Effect of 5 different methods of "Land Forming" on the yield of corn, wheat, barley and alfalfa.

Land Forming Treatments	Fertilizer lbs/acre	Corn[a] bu/acre 1969	Corn[a] bu/acre Avg.1966-69	Wheat bu/acre 1969	Wheat bu/acre Avg.1966-69	Barley bu/acre 1969	Barley bu/acre Avg.1966-69	Alfalfa[b] lbs/acre 1969	Alfalfa[b] lbs/acre Avg.1967-69
	0+0+0	85	84	47	40	53	51	6799	5785
Check	0+40+0	80	82	47	40	50	53	6504	5666
	0+40+20	74	78	47	39	53	49	6424	5464
	40+40+20	75	84	49	42	66	59	6315	5272
	0+0+0	88	85	40	37	26	37	6233	5833
0.2%	0+40+0	86	83	42	37	25	40	6479	6301
Slope	0+40+20	89	80	40	35	24	43	6088	6124
	40+40+20	81	85	44	41	39	56	5871	5916
	0+0+0	84	78	39	34	38	42	7119	5771
0.1%	0+40+0	84	77	43	34	26	38	7163	5985
Slope	0+40+20	80	79	48	37	38	45	7056	6201
	40+40+20	84	82	50	42	68	62	7379	6427
	0+0+0	88	84	43	37	45	51	6791	5742[c]
Level	0+40+0	95	88	46	38	46	53	6514	5363
	0+40+20	90	83	42	36	46	56	6239	5089
	40+40+20	98	90	43	40	57	60	6293	5096
	0+0+0	87	87	42	40	50	54	6779	4701[d]
Land	0+40+0	80	85	39	39	47	51	7065	4568
Smoothing	0+40+20	80	84	41	40	46	57	6858	4456
	40+40+20	88	85	48	41	60	62	6504	4274

[a]15.5% Moisture, 22-inch rows
[b]15.5% Moisture, 2 cuttings
[c]Only 1 crop in 1967 on Level Treatment
[d]No crop in 1967 and 1st crop in 1968 on Smoothing Treatment

SUGARBEET ROTATION STUDIES - 1969

Northwest Experiment Station, Crookston

Olaf C. Soine, Soil Scientist

This trial was initiated in 1967 to study the effect of different cropping systems on the yield and quality of beets. Cost of production and net return per acre are also included.

The following 4-year rotations are being used:

1. Beets, wheat, barley, legume fallow
2. Beets, wheat, barley, oats
3. Beets, potato, wheat, barley
4. Beets, wheat, barley, alf. hay-fallow
5. Beets, wheat, barley, bl.fallow
6. Beets, wheat, barley, soybeans

Table 1 gives the average yields for 1967-69 for the six rotations. Rotation 1, with the required year of a legume fallow, has been the common type of cropping for beets throughout the Red River Valley. This requirement has been lifted and growers will now be looking for information about different cropping systems for beets.

The yield of beets and all other crops has been good in all the rotations. The highest average beet yield of 18.49 tons was obtained with Rotation 5 and the lowest yield of 16.99 tons with Rotation 2.

Table 1. Average yields of crops for 1967-69 for six sugarbeet rotations.

Rotation 1	Beets	Wheat*	Barley	Sw. C. Fallow
	18.19 T	50.5 B	80.6 B	----
Rotation 2	Beets	Wheat	Barley	Oats
	16.99 T	52.2 B	83.5 B	116.7 B
Rotation 3	Beets	Potato**	Wheat	Barley
	17.45 T	327 B	49.3 B	82.8 B
Rotation 4	Beets	Wheat	Barley	Alf-hay Fallow***
	17.36 T	50.9 B	82.1 B	2134 lbs.

