AGRICULTURAL IMPACT STUDY

REGION FIVE
REGIONAL DEVELOPMENT COMMISSION
SEPTEMBER 1978

agriculture

REGION 5

AGRICULTURAL IMPACT STUDY

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APPENDIX

CHAPTER I INTRODUCTION

REGION FIVE REGIONAL DEVELOPMENT COMMISSION

AGRICULTURAL IMPACT STUDY

One of the major activities of Region 5 Regional Development Commission has been the preparation of a Regional Overall Economic Development Program (OEDP). During the process, the citizens involved in the development of the program have continually addressed the importance of stabilizing agricultural employment in the region. The highest priority in the OEDP document, (which has been officially accepted by the Region 5 Commission at its December 1, 1977 meeting) is the establishment of agricultural processing facilities in the region.

The agricultural sector in Region 5 traditionally has been a cyclical-seasonal employer. However, this trait is a function of the inherent employment patterns of Region 5, not of national employment trends. Therefore, it is important to develop activities that would enhance the future of this sector within the region in order to meet the following objectives:

1. Establish dependable markets for agricultural commodities.
2. Retain agriculture as a viable economic sector in the region.
3. Increase the value added of commodities produced in the region.
4. Create year round employment opportunities.
5. Develop sound investment opportunities.
6. Increase the value of local shipments through further processing.

It is assumed that these objectives can best be met, to the maximum benefit of the region, in line with the following two policies:

1. Increase the production and introduce processing of crops which are now normally grown in the region.
2. Provide farmers in the region an opportunity to export a finished product from the region rather than be providers of raw materials for export which is currently the case.

Because of this identification, the State of Minnesota/State Planning Agency granted funds to more thoroughly investigate these objectives.

A. AGRICULTURAL COMMODITIES ANALYZED

Grains

*Corn

*Oats

*All Hay

Speciality Crops

*Potatoes

Livestock and Poultry Commodities

*Beef

*Dairy

*Turkeys

B. ISSUES TO BE INVESTIGATED

Listed below are specific issues to be investigated in the study:

1. Availability of raw materials for processing.
2. Determine if any raw materials need to be imported to supplement existing supplies.
3. Analyze the available markets and investigate possible future markets for processed agricultural commodities.

4. Determine the impact on the region's economy if agricultural processing facilities were constructed.
5. Suggest specific types of processing plants.
6. Determine the effect of technological changes on agricultural processing.

CHAPTER II ANALYSIS OF AGRICULTURAL PRODUCTION

A. Current Situation

Table II-1 illustrates the major crops grown by type and year from 1969-1977 for all counties in Region 5. The crops considered are corn, oats, all hay and potatoes. From this chart, the yearly fluctuations can be traced for each crop.

TABLE II-1

MAJOR CROPS GROWN

BY TYPE AND YEAR

CASS COUNTY

	CORN			OATS			ALL HAY			POTATOES		
	Planted All Purposes (Acres)	Harvested for Grain (Acres)	Yield/ Acre (Bushels)	Production (Bushels)	Acres Harvested	Yield/ Acre (Bushels)	Production (Bushels)	Acres Harvested	Yield/ Acre (Bushels)	Production (Bushels)	Acres Harvested	Yield/ Acre (CWT)	Production (CWT)
1969	4,100	1,400	45	63,000	4,600	38	174,800	46,300	1.6	75,100	-	-	-
1970	4,100	1,400	59	82,600	5,100	29	147,900	49,200	1.6	76,900	-	-	-
1971	4,600	1,800	58	104,400	7,300	35	255,500	52,000	1.5	78,200	-	-	-
1972	4,500	1,900	60	114,000	3,000	32	96,000	50,500	1.7	87,800	-	-	-
1973	4,800	2,800	60	168,000	3,300	42	138,600	53,000	1.4	75,200	-	-	-
1974	6,900	3,100	38.9	120,500	1,800	26.9	48,500	53,900	1.8	95,700	-	-	-
1975	5,000	1,500	45.0	67,500	2,500	37.5	93,700	49,600	1.2	60,000	-	-	-
	8,100	3,500	28.0	98,000	4,900	34.1	167,000	57,400	0.7	41,400	-	-	-
1977	8,100	3,900	60.2	234,900	5,700	42.1	240,000	57,400	1.1	65,600	-	-	-

SOURCE: Minnesota Crop and Livestock and Reporting Service
Annual Yearbooks 1971 - 1978

MAJOR CROPS GROWN

BY TYPE AND YEAR

CROW WING COUNTY

	CORN			OATS			ALL HAY			POTATOES		
	Planted All Purposes (Acres)	Harvested for Grain (Acres)	Yield/ Acre (Bushels)	Production (Bushels)	Acres Harvested	Yield/ Acre (Bushels)	Production (Bushels)	Acres Harvested	Yield/ Acre (Bushels)	Production (Bushels)	Acres Harvested	Yield/ Acre (CWT)	Production Acre (CWT)
1969	7,800	3,500	33	115,500	5,300	41	217,300	27,500	1.7	45,600	-	-	-
1970	7,800	3,300	36	118,800	4,000	37	148,000	27,400	1.6	43,000	-	-	-
1971	7,900	4,500	59	265,500	4,000	42	168,000	29,200	1.6	46,400	-	-	-
1972	8,000	3,800	60	228,000	4,600	35	161,000	31,300	1.7	53,000	-	-	-
1973	8,400	5,000	72	360,000	4,900	50	245,000	32,400	1.7	54,900	-	-	-
1974	11,100	4,700	38.4	180,500	9,500	39.6	376,000	28,300	1.8	71,400	-	-	-
1975	8,900	2,600	35.0	91,000	6,800	49.5	336,600	44,200	1.8	77,400	-	-	-
1976	13,500	7,700	28.5	219,200	6,200	32.7	203,000	38,200	0.7	28,500	-	-	-
1977	18,000	11,900	68.8	818,400	6,500	52.1	338,800	33,800	1.4	46,100	-	-	-

SOURCE: Minnesota Crop and Livestock and Reporting Service
Annual Yearbooks 1971 - 1978

TABLE II-1 (continued)

MAJOR CROPS GROWN

BY TYPE AND YEAR

MORRISON COUNTY

	Planted All Purposes (Acres)	Harvested for Grain (Acres)	CORN Yield/ Acre (Bushels)	Production (Bushels)	OATS Acres Harvested	Yield/ Acre (Bushels)	Production (Bushels)	ALL HAY Acres Harvested	Yield/ Acre (Bushels)	Production (Bushels)	POTATOES Acres Harvested	Yield/ Acre (CWT)	Production Acre (CWT)
1969	47,700	24,700	51	1,259,700	39,200	41	1,607,200	97,300	2.1	208,400	-	-	-
1970	51,100	27,900	63	1,757,700	43,600	43	1,874,800	100,000	2.1	213,000	-	-	-
1971	75,900	49,500	58	2,871,000	35,300	47	1,659,100	101,400	2.3	228,600	-	-	-
1972	54,800	36,900	60	2,214,000	32,400	44	1,425,600	90,100	2.4	214,400	-	-	-
1973	65,500	45,800	74	3,389,200	35,200	53	1,865,600	94,500	2.1	197,900	-	-	-
1974	77,000	45,400	44.1	2,003,000	35,700	35.4	1,264,200	80,300	2.1	168,200	-	-	-
1975	79,600	41,600	36.6	1,521,700	29,800	40.3	1,201,300	88,500	2.0	179,500	-	-	-
1976	74,500	17,000	33.5	569,400	31,700	32.8	1,038,300	102,000	1.0	105,000	-	-	-
1977	91,000	59,800	74.3	4,443,800	37,500	62	2,324,600	95,600	1.7	161,000	-	-	-

SOURCE: Minnesota Crop and Livestock Reporting Service
Annual Yearbooks 1971 - 1978

MAJOR CROPS GROWN

BY TYPE AND YEAR

TODD COUNTY

	Planted All Purposes (Acres)	Harvested for Grain (Acres)	CORN Yield/ Acre (Bushels)	Production (Bushels)	OATS Acres Harvested	Yield/ Acre (Bushels)	Production (Bushels)	ALL HAY Acres Harvested	Yield/ Acre (Bushels)	Production (Bushels)	POTATOES Acres Harvested	Yield/ Acre (CWT)	Production Acre (CWT)
1969	56,400	25,600	50	1,280,000	58,700	44	2,582,800	92,900	2.6	245,000	700	230	161,000
1970	54,700	23,000	48	1,104,000	63,400	43	2,726,200	95,900	2.3	216,300	700	120	84,000
1971	67,700	39,000	55	2,145,000	60,200	53	3,190,600	102,100	2.3	232,200	700	140	98,[illegible]
1972	64,800	35,100	59	2,070,900	45,400	35	1,589,000	82,100	2.7	220,000	500	270	135,[illegible]
1973	73,500	51,000	75	3,825,000	53,200	51	2,713,200	83,800	2.6	217,300	2,100	250	525,000
1974	83,600	49,000	37.3	1,827,700	52,000	33.8	1,757,600	85,300	2.1	181,900	-	-	-
1975	77,800	40,000	48.9	1,956,600	55,600	46.5	2,587,200	91,100	2.3	205,300	-	-	-
1976	86,000	24,300	32.8	796,700	11,000	34.6	380,500	98,000	1.2	113,100	1,600	175	280,000
1977	100,000	65,300	73.2	4,778,000	55,700	61.3	3,415,000	94,400	2.3	220,200	1,700	195	331,500

SOURCE: Minnesota Crop and Livestock and Reporting Service
Annual Yearbooks 1971 - 1978

MAJOR CROPS GROWN

BY TYPE AND YEAR

WADENA COUNTY

	Planted All Purposes (Acres)	Harvested for Grain (Acres)	CORN Yield/ Acre (Bushels)	Production (Bushels)	OATS Acres Harvested	Yield/ Acre (Bushels)	Production (Bushels)	ALL HAY Acres Harvested	Yield/ Acre (Bushels)	Production (Bushels)	POTATOES Acres Harvested	Yield/ Acre (CWT)	Production Acre (CWT)
1969	14,000	4,300	38	163,400	10,600	42	445,200	34,600	1.7	57,400	-	-	-
1970	16,400	6,600	33	217,800	10,700	30	321,000	37,000	1.7	63,000	-	-	-
1971	22,100	12,600	57	718,200	12,200	51	622,200	38,600	1.8	67,900	-	-	-
1972	14,900	9,000	65	585,000	10,600	31	328,600	34,200	1.9	66,200	-	-	-
1973	18,600	14,100	71	1,001,000	12,600	48	604,800	36,800	1.8	65,300	-	-	-
1974	22,300	16,700	41.9	699,700	10,000	32.3	323,100	35,000	1.8	61,300	-	-	-
1975	22,500	12,300	34.6	425,400	10,200	40.3	411,200	41,300	1.8	73,700	-	-	-
1976	27,500	11,700	35.3	413,400	11,000	34.6	380,500	42,500	0.9	37,500	-	-	-
1977	32,000	21,800	75.8	1,651,600	15,400	55.3	851,400	46,300	1.8	82,000	-	-	-

SOURCE: Minnesota Crop and Livestock and Reporting Service
Annual Yearbooks 1971 - 1978

TABLE II-1. (continued)

MAJOR CROPS GROWN

BY TYPE AND YEAR

REGION 5

	Planted All Purposes (Acres)	Harvested For Grain (Acres)	CORN Yield/ Acre (Bushels)	Production (Bushels)	OATS Acres Harvested	OATS Yield/ Acre (Bushels)	OATS Production (Bushels)	ALL HAY Acres Harvested	ALL HAY Yield/ Acre (Bushels)	ALL HAY Production (Bushels)	POTATOES Acres Harvested	POTATOES Yield/ Acre (CWT)	POTATOES Production Acre (CWT)
1969	130,000	59,500	42.6	2,881,600	118,400	41.2	5,027,300	298,600	1.9	631,500	700	230	161,000
970	134,100	62,200	43.8	3,280,900	126,800	36.4	5,217,900	309,500	1.9	612,200	700	120	84,000
1971	178,200	107,400	57.4	6,104,100	119,000	45.6	5,895,400	323,300	1.9	653,300	700	140	98,000
1972	147,000	86,700	60.8	5,211,900	96,000	35.4	3,600,200	288,200	2.1	641,400	500	270	135,000
973	170,800	118,700	70.4	8,743,200	109,200	48.8	5,567,200	300,500	1.9	610,600	2,100	250	525,000
1974	200,900	118,900	40.1	4,831,400	109,000	35.7	3,769,400	282,800	1.9	578,500	-	-	-
1975	193,800	98,000	40.0	4,062,200	104,900	42.8	4,630,000	314,700	1.8	595,900	-	-	-
976	209,600	64,200	31.6	2,096,700	64,800	33.8	2,169,300	338,100	1.0	325,500	1,600	175	280,000
1977	249,100	162,700	70.5	11,926,700	120,800	54.6	7,169,800	327,500	1.7	574,900	1,700	195	331,500

SOURCE: Minnesota Crop and Livestock Reporting Service
Annual Yearbooks 1971 - 1978

MAJOR CROPS GROWN

BY TYPE AND YEAR

MINNESOTA

	Planted All Purposes (Acres)	Harvested for Grain (Acres) For Grain	CORN Yield/ Acre (Bushels) For Grain	Production (Bushels)	OATS Acres Harvested	OATS Yield/ Acre (Bushels)	OATS Production (Bushels)	ALL HAY Acres Harvested	ALL HAY Yield/ Acre (Bushels)	ALL HAY Production (Bushels)	POTATOES Acres Harvested	POTATOES Yield/ Acre (CWT)	POTATOES Production Acre (CWT)
19	4,939,000	4,139,000	85.0	351,815,000	3,388,000	56.0	189,728,000	3,336,000	2.5	8,401,000	97,900	158	15,475,000
19	5,285,000	4,594,000	85.0	390,490,000	3,354,000	50.0	167,700,000	3,231,000	2.5	8,155,000	95,800	140	13,390,000
1971	6,533,000	5,725,000	83.0	475,175,000	3,000,000	59.0	177,000,000	3,250,000	2.6	8,336,000	97,500	172	16,725,000
1972	5,605,000	4,899,000	93.0	455,607,000	2,440,000	51.0	124,440,000	3,020,000	2.7	8,163,000	85,200	177	15,000,000
1973	6,169,000	5,520,000	93.0	513,360,000	2,550,000	56.0	142,800,000	3,150,000	2.5	8,007,000	89,400	167	14,970,000
1974	6,940,000	5,900,000	61.0	359,900,000	2,020,000	48.0	96,960,000	3,060,000	2.4	7,496,000	93,500	186	17,425,000
1975	7,000,000	5,820,000	70.0	407,400,000	2,000,000	50.5	101,000,000	3,210,000	2.5	8,005,000	65,100	181	11,796,000
1976	7,200,000	5,600,000	59.0	330,400,000	2,060,000	45.0	92,700,000	3,250,000	1.8	5,765,000	75,000	174	13,055,000
1977	6,900,000	6,000,000	100.0	600,000,000	2,380,000	68.0	161,840,000	3,140,000	2.6	8,136,000	79,500	189	15,023,000

SOURCE: Minnesota Crop and Livestock Reporting Service
Annual Yearbooks 1971 - 1978

1. Corn

In Cass and Crow Wing Counties, the acreage planted for all purposes is lower in comparison to the acreages planted in the other counties. However, the yield per acre figures are comparable with the other counties. Todd and Morrison Counties exhibit the highest production figures, not necessarily due to extremely high yields, but due to

a larger number of acres planted to that crop. When regional yields are compared with statewide yields, they are considerably lower. During the period from 1974-1976, the corn production throughout throughout the State was severly reduced due to the adverse weather conditions that existed. The 1977 crop year was the most successful year for corn production in the region as well as statewide, both in terms of yields and production.

2. Oats

The same pattern exists here as with corn. The only exception is in Cass County where both the acres planted and yield per acre are low as compared to the other counties. Todd County has the highest production, but due to large number of acres planted.

Again, yield per acre on a regional basis is significantly smaller than statewide. As with corn 1977 brought high yields and production to farms in the region and throughout the State.

3. All Hay

Of the two counties that are basically non-agricultural in nature (Cass and Crow Wing), Cass County exhibits the higher production of the two in terms of hay crops. In terms of acres harvested for hay, Todd and Morrison Counties have a larger number of acres harvested than the other counties. Todd and Morrison Counties have the highest production figures based on both high yields and high acres harvested.

In terms of yields, Cass, Crow Wing, and Wadena Counties have yields per acre that are lower than Todd and Morrison Counties.

When regional figures are compared to statewide figures, the yield per acre again is lower, however, not as significantly as with the other crops.

4. Potatoes

Todd County is the only county in the region in which potatoe planting activity is large enough to be reported. (At least until 1974 when the figures are too small to be reported to avoid disclosure of individual operations). Generally yields per acre are higher than statewide figures, however, the acres harvested are too small to effect statewide production figures. This fact is substantiated also in Table II-2 which indicates that indeed in 1974 there is a large number of acres reported in Todd County. It also illustrates that the other counties in the region do have acreages devoted to potatoes, however, Todd County still accounts for over 90% of the region's potatoe production.

TABLE II-2

Irish Potatoes: 1974

	All farms			Farms with sales of $2,500 and over				
							Irrigated	
	Farms	Acres	Quantity harvested (hundredweight)	Farms	Acres	Quantity harvested (hundredweight)	Farms	Acres
Minnesota, total	1 193	105 314	17 190 968	920	105 023	17 162 872	90	17 755
[illegible]	16	83	9 123	8	81	8 962	–	–
[illegible]	16	384	71 815	12	379	71 007	2	14
[illegible]	16	11	805	8	8	675	2	3
Beltrami	19	250	53 454	10	244	53 003	1	195
Benton	8	451	87 832	5	451	87 764	2	450
Big Stone	–	–	–	–	–	–	–	–
Blue Earth	9	2	106	5	1	34	–	–
Brown	6	3	572	6	3	572	–	–
Carlton	26	328	57 205	15	312	55 781	–	–
Carver	8	1	35	2	(Z)	14	–	–
Cass	21	19	3 456	14	16	2 922	–	–
Chippewa	6	50	3 774	6	50	3 774	–	–
Chisago	15	14	830	6	11	557	–	–
Clay	85	14 290	2 220 662	76	14 276	2 217 999	3	1 281
Clearwater	18	250	18 026	13	240	17 630	1	40
Coass	2	1	20	–	–	–	–	–
Cottonwood	4	200	38 770	4	200	38 770	–	–
Crow Wing	21	94	5 599	10	89	5 302	–	–
Dakota	12	182	30 962	8	181	30 850	1	(Z)
Dodge	1	(Z)	8	1	(Z)	8	–	–
Douglas	6	2	65	6	2	65	–	–
Faribault	2	150	(D)	2	150	(D)	–	–
Fillmore	2	3	460	–	–	–	–	–
Freeborn	32	6 508	1 210 712	32	6 508	1 210 712	1	375
Goodhue	10	24	3 570	9	24	3 540	–	–
Grant	1	3	500	1	3	500	–	–
Hennepin	18	1 694	416 958	16	1 694	416 952	15	1 682
Houston	15	19	2 858	15	19	2 858	–	–
Hubbard	20	273	51 458	12	255	49 335	5	239
Isanti	12	634	140 034	6	628	138 870	5	538
Itasca	23	197	27 548	13	174	24 038	–	–
Jackson	5	6	610	3	2	210	–	–
Kanabec	6	6	192	2	1	23	–	–
Kandiyohi	4	1	97	3	1	80	–	–
Kittson	39	9 491	1 420 856	39	9 491	1 420 856	3	560
Koochiching	10	14	920	6	12	740	–	–
Lac qui Parle	2	(Z)	23	2	(Z)	23	–	–
Lake	2	3	650	2	3	650	–	–
Lake of the Woods	22	549	76 087	17	545	75 688	1	65
Le Sueur	–	–	–	–	–	–	–	–
Lincoln	–	–	–	–	–	–	–	–
Lyon	5	11	1 092	5	11	1 092	–	–
McLeod	7	7	500	7	7	500	–	–
Mahnomen	7	209	36 416	5	205	36 216	–	–
Marshall	74	18 084	2 824 499	74	18 084	2 824 499	–	–
Martin	3	1	30	2	(Z)	12	–	–
Meeker	3	(Z)	14	3	(Z)	14	–	–
Mille Lacs	14	4	207	11	3	181	–	–
Morrison	30	68	2 522	21	55	1 740	–	–
Mower	–	–	–	–	–	–	–	–
Murray	1	1	10	1	1	10	–	–
Nicollet	–	–	–	–	–	–	–	–
Nobles	–	–	–	–	–	–	–	–
Norman	25	2 368	262 557	24	2 367	262 521	–	–
Olmsted	1	(Z)	10	1	(Z)	10	–	–
Otter Tail	48	3 182	715 083	31	3 158	712 952	3	3 134
Pennington	2	1	30	–	–	–	–	–
Pine	21	24	775	11	14	453	–	–
Pipestone	–	–	–	–	–	–	–	–
Polk	125	29 076	4 717 259	123	29 076	4 717 167	3	395
Pope	18	6 283	799 056	13	6 275	798 724	6	1 331
Ramsey	–	–	–	–	–	–	–	–
Red Lake	4	540	109 250	4	540	109 250	–	–
Redwood	3	1	165	3	1	165	–	–
Renville	6	50	(D)	2	42	(D)	–	–
Rice	2	1	75	–	–	–	–	–
Rock	4	6	311	4	6	311	–	–
Roseau	10	171	17 635	7	170	17 608	–	–
St. Louis	49	119	13 561	24	85	10 646	–	–
Scott	4	4	295	4	4	295	–	–
Sherburne	25	4 607	1 063 683	23	4 605	1 063 151	20	4 604
Sibley	6	4	630	6	4	630	–	–
Stearns	30	30	3 062	18	12	833	2	(Z)
Steele	8	463	75 500	4	462	75 452	–	–
Stevens	3	8	440	3	8	440	–	–
Swift	2	1	400	2	1	400	–	–
Todd	27	2 471	326 689	20	2 470	326 568	6	1 957
Traverse	1	1	75	1	1	75	–	–
Wabasha	4	10	510	2	(Z)	10	–	–
Wadena	17	95	18 236	14	86	17 572	2	60
Waseca	2	1	160	1	(Z)	23	–	–
Washington	6	606	107 980	6	606	107 980	3	603
Watonwan	6	8	268	4	2	52	1	(Z)
Wilkin	11	356	62 041	8	354	61 940	–	–
Winona	18	6	646	15	5	586	–	–
Wright	17	251	58 866	14	250	58 852	2	230
Yellow Medicine	4	(Z)	60	4	(Z)	60	–	–

B. Trends

Table II-3 illustrates the percent changes in the major crops grown by county within Region 5 from 1969 through 1977.

Corn

The most interesting change in this crop was from 1975 to 1976. During this time period, the acres harvested for grain decreased in Morrison, Todd and Wadena Counties. In Cass and Crow Wing Counties the acres harvested for grain increased an average of 165%. Therefore, production in Cass and Crow Wing Counties increased while in the other three counties production decreased. Statewide during that same period of time, both the acres harvested for grain and production decreased. However, the 1977 crop year brought significant increases in the entire region's corn crop, reversing the trend previously outlined. Morrison, Todd, and Wadena Counties emerged as the leaders in corn production.

