agr gage : 1932-39, no data 1940-43, d1944, 1945-46, d1947, no data 1948-49, 1950-51.
Ban Na Tom	Irg	Aug 1956	
Banthoong	Irg	Jul 1956	
Bua Yai	Met	Aug 1951	Prior Agr gage: d1917, 1918, d1919, 1920-24, d1925-28, 1929-36, d1937, 1938-39, d1940, no data 1941, d1942-45, no data 1946-47, d1948-51. Discontinued : 1932-35.
Ban Yai Agr School	Agr	?	
Bung Kratone	Irg	Apr 1957	
Bung Thanonhak	Irg	Apr 1960	
Bu Phai	Met	Jun 1954	d1959-60.
Chakkarat	Met	Aug 1951	d1962-63. Prior Agr gage: d1922, 1923-27, d1928, 1929-40, d1941, 1942-43, d1944, no data 1945, d1946, no data 1947-49, d1950-51.
Chokchai	Met	Aug 1951	d1954. Prior Agr gage: d1911-12, 1913-35, d1936, no data 1937-38, d1939-42, 1943-44, d1945, no data 1946-47, d1948-49, no data 1950, d1951.
Chunhawan Klangdong	Fst	Jan 1957?	d1960.
Dan Khunthot	Met	Aug 1951	d1953. Prior Agr gage : d1914, 1915-41, d1942-48, 1949, d1950-51.
Huey Ban Yang	Irg	Apr 1960	
Huey Namkem	Irg	May 1960	
Huey Sakad	Irg	Apr 1957	
Huey Yang	Irg	Aug 1956	
Irg Office	Irg	+Apr 1946?	
Jaw Haw	Agr	?	Discontinued : 1932-37, d1938.

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Khon Buri	Met	Aug 1951	d1953, d1962. Prior Agr gage : d1940-43, 1944-45, d1946-48, no data 1949-51
Khong	Met	Jan 1956	d1957.
Kraburi	Agr	?	Discontinued : 1932-39.
Kratok	Agr	?	Discontinued : 1932-37, d1938- 39, no data 1940-42, d1943.
Kru Mun Normal School	Agr	?	Discontinued : 1932-33, d1934, 1935-36.
Lam Chamuak	Irg	Jan 1961	
Lam Phra Plerng	Irg	+Jan 1954	d1955, d1959.
Lam Plai Mas	NEA	Jan 1962 ?	Discontinued 1963.
Lamprasat	Irg	Jan 1961	
Lamsataed	Irg	Apr 1957	
Lam Ta Kong	Irg	Oct 1963 +Oct 1963	+Data not forwarded to head office.
Lam Ta Krong (Ban Bung Toei)	NEA	May 1963	
Lam Ta Krong (Kao Yai)	NEA	Jun 1965	
Makhamthao	Irg	Jul 1956	
Mok Lek	Agr	Aug 1962	
Nikom Phimai	S-H	Feb 1961	
Nong Teng	Fst	Jan 1954	Discontinued: d1954-57, no data 1958-60, d1961.
Non Sung	Met	Sep 1954	d1960-61. Prior Agr gage : d1915, 1916-17, d1918, 1919- 24, d1925, 1926-28, d1929, 1930-38, d1939-45, no data 1946-51, d1952, 1953, d1954.
Non Thai	Met	Aug 1951	d1960-61, d1963. Prior Agr gage: d1921, 1922-25, d1926, 1927-40, d1941-42, 1943-44, d1945, 1946-48, d1949, no data 1950-51.
Nonwat Agr School	Agr	?	Discontinued : 1932-35, no data 1936-38, 1939.