Table 1. (Continued)

Rotation 5	Beets 18.49 T	Wheat 53.3 B	Barley 83.6 B	Bl. Fallow ---
Rotation 6	Beets 17.42 T	Wheat 51.8 B	Barley 79.9 B	Soybeans 26.8 B

* All grain yields on pure seed basis
** No. 1 potato
*** 1st. crop alfalfa removed. Moisture content 20%

The effect of the 1967-69 crop on the 3-year average yield of beets, percent sugar, impurity index, and pounds of sugar per acre is given in Table 2. The data in this table shows the effect of the previous cropping on beets. For example, in Rotation 1, beets always follow the sw. clover fallow.

There are some interesting variations in the percent sugar for the various rotations. The black, sw. clover, and alfalfa fallow rotations have the lowest percent sugar, while Rotations 2 and 6 have the highest. This same result occurred in 1968.

The impurity index gives some indication of the quality of the beets and the lower this figure is the better the processing quality. The three fallow rotations have the highest impurity indexes while the oats and soybean rotations, Rotations 2 and 6, have the lowest.

Table 2. Effect of 1967-69 crop on 1967-69 yield, percent sugar, impurity index and yield of sugar.

Rotation	1967-69 crop	Yield T/A	Sugar %	Impurity index	Sugar T/A
1	Sw.cl. fallow	18.19	13.57	2768	2.47
2	Oats	16.99	14.72	2021	2.50
3	Barley	17.45	13.92	2370	2.43
4	Alf-hay fallow	17.36	13.96	2459	2.42
5	Bl. fallow	18.49	13.48	2715	2.49
6	Soybeans	17.42	14.38	2247	2.50

It is interesting to note that the amount of sugar per acre for Rotations 2 and 6 are higher than that from the three fallow rotations.

Table 3 gives the average net income for 1967-68. These figures include a land cost of $20.00 per acre and $5.00 per acre for taxes. If a grower owns his land, the $20.00/A would not be "out of pocket" cost.

Table 3. Average net income from six sugarbeet rotations, 1967-68.

Rotation 1	Beets	Wheat	Barley	Sw.cl.fallow	Total
	$184.84	$48.34	$45.29	$-25.11	$253.36
Rotation 2	Beets	Wheat	Barley	Oats	
	$169.38	$47.73	$49.97	$36.35	$303.43
Rotation 3	Beets	Potato	Wheat	Barley	
	$168.55	$294.15	$42.32	$43.52	$548.54
Rotation 4	Beets	Wheat	Barley	A.Hay fallow	
	$166.14	$44.81	$50.32	$-13.68	$247.59
Rotation 5	Beets	Wheat	Barley	Bl.Fallow	
	$196.22	$53.66	$48.69	$-23.63	$274.94
Rotation 6	Beets	Wheat	Barley	Soybeans	
	$178.00	$41.98	$43.85	$33.48	$297.31

Tables 4 and 5 give a breakdown for cost of production for beets for 1967. The calculations for all crops follow this pattern and the rates for all farm operations are based on two publications[1] by the Extension Service, University of Minnesota, and North Dakota Crop and Livestock Reporting Service.

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[1] Custom Rates for Farm Operation. Extension Pamphlet 134 - Revised 1969 - Agricultural Extension Service, University of Minnesota.

Custom Farm Work Rates. Jan. 8, 1969. North Dakota Crop and Livestock Reporting Service, North Dakota State University, Fargo, North Dakota.

The net return from beets varies, depending on the type of rotation, but the important figure becomes the total return from all the crops in each rotation. The highest income came from Rotation 3 which included potatoes, while the lowest came from Rotation 4. In general, the net returns from the three fallow rotations were the lowest.

Table 4. Production worksheet for sugarbeets, 1967.