TABLE II-3

PERCENT CHANGES IN MAJOR CROPS GROWN

BY TYPE AND YEAR

CASS COUNTY

	CORN				OATS			ALL HAY			POTATOES		
	Acres Planted All Purposes	Acres Harvested for Grain	Yield/ Acre	Production	Acres Harvested	Yield/ Acre	Production	Acres Harvested	Yield/ Acre	Production	Acres Harvested	Yield/ Acre	Production
1969-1970	0	0	31.1	31.1	10.9	-23.7	-15.4	6.3	0	2.4	-	-	-
1970-1971	12.2	28.6	-1.7	26.4	43.1	20.7	72.8	5.7	-6.3	1.7	-	-	-
1971-1972	-2.2	5.6	3.4	9.2	-58.9	-8.6	-62.4	-2.9	13.3	12.3	-	-	-
1972-1973	6.7	47.4	0	47.4	10.0	31.3	44.4	5.0	-17.6	-14.4	-	-	-
1973-1974	43.8	10.7	-35.2	-28.3	-45.5	-36.0	-65.0	1.7	28.6	27.3	-	-	-
1974-1975	-27.5	-51.6	15.7	-44.0	38.9	39.4	93.2	-8.0	-33.3	-37.3	-	-	-
1975-1976	62.0	133.3	-37.8	45.2	96.0	-9.1	78.2	15.7	-41.7	-31.0	-	-	-
1976-1977	0	11.4	115.0	139.7	16.3	23.5	43.7	0	57.1	58.5	-	-	-
1969-1977	97.6	178.6	33.8	272.9	23.9	10.8	37.3	24.0	-31.3	-12.6	-	-	-
Average Change 1969-1977	11.9	23.2	11.3	28.3	13.9	4.7	23.7	2.9	0.01	2.4	-	-	-

TABLE II-3 (continued)

PERCENT CHANGES IN MAJOR CROPS GROWN

BY TYPE AND YEAR

CROW WING COUNTY

	CORN				OATS			ALL HAY			POTATOES		
	Acres Planted All Purposes	Acres Harvested for Grain	Yield/ Acre	Production	Acres Harvested	Yield/ Acre	Production	Acres Harvested	Yield/ Acre	Production	Acres Harvested	Yield/ Acre	Production
1969-1970	0	-5.7	9.1	2.9	-24.5	-9.8	-31.9	-0.4	-5.9	-5.7	-	-	-
1970-1971	1.3	36.4	63.9	123.5	0	13.5	13.5	6.6	0	7.9	-	-	-
1971-1972	1.3	-15.6	1.7	-14.1	15.0	-16.7	-4.2	7.2	6.3	14.2	-	-	-
1972-1973	5.0	31.6	20.0	57.9	6.5	42.9	52.2	3.5	0	3.6	-	-	-
1973-1974	32.1	-6.0	-46.7	-49.9	93.9	-20.8	53.5	-12.7	5.9	30.1	-	-	-
1974-1975	-19.8	-44.7	-8.9	-49.6	-28.4	25.0	-10.5	56.2	0	8.4	-	-	-
1975-1976	51.7	196.2	-18.6	140.6	-8.8	-33.9	-39.7	-13.6	-61.1	-63.2	-	-	-
1976-1977	33.3	54.5	141.4	273.4	4.8	59.3	66.9	-11.5	100.0	61.8	-	-	-
1969-1977	130.8	240.0	108.5	608.6	22.6	27.1	55.9	22.9	-17.6	1.1	-	-	-
											-	-	-
Average Change 1969-1977	13.1	30.8	20.2	60.6	7.3	7.4	12.5	4.4	5.9	7.1	-	-	-

PERCENT CHANGES IN MAJOR CROPS GROWN

BY TYPE AND YEAR

MORRISON COUNTY

	CORN				OATS			ALL HAY			POTATOES		
	Acres Planted All Purposes	Acres Harvested for Grain	Yield/ Acre	Production	Acres Harvested	Yield/ Acre	Production	Acres Harvested	Yield/ Acre	Production	Acres Harvested	Yield/ Acre	Production
1969-1970	7.1	13.0	23.5	39.5	11.2	4.9	16.7	2.8	0	2.2	-	-	-
1970-1971	48.5	77.4	-7.9	63.3	-19.0	9.3	-11.5	1.4	9.5	7.3	-	-	-
1971-1972	-27.8	-25.5	3.4	-22.9	-8.2	-6.4	-14.1	-11.1	4.3	-6.2	-	-	-
1972-1973	19.5	24.1	10.0	53.1	8.6	20.5	30.9	4.9	-12.5	-7.7	-	-	-
1973-1974	17.6	-0.9	-40.4	-40.9	1.4	-33.2	-32.2	-15.0	0	-15.0	-	-	-
1974-1975	3.4	-8.4	-17.0	-24.0	-16.5	13.8	-5.0	10.2	-4.8	6.7	-	-	-
1975-1976	-6.4	-59.1	-8.5	-62.6	6.4	-18.6	-13.6	15.3	-50	-41.5	-	-	-
1976-1977	22.1	251.8	121.8	680.4	18.3	89.0	123.9	-6.3	70	53.3	-	-	-
1969-1977	90.8	142.1	45.7	252.8	-4.3	51.2	44.6	-1.7	-19.0	-22.7	-	-	-
Average Change 1969-1977	10.5	34.1	10.6	85.7	0.3	9.9	11.9	0.3	2.1	-0.1	-	-	-

TABLE II-3 (continued)

PERCENT CHANGES IN MAJOR CROPS GROWN

BY TYPE AND YEAR

TODD COUNTY

	CORN				OATS			ALL HAY			POTATOES		
	Acres Planted All Purposes	Acres Harvested for Grain	Yield/ Acre	Production	Acres Harvested	Yield/ Acre	Production	Acres Harvested	Yield/ Acre	Production	Acres Harvested	Yield/ Acre	Production
1969-1970	-3.0	-10.2	-4.0	-13.8	8.0	-2.3	5.6	3.2	-11.5	-10.5	0	-47.8	-47.8
1970-1971	22.5	69.6	14.6	94.3	-5.0	23.3	17.0	6.5	0	7.4	0	16.7	16.7
1971-1972	-4.3	-10.0	7.3	-3.5	-24.6	-34.0	-50.2	-19.6	17.4	-5.3	-28.6	92.9	37.8
1972-1973	13.4	45.3	27.1	84.7	17.2	45.7	70.7	2.1	-3.7	-1.2	320	-7.4	288.9
1973-1974	13.7	-3.9	-50.3	-52.2	-2.3	-33.7	-35.2	1.8	-19.2	-16.3	-	-	-
1974-1975	-6.9	-18.4	31.1	7.1	6.9	37.6	47.2	6.8	9.5	12.9	-	-	-
1975-1976	10.5	-39.3	-32.9	-59.3	-80.2	-25.6	-85.3	7.7	-47.8	-44.9	-	-	-
1976-1977	16.3	168.7	123.2	499.7	406.4	77.2	779.5	-3.7	91.7	94.7	6.3	11.4	18.4
1969-1977	77.3	155.1	46.5	273.3	-5.1	39.3	32.2	1.6	-11.5	-10.1	142.9	-15.2	105.9
Average Change 1969-1977	7.8	25.2	14.5	69.6	40.8	11.0	93.7	0.6	4.6	4.6	59.5	13.2	62.8

PERCENT CHANGES IN MAJOR CROPS GROWN

BY TYPE AND YEAR

WADENA COUNTY

	CORN				OATS			ALL HAY			POTATOES		
	Acres Planted All Purposes	Acres Harvested for Grain	Yield/ Acre	Production	Acres Harvested	Yield/ Acre	Production	Acres Harvested	Yield/ Acre	Production	Acres Harvested	Yield/ Acre	Production
1969-1970	17.1	53.5	-13.2	33.3	0.9	-28.6	-27.9	6.9	0	9.8	-	-	-
1970-1971	34.8	90.9	72.7	229.8	14.0	70.0	93.8	4.3	5.9	7.6	-	-	-
1971-1972	-32.6	-28.6	14.0	-18.5	-13.1	-39.2	-47.2	-11.4	5.6	-2.5	-	-	-
1972-1973	24.8	56.7	9.2	71.1	18.9	54.8	84.1	7.6	-5.3	-1.4	-	-	-
1973-1974	19.9	18.4	-41.0	-30.1	-20.6	-32.7	-46.6	-4.9	0	-6.1	-	-	-
1974-1975	0.9	-26.3	-17.4	-39.2	2.0	24.8	27.3	18.0	0	20.2	-	-	-
1975-1976	22.2	-4.9	2.0	-2.8	7.8	-14.1	-7.5	2.9	-50.0	-49.1	-	-	-
1976-1977	16.4	86.3	114.7	299.5	40.0	59.6	123.8	8.9	100.0	118.7	-	-	-
1969-1977	128.6	407.0	99.5	910.8	45.3	31.7	91.2	33.8	5.9	42.9			
Average Change 1969-1977	12.9	30.8	17.6	67.9	6.2	11.8	25.0	4.0	7.0	12.2	-	-	-

TABLE II-3 (continued)

PERCENT CHANGES IN MAJOR CROPS GROWN

REGION 5

BY TYPE AND YEAR

	CORN				OATS			ALL HAY			POTATOES		
	Acres Planted All Purposes	Acres Harvested for Grain	Yield/ Acre	Production	Acres Harvested	Yield/ Acre	Production	Acres Harvested	Yield/ Acre	Production	Acres Harvested	Yield/ Acre	Production
1969-1970	3.2	4.5	2.8	13.9	7.1	-11.7	3.8	3.7	0	-3.1	0	-47.8	-47.8
1970-1971	32.9	72.7	31.1	86.0	-6.2	25.3	13.0	4.5	0	6.7	0	16.7	16.7
1971-1972	-17.5	-19.3	5.9	-14.6	-19.3	-22.4	-38.9	-10.9	10.5	-1.8	-28.6	92.9	37.8
1972-1973	16.2	36.9	15.8	67.8	13.8	37.9	54.6	4.3	-9.5	-4.8	320.0	-7.4	288.9
1973-1974	17.6	0.2	-43.0	-44.7	-0.2	-26.8	-32.3	-5.9	0	-5.3	-	-	-
1974-1975	-3.5	-17.6	-0.2	-15.9	-3.8	19.9	22.8	11.3	-5.3	2.9	-	-	-
1975-1976	8.2	-34.5	-21.0	-48.4	-38.2	-21.0	-53.1	7.4	-44.4	-45.4	-	-	-
1976-1977	18.8	153.4	123.1	468.8	86.4	61.5	230.5	-3.1	70.0	76.6	6.3	11.4	18.4
1969-1977	91.6	173.4	65.5	313.9	2.0	32.5	42.6	9.7	-10.5	-9.0	142.9	-15.2	105.9
Average Change 1969-1977	9.5	24.5	14.3	64.1	5.0	7.8	25.1	1.4	2.7	3.2	59.5	13.2	62.8

PERCENT CHANGES IN MAJOR CROPS GROWN

MINNESOTA

BY TYPE AND YEAR

	CORN				OATS			ALL HAY			POTATOES		
	Acres Planted All Purposes	Acres Harvested for Grain	Yield/ Acre	Production	Acres Harvested	Yield/ Acre	Production	Acres Harvested	Yield/ Acre	Production	Acres Harvested	Yield/ Acre	Product
1969-1970	7.0	11.0	0	11.0	-1.0	-10.7	-11.6	-3.1	0	-2.9	-2.1	-11.4	-13.5
1970-1971	23.6	24.6	-2.4	21.8	-10.6	18.0	5.5	0.6	4.0	2.2	1.8	22.9	24.9
1971-1972	-14.2	-14.4	12.0	-4.1	-18.7	-13.6	-29.7	-7.1	3.8	-2.1	-12.6	2.9	-10.3
1972-1973	10.1	12.7	0	12.7	4.5	9.8	14.8	4.3	-7.4	-1.9	4.9	-5.6	-0.2
1973-1974	12.5	6.9	-34.4	-29.9	-20.8	-14.3	-32.1	-2.9	-4.0	-6.4	4.6	11.4	16.4
1974-1975	0.9	-1.4	14.8	13.2	-1.0	5.2	4.2	4.9	4.2	6.8	-30.4	-2.7	-32.3
1975-1976	2.9	-3.8	-15.7	-18.9	3.0	-10.9	-8.2	1.2	-28.0	-28.0	15.2	-3.9	10.7
1976-1977	-4.2	7.1	69.5	81.6	15.5	51.1	74.6	-3.4	44.4	41.1	6.0	8.6	15.1
1969-1977	39.7	45.0	17.6	70.5	-29.8	21.4	-14.7	-5.9	4.0	-3.2	-18.8	19.6	-2.9
Average Change 1969-1977	4.8	5.3	5.5	10.9	-3.6	11.3	2.2	-0.7	2.1	1.1	-1.6	2.8	1.4

2. Oats

Again during the period from 1975 to 1976 acres harvested for oats in Cass County increased 96% and production increased 78% while the other counties' production decreased approximately 38% on the average. From 1976 to 1977, all five counties in the region experienced increases in both the acres harvested as well as production.

3. All Hay

The changes in this crop have fluctuated between increases and decreases throughout the time period. The only trend that can be generalized is that on a regional basis hay has decreased at a faster rate than statewide.

4. Potatoes

The significant trend to note here is that from 1972 to 1973 the acres harvested increased remarkably in Todd County. When compared to statewide changes, this increase becomes even more apparent. However, just one year later the amounts in Todd County became too small to report, indicating a marked decrease. Then again in 1976 Todd County was back on the board, however, at levels lower than the previous years.

Production Percentages

Table II-4 indicates the percentage of region-wide production for each of the major crops by county. It also indicates the regional production for the same crops as a percentage of statewide production.

This chart is a good indicator of the counties in the region which are highly agricultural in nature and those which are not. Todd and Morrison Counties have generally the highest percentages followed by Wadena, Crow Wing, and Cass County respectively.

1. Corn

The major production has shifted between Morrison and Todd Counties throughout the period.

TABLE II-4

PERCENT OF REGION-WIDE PRODUCTION

	CORN	OATS	ALL HAY	POTATOES
CASS COUNTY				
1969	2.2	3.5	11.9	-
1970	2.5	2.8	12.6	-
1971	1.7	4.3	12.0	-
1972	2.2	2.7	13.7	-
1973	1.9	2.5	12.3	-
1974	2.5	1.3	16.5	-
1975	1.7	2.0	10.1	-
1976	4.7	7.7	12.7	-
1977	2.0	3.3	11.4	-
CROW WING COUNTY				
1969	4.0	4.3	7.2	-
1970	3.6	2.8	7.0	-
1971	4.3	2.8	7.1	-
1972	4.4	4.5	8.3	-
1973	4.1	4.4	9.0	-
1974	3.7	10.0	12.3	-
1975	2.2	7.3	13.0	-
1976	10.5	9.4	8.8	-
1977	6.9	4.7	8.0	-
MORRISON COUNTY				
1969	43.7	32.0	69.8	-
1970	53.4	35.9	68.8	-
1971	47.0	28.1	70.7	-
1972	42.5	39.6	74.4	-
1973	38.8	33.5	65.2	-
1974	41.5	33.5	59.5	-
1975	37.5	25.9	57.0	-
1976	27.2	47.9	32.3	-
1977	37.3	32.4	28.0	-
TODD COUNTY				
1969	44.4	51.4	38.8	100
1970	33.6	52.2	35.3	100
1971	35.1	54.1	35.5	100
1972	39.7	44.1	34.3	100
1973	43.7	48.7	35.6	100
1974	37.8	46.6	31.4	-
1975	48.2	55.9	34.5	-
1976	38.0	17.5	34.7	100
1977	40.1	47.6	38.3	100

TABLE II-4 (continued)

WADENA COUNTY

1969	5.7	8.9	9.1	-
1970	6.6	6.2	10.3	-
1971	11.8	10.6	10.4	-
1972	11.2	9.1	10.3	-
1973	11.4	10.9	10.7	-
1974	14.5	8.6	10.6	-
1975	10.5	8.9	12.4	-
1976	19.7	17.5	11.5	-
1977	13.8	11.9	14.3	-

REGIONAL PRODUCTION

As Percent Of

STATEWIDE PRODUCTION

	CORN	OATS	ALL HAY	POTATOES
1969	0.8	2.6	7.5	1.0
1970	0.8	3.1	7.5	0.6
1971	1.3	3.3	7.8	0.6
1972	1.1	2.9	7.9	0.9
1973	1.7	3.9	7.6	3.5
1974	1.3	3.9	7.7	-
1975	1.0	4.6	7.4	-
1976	0.6	2.3	5.6	2.1
1977	2.0	4.4	7.1	2.2

2. Oats

Todd County has led the way in production of this crop, except in 1976 where Morrison County had higher production.

3. All Hay

Morrison County has produced the majority of the hay in the region, except in 1976 when Todd County had produced more.

4. Potatoes

Todd County has produced 100% of the region's potatoes. In 1974 data was unavailable for counties.

In terms of a comparison between regional and statewide production, this chart indicates that the region contributes very little towards statewide production figures.

D. Cattle

Table II-5 illustrates the inventory of cattle and calves by county in Minnesota in 1974. Of the five counties in the region, Morrison and Todd Counties are among the highest totals for cattle and calves in the State. Todd and Morrison Counties account for approximately 70% of the region's cattle and calf inventory, but only 5% of the statewide inventory.

When beef cows are broken out of the total, Morrison County ranks the highest in the regional totals with 29%, however, Cass County shows up with 24% of the region's beef cows and Todd County with 23%. Crow Wing and Wadena Counties account for 11.8% and 12.4% of the region's beef cows respectively.

TABLE 11-5

Cattle and Calves—Inventory and Sales: 1974

	Inventory											
	Cattle and calves				Cows and heifers that had calved							
	All farms		Farms with sales of $2,500 and over		Total				Beef cows			
					All farms		Farms with sales of $2,500 and over		All farms		Farms with sales of $2,500 and over	
	Farms	Number	Farms	Number	Farms	Number	Farms	Number	Farms	Number	Farms	Number
a, total	61 811	3 665 505	54 726	3 549 816	52 042	1 484 959	46 681	1 432 765	26 342	657 260	21 853	611 436
	566	22 602	388	19 311	515	11 472	365	9 896	321	6 558	194	5 127
	324	11 058	207	9 817	255	4 886	168	4 367	185	2 539	104	2 048
	973	51 778	800	48 941	864	21 910	729	20 665	450	9 765	337	8 630
	560	26 408	389	23 352	510	14 314	364	12 660	392	10 475	269	9 001
	848	43 954	722	41 873	744	20 911	662	19 946	300	6 081	237	5 302
	314	22 007	301	21 804	269	7 752	260	7 651	188	5 456	181	5 371
	605	32 862	578	32 480	465	10 844	449	10 610	289	7 322	273	7 089
	726	42 748	712	42 639	538	13 518	535	13 506	147	3 051	144	3 039
	518	20 170	331	16 849	480	10 362	317	8 830	288	5 015	154	3 705
	909	52 008	853	51 322	783	25 562	750	25 305	208	3 884	181	3 662
	528	26 795	380	24 148	488	14 665	368	13 408	314	9 902	219	8 769
wa	421	21 337	415	21 217	294	7 258	290	7 224	197	4 711	193	4 677
a	654	29 246	495	27 124	562	12 894	437	11 890	340	5 132	221	4 177
	529	32 596	473	31 497	450	11 840	401	11 361	313	7 707	269	7 252
r	561	26 095	412	23 292	500	12 322	381	11 090	370	9 294	275	8 190
	5	147	–	–	5	79	–	–	5	75	–	–
od	577	45 705	564	45 572	388	11 517	380	11 458	264	7 785	258	7 736
g	460	19 080	297	16 377	402	8 865	274	7 668	254	4 932	144	3 932
a	567	37 858	507	36 343	418	13 474	381	12 853	184	3 064	153	2 643
	687	40 672	637	40 005	569	16 195	537	15 915	197	4 002	172	3 758
	1 098	54 835	987	53 285	995	25 380	912	24 603	384	6 945	323	6 331
	488	32 252	473	32 110	339	8 078	324	7 994	191	4 162	180	4 108
	1 583	133 064	1 480	131 371	1 441	61 230	1 369	60 535	946	38 180	892	37 573
	780	39 984	728	39 415	596	14 435	566	14 210	269	5 923	246	5 736
	1 436	92 460	1 324	90 920	1 272	41 448	1 191	40 863	589	12 954	522	12 454
	319	20 735	311	20 661	262	7 779	258	7 754	120	3 636	118	3 619
	496	23 032	397	21 794	401	10 764	326	10 284	193	2 958	127	2 521
	1 012	85 437	953	84 103	932	37 025	886	36 230	578	20 242	541	19 489
	326	16 508	220	14 739	290	7 626	194	6 680	213	5 849	124	4 944
	533	21 763	392	20 229	439	8 944	337	8 261	241	3 390	157	2 800
a	393	15 437	189	11 494	362	7 442	182	5 624	309	5 837	140	4 176
	552	50 661	541	50 528	389	11 700	379	11 623	288	8 906	280	8 833
	653	34 102	471	30 809	546	15 121	417	13 754	299	7 094	186	5 858
hi	970	51 210	918	50 557	776	19 564	743	19 252	273	6 106	247	5 835
	293	17 541	259	16 926	271	8 774	239	8 425	236	7 498	207	7 162
chiching	211	8 643	101	6 712	186	3 789	97	2 808	166	3 282	87	2 343
au Parle	685	40 303	668	40 040	570	14 872	561	14 791	433	11 220	425	11 143
	17	286	4	149	14	150	3	87	13	140	2	80
the M s	156	8 651	109	8 011	141	4 523	104	4 181	118	4 007	85	3 679
	715	32 534	653	31 837	585	12 739	539	12 459	259	4 329	225	4 107
	677	54 176	655	53 841	535	17 712	520	17 533	366	11 291	355	11 137
	689	68 475	668	68 278	450	17 024	440	16 963	306	12 258	300	12 224
	1 115	51 459	1 076	50 974	956	24 907	926	24 652	213	3 199	192	2 991
	320	22 867	287	22 471	297	9 546	266	9 338	174	5 708	151	5 539
	691	32 173	597	30 771	621	16 083	537	15 379	481	12 780	413	12 165
	571	46 897	563	46 690	338	9 857	333	9 759	206	5 998	201	5 900
	913	44 865	862	44 194	740	19 403	718	19 208	215	3 756	197	3 582
tocks	818	38 271	624	34 576	735	18 030	584	16 349	299	4 552	166	3 089
rson	1 653	82 601	1 410	78 258	1 505	40 529	1 328	38 528	555	11 996	424	10 341
er	867	47 182	816	46 581	704	18 263	662	17 949	392	8 447	356	8 146
	804	69 989	797	69 735	613	19 895	606	19 775	360	11 615	353	11 495
	519	28 180	512	27 825	397	9 995	394	9 981	100	2 071	99	2 061
cs	874	72 296	865	72 147	640	20 060	635	20 006	385	11 848	380	11 796
nan	515	33 894	490	33 423	460	13 220	437	12 967	295	8 230	276	7 997
ted	1 162	84 716	1 046	82 399	1 026	37 063	936	36 003	635	20 246	549	19 215	
Tail	2 556	141 012	2 262	136 575	2 298	62 993	2 096	61 163	930	19 976	777	18 501
gton	453	20 964	376	20 097	396	10 543	337	10 175	285	7 333	238	7 031
	997	48 813	762	44 264	898	23 461	702	21 468	411	8 807	262	7 092
ine	587	53 672	580	53 583	460	17 495	453	17 455	288	10 955	285	10 925
	879	52 582	768	50 192	775	23 044	692	22 124	515	15 751	442	14 960
	777	48 303	745	47 811	669	20 865	648	20 723	289	8 369	273	8 254
y	16	636	5	175	8	196	3	92	7	107	3	92
ke	299	15 776	267	15 197	279	7 742	254	7 458	201	5 067	178	4 805
od	792	53 981	777	53 870	529	14 446	522	14 408	306	8 521	299	8 433
de	677	45 127	665	44 982	483	12 224	476	12 166	198	5 206	192	5 149
	976	47 623	900	46 592	826	20 913	782	20 612	281	3 945	248	3 703
	700	77 830	691	77 675	530	20 932	521	20 859	362	14 633	353	14 560
u	775	39 376	646	37 020	730	20 399	619	19 061	546	14 407	452	13 245
s	625	17 551	292	12 415	569	8 975	282	6 310	422	5 494	166	3 107
	704	34 316	634	33 676	592	15 893	548	15 565	245	3 715	209	3 449
burne	356	15 524	265	14 424	299	6 604	229	6 171	190	3 080	129	2 693
y	955	48 622	911	48 010	776	20 144	751	19 932	208	3 898	189	3 731
ns	2 753	159 354	2 544	155 708	2 499	74 258	2 347	72 842	587	10 759	464	9 582
	726	34 336	688	33 819	591	15 726	574	15 522	160	3 213	148	3 047
ns	353	42 641	348	42 556	244	7 843	239	7 792	167	5 584	162	5 533
	543	35 089	507	34 469	429	12 499	401	12 203	272	8 103	245	7 819
	1 693	82 785	1 452	79 308	1 507	39 174	1 353	37 842	503	9 484	375	8 327
rse	234	14 766	229	14 719	175	4 929	173	4 913	121	3 496	119	3 480
sand	841	71 148	792	69 920	785	31 946	750	31 354	435	14 553	404	13 988
end	568	26 144	457	24 176	490	12 316	405	11 462	242	5 181	171	4 424
ca	496	22 432	475	21 932	395	9 524	381	9 354	140	2 890	132	2 811
ington	449	20 469	332	18 566	373	8 459	274	7 541	229	3 633	136	2 782
nwan	408	24 947	397	24 774	285	7 324	275	7 211	166	4 152	158	4 056
n	246	13 178	238	13 082	202	5 936	196	5 868	125	3 771	121	3 717
na	1 051	83 540	968	82 091	967	38 209	911	37 607	410	12 160	367	11 614
	1 483	68 649	1 271	65 164	1 229	32 825	1 080	31 073	499	8 122	375	6 579
Watonwan	607	41 719	575	41 158	431	13 512	410	13 328	296	9 492	277	9 326

2. Poultry - turkeys

Table II-6 indicates the inventory and sales of turkeys for farms with sales of over $2,500 by county in Minnesota in 1974. Morrison County emerges as one of the larger turkey producers in the State with 5% of the inventory. When the region is compared with statewide totals, 11% of the turkey inventory is accounted for in Region 5. In Morrison County, $6,425,000 was obtained from turkey sales in 1974.

It is apparent from the table that the majority of turkeys raised in the region are sold for slaughter and not kept for breeding purposes. This trend is also evident at the statewide level.

F. Dairy

Table II-7 illustrates the inventory of milk cows by county in Minnesota in 1974. Morrison and Todd Counties emerge as having among the largest inventory in Minnesota. These two counties account for approximately 79% of the region's milk cow inventory and 7% of the state's inventory. Table II-7 illustrates the inventory of milk cows and total production by county in Minnesota in 1976 and 1977. This chart indicates that in terms of cow inventory, Morrison and Todd Counties still account for 80% of the region's milk cows and 8% of the State's inventory. Therefore, no significant change has taken place since 1974.

Approximately the same pattern exists with production figures. Morrison and Todd Counties account for 82% of the region's production, but only 8% of the state production.