Pak Chong Serum Exp	Agr	Jun 1952	d1958, d1960. Record since 1960 unavailable believed disconti- nuous. Prior Agr gage : 1931-39, no data 1940-45, d1946, 1947- 48, no data 1949, 1950, d1951- 52.
Pak Chong Plantation	Fst	Dec 1958	Discontinued: d1959-60.
Pak Thong Chai	Met	Aug 1951	d1954. Prior Agr gage : d1911, 1912-36, d1937, 1938-39, no data 1940-45, d1946-47, 1948- 49, d1950, 1951.
Pang Sok Phimai	Fst Met	Jan 1960 Jan 1954	Discontinued: 1961. d1954, d1956-59. Prior Agr gage : d1908, 1909-25, d1926, 1927-35, d1936, 1937, d1938, 1939-40, d1941, 1942-53.
Phimai Barrage	Irg	May 1953	
Phimai Exp	Agr	Jul 1962	Record unavailable believed dis- continuous.
Sakac Rat	Met	Jul 1965	
Sala Pho T'ia	Irg	Jul 1956	
Si Khiu	Met	Aug 1951	Prior Agr gage : d1914, 1915- 17, d1918, 1919, d1920-21, 1922-35, d1936-37, 1938, d1939- 40, no data 1941, d1942-45, no data 1946-47, d1948, 1949, d1950-51.
Si Khiu Exp	Agr	Jan 1952	Record unavailable believed dis- continuous.
Si Khiu Teak Exp	Fst	Jan 1956	
Sung Noen	Met	Aug 1951	Prior Agr gage : d1911-12, 1913- 17, d1918, 1919-22, d1923, d1924-28, d1929-30, 1931-40, 1941-43, no data 1944, d1945- 46, no data 1947-49, d1950-51.
Thakoengpol	Irg	May 1961	
Tharn Asoke	Irg	May 1960	
Vitayalai Khru	TTS	? 1960	
<i>Nong Khai</i>			
Amphur Muang Tbc	Tbc	Jan 1954	Record unavailable believed dis- continuous.

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Ban Nong Bua	Agr	Jan	1960	Record unavailable believed discontinuous.
Silk Worm Exp				
Bung Kan	Met	Aug	1951	No data 1954. Prior Agr gage : d1907, 1908-20, d1921, no data 1922-31, 1932-40, d1941-42, no data 1943, d1944-45, 1946, d1947-51.
Had Kam Tbc	Tbc	Jan	1953	Record unavailable believed discontinuous.
Huey Bon	Irg	May	1954	
Huey Bang Puan	Irg	May	1956	d1961.
Huey Bang Puan Inlet	Irg	May	1954	
Huey Lan Inlet	Irg	May	1954	
Huey Mak Kong Inlet	Irg	Oct	1960	
Huey Pho Inlet	Irg	May	1963	d1964-65.
Huey Plew Nguak	Irg	Jun	1954	
Huey Wang Hoo Inlet	Irg	May	1954	
Huey Wieng Kook Inlet	Irg	Apr	1954	
Nong Khai	Met	Jul	1951	Prior Agr gage: d1916, 1917-20, d1921-22, 1923-43, d1944, 1945-48, d1949-51.
Nong Khai Exp	Agr	Jan	1951	d1951, no data 1952-53. Record since 1960 unavailable believed discontinuous.
Nikom Phon Phisai	S-H	Jan	1959	
Nong Song Hong	Irg	May	1954	
Pak Nam Suaey Tbc	Tbc	Jan	1954	Record unavailable believed discontinuous.
Phon Phisai	Met	Aug	1951	Prior Agr gage : d1907, 1908-23, d1924, 1925-42, d1943-48, no data 1949, d1950-51.
Pone Sa Tbc	Tbc	Jan	1958	Record unavailable believed discontinuous.
Sri Chieng Mai Tbc	Tbc	Jan	1956	Record unavailable believed discontinuous.
Tha Bo	Met	Aug	1951	d1951, d1956-57. Prior Agr gage: d1907, 1908-11, d1912, 1913-21, d1922, 1923-25, d1926, 1927-28, d1929, 1930-42, no data 1943, d1944, no data 1945-49, 1950-51.