	Exp.	Seed bed	Har.	Land	Mkt.
Seed	$2.00				
Fertilizer	3.00				
Chemicals	3.60				
*Risk	0.75				
F. culti.		$1.00			
Harrow		0.50			
Plant		2.00			
Culti (4)		6.00			
Lift			$25.00		
Haul					$18.87
H. Labor		22.00			
R. tax				$ 5.00	
*Land				20.00	
Total	$9.35	$31.50	$25.00	$25.00	$18.87

Price. $16.74/ton
Yield. . . . . 13.11 ton

1. Gross per acre. $219.46
2. Total production cost. 109.72
3. Profit or loss. 109.74
4. Spendable income per acre. 20.75
5. Total spendable income. 130.49

Table 5. Production worksheet for Sw. clover fallow.

	Exp.	Seed bed	Land
Seed	$ 3.00		
Fert.	9.63		
Plow		$3.00	
Disk		1.00	
F. culti. (3)		3.00	
Harrow		1.50	
R. Estate tax			$ 5.00
*Land use			20.00
Total	$12.63	$8.50	$25.00

1.	Total production cost.	$46.13
2*	Spendable income per acre.	20.00
3.	Total production cost.	-26.13

FERTILIZING ALFALFA AT ELK RIVER, SHERBURNE COUNTY, 1969

C.J. Overdahl, C.P. Klint, D.S. Fairchild, B.C. McCaslin

This experiment was initiated in April of 1968. Lime applications of 8 tons per acre were made at that time, bringing the average pH to 6.2 on the irrigated plots and an average pH to 5.5 on the non-irrigated plots (Table 1). Seeding time treatments consisted of corrective and topdressing treatments of K_2O. The following treatment combinations were used on 16 irrigated plots and 16 non-irrigated plots:

(1) 0 lbs/A K_2O corrective + 0 lbs/A K_2O topdress

(2) 0 lbs/A K_2O corrective + 240 lbs/A K_2O topdress

(3) 480 lbs/A K_2O corrective + 0 lbs/A K_2O topdress

(4) 480 lbs/A K_2O corrective + 240 lbs/A K_2O topdress

Borate gypsum and phosphorus were applied to the entire experiment.

Comparisons are made in Table 1 of the pH differences between the irrigated and non-irrigated plots. Without irrigation, 8 tons/acre of lime over 1 1/2 years raised the pH by 0.1 compared with the irrigated plot with the same rates of lime raised the pH 0.8. This significant change in pH indicates the importance of lime quality and water in entering into the soil reaction in producing a pH change.

Comparisons are made in Table 2 of the yield differences, plant tissue contents and soil tests of the various treatments. There is the expected large difference between irrigated and non-irrigated plots. There was only a 0.2 tons/acre yield response over the check from the 240 lbs/A/K_2O topdress treatment without irrigation. The irrigated plots indicated a 0.9 tons/acre yield increase between the check plot versus the highest potash

treatment. The small differences in yields may be the result of the relatively high initial K soil tests (190 lbs/A/K). With additional crop removal, the soil test and plant tissue contents of K will likely be reduced resulting in greater yield differences between K treatments.

Future plans for this experiment include increasing the number of cuttings from 3 to four and the application of the 240 K_2O topdress treatment as a split application. One-half of the topdress rate will be applied in April, with the remainder being applied in July after removal of the 2nd cutting.

Table 1. Effect of 8 tons/acre of lime* on soil-water pH with irrigated and non-irrigated alfalfa. (Sherburne Co., Hubbard Loamy Coarse Sand).

Lime Treatment	April 1968	September 1969
Tons/A	(Initial pH)	
0	5.4	5.2
8	-	6.2
Irrigated plots		
8	-	5.5
Non-irrigated plots		

*Lime quality-92.0% C.C.E.

92.8% Pass 8 mesh screen
24.2% Pass 60 mesh screen

Table 2. Elk River alfalfa yields and plant tissue contents, 1969.