TABLE II-6
Poultry — Inventory and Sales: 1974 — Continued

Sales — Continued												
Turkeys for farms with sales of $2,500 and over								Market value of poultry and poultry products			
Total		Heavy breeds for slaughter		Light breeds for slaughter		Hens kept for breeding		All farms		Farms with sales of $2,500 and over	
Farms	Number	Farms	Number	Farms	Number	Farms	Number	Farms	Sales ($1,000)	Farms	Sales ($1,000)
370	22 252 708	248	15 466 037	99	5 903 935	95	882 736	9 301	217 402	8 108	216 881
15	378 222	10	224 918	4	142 304	5	11 000	74	3 634	52	3 631
5	232 480	1	(D)	3	(D)	1	(D)	67	2 131	36	2 126
29	842 373	12	376 690	6	316 500	16	149 183	119	9 516	89	9 509
2	(D)	1	75	1	(D)	1	(D)	65	90	39	63
2	585	1	288	2	297	–	–	104	4 241	86	4 235
1	(D)	1	(D)	–	–	–	–	60	1 043	59	1 043
7	170 600	5	52 500	3	115 800	1	2 300	173	1 585	152	1 578
12	213 750	8	184 150	1	(D)	4	(D)	170	3 663	168	3 662
1	(D)	1	(D)	–	–	1	(D)	31	148	21	147
6	37 990	2	160	1	20	3	37 810	154	752	144	746
2	(D)	2	(D)	1	(D)	–	–	57	339	34	333
1	(D)	–	–	1	(D)	–	–	91	1 545	87	1 543
4	94 000	4	94 000	–	–	–	–	89	1 224	71	1 217
1	(D)	–	–	1	(D)	1	(D)	48	1 879	43	1 878
2	90	2	90	–	–	–	–	43	3 093	34	3 091
–	–	–	–	–	–	–	–	2	(Z)	–	–
7	175 342	5	(D)	1	5	2	(D)	126	2 280	119	2 274
6	252 858	4	91 458	2	(D)	3	(D)	61	1 088	32	1 080
3	63 243	3	63 241	1	2	–	–	105	940	88	898
2	(D)	2	(D)	–	–	1	(D)	83	2 348	74	2 345
5	247 247	4	(D)	2	(D)	–	–	159	1 510	140	1 502
2	(D)	2	(D)	–	–	–	–	128	1 356	120	1 354
11	396 946	9	372 146	–	–	4	24 800	173	3 562	165	3 559
1	(D)	1	(D)	–	–	–	–	145	3 964	135	3 959
6	73 043	3	32 700	1	(D)	3	(D)	187	2 003	169	1 997
–	–	–	–	–	–	–	–	65	370	60	365
5	69 050	3	(D)	2	(D)	2	(D)	84	880	63	874
3	219 800	3	218 800	–	–	1	1 000	110	974	102	973
4	(D)	–	–	1	(D)	3	8 719	58	969	43	964
2	(D)	2	(D)	–	–	–	–	67	1 714	41	1 708
1	(D)	1	(D)	–	–	1	(D)	42	185	19	180
1	205	–	–	1	205	–	–	126	1 348	124	1 347
–	–	–	–	–	–	–	–	60	174	39	171
25	3 075 963	20	1 890 047	7	(D)	2	(D)	163	24 482	157	24 480
–	–	–	–	–	–	–	–	25	29	22	29
–	–	–	–	–	–	–	–	46	164	22	160
1	(D)	–	–	1	(D)	–	–	113	1 287	111	1 285
–	–	–	–	–	–	–	–	2	(D)	2	(D)
–	–	–	–	–	–	–	–	30	17	16	14
4	14 046	4	14 046	–	–	–	–	160	484	139	478
1	150	–	–	1	150	–	–	104	221	91	212
2	(D)	2	(D)	–	–	–	–	110	2 889	106	2 869
–	–	–	–	–	–	–	–	226	1 682	215	1 678
–	–	–	–	–	–	–	–	32	127	26	125
1	(D)	1	(D)	–	–	1	1 900	52	107	44	105
6	151 003	5	(D)	1	(D)	–	–	154	1 416	150	1 414
6	985 186	6	823 186	2	(D)	1	(D)	177	11 245	150	11 229
–	–	–	–	–	–	–	–	64	636	43	633
23	1 087 600	2	55 500	19	1 015 000	3	17 100	193	6 425	161	6 417
2	(D)	2	(D)	–	–	1	(D)	119	2 325	100	2 317
3	4 830	3	(D)	–	–	1	(D)	117	496	115	493
1	(D)	1	(D)	–	–	–	–	123	1 477	118	1 441
3	(D)	2	(D)	–	–	1	(D)	149	2 067	146	2 065
–	–	–	–	–	–	–	–	59	151	56	151
4	210 170	3	(D)	–	–	1	(D)	132	4 315	118	4 311
28	2 302 058	18	1 363 300	11	606 108	9	332 650	309	11 906	261	11 893
4	76 500	4	(D)	–	–	2	(D)	42	1 751	28	1 745
1	8	1	8	–	–	–	–	98	1 566	68	1 562
–	–	–	–	–	–	–	–	96	(D)	89	(D)
1	28	1	28	–	–	–	–	95	1 208	86	1 204
1	(D)	–	–	–	–	1	(D)	79	1 005	76	1 004
–	–	–	–	–	–	–	–	4	(D)	1	(D)
–	–	–	–	–	–	–	–	31	325	28	325
1	50	1	50	–	–	–	–	189	1 459	177	1 448
2	(D)	2	(D)	–	–	–	–	220	2 444	208	2 437
5	(D)	5	(D)	–	–	2	(D)	172	3 450	150	3 444
–	–	–	–	–	–	–	–	106	665	106	665
24	621 712	22	(D)	2	(D)	–	–	82	3 060	67	3 057
–	–	–	–	–	–	–	–	62	1 613	29	1 583
1	250	1	250	–	–	–	–	125	435	105	432
2	(D)	1	550	–	–	1	(D)	40	1 972	30	1 970
1	115	1	115	–	–	–	–	201	4 317	192	4 312
27	3 315 439	24	2 568 300	8	747 139	–	–	390	19 761	350	19 737
–	–	–	–	–	–	–	–	124	2 277	120	2 275
–	–	–	–	–	–	–	–	82	1 253	82	1 253
6	2 869 564	5	2 317 110	1	(D)	2	(D)	97	13 811	91	13 807
11	441 275	4	58 550	6	372 525	3	10 200	145	2 940	105	2 932
–	–	–	–	–	–	–	–	47	154	46	153
–	–	–	–	–	–	–	–	105	906	98	902
7	635 363	3	565 133	1	(D)	3	(D)	52	4 261	31	4 256
1	(D)	1	(D)	–	–	–	–	92	281	83	274
3	21 020	3	21 020	–	–	–	–	76	573	55	551
1	(D)	1	(D)	1	(D)	–	–	96	1 439	90	1 431
1	(D)	1	(D)	–	–	1	(D)	46	793	45	792
8	939 709	2	(D)	3	(D)	5	22 000	153	5 540	139	5 538
2	(D)	2	(D)	–	–	–	–	252	1 972	205	1 957
2	(D)	2	(D)	–	–	–	–	117	1 464	111	1 460

Cattle and Calves—Inventory and Sales: 1974—Continued

Part 2 of 4

	Inventory—Continued											
	Cows and heifers that had calved—Continued				Farms with sales of $2,500 and over							
	Milk cows				Heifers and heifer calves						Steers, steer calves, bulls, and bull calves	
	All farms		Farms with sales of $2,500 and over		Total		For beef purposes		For milk cow replacement			
	Farms	Number	Farms	Number	Farms	Number	Farms	Number	Farms	Number	Farms	
Minnesota, total	32 227	827 699	30 740	821 329	40 847	898 957	20 292	428 318	24 906	470 639	44 785	1 218 694
Aitkin	293	4 914	244	4 769	319	5 337	187	2 712	186	2 625	314	4 078
Anoka	93	2 347	82	2 319	145	2 588	96	1 468	63	1 120	165	2 862
Becker	555	12 145	517	12 035	651	12 096	310	5 292	420	6 804	694	16 180
Beltrami	234	3 839	183	3 659	327	5 439	232	3 619	133	1 820	326	5 253
Benton	542	14 830	516	14 644	576	11 360	184	2 399	441	8 961	594	10 567
Big Stone	110	2 296	108	2 280	218	4 128	153	2 962	86	1 166	271	10 022
Blue Earth	202	3 522	201	3 521	389	7 058	251	5 228	163	1 830	472	14 817
Brown	415	10 467	415	10 467	505	10 839	201	5 765	336	5 074	539	18 294
Carlton	280	5 347	231	5 125	264	4 710	137	1 754	187	2 956	254	3 309
Carver	659	21 678	652	21 643	681	14 444	165	2 333	572	12 111	617	11 573
Cass	273	4 763	231	4 639	311	5 341	188	2 665	176	2 676	319	5 299
Chippewa	123	2 547	123	2 547	239	3 905	167	2 659	79	1 246	350	10 045
Chisago	308	7 762	287	7 713	368	7 379	172	2 250	237	5 129	409	7 855
Clay	180	4 133	175	4 109	351	7 580	246	5 417	131	2 163	423	12 556
Clearwater	216	3 028	181	2 900	316	5 636	236	3 983	127	1 653	352	6 566
Cook	2	4	–	–	–	–	–	–	–	–	–	–
Cottonwood	157	3 732	155	3 722	342	12 811	231	10 019	129	2 792	459	21 302
Crow Wing	212	3 933	169	3 736	231	5 046	125	2 484	132	2 562	230	3 642
Dakota	275	10 410	261	10 210	367	11 356	171	4 973	241	6 383	391	12 134
Dodge	420	12 193	411	12 157	461	9 665	183	2 929	326	6 736	509	14 425
Douglas	746	18 435	717	18 272	828	14 307	322	4 175	605	10 132	818	14 375
Faribault	169	3 916	162	3 886	278	7 041	169	4 976	128	2 065	393	17 075
Fillmore	832	23 050	806	22 962	1 158	28 492	705	15 534	663	12 958	1 244	42 344
Freeborn	374	8 512	364	8 474	499	10 437	218	4 790	315	5 647	598	14 742
Goodhue	812	28 494	791	28 409	1 050	24 102	486	7 548	696	16 554	1 076	25 992
Grant	167	4 143	165	4 135	212	4 392	106	2 309	123	2 083	269	8 511
Hennepin	239	7 806	224	7 763	296	6 404	120	1 368	203	5 036	289	5 163
Houston	576	16 783	564	16 741	772	18 589	456	9 771	461	8 818	797	29 234
Hubbard	124	1 777	104	1 736	184	3 139	139	2 304	65	835	180	4 977
Isanti	243	5 554	219	5 461	288	5 150	135	1 854	178	3 296	319	6 811
Itasca	105	1 605	68	1 448	164	3 046	131	2 127	47	919	169	2 832
Jackson	123	2 794	119	2 790	351	14 981	280	13 017	89	1 964	442	23 974
Kanabec	339	8 027	313	7 896	383	8 766	173	3 408	264	5 358	394	8 299
Kandiyohi	600	13 458	588	13 417	662	12 990	255	5 690	462	7 300	762	18 311
Kittson	79	1 276	74	1 263	204	3 832	187	3 441	32	391	236	4 647
Koochiching	58	507	35	465	84	2 640	74	1 185	20	1 455	85	1 276
Lac qui Parle	188	3 652	187	3 648	434	7 296	339	5 308	133	1 988	571	17 955
Lake	4	10	1	7	4	40	3	36	1	4	4	4
Lake of the Woods	40	516	31	502	89	1 976	77	1 655	16	321	99	1 977
Le Sueur	375	8 410	356	8 352	459	8 251	214	4 134	271	4 117	493	11 [illegible]
Lincoln	237	6 421	232	6 396	423	12 147	308	8 981	167	3 166	561	[illegible] 16
Lyon	179	4 766	174	4 739	399	16 310	297	13 658	129	2 652	571	[illegible] 09
McLeod	811	21 708	801	21 661	839	13 892	224	2 527	680	11 365	788	12 43[illegible]
Mahnomen	186	3 838	174	3 799	221	5 567	124	3 544	131	2 023	252	7 5[illegible]
Marshall	239	3 303	219	3 214	425	6 931	346	5 477	140	1 454	505	8 4[illegible]
Martin	158	3 859	158	3 859	352	13 421	249	10 536	123	2 885	451	23 [illegible]
Meeker	586	15 647	582	15 626	648	11 488	210	2 475	493	9 013	697	13 4[illegible]
Mille Lacs	532	13 478	492	13 260	523	10 883	164	2 161	425	8 722	496	7 3[illegible]
Morrison	1 157	28 533	1 096	28 187	1 155	22 159	436	5 584	884	16 575	1 150	17 [illegible]
Mower	390	9 816	382	9 803	544	12 091	302	6 229	296	5 862	675	16 54[illegible]
Murray	327	8 280	327	8 280	505	16 061	319	12 172	224	3 889	703	33 [illegible]
Nicollet	317	7 924	315	7 920	350	6 543	112	2 427	264	4 116	423	11 [illegible]
Nobles	353	8 212	351	8 210	527	16 704	351	13 086	222	3 618	727	35 [illegible]
Norman	248	4 990	240	4 970	361	7 507	253	5 339	151	2 168	434	12 [illegible]
Olmsted	536	16 817	529	16 788	808	20 556	480	10 525	436	10 031	863	25 [illegible]
Otter Tail	1 671	43 017	1 605	42 662	1 820	36 171	746	11 117	1 313	25 054	1 919	39 [illegible]
Pennington	165	3 210	148	3 144	287	4 226	193	2 583	121	1 643	319	6 [illegible]
Pine	632	14 654	563	14 376	639	12 744	294	4 346	450	8 398	603	10 [illegible]
Pipestone	238	6 540	234	6 530	379	11 670	244	7 063	170	4 607	511	24 [illegible]
Polk	376	7 293	361	7 164	599	11 863	409	8 109	275	3 754	676	16 [illegible]
Pope	454	12 496	449	12 469	564	11 273	253	4 536	368	6 737	641	15 [illegible]
Ramsey	2	89	–	–	2	12	2	12	–	–	5	
Red Lake	132	2 675	130	2 653	208	3 566	154	2 397	83	1 169	245	4 [illegible]
Redwood	253	5 925	253	5 925	491	13 361	308	10 348	203	3 013	654	26 [illegible]
Renville	315	7 018	314	7 017	412	11 329	195	7 995	240	3 334	537	21 [illegible]
Rice	619	16 968	604	16 909	682	12 908	211	3 083	517	9 825	685	13 [illegible]
Rock	223	6 299	223	6 299	439	19 895	322	15 566	152	4 329	614	38 [illegible]
Roseau	329	5 992	299	5 816	504	8 652	381	5 875	205	2 777	553	[illegible]
St Louis	264	3 481	173	3 203	231	3 268	146	1 612	112	1 656	229	2 [illegible]
Scott	418	12 178	401	12 116	464	8 802	158	2 041	346	6 761	447	9 [illegible]
Sherburne	142	3 524	123	3 478	180	3 617	101	1 799	99	1 818	203	4 [illegible]
Sibley	623	16 246	614	16 201	679	11 863	213	3 302	527	8 561	713	16 [illegible]
Stearns	2 081	63 499	2 023	63 260	2 127	43 789	528	8 637	1 742	35 152	1 920	39 [illegible]
Steele	501	12 513	494	12 475	511	8 736	146	1 728	414	7 008	529	[illegible]
Stevens	100	2 259	100	2 259	205	7 204	147	5 859	75	1 345	307	27 [illegible]
Swift	200	4 396	195	4 384	352	7 671	230	5 088	150	2 583	426	11 [illegible]
Todd	1 165	29 690	1 129	29 515	1 234	23 314	407	5 622	973	17 692	1 135	18 [illegible]
Traverse	65	1 433	65	1 433	162	2 848	118	1 894	48	954	204	6 [illegible]
Wabasha	496	17 393	491	17 366	632	16 435	311	6 104	420	10 331	696	22 [illegible]
Wadena	336	7 135	313	7 038	365	6 263	174	2 385	246	3 878	379	6 [illegible]
Waseca	280	6 634	273	6 543	338	5 708	129	1 901	227	3 807	383	6 [illegible]
Washington	198	4 826	171	4 759	230	4 861	114	1 588	140	3 273	265	6 [illegible]
Watonwan	135	3 172	133	3 161	256	7 280	172	5 681	102	1 599	326	10 [illegible]
Wilkin	91	2 165	88	2 151	189	3 079	126	1 855	73	1 224	198	4 [illegible]
Winona	700	26 049	682	25 993	808	24 900	349	6 708	583	18 192	748	15 [illegible]
Wright	849	24 703	817	24 494	969	17 619	379	4 512	697	13 107	997	16 [illegible]
Yellow Medicine	176	4 020	170	4 002	349	9 181	233	6 710	133	2 471	496	11 [illegible]

TABLE II - 7a

MINNESOTA MILK COWS AND PRODUCTION BY COUNTY

rict nd nty	Milk cows on farms		Production per cow		Total production	
	1976	1977	1976	1977	1976	1977
	Number		Thousand pounds		Million pounds	
Dist. (1)						
	12,300	12,200	9.6	10.2	118	124
	4,000	4,000	9.2	10.5	38	42
er	3,900	4,100	7.9	9.0	31	37
	1,100	1,000	8.2	9.0	9	9
	3,400	3,000	8.8	9.3	30	28
	4,000	3,500	8.5	8.9	34	32
	3,900	4,000	9.7	10.2	38	41
on	3,100	2,500	8.1	8.8	25	22
	7,100	7,000	8.6	9.1	61	64
	3,400	3,300	8.5	9.1	29	30
	4,900	4,800	9.6	9.8	47	47
	51,100	49,500	9.0	9.6	460	476
. Dist. (2)						
	3,600	3,800	8.6	9.2	31	35
	3,900	3,400	8.2	8.8	32	30
	1,700	2,000	8.8	9.5	15	19
	1,400	1,400	8.6	9.3	12	13
ing	400	400	7.5	7.5	3	3
the Woods	400	500	7.5	8.0	3	4
	11,400	11,500	8.4	9.0	96	104
Dist. (3)						
	--	--	--	--	--	--
	--	--	--	--	--	--
s	3,500	3,800	8.3	8.7	29	33
	3,500	3,800	8.3	8.7	29	33
Dist. (4)						
e	2,600	2,300	10.4	12.2	27	28
	2,900	2,900	11.0	11.7	32	34
	21,000	19,900	11.2	11.6	236	231
	3,900	3,700	11.0	10.5	43	39
Parle	3,700	3,300	11.6	10.6	43	35
ill	44,100	43,600	10.5	11.1	461	484
	12,700	11,700	11.6	12.2	147	143
	2,000	2,000	11.5	12.0	23	24
	4,600	4,400	11.7	10.9	54	48
e	1,500	1,300	10.7	10.0	16	13
	2,000	2,000	10.5	10.0	21	20
edicine	4,500	4,500	10.9	10.7	49	48
	105,500	101,600	10.9	11.3	1,152	1,147
st. (5)						
	17,000	17,600	9.9	10.2	169	180
	24,000	24,100	10.8	11.2	259	270
l	12,700	11,900	12.0	11.9	152	142
	22,900	22,000	11.5	12.0	263	264
	17,900	16,600	11.0	12.0	197	199
	32,600	32,600	10.0	10.7	326	349
	6,000	5,200	11.3	11.5	68	60
	14,300	13,500	12.2	11.9	174	161
e	4,200	4,200	10.7	12.1	45	51
	16,700	16,200	11.1	11.3	185	183
	71,500	70,200	10.0	10.7	717	751
	35,000	33,700	10.4	11.1	364	374
	8,000	9,000	9.6	9.6	77	86
	23,900	24,000	10.8	11.0	257	264
	306,700	300,300	10.6	11.1	3,253	3,334

District and county	Milk cows on farms		Production per cow		Tota
	1976	1977	1976	1977	1976
	Number		Thousand pounds		Mil
East Cent. Dist. (6)					
Aitkin	5,000	4,900	9.2	10.4	46
Anoka	1,700	1,900	10.6	11.1	18
Carlton	5,600	6,000	8.2	8.3	46
Chisago	7,800	7,800	10.1	10.5	79
Crow Wing	4,200	4,600	9.5	9.8	40
Hennepin	7,000	8,100	10.7	11.0	75
Isanti	6,300	6,100	10.6	11.3	67
Kanabec	9,200	9,300	10.0	10.5	92
Mille Lacs	15,000	14,500	10.0	11.0	150
Pine	15,000	14,700	9.0	9.5	135
Ramsey	--	--	--	--	--
Washington	4,800	5,300	11.5	11.5	55
Total	81,600	83,200	9.8	10.4	803
Southwest Dist. (7)					
Cottonwood	4,200	3,600	10.5	10.8	44
Jackson	3,400	3,300	10.6	10.6	36
Lincoln	6,700	6,000	11.2	10.7	75
Lyon	6,000	5,900	11.2	10.8	67
Murray	8,400	7,500	10.7	10.7	90
Nobles	8,000	7,100	10.7	10.7	86
Pipestone	9,000	8,300	10.9	11.0	98
Redwood	6,300	5,800	11.0	11.6	69
Rock	7,000	6,400	10.0	10.8	70
Total	59,000	53,900	10.8	10.9	635
South Cent. Dist. (8)					
Blue Earth	4,500	4,300	10.9	10.6	49
Brown	12,900	11,300	10.4	10.7	134
Faribault	4,600	4,000	9.3	10.5	43
Freeborn	9,800	9,700	9.4	10.5	92
LeSueur	9,200	9,200	11.3	11.4	104
Martin	3,100	3,000	9.4	10.3	29
Nicollet	9,100	8,900	10.9	11.3	99
Rice	17,900	18,400	10.7	11.2	192
Steele	11,800	11,600	10.7	11.1	126
Waseca	7,300	6,400	10.4	10.9	76
Watonwan	2,900	2,600	9.7	11.2	28
Total	93,100	89,400	10.4	11.0	972
Southeast Dist. (9)					
Dakota	9,400	9,800	12.2	12.9	115
Dodge	13,400	12,300	11.5	11.7	154
Fillmore	26,000	27,500	10.6	11.0	275
Goodhue	30,000	30,000	11.0	11.2	331
Houston	16,100	17,600	11.0	11.0	177
Mower	10,300	10,400	11.3	11.3	116
Olmsted	16,000	17,700	11.4	11.6	183
Wabasha	18,800	19,600	10.6	11.1	199
Winona	26,100	27,400	11.1	11.4	289
Total	166,100	172,300	11.1	11.4	1,839
STATE TOTAL	878,000	866,000	10.5	11.0	9,239

URCE: 1978 Minnesota Agricultural Statistics
Minnesota Crop and Livestock Reporting Service
St. Paul, MN.

G. REGIONAL SUMMARY

Table II-8 is a breakdown by Regional Development Commission of milk production, numbers of turkeys, beef cows and potatoe production. It is an indication of the position of Region 5 in the statewide picture.

1. Milk Production

   Region 5 is the fourth largest milk producing area in the State. In 1977, 884,000,000 lbs. of milk was produced in the region.

2. Turkeys

   Region 5 ranks fifth in the State in farms where turkeys are sold for slaughter. The region appears to be specializing in light breeds for slaughter.

3. Beef Cows

   The region is not among the major beef cow producing regions in the State.

4. Potatoes

   The same trend exists for potatoes as with beef cows. The quantities harvested are relatively high, but not when compared to other regions in the State.

Table II-9 indicates the percent change in major agricultural activities by county in Region 5 in comparison to State averages. Milk production in the region is the only sector which grew at a rate higher than that of the State of Minnesota. The other sectors, namely beef cattle and turkeys, grew at rates slower than the State, even though healthy increases were experienced in each sector.

TABLE II-8

BREAKDOWN OF MILK PRODUCTION, TURKEY, BEEF COWS, AND POTATOES BY REGIONAL DEVELOPMENT COMMISSION

RDC	MILK PRODUCTION (million pounds)	TURKEYS FOR FARMS WITH SALES OVER $2,500			COWS AND HEIFERS THAT HAD CALVED	IRISH POTATOES	
		Heavy breeds for slaughter (number)	Light breeds for slaughter (number)	Hens kept for breeding (number)	Beef Cows (number)	Acres	Quanity Harvested (number)
1	245	28	0 (D)	1900	71,066	59,731	9,352,086
2	123	165	0 (D)	8719	35,333	1,531	235,441
3	150	224,918	142,304	1,100	26,401	745	109,027
4	1120	1,739,990	922,608	481,833	69,249	24,136	3,798,727
5	884	770,641	1,387,525	27,300	41,495	2,747	356,502
6E	665	2,713,233	0 (D)	0 (D)	18,267	58[1]	611
6W	193	2,317,110	0 (D)	0 (D)	38,982	51[2]	4,257
7E	849	94,008	0	0	28,975	682	142,038
7W	1246	2,569,138	747,436	0 (D)	28,042	5,339	1,213,443
8	585	50	360	0 (D)	97,812	225	40,958
9	728	250,811	115,800	2300	37,873	169	1,766
10	1955	623,646	0 (D)	52,800	142,897	7,034[3]	1,294,349
11	728	84,671	22	37,810	19,900	2,871	628,045

*D=Data witheld to avoid disclosing information for individual farms.

1=In Meeker county less than half of the units reported.
2=In Lac qui Parle and Yellow Medicine counties less than half of the units reported.
3=In Dodge and Olmsted counties less than half of the units reported.

SOURCE: 1974 CENSUS OF AGRICULTURE
1978 MINNESOTA AGRICULTURAL STATISTICS

TABLE II-9

COMPARISON OF REGION 5 COUNTIES AND MINNESOTA

FOR

MILK PRODUCTION, BEEF, COWS, AND TURKEYS

	CASS	CROW WING	MORRISON	TODD	WADENA	MINNESOTA
Milk Production[1] (million pounds)						
1969	41	43	277	313	70	9,727
1977	30	45	349	374	86	9,483
% Change	-26.8	4.7	26.0	19.5	22:8	-2.6
Beef Cows[2]						
1970	7,500	2,800	7,600	6,600	3,200	493,000
1977	10,300	2,300	8,200	9,600	4,600	640,000
% Change	37.3	-17.9	7.9	45.5	43.8	29.8
Turkeys (for farms with sales over $2,500)[3]						
1969	27,021	23,331	232,620	75,982	(D)	2,106,800
1974	50	65,406	464,117	113,461	42,643	4,518,068
% Change	-99.8	180.3	99.5	49.3	-	114.5

SOURCE

(1) and (2) - 1971 and 1978 - Minnesota Agricultural Statistics
Minnesota Crop and Livestock Reporting Services
St. Paul, MN.

(3) - 1974 Census of Agriculture

Table II-10 outlines the feed purchases for farms in Region 5 with sales exceeding $2,500 and the average investment per farm for 1974.

TABLE II-10

PURCHASES FOR FARMS

With Sales over $2,500

1974

FEED

County	Number and % of farms in this class		Commercial Mix Tons	($1,000)	Feed Ingredients Tons	($1,000)	Whole Grains Tons	($1,000)	Other Tons	($1,000)	Commercial Fertilizer ($1,000)	Average Investment Per Farm
Cass County	432	65%	6,779	961	829	147	3,411	299	2,403	82	410	$4,396
Crow Wing	348	60%	4,303	601	2,008	343	4,980	483	2,949	56	194	$4,819
Morrison	1,603	82%	42,593	6,462	8,855	1,571	9,966	1,028	11,446	332	1,595	$6,855
Todd	1,698	82%	28,530	4,289	9,363	1,608	13,753	1,324	11,750	330	1,507	$5,335
Wadena	538	75%	27,406	4,148	2,115	377	4,274	405	2,806	80	487	$10,217
Region 5	4,619	77%	109,611	16,461	23,170	4,046	36,384	3,539	31,354	880	4,193	$6,304
Minnesota	83,743	88%	1,661,992	271,891	340,701	57,250	684,738	70,220	398,626	11,086	254,999	$7,946

Source: 1974 Census of Agriculture

*Definitions

Commercial Mix: concentrates and protein supplements.

Feed Ingredients: extra ingredients to be added to commercial mix (molasses, salt, etc.). Does not include any grain.

Whole grains: Corn, oats, etc., to be combined with other ingredients and protein supplements.

Morrison and Todd Counties have the highest percentage of farms in the category of sales greater than $2,500, followed by Wadena, Cass and Crow Wing Counties, respectively. These percentages are, however, still lower than statewide averages.

In terms of investments per farm, Wadena County has an extremely high cost due mainly to the high amounts purchased and also to the relatively small number of farms.

All of the counties except for Wadena County have an average investment that is lower than the statewide average.

TABLE II-11

CHARACTERISTICS OF

FARM OPERATORS

		BY PLACE OF RESIDENCE								DAYS WORKED OFF FARM							
County	Farm Operators	On Farm Operated		On Another Farm		In a rural area not on a farm		In a City, Town or Urban Area		Any Days		Less than 100 days		100 to 199 days		200 + days	
		Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Cass	686	547	79.7	10	1.5	10	1.5	18	2.6	316	46.1	59	8.6	78	11.4	179	26.1
Crow Wing	599	488	81.5	10	1.7	14	2.3	6	1.0	362	60.4	47	7.8	65	10.9	250	41.7
Morrison	2,022	1,601	79.2	40	2.0	14	0.7	29	1.4	703	34.8	129	6.4	167	8.3	407	20.1
Todd	2,142	1,694	79.1	43	2.0	12	0.6	41	1.9	702	32.8	145	6.8	143	6.7	414	19.3
Wadena	740	566	76.5	3	0.4	12	1.6	25	3.4	295	39.9	68	9.2	72	9.7	155	20.9
Region 5	6,189	4,896	79.1	106	1.7	62	1.0	119	1.9	2,378	38.4	448	7.2	525	8.5	1,405	22.7
Minnesota	97,693	73,990	75.7	3,525	3.6	849	0.9	3,904	4.0	32,260	33.0	9,193	9.4	5,884	6.0	17,183	17.6

Source: 1974 Census of Agriculture

Table II-11 illustrates the characteristics of farm operators by county within the region. The table is broken into two sections. First, the place of residence is analyzed and secondly, the number of days spent working off the farm is presented.

5. Place of Residence

The vast majority of farms in the region are owner operated, which is to say that the individual farmer lives where the farm is operated. These percentages are higher than statewide averages.

6. Days Off Farm

This is an indication of how intensely the farms are operated during the year. In the two principally non-agricultural oriented counties (Cass and Crow Wing) 46% and 60% of the respective farmers worked part of the time off the farm at another job. In the other three counties, this percentage is considerably less. When the number of days is broken down, it is interesting to note that in almost all of the counties, as the number of days worked off the farm increases, so does the percentage in that category. These percentages are also higher than statewide averages.

TABLE II-12

SPRINKLER IRRIGATED ACREAGE

1974[1], 1976 & 1977[2]

BY COUNTY

ACRES

COUNTY	1974	1976	1977
Cass	249	887	2,427
Crow Wing	131	366	799
Morrison	12	5,766	11,559
Todd	3,703	8,073	12,892
Wadena	1,845	9,692	15,671
Region 5	5,940	24,784	27,677
Minnesota	111,233	221,521	387,000

PERCENT OF TOTAL AGRICULTURAL LAND[3]

COUNTY	1974	1976	1977
Cass	0.3	0.4	1.1
Crow Wing	0.2	0.2	0.5
Morrison	0.005	1.2	2.3
Todd	1.4	1.6	2.5
Wadena	1.9	4.6	7.3
Region 5	0.8	1.6	1.7
Minnesota	0.5	0.7	1.3

SOURCE: 1) *1974 Census of Agriculture*
2) *University of Minnesota, Agricultural Extension Service*
3) *Based on data from 1974 Census of Agriculture and the Minnesota Crop and Livestock Reporting Service*

7. Irrigation

Table II-12 and II-13 illustrate the acreage by county devoted to sprinkler irrigation from 1974 to 1977. There are two observations to be made from this table. First, the number of acres devoted to sprinkler irrigation techniques within the counties of the region has risen drastically from 1974. The rate of growth for counties in Region 5 is significantly higher than the statewide average. However, when comparing the number of acres in irrigation to the total number of acres in agriculture, an increase has taken place. This increase, though larger than the statewide average, still represents a very small proportion of the region's agricultural land. A potential exists for increased use of irrigation within the region to assist in the production of the major crops.

TABLE II-13

IRRIGATION

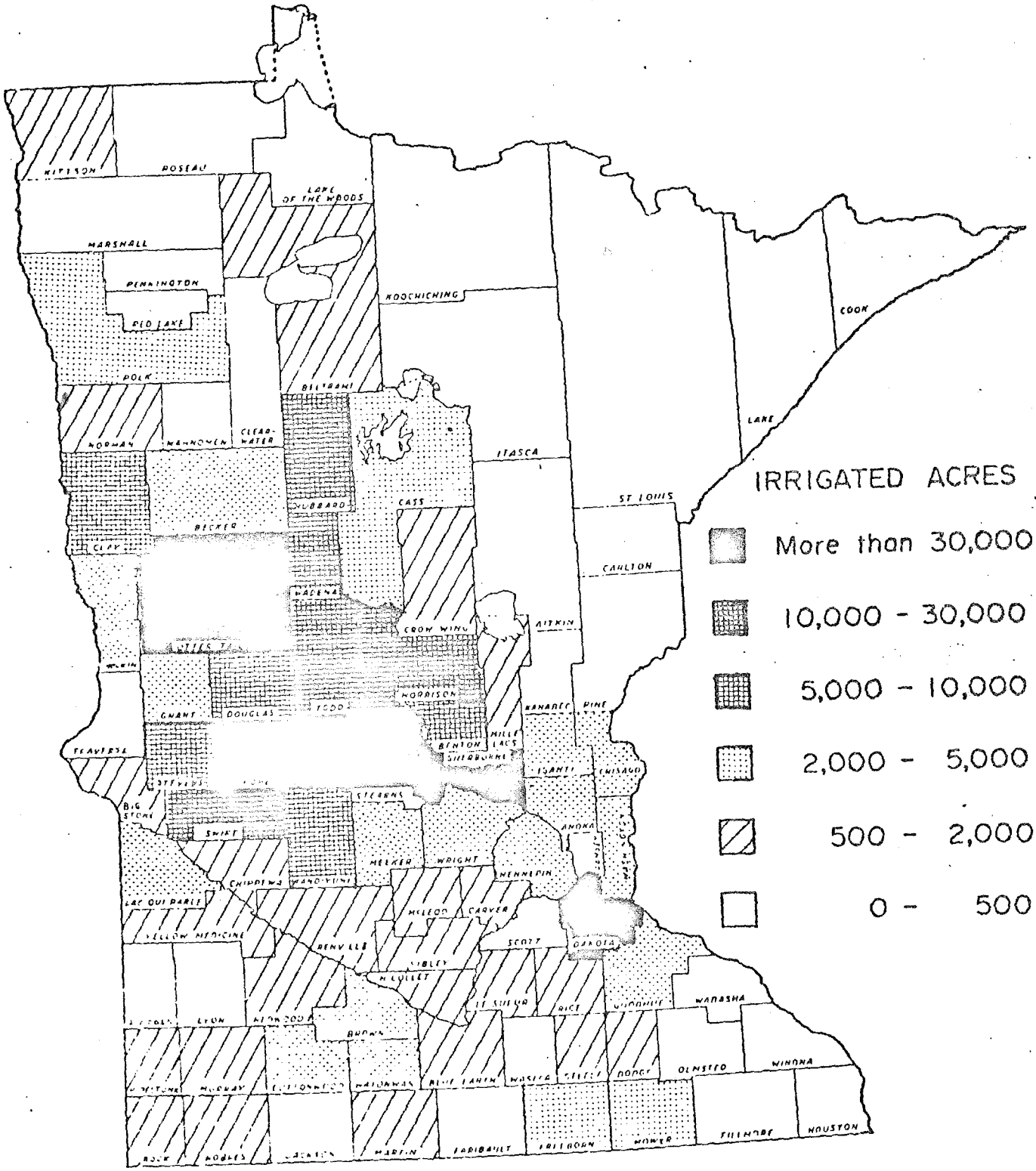
1974

County	Farms with Irrigation		Land Irrigated		Land in Irrigated Farms		FARMS WITH SALES OVER $2,500													
							Land Irrigated		Land in Irrigated Farms				Harvested Cropland Irrigated				Land Irrigated by Sprinklers			
	Number	%	Acres	%	Acres	%	Farms	%	Acres	%	Acres	%	Farms	%	Acres	%	Farms	%	Acres	%
Cass	9	1.4	679	.8	3,691	4.1	8	1.9	669	.9	3,611	4.8	7	1.7	549	1.2	5	1.2	249	.3
Crow Wing	6	1.0	143	.2	1,378	2.0	4	1.1	141	.2	1,370	2.4	4	1.2	141	.4	3	.9	131	.2
Morrison	4	.2	49	.02	232	.09	3	.2	12	.01	112	.05	3	.2	12	.01	3	.2	12	.005
Todd	26	1.2	4,249	1.7	11,831	4.6	25	1.5	4,248	1.8	11,756	5.0	25	1.5	4,248	2.3	21	1.2	3,703	1.4
Wadena	38	5.3	1,871	1.9	13,287	13.7	36	6.7	1,857	2.2	12,967	15.3	36	6.9	1,847	3.0	35	6.5	1,845	1.9
Region 5	83	1.4	6,991	.9	30,419	4.0	76	1.6	6,927	1.3	29,816	4.4	75	1.7	6,797	1.4	67	1.5	5,940	.8
Minnesota	853	.9	77,823	.4	335,567	1.6	755	.8	77,112	.4	325,371	1.6	746	.9	74,769	.4	647	.8	64,981	.5

SOURCE: 1974 Census of Agriculture

MAP II-1

SPRINKLER IRRIGATED ACREAGE
MINNESOTA
1977 DATA



A. Beef Processing Alternatives

Chapter II of this report has identified that Morrison and Todd Counties have one of the highest production totals for cattle and calves in the State. Although Todd and Morrison Counties account for approximately 70% of the region's cattle and calf inventory, they only account for 5% of the statewide inventory. Due to the small amount of cattle and calf inventory actually produced in Region 5, the report has not investigated alternatives in cattle and calf processing.

B. Dairy Processing Alternatives

Minnesota has ranked first nationally in non-fat dry milk and creamery butter production. Differing consumer trends are affecting this sector in various ways. Processing volumes of non-fat dry milk and butter have been declining in response to reduced consumer demand. Butter production has declined by 35% between 1965 and 1974 while non-fat dry milk production has declined by 54% during the same time period. Cheese and ice cream production has steadily increased in Minnesota, this has produced guarded optimism in a somewhat troubled industry.

Analysis of milk processing was, therefore, limited to the production of cheese.

1. Cheese Processing Centers

Since the introduction of refrigerated semi-trailer milk trucks, the location of milk processing has not been limited to the area of production. An example of the extent of transportation involved in milk processing can be made with the Mid-America Dairyment Cooperative Plant located in Bertha, Minnesota. This plant collects four to six semi-truck loads of bulk milk per day and hauls the product to a plant in

Fergus Falls, Minnesota. The Fergus Falls plant then processes the milk into cheese and the whey by-product is then shipped back to the Bertha, Minnesota plant for drying. The examples of the transportation distances readily identifies the ability of milk processing to be located either at the source of production or the market area.

Cheese processors were contacted throughout the State and Chart III-1 identifies parameters of their operations. A great variety exists in the actual minimum requirements of raw milk. This results from the apparent remnants of creameries which continue to operate and market their products regionally within the State to the National Cooperatives which market their products on a worldwide scale.

A majority of the processors who responded to the survey indicated that a minimum of one million pounds of raw milk is necessary for production of cheese.

CHART III-1

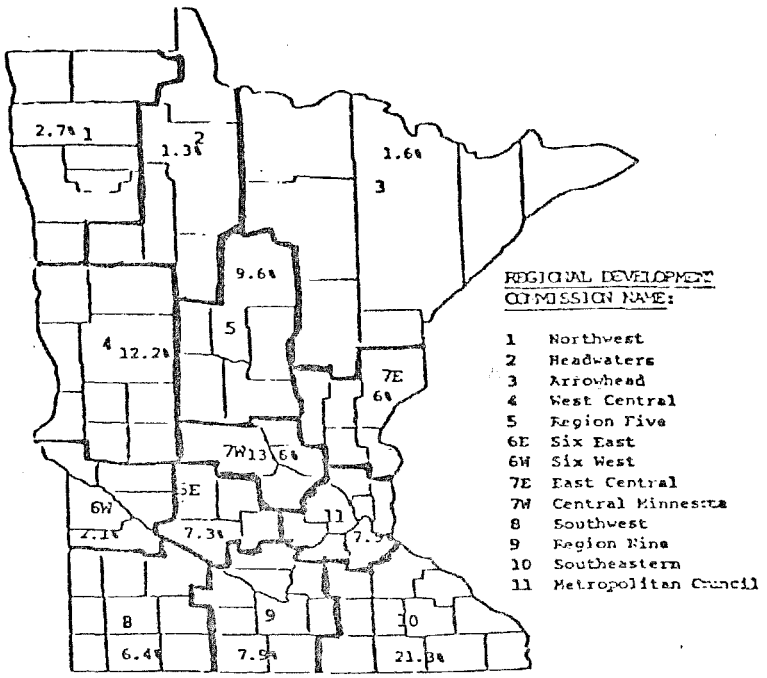
MAXIMUM AND MINIMUM FOR MILK PROCESSING

Company	Maximum Peak Output of Plant	Raw Materials	
		Minimum Requirements	Input Necessary for Best Operation
A	110,000 lbs/day	1,100,000 lbs/day	1,500,000 lbs/day
B	150,000 lbs/day cheese	1,100,000 lbs/day	1,000,000 lbs/day
C	108,500 lbs/day	1,085,000 lbs/day	980,000 lbs/day
D	775,000 lbs/day	5,000,000 lbs/day	775,000 lbs/day

CHAPTER III MARKETING OF AGRICULTURAL PRODUCTS

CHART III-1 (continued)

FREQUENCY DISTRIBUTION OF MILK PRODUCTION BY REGION



2. Future Potential for Development of Cheese Processing

The unique nature of cheese processing does not necessarily lend itself to maximizing output at the loss of product taste and consistency. Maximizing cheese production can best be accomplished today and in the foreseeable future by coordinating the talents of the cheesemaker with modern processing techniques.

3. Status of Existing Plants

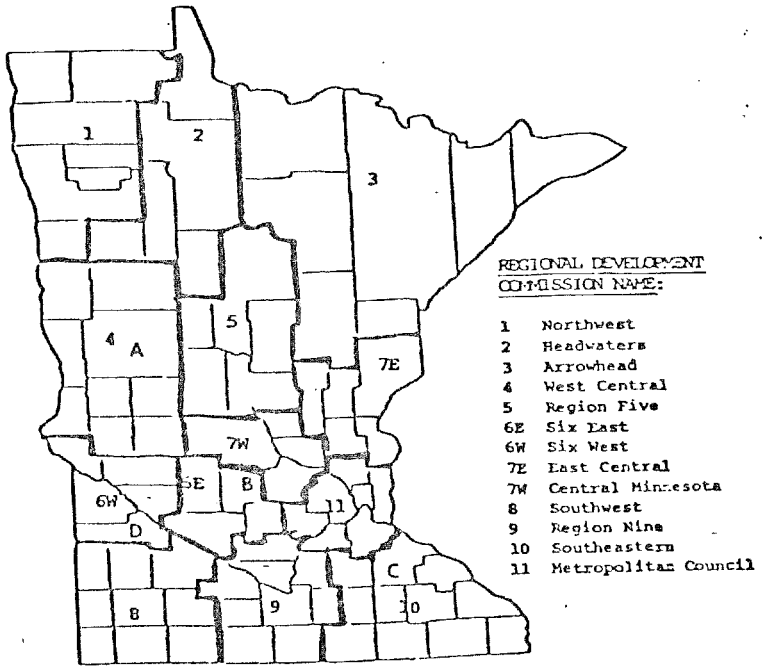
Chart III-2 points out that expansion of cheese processing facilities in Minnesota is not presently a promising possibility. Many of the plants are not operating at a break even level. Many small cooperative creameries remain in operation having a negative effect on both the producers and consumers in the market area. On the other hand, many of the larger plants were designed for large production amounts and have not been able to obtain the necessary raw materials to operate at a good level.

CHART III-6

POTENTIAL FOR EXPANSION IN MILK PROCESSING

Company	Present Operation level	Expansion Point	$ Amount to Duplicate Plant
A	750,000 lbs/week cheese	none planned at present	$10 - $12 million
B	105,000 lbs/day	none planned at present	$9 - $12 million
C	1,000,000 lbs/day	expanding at present	$1,300,000
D	750,000 lbs/day	none planned at present	$10,000,000

LOCATION OF MILK PROCESSING PLANTS SURVEYED



5. Transportation Impact

Significant quantities of raw milk are transported around the State. When energy costs begin to escalate, these massive shipments may become too expensive and the raw milk will have to be processed locally, therefore reducing the overall weight and transportation costs.

C. Turkey Processing Alternatives

There is one major trend in turkey processing both in Minnesota and the United States that can be clearly identified: there has been a rapid decline in the number of turkey processors, and an associated increase in the growth of integrated processing organizations. The result of this integration is the emergence of very large producers. In the State of Minnesota the observation can be made that approximately 30% of the birds needed for processing are currently raised by the producers who have also developed their own marketing skills. The increase in turkey processing has primarily occurred because of new products developed in addition to the standard frozen, canned and fresh products. We find that today over 50% of all turkeys produced are processed into cut-up products; whereas, in 1960 over 80% of all turkeys produced were marketed in the form of whole birds. The impressive rate of turkey production growth in Minnesota can be shown in the period from 1961 to 1971 where the industry grew by over 39%, while in the entire United States the industry grew by just 19%. With this increase in production the average producer in Minnesota

handles approximately 40,000 turkeys per year, whereas ten years ago the average may have been only 10,000 birds. With this increase in production, it is very doubtful there will be a significant increase in the number of producers. In 1971, six counties in Minnesota continued to top producers and accounted for over 50% of the total cash receipts for turkey production. As production increased significantly by 1974, the same six counties produced 40% of total production in the State.

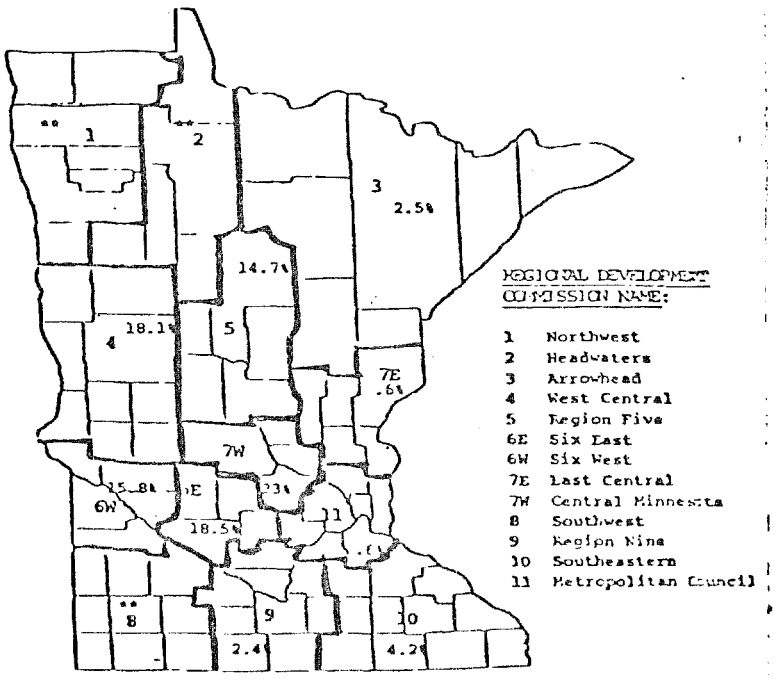
1. Production Centers in the Central Minnesota Area

The six counties with highest production are clustered in central Minnesota and are also near the center of processing facilities. Map III-1 identifies the distribution of turkey production by regions in Minnesota.

MAP III-1

FREQUENCY DISTRIBUTION OF TURKEY PRODUCTION

BY REGION



** Data Insufficient For Analysis

2. Types of Processing Available

The trend noted in the previous section identified the increasing number of speciality products rather than processing of whole turkeys. In the speciality category there has also been a market shift to frozen products rather than canned products. USDA in 1970 estimated the per capita turkey consumption would increase by 40% during the 70's. Comparing cash receipts in turkey production from 1971 to 1974, there was a 231% gain within a three year period. Turkey speciality products appear to be gaining very rapid consumer acceptance especially on a year around basis. Another important factor to note is that turkey consumption will also benefit from its relative price position to beef and pork. As beef and pork prices continue to esculate relative to poultry prices, turkey consumption should continue to grow at a rapid rate.

3. Volumes necessary for break even in Turkey Production Processing

Mr. Keith Barnes, Vice President of poultry division for Land-O-Lakes, responded to an inquiry from Region 5 requesting information on the number of birds required for a processing operation. Major points identified in his letter included a need for minimum of 1,300,000 heavy bred turkeys to support a plant. This plant would produce approximately 20,000,000 lbs. of eviscerated turkeys. Processing the 1,300,000 birds would bring the cost to approximately 14¢ per pound for procuring the birds at the farm, processing, freezing, marketing and distribution. By reducing the scale of the operation, the cost would escalate sharply. On the other hand, if the operation were significantly larger, costs could be reduced slightly, but processing is extremely labor intensive and the greatest share of expenses are of such a variable type it is

difficult to determine whether cost increase would increase the volume of production.

4. Future Potential for New Technology in Turkey Processing

The previous section has identified that turkey processing is extremely labor intensive and the greatest share of expenses are of variable type and would increase with volume. The problem faced by producers today is the proportionate increase in disease which accompanies increase in production. About half the turkey losses are presently caused by disease. Short range savings will most likely occur, therefore, in the form of disease control rather than new processing technology.

5. Status of Existing Plants

The response to the survey by turkey processors was not large enough to report without disclosing information about individual operations. However, Land-O-Lakes is discussed as a reference point. It appears that most of the plants are operating at or below initial construction capacities. Turkey production significantly increased after the plants were initially constructed, even though turdey processing was primarily seasonal in nature. Processing subsequently shifted to complete year around production. Responses by companies shows that no expansion is anticipated in the near future.

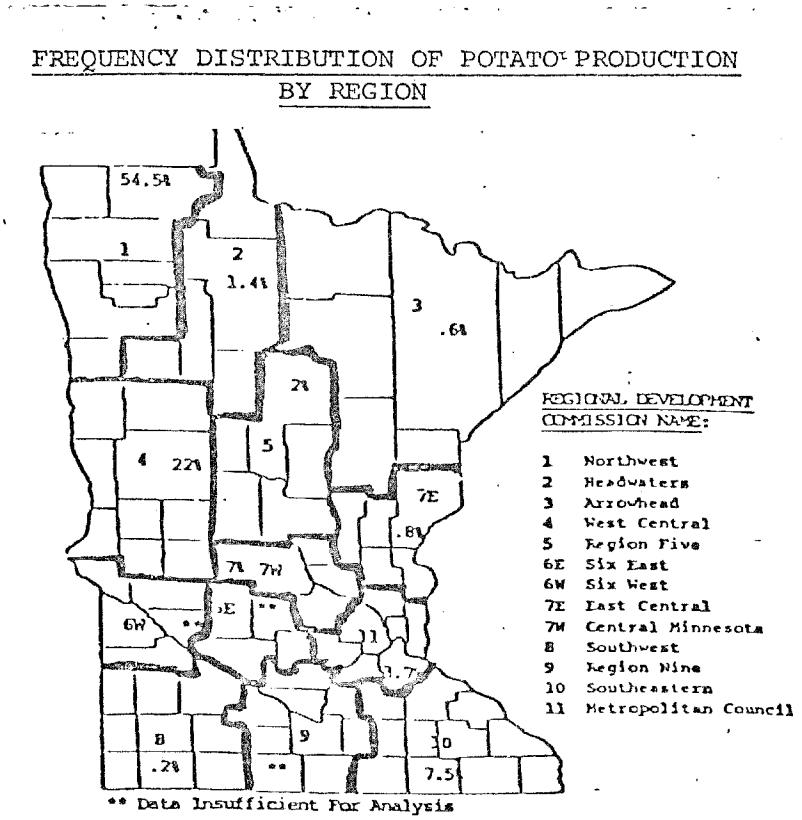
D. Processing Alternatives For Potatoes

During the last two decades, there have been major changes in the potatoe industry similar to those identified in the turkey business in Minnesota and in the United States. Overall acreages have declined very slowly in Minnesota and the Red River Valley. This decline in acreage has had a reverse impact on the production figure. Minnesota has continued to decrease in overall production figures in the entire United States. With that decline, potatoe production in Minnesota has become more concentrated in the Red River Valley. This geographical region: accounted for 77% of the total production in 1970. It is expected that this geographical concentration is likely to continue.

1. Locations In The State Where Potatoe Products Are Processed

Map III-2 identifies the concentrations of potatoe production by Region.

MAP III-2



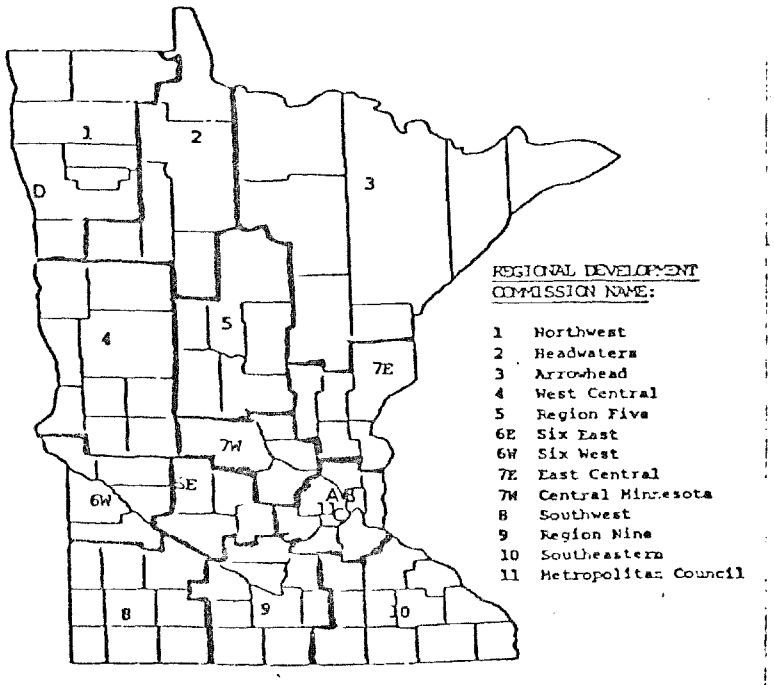
2. Type of Processing Currently Being Done in Minnesota

CHART III-4

MAXIMUM AND MINIMUM FOR POTATOE PROCESSING

Company	Maximum Peak Output of Plant	Raw Materials	
		Minimum Requirements	Input Necessary for Best Operation
A	274,000 lbs/day	608,200 lbs/day	1,000,000 lbs/day
B	60,000 lbs/day	240,000 lbs/day	80,000-90,000 lbs/day
C	14,000 lbs/day	51,200 lbs/day	51,200 lbs/day
D.	80,000 lbs/day	320,000 lbs/day	320,000 lbs/day

LOCATION OF POTATO PROCESSING PLANTS SURVEYED



3. Volume Necessary for Break Even in Potatoe Production

CHART III-5

POTENTIAL FOR EXPANSION IN POTATOE PROCESSING

Company	Present Operation level	Expansion Point	$ Amount to Duplicate Plant
A	205,500 lbs/day	none planned at present	$5,000,000
B	22,000-24,000 lbs/day	none planned at present	$2.5 to $3 million
C	14,000 lbs/day	none planned at present	unknown
D	80,000 lbs/day	none planned at present	unknown

4. Future Potentials for New Technology in Potatoe Processing

Information received from dehydration processors indicates that the potatoe industry is on the threshold of technological improvements which should have a positive impact on the total market for potatoe flakes, slices, and other new products becoming more fleasible with innovations. In 1962, three types of potatoe processing accounted for 22% of the total potatoe consumption: potatoe chips, frozen potatoes, and dehydrated potatoes. By 1970, this consumption increased to 42%. By 1980, the above mentioned new speciality products consumption will increase to 58% of total potatoe consumption. Of the three speciality products, frozen potatoes have shown the greatest gain in per capita consumption due to increasing demands placed by the institutional market. Dehydrated potatoe products have also shown impressive gains during the last decade because of retail market demands. Potatoe chip and dehydrated potatoe markets are expected to maintain retail orientation and the institutional markets demand for dehydrated potatoe flakes and slices will grow.