Unirrigated

	Corrective K_2O lbs/A	0		480	
	Topdressed K_2O lbs/A	0	240	0	240
		Tons/A			
Cuttings					
1	May 28	1.1	1.2	1.2	1.1
2	July 9	0.6	0.6	0.7	0.7
3	August 14	0.9	1.0	1.0	1.0
	Total yield	2.6	2.8	2.9	2.8
K soil test Sept. 69 (lbs/A/K)		150	272	242	367
Tissue test	May %K	2.10			2.62
" "	Aug. %K	2.39	2.23	2.70	2.39

Irrigated

	Corrective K_2O lbs/A	0		480	
	Topdressed K_2O lbs/A	0	240	0	240
		Tons/A			
Cuttings					
1	May 28	1.1	1.2	1.2	1.1
2	July 9	2.4	2.5	2.4	2.6
3	August 14	1.8	1.7	1.8	2.5
	Total yield	5.3	5.4	5.4	6.2
K soil test Sept. 69 (lbs/A/K)		150	272	277	480
Tissue test	May %K	2.04			2.65
" "	Aug.%K	1.86	2.20	2.69	2.57

IRRIGATION
AMB PLOTS

ELK RIVER
1969

Plots were irrigated when tensiometers on potatoes at 12 inch depth were between 0.4 and 0.5 atmospheres. If 41-42 waited one more day; If >43 irrigated that day. Tensiometers read between 8 AM and 10 AM each morning.

Date	Barrier	No Barrier
May 29*	0.5	0.5
May 30*	0.5	0.5
July 21	1.0	1.0
August 4		1.0
August 8	1.0	1.0
August 12		1.0
August 15	1.0	
August 18	1.0	1.0
August 22	1.0	1.0
August 27		1.0
August 29	1.0	1.0
Totals	7.0	9.0

*Irrigated both non-irrigated and irrigated plots these dates to insure onion germination.

IRRIGATION
AMB - TURF

ELK RIVER
1969

Date	Water Added, inches
May 27	1.0
June 10	0.6
June 13	0.6
June 17	0.6
June 20	0.5
July 7	0.5
July 12	0.5
July 22	1.0*
August 6	1.0
August 11	1.0
August 19	1.0
August 25	1.0
August 29	1.0
September 1	1.0
Total	

* All plots irrigated alike except on July 22 south plot was not irrigated as tensiometer showed no need.

ASPHALT BARRIER STUDY

Potatoes

ELK RIVER EXPERIMENTAL FIELD

1969

	No Irrigation		Irrigation		Statistical
	No Barrier	Barrier	No Barrier	Barrier	Significance
No. 1's	9,899.5	10,804.0	22,749.3	20,524.6	Irr*
Knobby	5,360.4	4,226.5	7,715.6	6,172.8	NS
Total No. 1 Size	15,259.9	15,030.5	30,464.9	26,697.4	Irr*
No. 2's	8,055.9	6,225.9	5,798.4	5,014.7	NS
Total 1 & 2	23,315.8	21,256.3	36,263.3	31,712.1	Irr*
Specific Gravity	1.076	1.079	1.071	1.072	Irr*

All values except specific gravity are in pounds per acre

ASPHALT BARRIER STUDY

ONIONS

Elk River, 1969

	No Irrigation		Irrigation		Statistical Significance		
	No Barrier	Barrier	No Barrier	Barrier	Irrig.	Bar.	I + B
Number of Onions per acre							
Total	35,780	41,914	42,156	42,108	NS	NS	NS
Rots	920	871	920	775	NS	NS	NS
No. 3 size	21,587	13,696	35,330	9,293	*	NS	NS
No. 2 size	14,859	25,120	22,312	23,038	NS	*	*
No. 1 size	726	2,323	15,391	13,745	*	NS	NS
Weights per acre (Pounds)							
Total	6,016	8,673	16,621	15,686	*	NS	NS
No. 3 size	2,057	1,142	397	445	*	*	*
No. 2 size	3,591	6,345	7,110	7,023	*	*	*
No. 1 size	368	1,186	9,114	8,214	*	NS	NS

NOTE: Weights per acre include big necks, doubles and rots in their proper size classification.