CHAPTER IV POTENTIALS OF AGRICULTURAL PRODUCTION AND PROCESSING

A. Recommendations for Agricultural Processing by Sector

1. Potatoes

Todd County is the only county in Region 5 in which potatoe production activity is currently large enough to be reported. Yields in Todd County are higher than statewide figures, however, the acres actually harvested are too small to effect statewide production. The Minnesota Crop and Livestock Reporting Service Annual Yearbook of 1978 identified that Todd County produced only 2.2% of the total potatoe production in the State.

Although the trend identified in the Crop and Livestock Reporting Service data for potatoe yield per acre in Todd County shows growth potential, it is not likely that the increased potatoe production will carry any significant growth relationship to overall production in the State.

Data obtained from the survey sent out to potatoe processors in August of 1978 indicates that processing is normally done in two areas of the State: one is the area of actual potatoe production, the other is the location of high urban population densities. Therefore it does not seem practical for Region 5, or Todd County specifically, to consider potatoe processing as a viable processing alternative.

2. Cattle Processing Recommendations

Chapter II of this report has identified Morrison and Todd Counties as locations of highest production totals for cattle and calves in the State. Although Todd and Morrison Counties account for approximately 70% of the Region's cattle and calf inventory, they only account for 5% of the statewide inventory. Due to the small amount of cattle and calf inventory actually produced in Region 5, the report has not investigated alternatives in cattle and calf processing.

3. Poultry Processing Recommendations

At first glance poultry production appears to have one of the greatest potentials for processing in Region 5. Minnesota Crop and Livestock Reporting Service estimates that the growth in turkey production from 1969 to 1974 was almost 100%. Turkey producers in the Swanville area also have indicated possibility for doubling production from 1978 to 1980. This data appears to be a favorable indicator for the need for additional turkey processing facilities.

Data supplied from turkey processors in the central Minnesota area shows that the turkey production data may be misleading as to need for additional processing facilities. Processors contacted in the survey indicated that they are not operating at maximum capacity and any additional production contemplated could easily be handled with existing facilities. It is feasible for turkey processing to become a potential in the long range in Region 5, but for the next three to five years any increase in turkey production can be handled by existing plants as identified in Chapter III.

4. Dairy Processing Recommendations

Dairy production in Region 5 has been one of the most stable agricultural activities. Minnesota Crop and Livestock Reporting Service estimated in 1978 that almost 10% of total milk production came from Region 5. Information obtained from the agricultural survey completed in August of 1978 indicates that most of this milk was exported outside of the region. Only two centers of dairy production in Region 5 actually process milk. Several other communities in Region 5 are collection points for over one million pounds of milk per day. These communities could be identified as potential sites for milk processing.

With the constant escalation of energy costs, one could expect that the continued trucking of bulk milk will become far more expensive than processing at a collection point. As an example, the City of Bertha, Minnesota, now collects over a million pounds of milk per day. The City has a creamery with the necessary space available for the production of cheese. Treatment of effluent from the processing facility could be accommodated by the existing treatment plant. Farmers are not currently being paid top dollar for milk produced in the area. Payments for bulk milk to the producers seem to be lower. The major commodity missing in this City seems to be the entrepreneurial desire or financial commitment and managerial commitment for the production of cheese.

5. Summary

Potatoes - Processing not recommended in Region 5 due to small production amounts in comparison to statewide figures.

Beef Cattle - Processing not recommended in Region 5 due to small production amounts in comparison to statewide figures.

Poultry - It is feasible for turkey processing to become a potential in the long range in Region 5, but for the next three to five years any increase in turkey production can be handled by existing plants as identified in Chapter III.

Dairy - Milk processing could be accomplished at collection points in Region 5 if transportation costs become prohibitively high to deter shipemnts of the raw material to processing facilities.

CHAPTER V PROBLEMS ENCOUNTERED IN DATA ANALYSIS

A. Validity of Existing Data

In the development of this study several major stumbling blocks were encountered which at first glance did not seem to be a problem. Volumes and volumes of agricultural production data was available in various census documents and in publications available from the Minnesota Crop and Livestock Reporting Service.

However, it must be recognized that all of the data presented in the tables and charts is the result of actual producers (farmers themselves) responding to surveys. Often times the farmers are reluctant to return the data to either the Federal Census of Agriculture or the Minnesota Crop and Livestock Reporting Service.

This apprehension on the part of producers needs to be overcome before an adequate assessment can be made of the agricultural situation in Minnesota. Many times when an agricultural producer responds to the survey this data can not be presented because it would identify the farmer as the chief producer of a particular crop. For instance, this has happened in Todd County with potatoes. This inability, to obtain conclusive data, represents a critical problem when one desires to investigate perhaps the most important industry in the State of Minnesota and the most significant industry in Region 5. Therefore sectors of agricultural production which represent over 10% of the region's output are not presented in the data.

B. Lack of Coordination Between Data Sources

Another problem encountered in agricultural production data surfaces from two different data sources. One, the U.S. Census of Agriculture

and the other a federally subsidized agency in the State of Minnesota: Minnesota Crop and Livestock Reporting Service. The Minnesota Crop and Livestock Reporting Service provides data on a yearly basis and the U.S. Census of Agriculture provides data on four-year basis. Very little data provided by the Minnesota Crop and Livestock Reporting Service is supplied by county. However, the U.S. Census of Agriculture supplies just about all of its data by county. Each of the above agencies seems to survey different farmers. Many times production data supplied by these surveyors cannot be compared. As the data was analyzed, it was difficult to determine what data was actually relevant to the report and which source could be depended upon for providing satisfactory information in Region 5.

C, Conclusion

The data and recommendations presented in this study will assist local entrepreneurs and elected officials in the development of future agricultural processing facilities in Region 5. This study will also serve as the foundation on which future agricultural development studies can be built upon.

APPENDIX

	CORN FOR GRAIN	OATS	ALL HAY	POTATOES
HIGH COUNTY				
1971	Todd 40,765	Todd 56,083	Todd 78,317	Todd 819
1974	Todd 35,977	Todd 49,562	Todd 79,231	Todd 1,896
LOW COUNTY				
1971	Cass 1,935	Cass 4,215	Wadena 29,905	Morrison 9
1974	Cass 1,693	Cass 2,360	Crow Wing 21,207	Morrison 0
AVERAGE COUNTY				
1971				
1974				

AVERAGE COUNTY ACREAGE

IN MINNESOTA(1)

	CORN	OATS	ALL HAY	POTATOES
1971	75,092	34,483	37,356	3,611
1974	79,770	24,713	35,172	3,944

(1) 1971: Acreage Harvested, for all crops
1974: Acreage Planted for corn, oats and potatoes; Acreage cut for hay

CASS COUNTY	CORN FOR GRAIN	OATS	ALL HAY	POTATOES
Hi Township (acres planted)				
1971	Becker 417	May 621	May 4605	Wilkinson 15
1974	Becker 579	May 414	May 4020	Turtle Lake 26
CROW WING COUNTY				
Hi Township (acres planted)				
1971	St. Mathias 480	St. Mathias 1200	Platte Lake 3151	Maple Grove 8
1974	Dagget Brook 960	Dagget Brook 2800	Platte Lake 2811	Maple Grove 8
MORRISON COUNTY				
Hi Township (acres planted)				
1971	Buckman 3304	Elmdale 2603	Buckman 6050	Swan River 8
1974	Buckman 3421	Elmdale 2452	Buckman 5086	Swan River 5
TODD COUNTY				
Hi Township (acres planted)				
1971	Hartford 2670	West Union 5158	Bertha 4347	Long Prairie 546
1974	Ward 2236	West Union 3864	Bertha 4679	Hartford 866
WADENA COUNTY				
Hi Township (acres planted)				
1971	Aldrich 2324	Aldrich 1869	Aldrich 3454	Wing River 40
1974	Wadena 2396	Wadena 1764	Rockwood 4083	Wing River 25

CASS COUNTY	CORN FOR GRAIN	OATS	ALL HAY	POTATOES
Lo Township (acres planted)				
1971	Fairview 2	Rogers 4	Fairview 60	Leech Lake & McKinley 1
1974	Maple 2	Bay Lake 4	Unorg.Dist.#4 25	Becker 24
CROW WING COUNTY				
Lo Township (acres planted)				
1971	Lake Edward 13	Jenkins 12	Mission 137	Platte Lake 2
1974	Pelican 3	Jenkins 12	Mission 117	Platte Lake 2
MORRISON COUNTY				
Lo Township (acres planted)				
1971	Motley 13	Clough 70	Rosing 73	Scandia Valley 1
1974	Motley 37	Rosing 15	Rosing 137	- 0
TODD COUNTY				
Lo Township (acres planted)				
1971	Villard 243	Little Elk 532	Turtle Creek 716	Burnhamville 13
1974	Villard 390	Villard 310	Villard 1355	Turtle Creek 5
WADENA COUNTY				
Lo Township (acres planted)				
1971	Lyons 14	Hunterville 43	Hunterville 548	Rockwood 1
1974	Hunterville 10	Hunterville 10	Hunterville 504	- 0

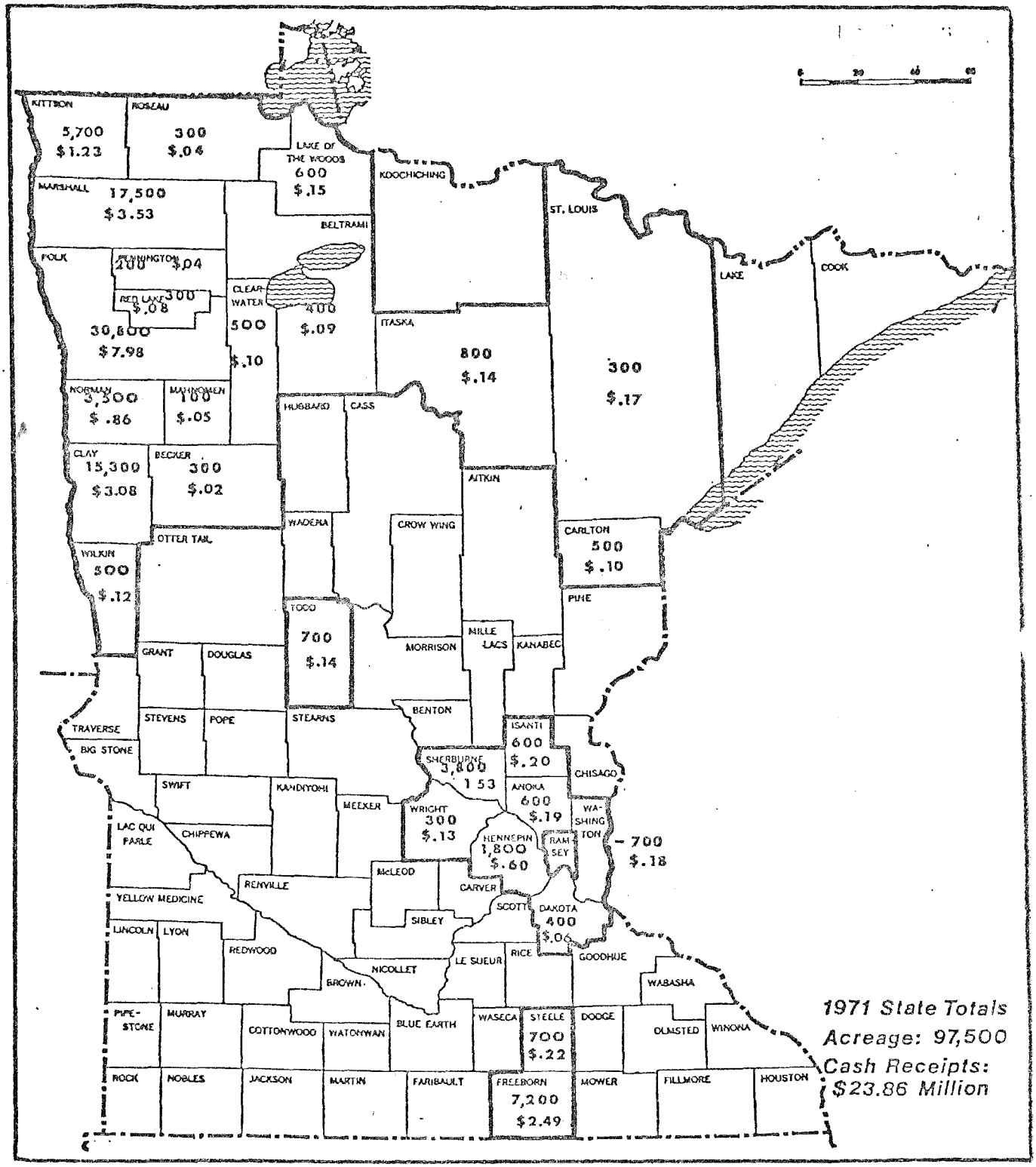


FIGURE 6-4

Potato Acreage and Cash Receipts by County, 1971

SOURCE: Minnesota Agricultural Statistics, Minn. Dept. of Agriculture

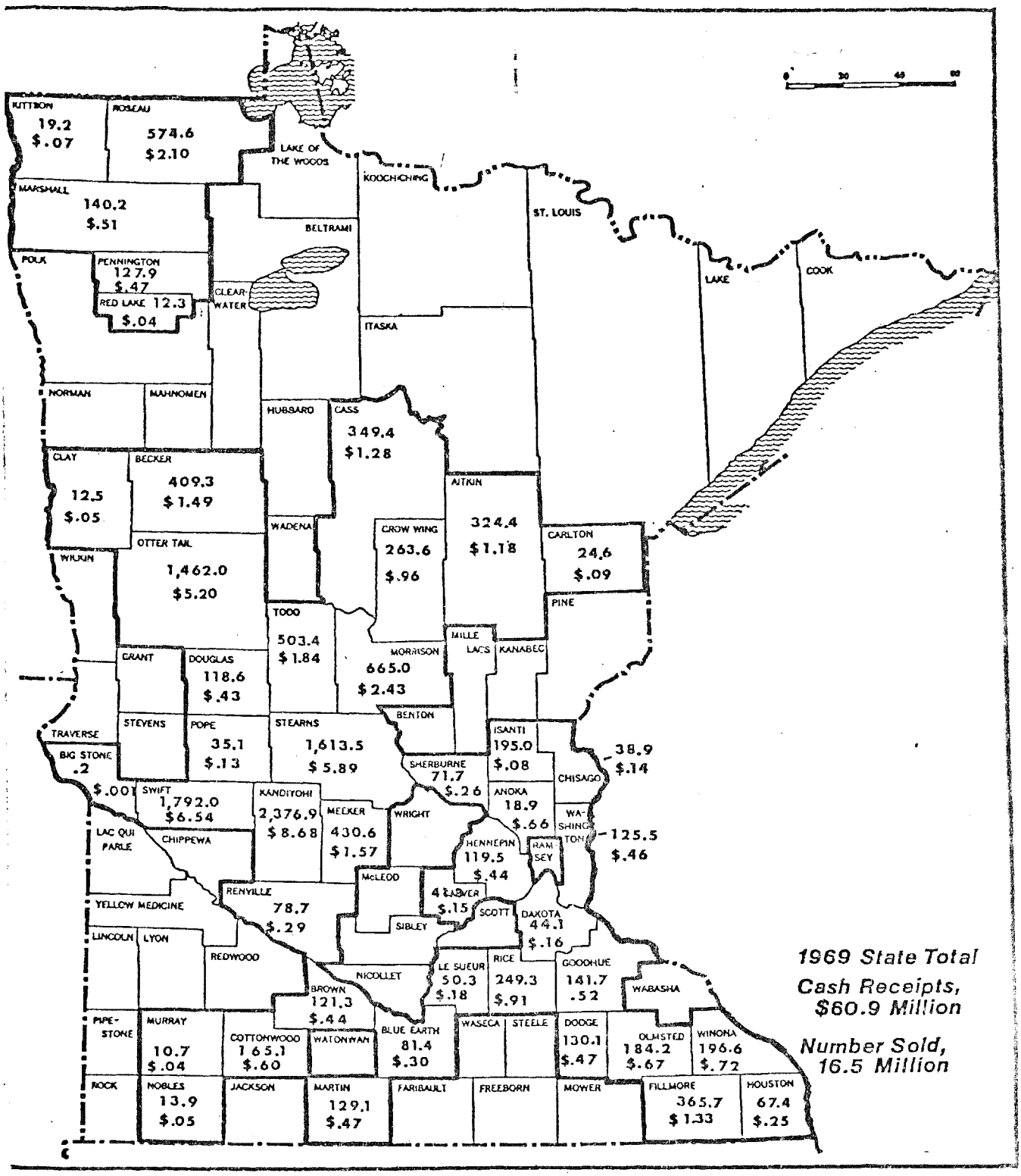


FIGURE 4-4

Number of Turkeys Sold and Cash Receipts by County, 1969

SOURCE: Minnesota Agricultural Statistics, Minnesota Dept. of Agriculture, 1970-72

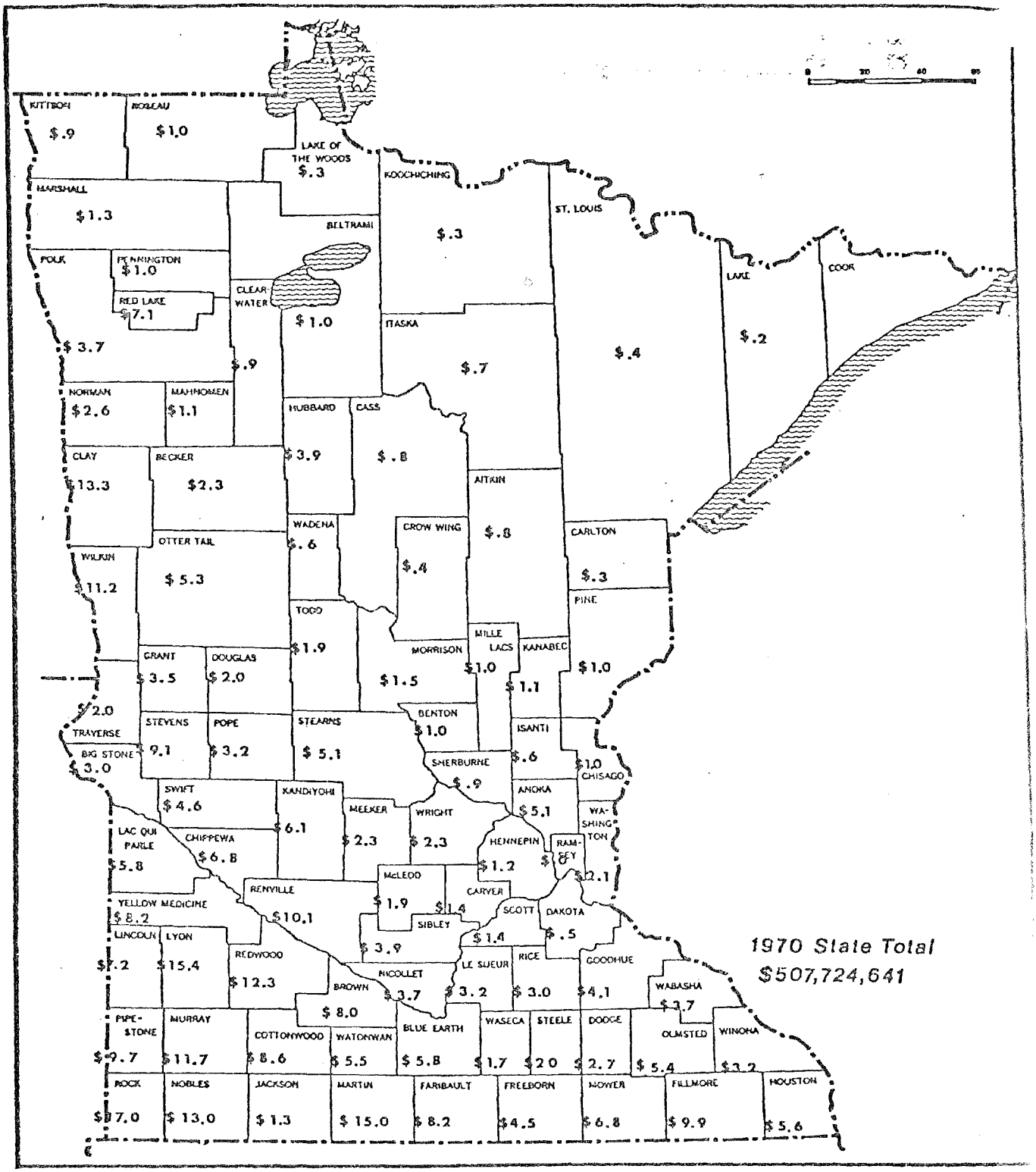
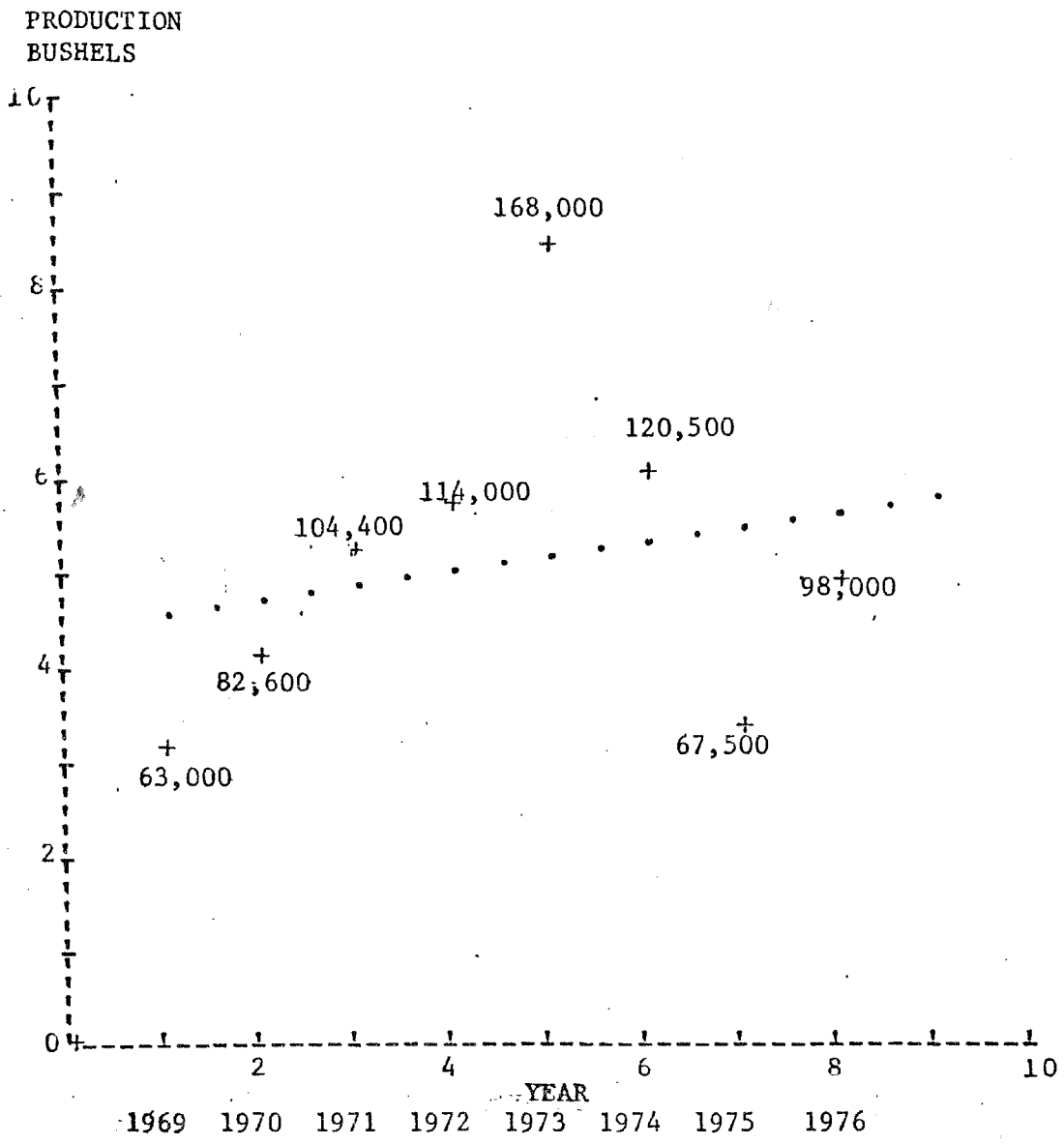


FIGURE 4-2

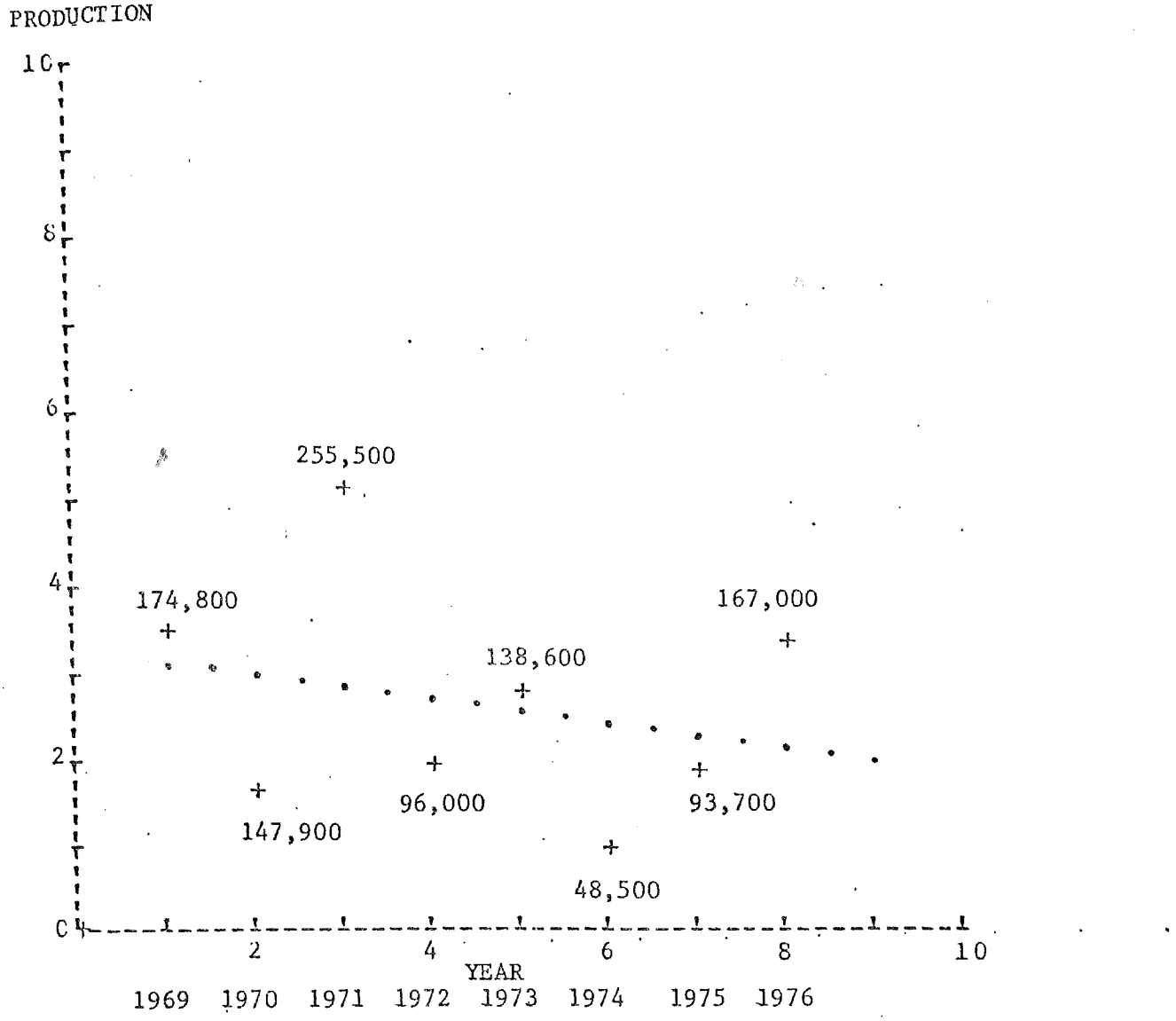
Beef Cash Receipts by County, 1970
(000's of Dollars)