ASPHALT BARRIER PROJECT

SNAP BEANS

ELK RIVER EXPERIMENTAL FIELD

1969

	BARRIER	NO BARRIER	STATISTICAL SIGNIFICANCE
Size #1 lbs/A	213.0	260.9	NS
Size #2 lbs/A	1553.6	1346.5	NS
Size #3 lbs/A	3083.6	2753.5	NS
Size #4 lbs/A	3344.4	3675.5	NS
Size #5 lbs/A	143.9	244.9	NS
Sizes 2,3,4 lbs/A	7981.7	7776.3	Rep*
Total lbs/A	8373.2	8310.8	NS

NOTE: Snap beans were not irrigated in 1969.

SWEET CORN YIELDS

Elk River Experimental Field

1969

	Not Irrigated		Irrigated	
	No Barrier	Barrier	No Barrier	Barrier
Numbers of Ears per acre				
Total	39,704	43,124	45,109	45,835
Sucker	11,240	13,381	9,883	13,678
Smut	958	366	1,272	489
Marketable	27,506	29,377	33,953	31,668
Weights of Ears per acre				
Total	19,144	20,889	22,810	22,512
Sucker	1,881	2,609	1,376	2,507
Smut	576	177	1,184	189
Marketable	16,686	18,103	20,250	19,815
Quality Factors				
Weight/Ear	0.61	0.62	0.59	0.62
Rows Missing	6.91	7.19	7.89	7.26
Over-all Quality	6.32	6.71	6.66	6.35
Maturity	4.04	3.98	4.25	4.04
Filled Ends	6.58	6.48	7.01	6.57

Differences not significant except for REP on total number and total weight of ears per plot and weight of sucker ears.

ASPHALT BARRIER STUDY

NO_3, NO_2, K, H_2O

Elk River, 1969

	No Irrigation		Irrigated	
	No Barrier	Barrier	No Barrier	Barrier
NO_3-N, ppm				
0-6"	12.3	16.8	9.0	12.6
6-12"	28.3	26.5	25.2	18.2
12-20"	19.6	16.9	15.5	10.9
Total	60.3	60.3	49.9	41.7
K, ppm				
0-6"	20.7	20.3	17.7	18.4
6-12"	13.2	11.8	11.3	14.7
12-20"	6.9	7.1	6.3	6.5
Total	40.9	39.2	35.3	39.7
Water, Percent Weight				
0-6"	10.7	10.9	10.6	9.8
6-12"	9.7	9.5	10.8	10.9
12-20"	11.5	10.2	9.2	9.7
Average	10.7	10.2	10.1	10.1

NOTE: (1) Differences not significant, except average water content for Rep.
(2) NO_2-N ppm was 0.4 ppm for all plots at all depths.

ASPHALT BARRIER STUDY

SWEET CORN

Elk River Satellite, 1969

	Gallons of Asphalt / Acre			
	0	750	950	1,500
Number of Ears per acre				
Total				
Marketable	12187a	15033b	15096b	15324b
Smutty	253	0	0	0
Weights per acre (Pounds)				
Total				
Marketable	6859a(a)	8840b(b)	9202b(bc)	9449b(c)
Smutty	242	0	0	0
Quality rating on basis of 10 as perfect				
Maturity	4.44	4.44	4.36	4.11
Missing Rows	9.22	8.86	8.70	9.11
Ends filled	6.06	6.58	7.11	7.17
Overall Quality	6.34	7.19	7.19	7.60
Mean weight per ear	0.55	0.58	0.60	0.61

NOTE: Duncan's MRT values are given at the 99% level. In addition, on weights of marketable ears per acre Duncan's MRT values are given in parenthesis for the 95% level.