SOURCE: Minnesota Agricultural Statistics, Minnesota Dept. of Agriculture, 1970

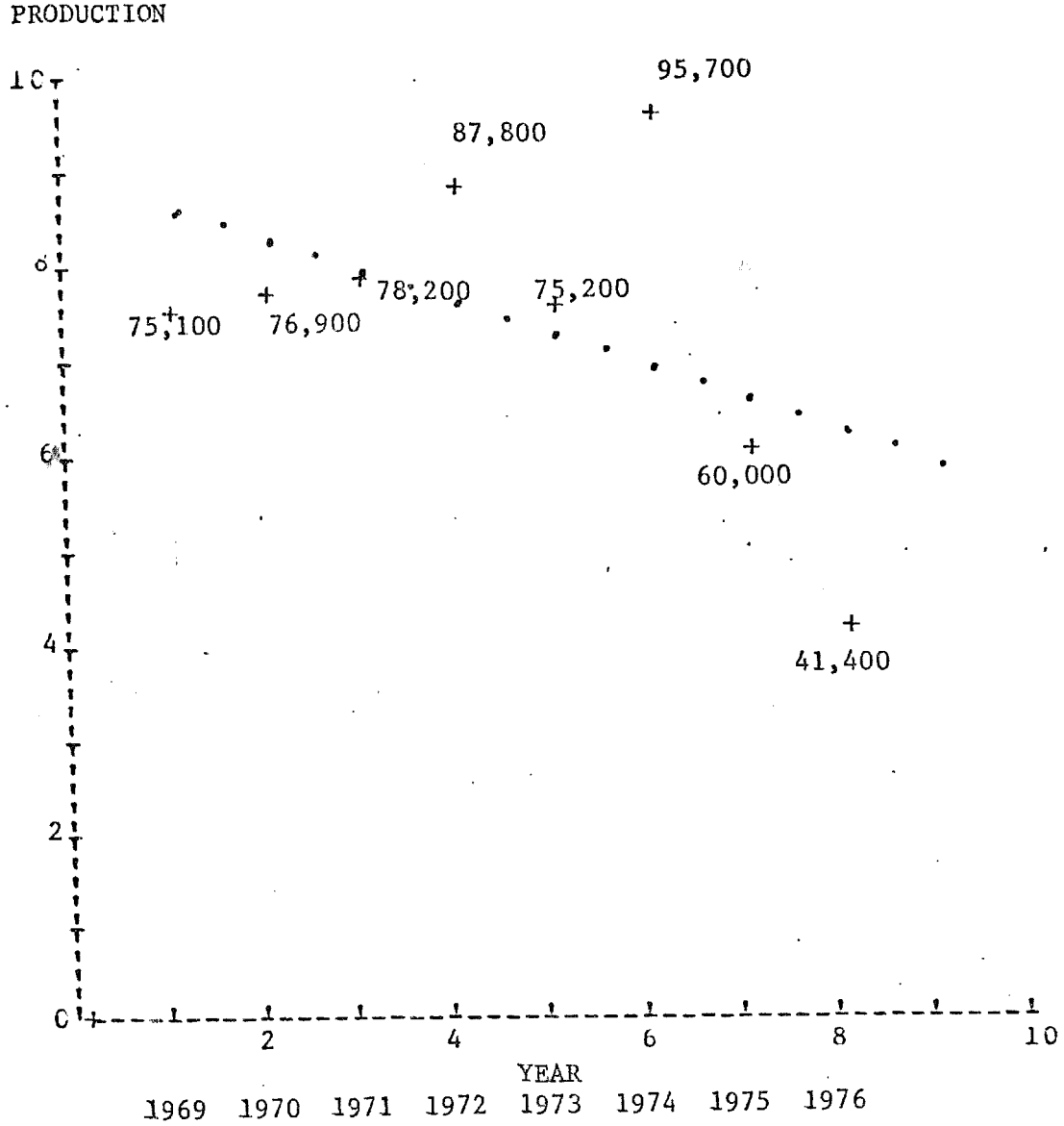
CASS COUNTY CORN PRODUCTION



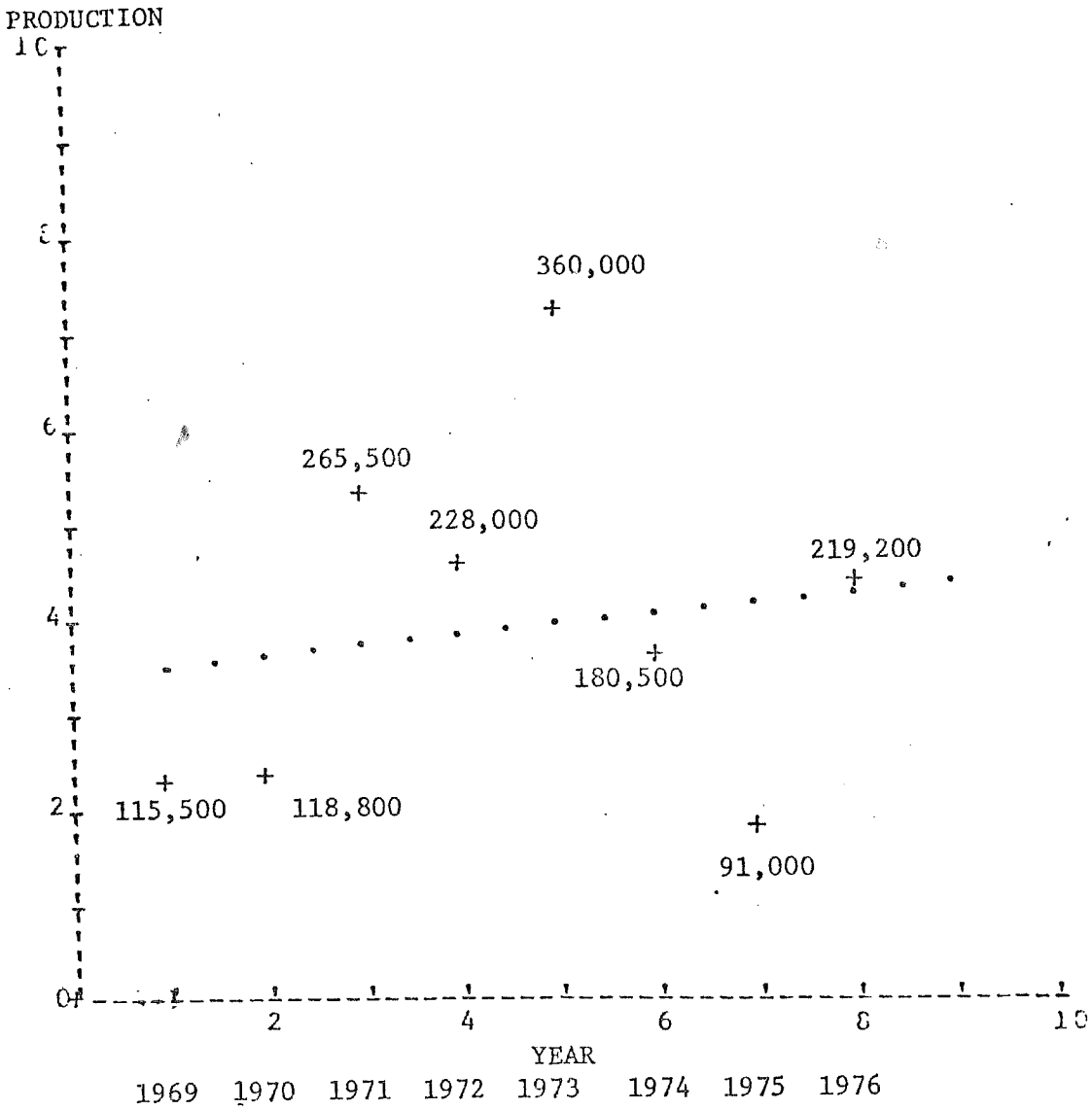
CASS COUNTY OATS PRODUCTION



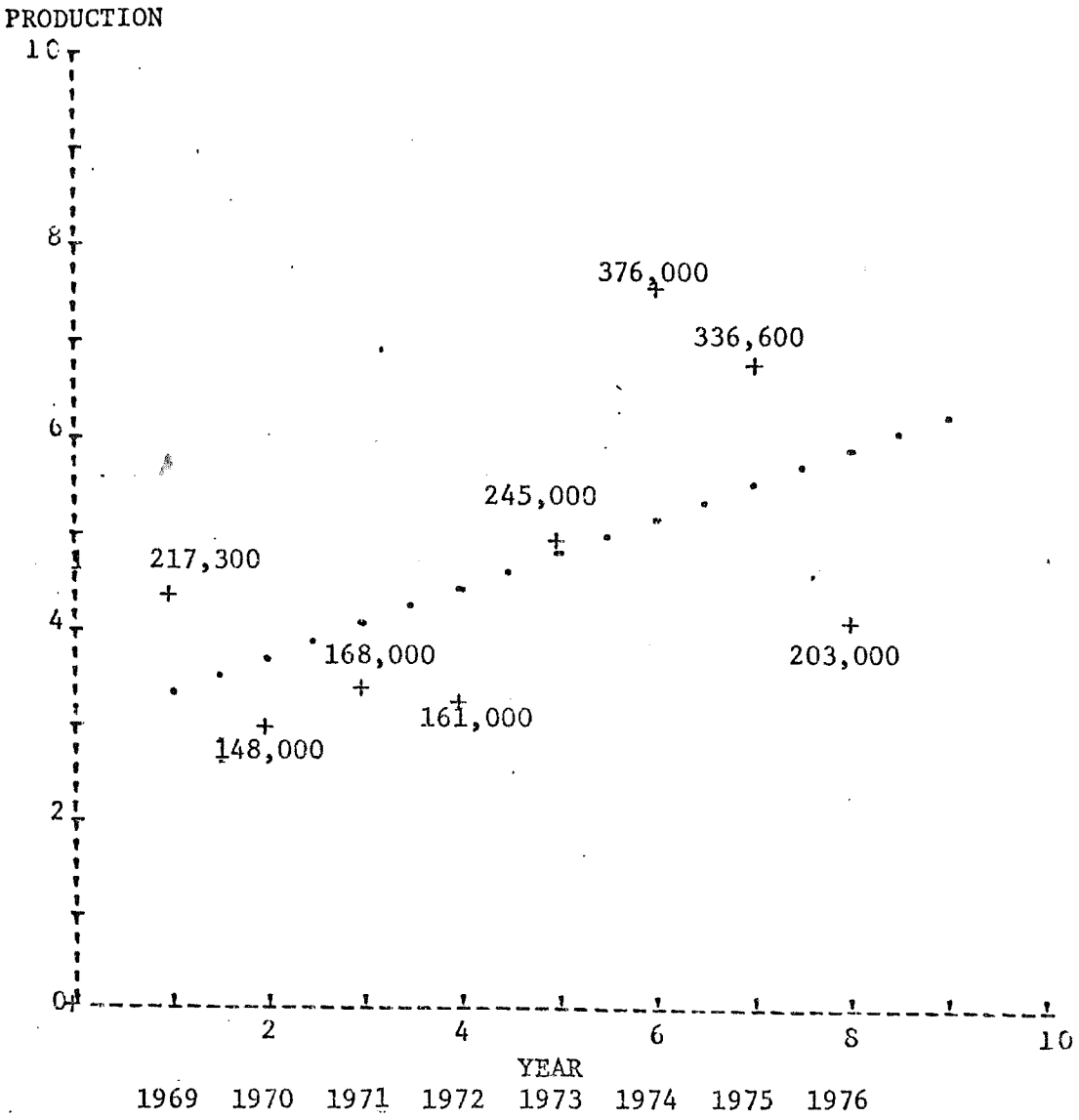
CASS COUNTY HAY PRODUCTION



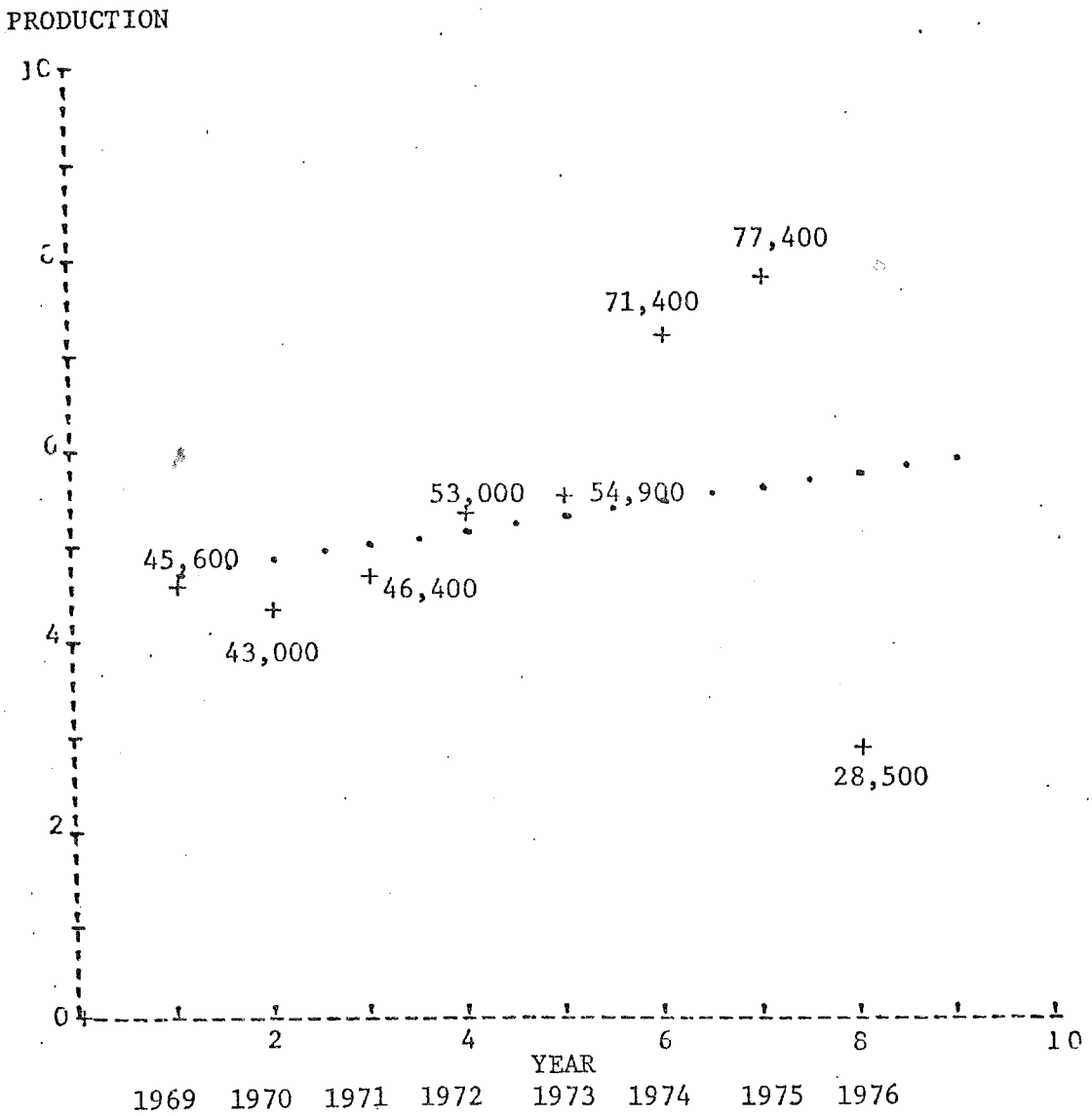
CROW WING COUNTY CORN PRODUCTION



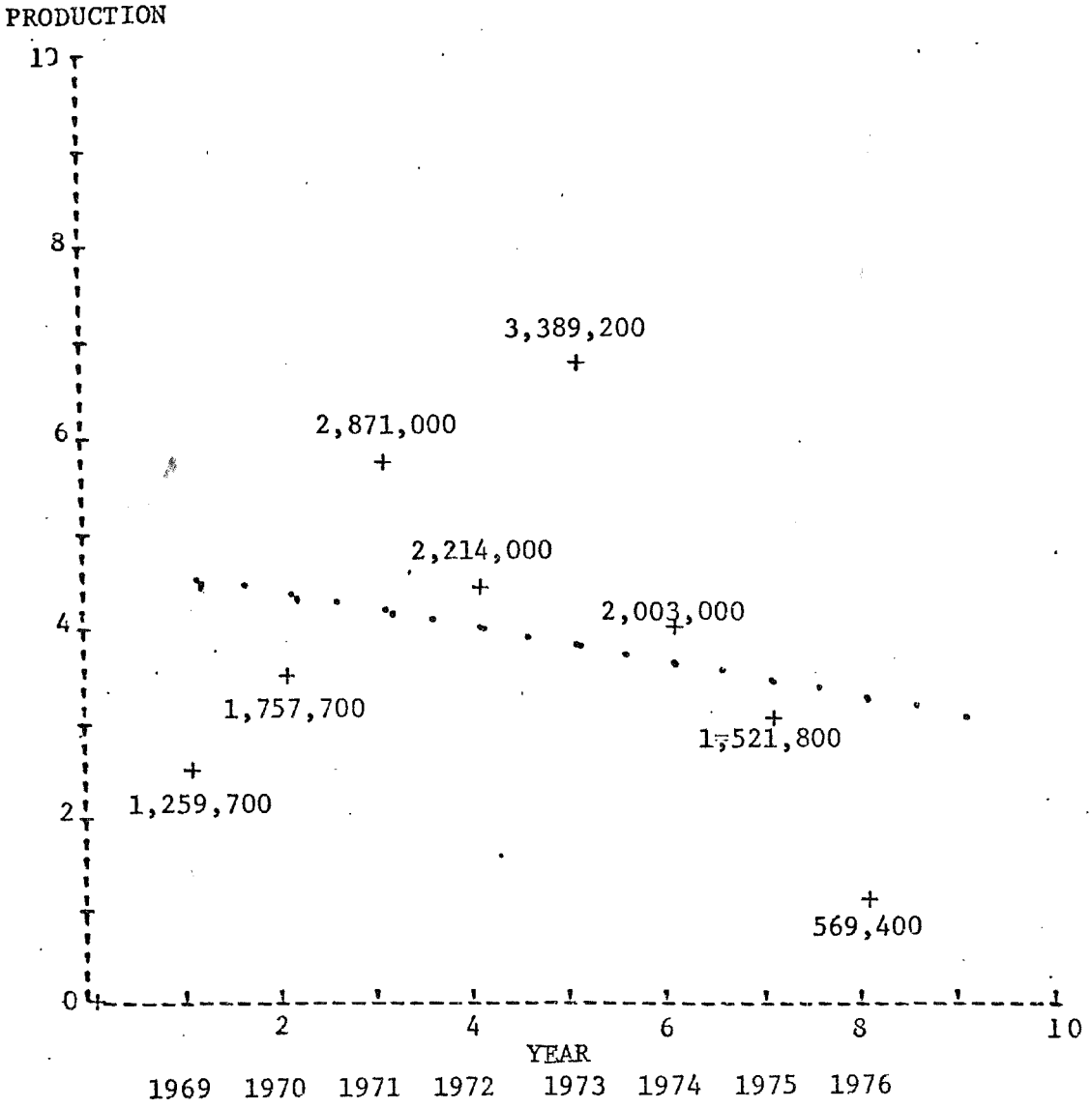
CROW WING COUNTY OATS PRODUCTION



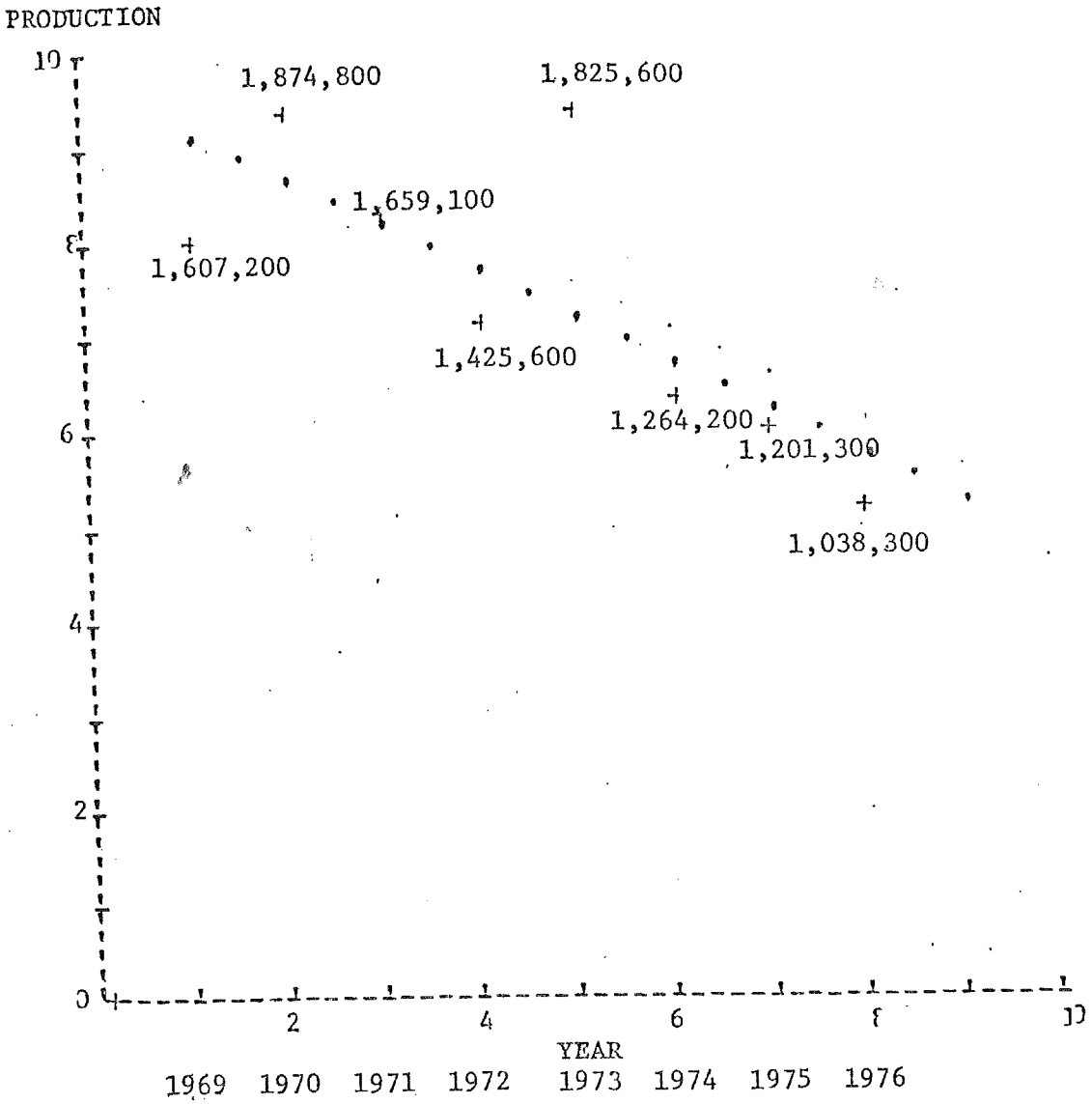
CROW WING COUNTY HAY PRODUCTION



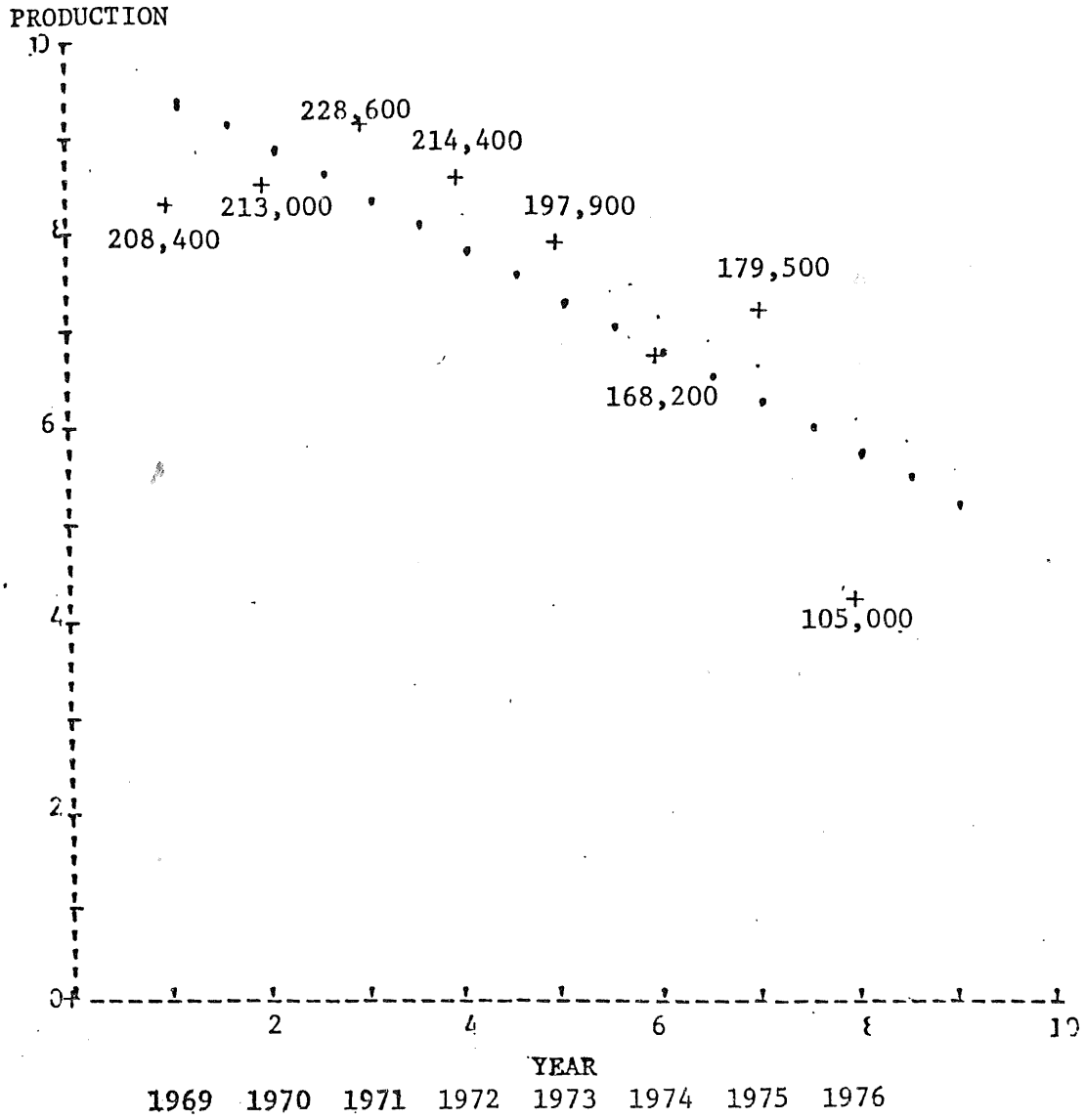
MORRISON COUNTY CORN PRODUCTION



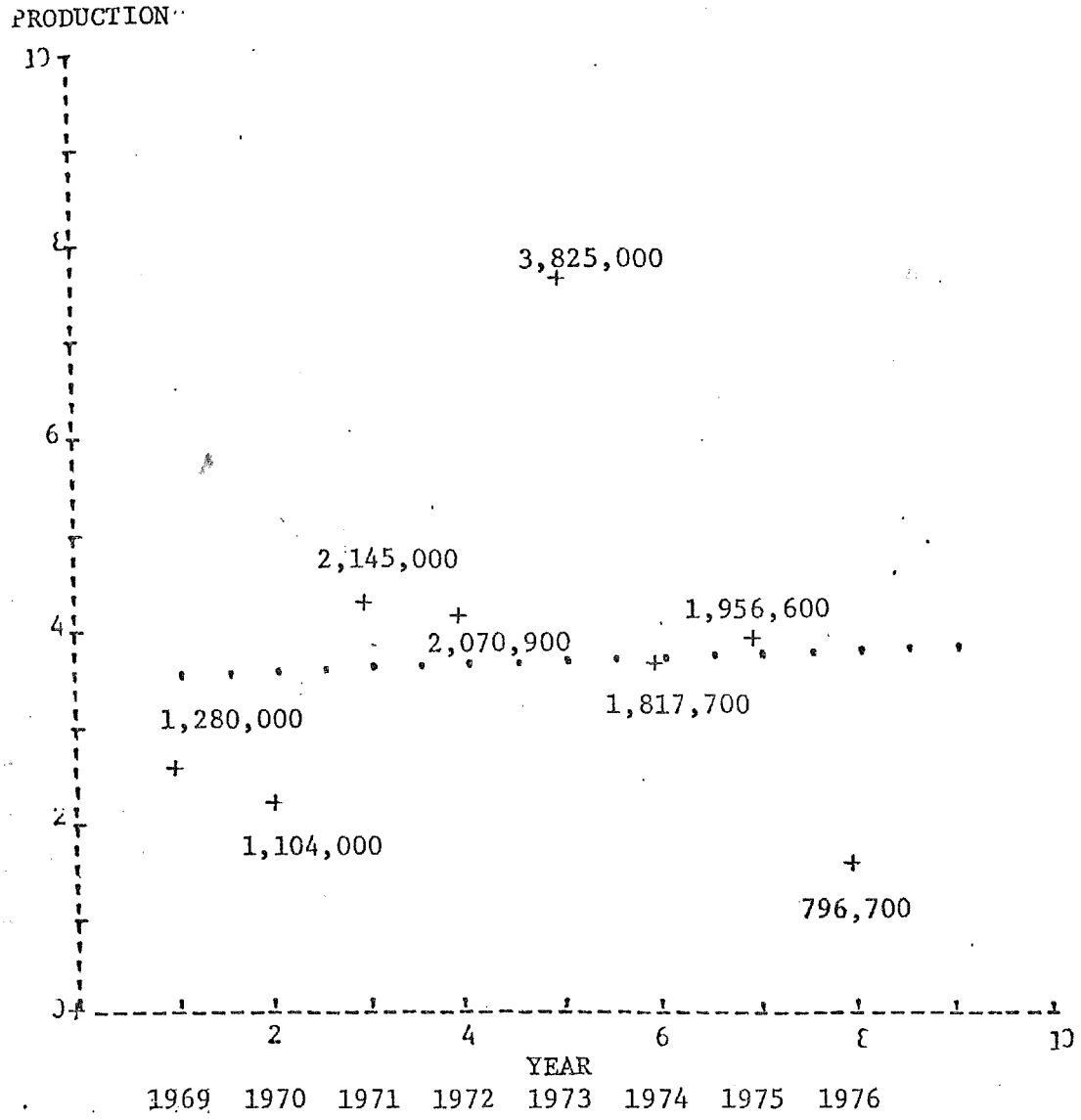
MORRISON COUNTY OATS PRODUCTION



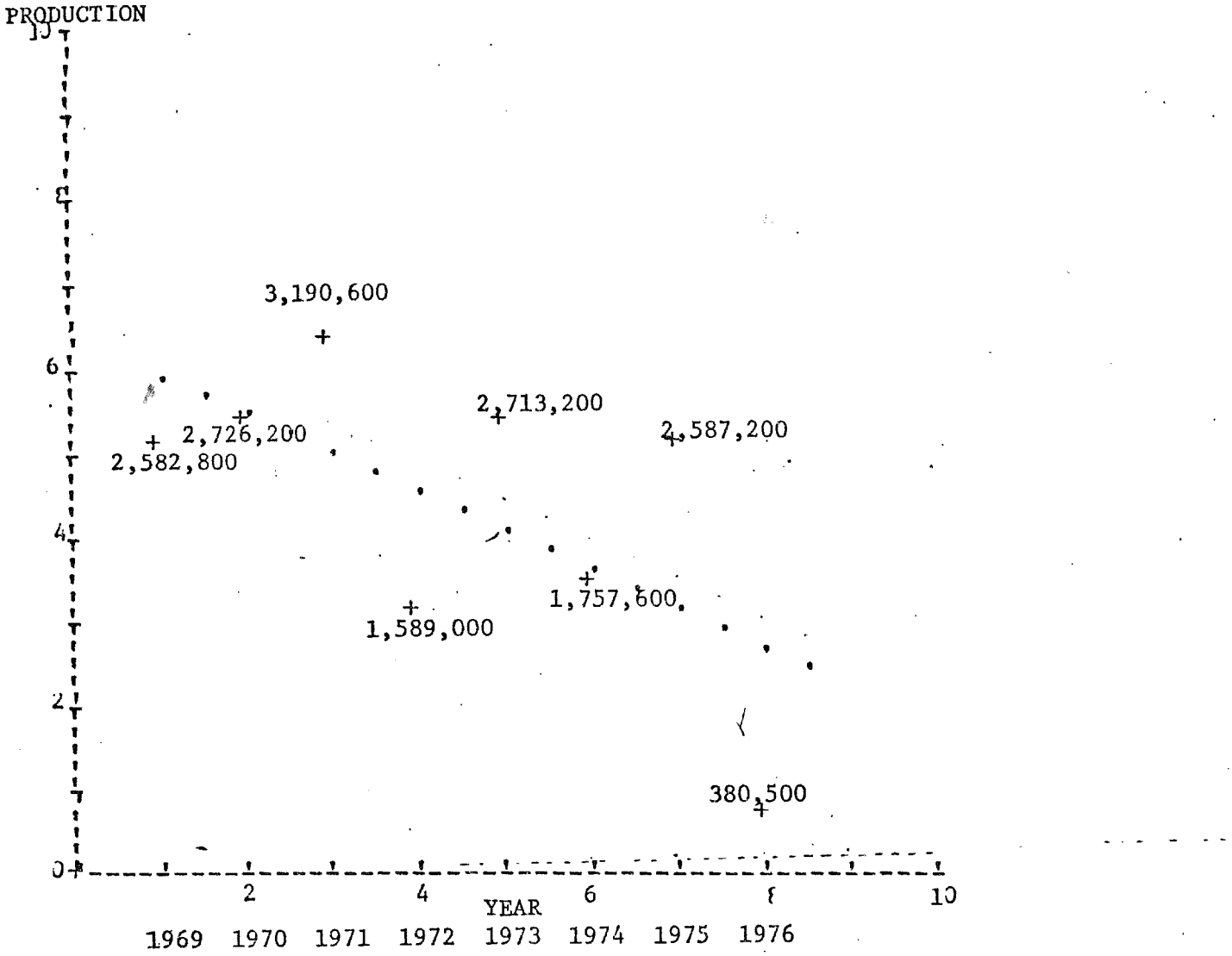
MORRISON COUNTY HAY PRODUCTION