ASPHALT BARRIER STUDY

SWEET CORN

Elk River Satellite, 1969

		Gallons of Asphalt / Acre			
		0	750	950	1,500
Nitrates, ppm	0-6"	3.60	2.62	2.57	4.25
"	6-12"	2.45	1.97	1.90	1.90
"	12-20"	2.95	2.53	3.20	2.92
"	0-20"	9.00	8.10	7.67	9.07
Nitrites, ppm	0-6"	0.60a	0.65a	0.45a	1.15b
"	6-12"	0.32	0.30	0.30	0.32
"	12-20"	0.25	0.30	0.30	0.30
"	0-20"	1.17a	1.25a	1.05a	1.77b
Potassium, ppm	0-6"	15.65	17.20	13.60	15.65
	6-12"	6.90	8.00	6.45	7.10
	12-20"	5.90	6.10	6.05	6.17
	0-20"	28.45	31.30	31.10	28.92
Water, Ow,	0-6"	7.07a	7.92b	6.90a	7.72b
	6-12"	7.40	7.17	5.90	7.27
	12-20"	7.20	7.32	7.12	6.55
	Average	7.20	7.45	6.72	7.12

NOTE: Duncan's MRT values are at 95% level.

Soil Fertility Trials on Potatoes

C. J. Overdahl and C. P. Klint

Field trials were initiated in the spring of 1966 to evaluate potato nutrient needs on loamy sands and sandy loams under intensive irrigation.

Objectives of the trials included:

1. To determine rates of potassium that must be applied annually to maintain high yields on soils that have been built to very high fertility levels.
2. To determine how fast potassium in soils will build up from average soil tests to very high levels.
3. To determine the extent of the effect of very high potassium rates on magnesium levels in potatoes on acid soils.
4. To determine the extent magnesium additions will have on soils where high potassium rates have reduced the magnesium levels in potato petioles.
5. To study how important annual phosphorus additions are.
6. To observe how much nitrogen is needed for most practical yields.

A complete analysis of soil and plant tissue samples, yields and N, P, K recommendations for potatoes can be obtained from Soil Series No. 85 "Soil Fertility Trials on Potatoes" by C. J. Overdahl and C. P. Klint, November 1969.

THE EFFECT OF NITROGEN AND POTASSIUM RATES ON CORN YIELDS ON AN IRRIGATED HUBBARD LOAMY COARSE SAND IN SHERBURNE COUNTY

J. M. MacGregor, D. S. Fairchild and B. C. McCaslin

In the spring of 1969, a project was initiated to study:

1. The effects of different rates of nitrogen and potassium, with sufficient phosphorus, on corn yields on a course textured soil with optimum irrigation,

2. The accumulation of nitrate nitrogen in the subsoils which may cause pollution of subterranean water supplies, and

3. The effect on the protein content of corn grain when additional amounts of potassium are added with adequate nitrogen and phosphorus fertility.

Objectives two and three were unable to be completed because of our inability to soil sample past 24", and the lack of funds to run amino acids to determine protein contents.

Six replications of 10 treatment combinations were applied as a randomized complete block design, each plot being 15 feet wide and 50 feet long. The potassium treatments (75, 150, 300 lbs K/A) and one half of the nitrogen treatments (100, 200, 400 lbs N/A) were broadcast on May 26. The variety Minhybrid 5301 was planted on May 27 with a starter fertilizer application of 0 + 100 + 0 (43 lb. P/A) over the entire experimental site. The final one half of the nitrogen treatments were broadcast on June 26. The corn was planted in 30 inch rows at 23,000 plants per acre.

The 1969 growing season at Elk River was characterized by a relatively wet spring and early summer, but with an extremely dry late summer and fall. A total of 11.5 inches of precipitation was recorded during the growing season at the station. An additional 14 3/4 inches of water was added periodically by irrigation. The irrigation water unfortunately was not always applied uniformly to all plots, since some jets clogged at times.

The experimental site is located on a Hubbard loamy coarse sand, with an initial pH of 5.4. No lime was applied to the plot. Soil test indicated a very high extractable phosphorus level (200 + lbs/A) with a exchangeable potassium at 210 lbs/A.

Table 1. Corn Yields with Varying Rates of Nitrogen and Potassium on a Hubbard Loamy Coarse Sand in Sherburne County.

Fertilizer Treatments*	1969 Yield 15.5% bu/A
0 + 43 + 0	19.9 a**
0 + 43 + 75	25.4 a
0 + 43 + 150	37.9 a
100 + 43 + 0	90.5 b
100 + 43 + 150	98.3 b
100 + 43 + 75	98.9 b
200 + 43 + 150	104.5 bc
400 + 43 + 300	119.1 cd
200 + 43 + 0	121.8 cd
200 + 43 + 75	128.9 d

* Pounds per acre of N + P + K. Applied in 1969.

** Numbers followed by the same letter are not significantly different at the 5.0% level (Duncan's New Multiple Range Test).

Rates of Nitrogen Application (0, 100, 200, 400 lbs/A)

It is evident that the addition of 100 and 200 lbs of N produced highly significant yield increases with the first 100 lbs of N increasing average corn yields by 70.6 bu/A. The 200 lbs of N treatment further increased average corn yields by 31.3 bu/A. The addition of 400 lbs of N produced no additional yield increase, but this might have been partly due to plant burning damage when the second half of the N (as ammonium nitrate) was broadcast on June 26.

Rates of Potassium Application (0, 75, 150, 300 K/A)

No significant yield responses resulted with the addition of increased rates of K with only a 7.0 bu/A average increase with the addition of the first 75 lbs/A of K. No yield advantages were shown with the 150 or 300 of K. This small K response might be expected with the relatively high initial potassium soil test (210 lbs/A).

Conclusion

Corn yields with adequate irrigation on a coarse textured soil showed a tremendous yield response to the addition of 100 and 200 lbs. of N/A. Though no significant yield responses occurred with increasing rates of K, in this field experiment the addition of this element to coarse textured soils is still important for maintaining a balance of major nutrients. It would appear that the optimum rates of fertilizer nitrogen and potassium for this experiment were 200 and 75 lbs/A.

Future plans on this experimental area may include:

(1) Rates of N-P-K for optimum corn production of irrigated coarse textured soils,

(2) Placement and number of applications of N, and

(3) Sources of nitrogen.

SAND PLAIN EXPERIMENT FIELD

ELK RIVER

WEATHER DATA 1969

Recorded 0800 Mon-Fri.

Date	Temperature °F Max.	Min.	Prec. inches	Date	Temperature °F Max.	Min.	Prec. inches
4/24	67			5/31	86	52	
25	74	40		6/1	52	41	
26	71	38		2	51	38	.80
27	38	31		3	67	38	.02
28	50	28	1.28*	4	72	51	.05
29	59	30		5	83	52	.02
30	64	40		6	62	48	
5/1	66	50		7	74	42	
2	68	48	.23	8	74	49	
3	70	40		9	80	41	
4	83	52		10	79	53	
5	81	48	.29	11	67	49	.52
6	74	57	.31	12	59	44	
7	72	44		13	62	34	
8	62	43		14	67	41	.02
9	56	38		15	75	42	
10	53	40		16	68	55	.03
11	54	32		17	71	56	.03
12	64	28		18	74	56	
13	76	35		19	84	66	
14	81	46		20	70	60	
15	83	60		21	78	57	
16	68	48		22	76	60	
17	63	42		23	81	52	.32
18	67	38		24	75	52	.34
19	61	48		25	80	53	.37
20	61	36	.03	26	67	47	1.22
21	56	40		27	65	37	
22	59	35	.18	28	61	50	
23	69	37		29	62	50	
24	73	49	.20	30	69	48	.10
25	72	38		7/1	76	40	
26	82	53		2	77	55	.20
27	98	69		3	86	49	
28	94	66		4	84	64	
29	83	55		5	72	55	
30	83	56		6	76	50	

Denotes Snow*