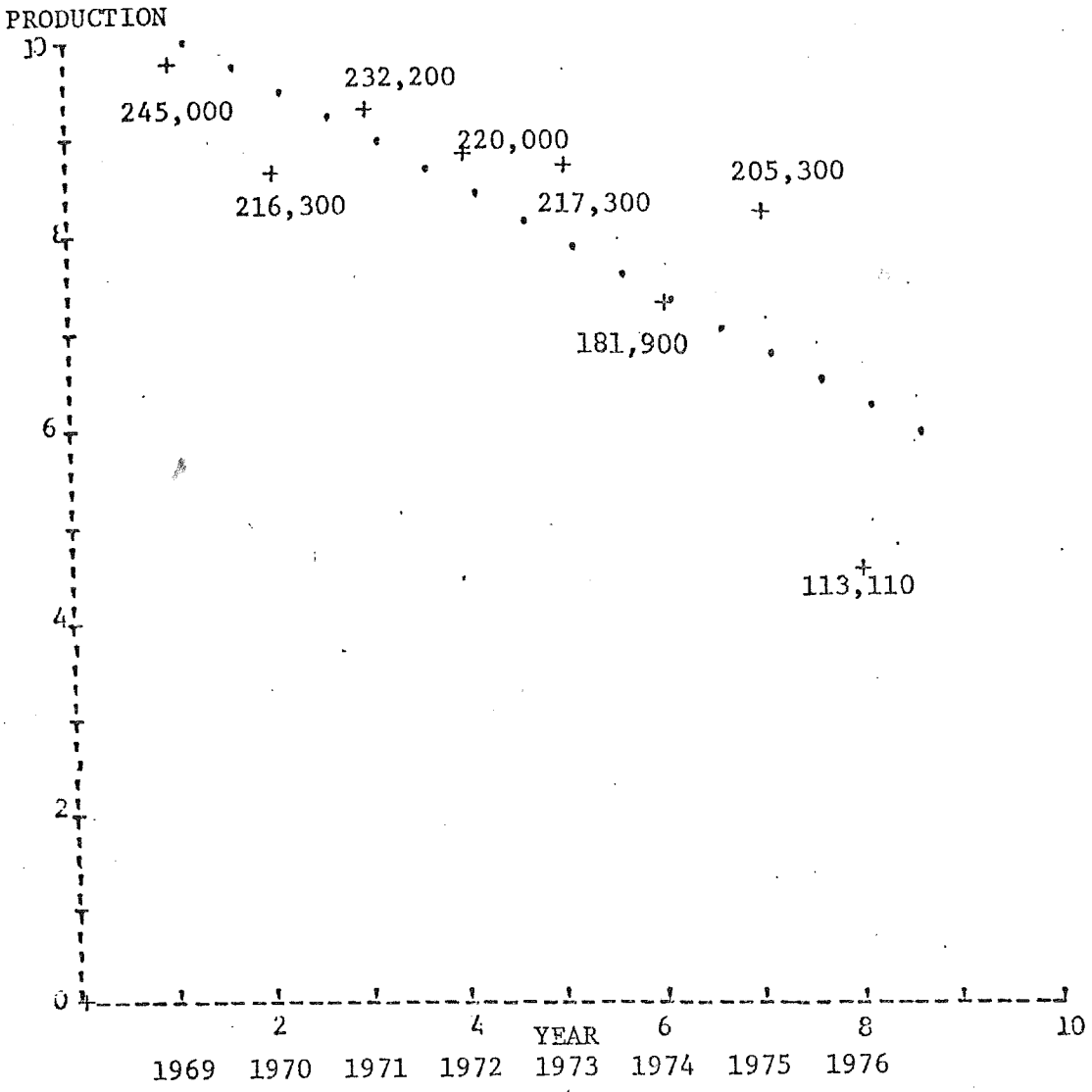
TODD COUNTY CORN PRODUCTION



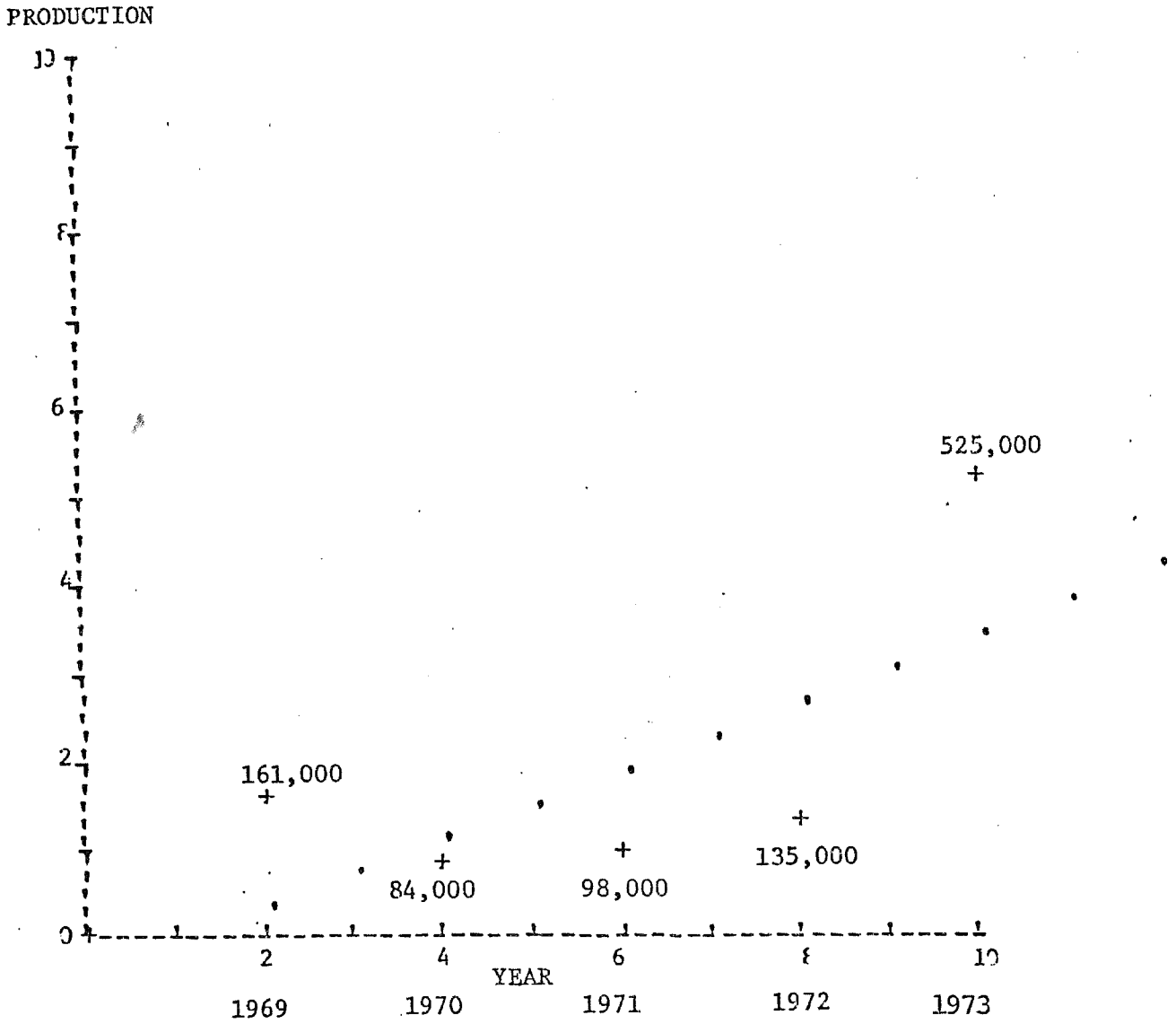
TODD COUNTY OATS PRODUCTION



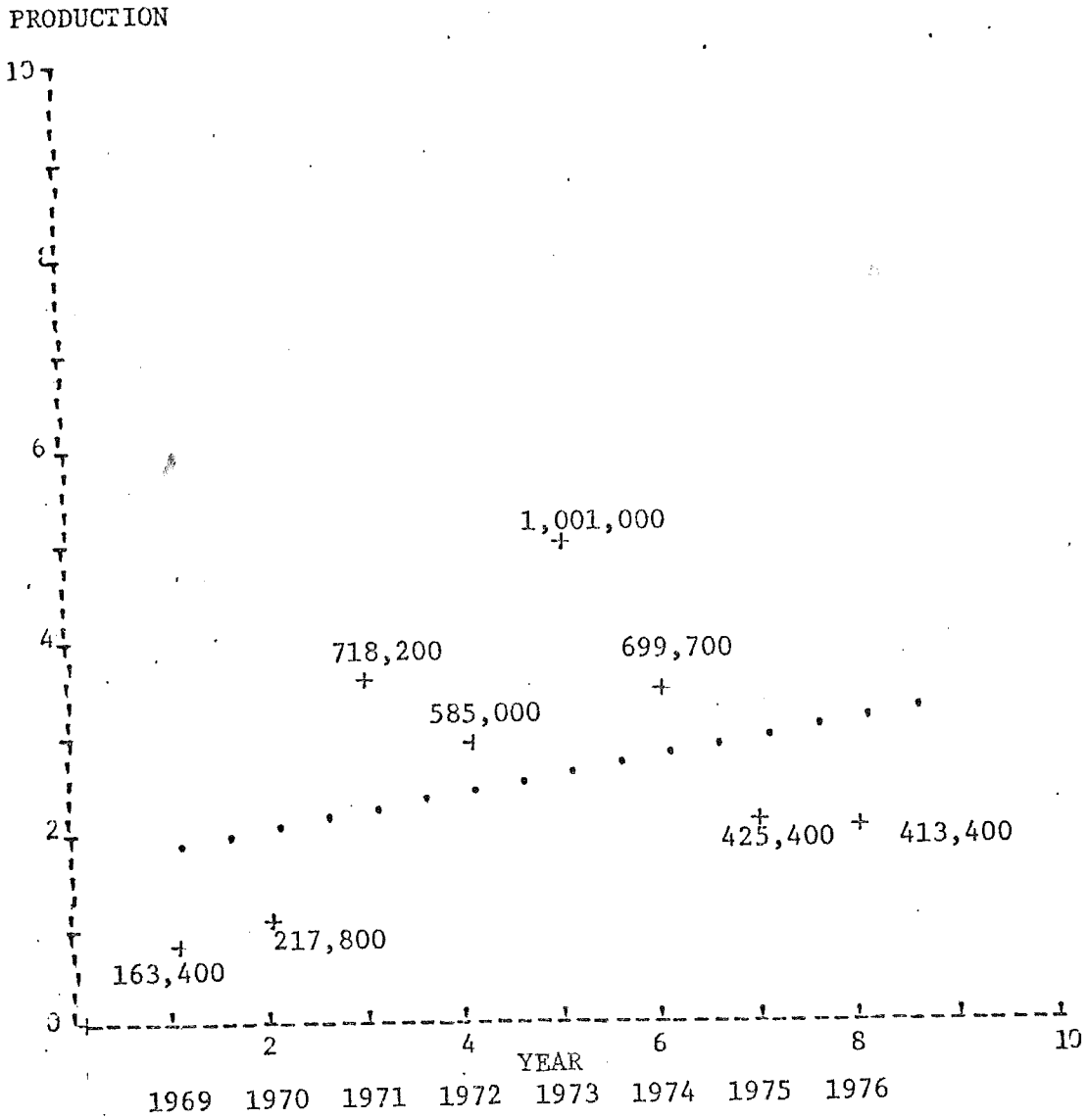
TODD COUNTY HAY PRODUCTION



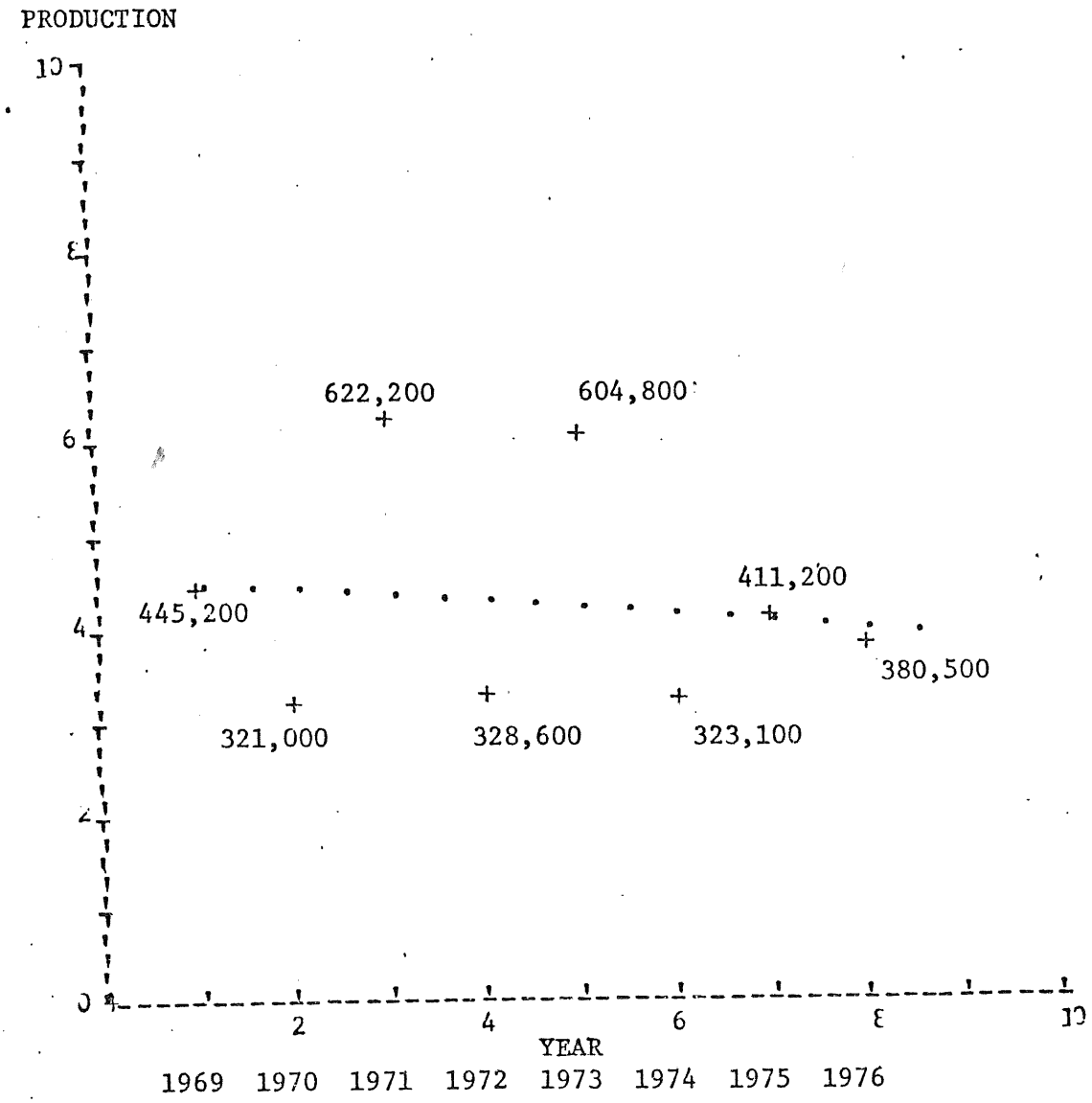
TODD COUNTY POTATOES PRODUCTION



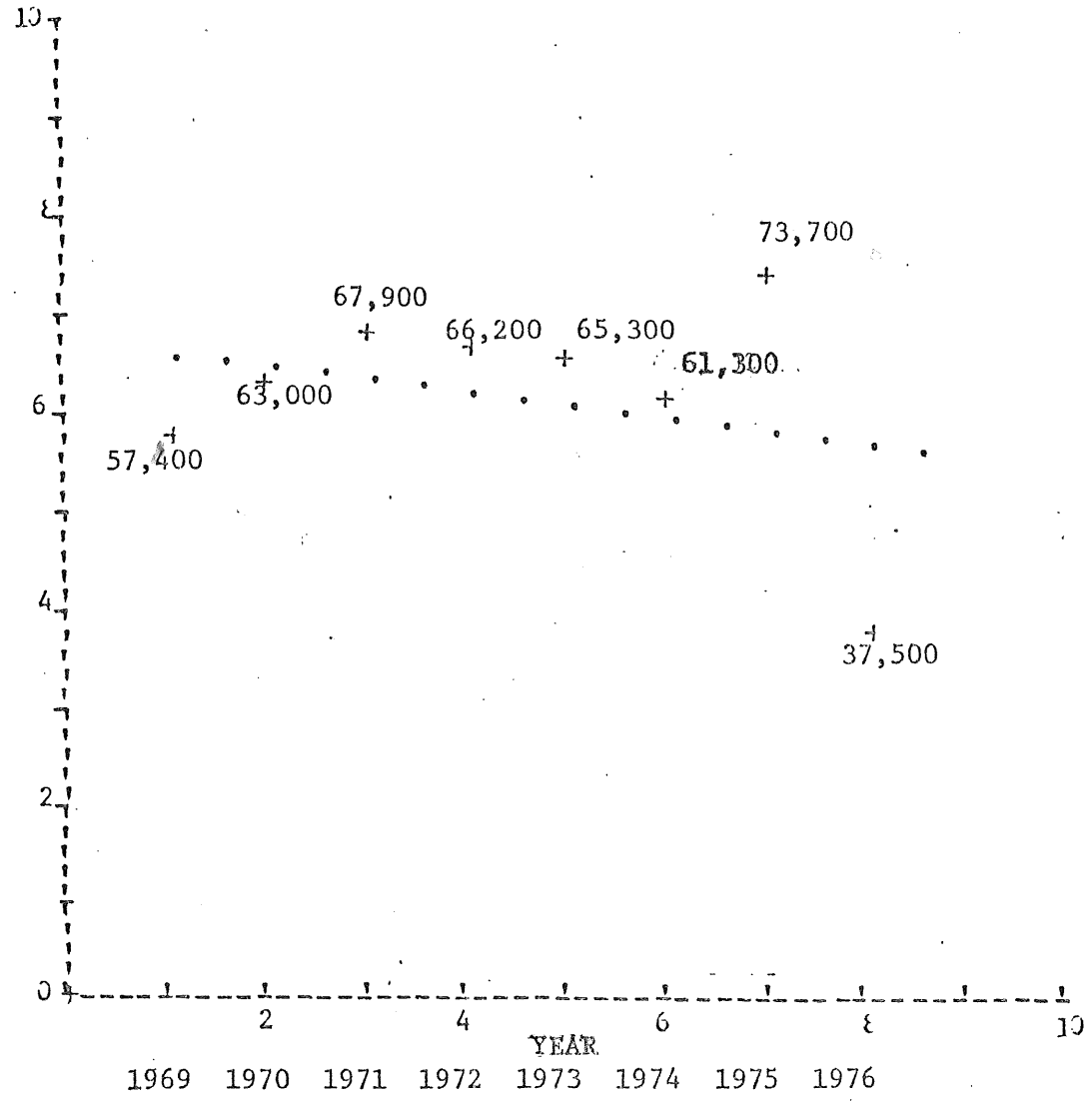
WADENA COUNTY CORN PRODUCTION



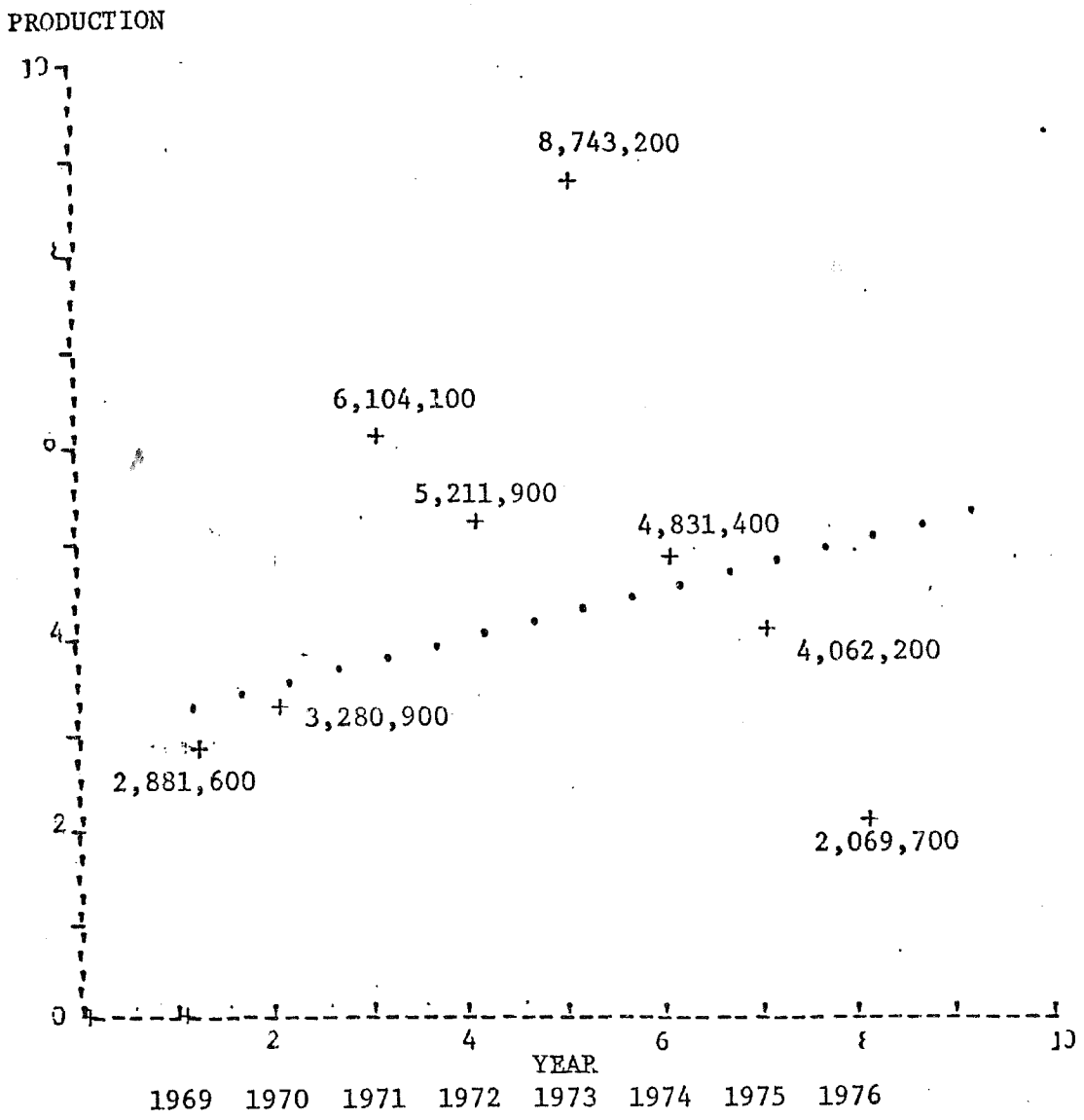
WADENA COUNTY OATS PRODUCTION



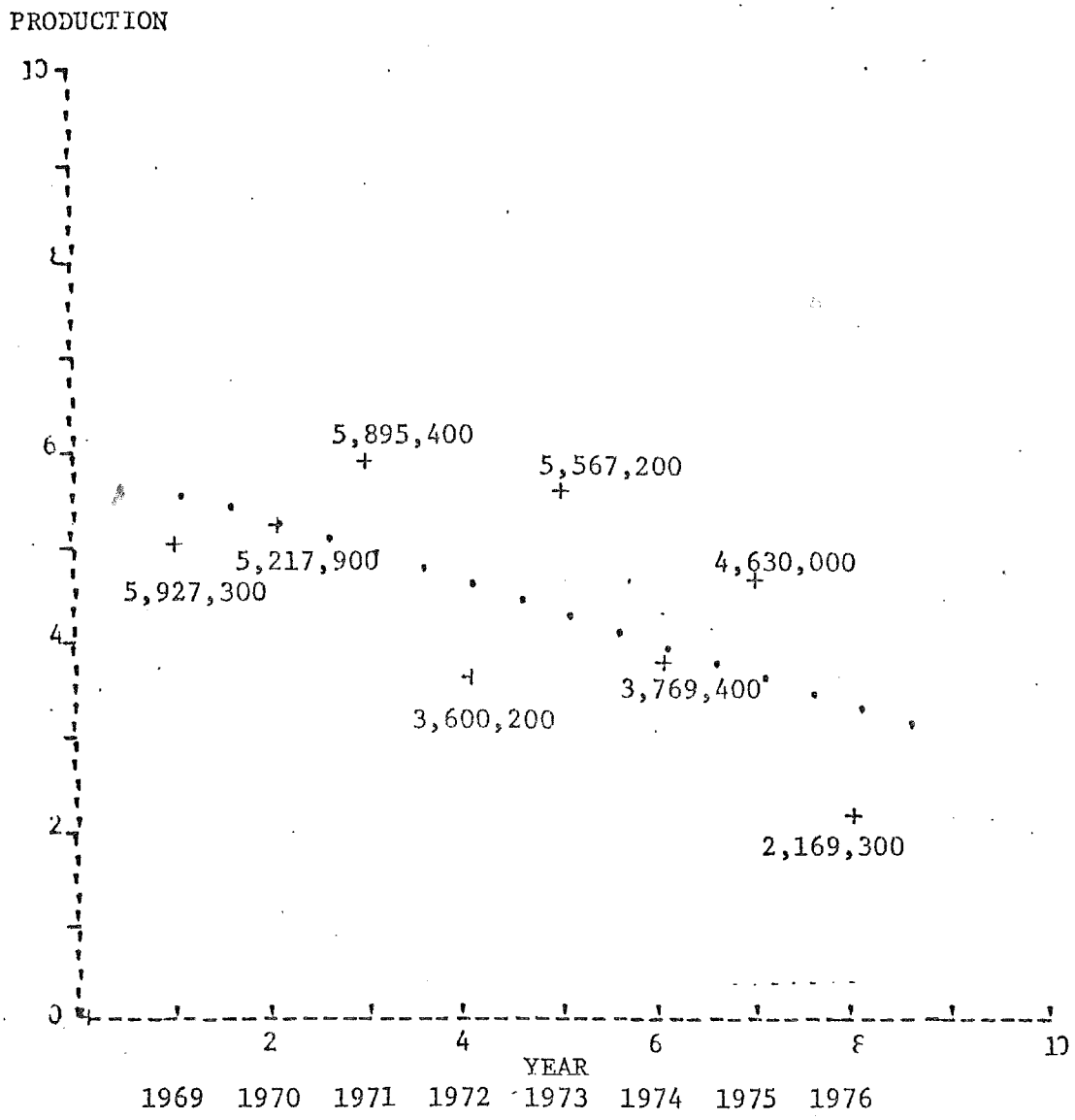
WADENA COUNTY HAY PRODUCTION



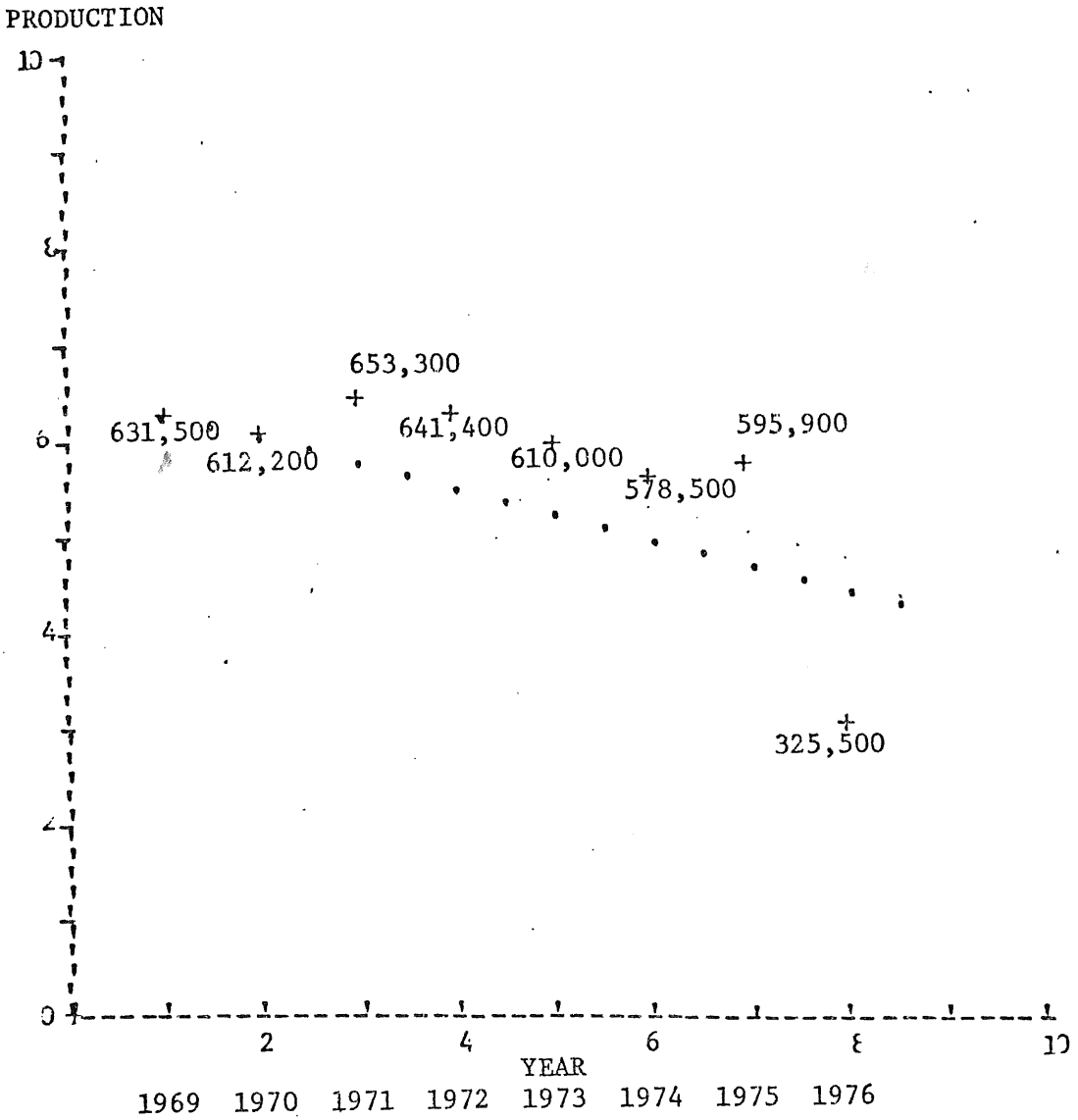
REGION 5 CORN PRODUCTION



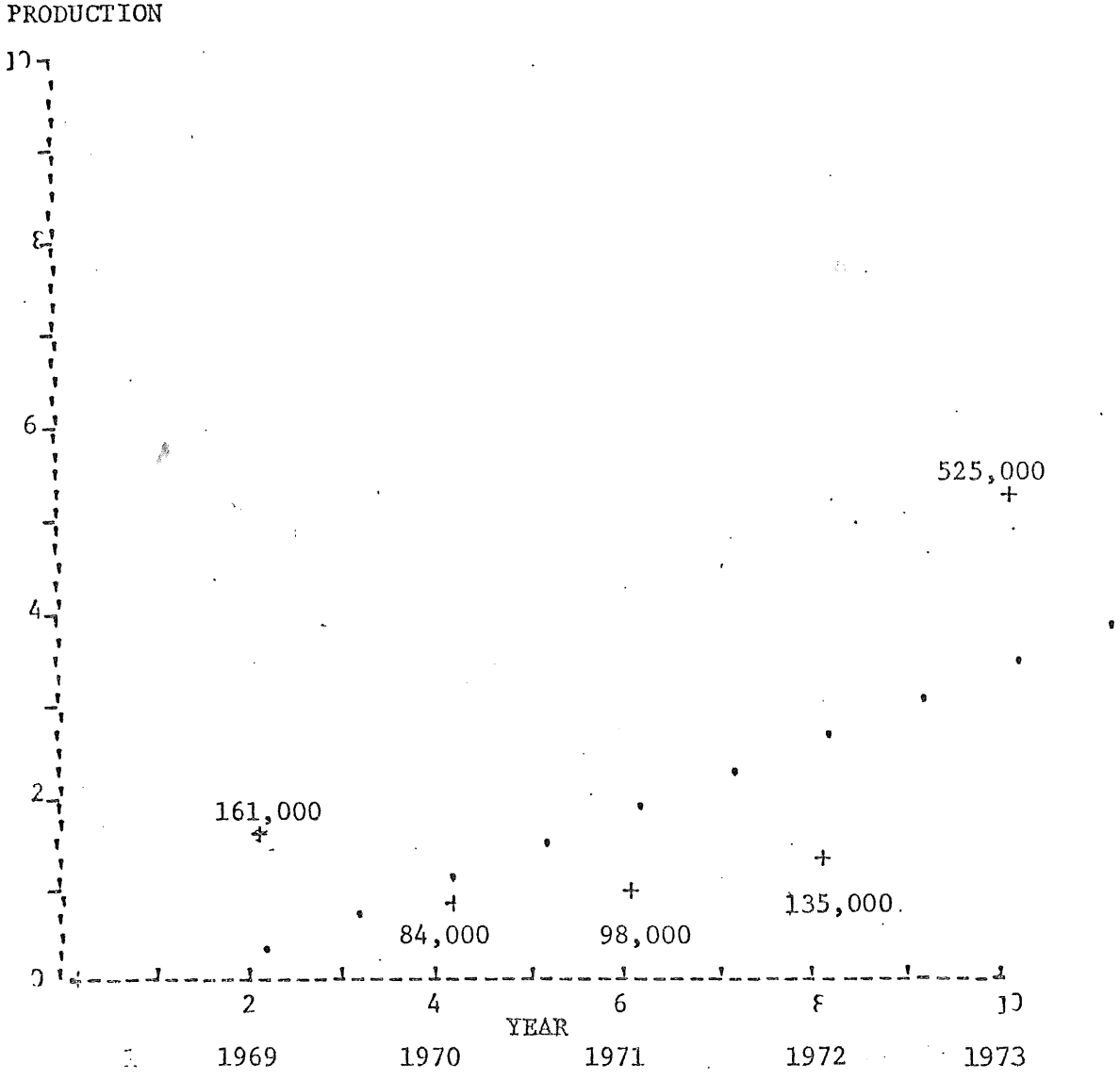
REGION 5 OATS PRODUCTION



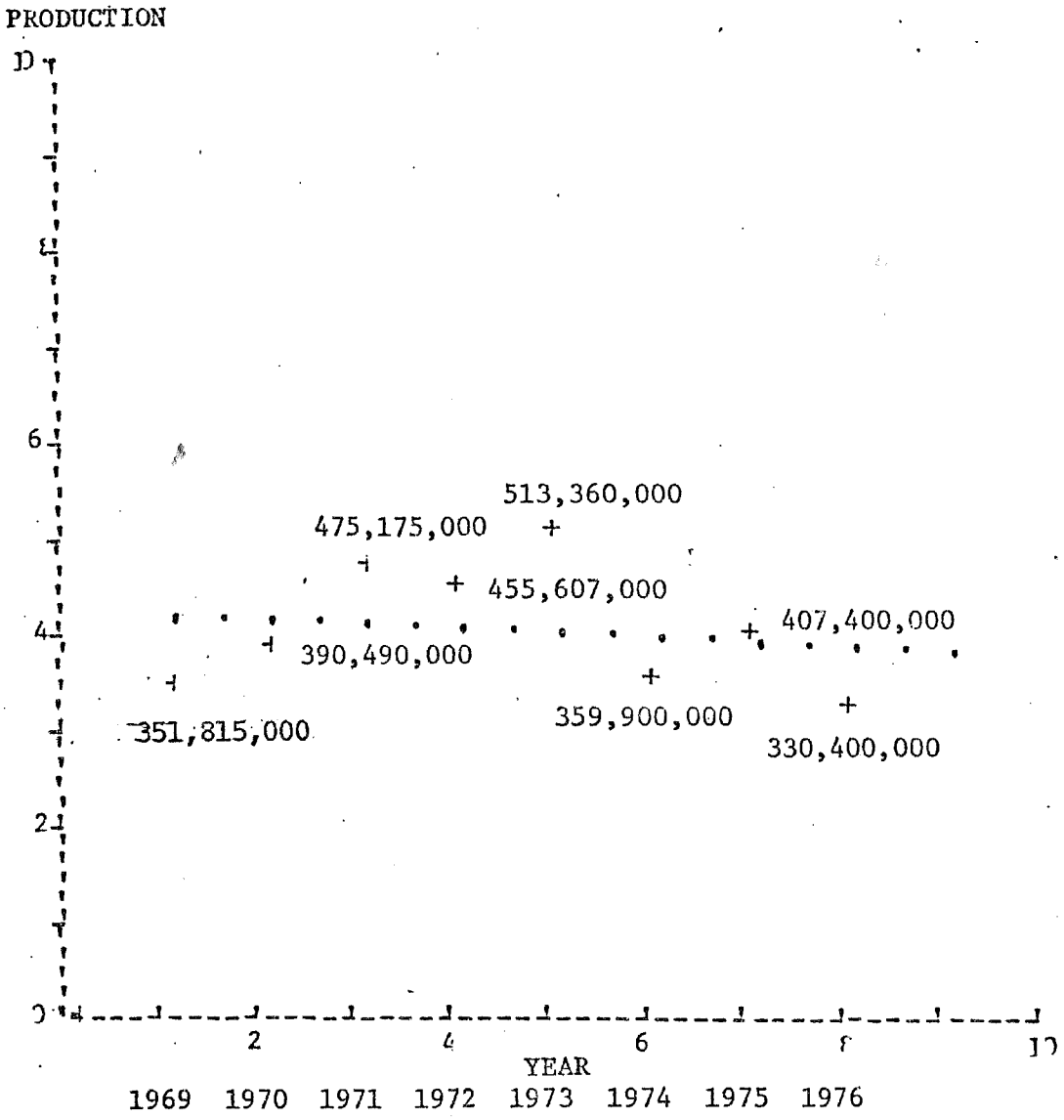
REGION 5 HAY PRODUCTION



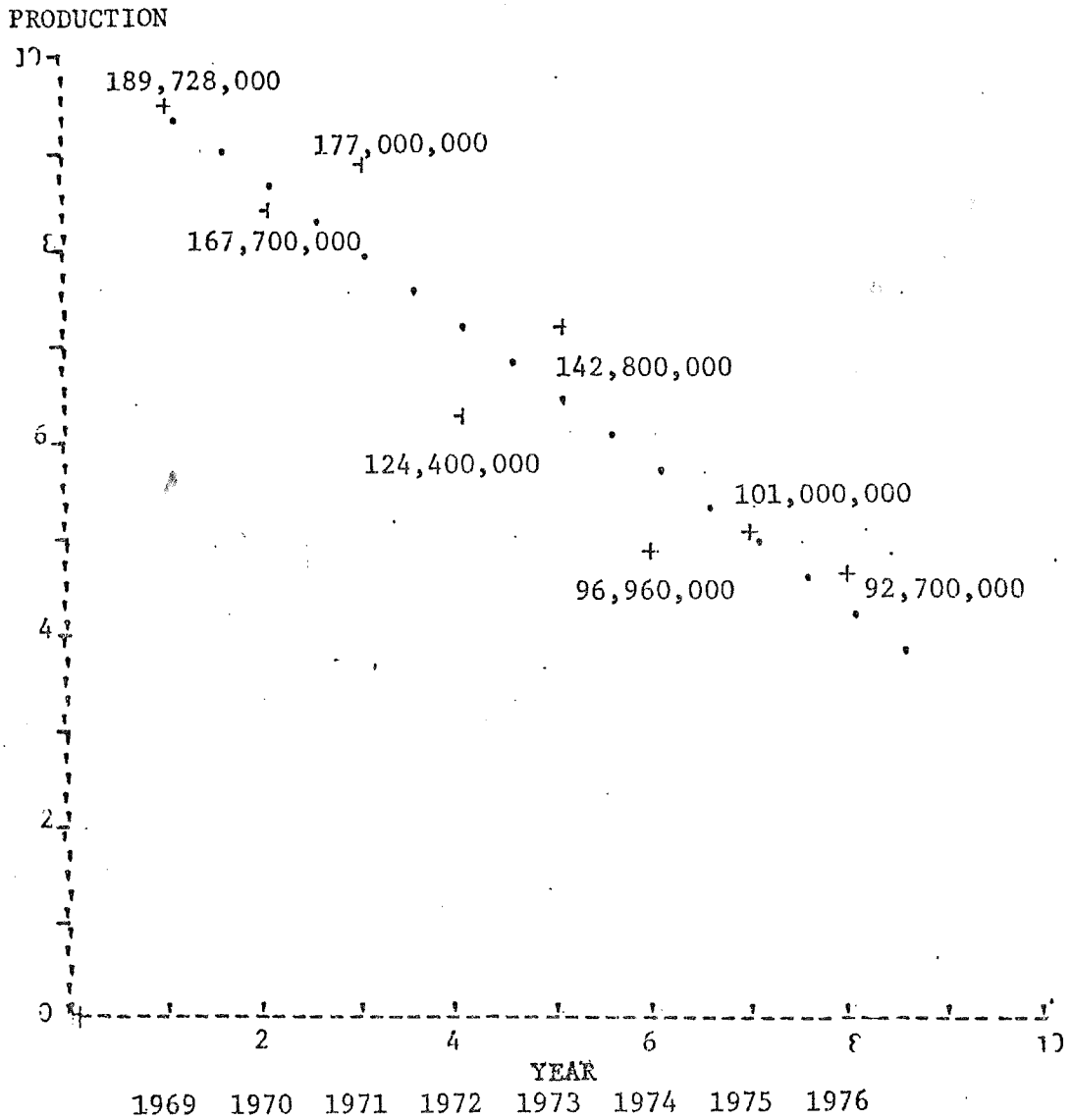
REGION 5 POTATOES PRODUCTION



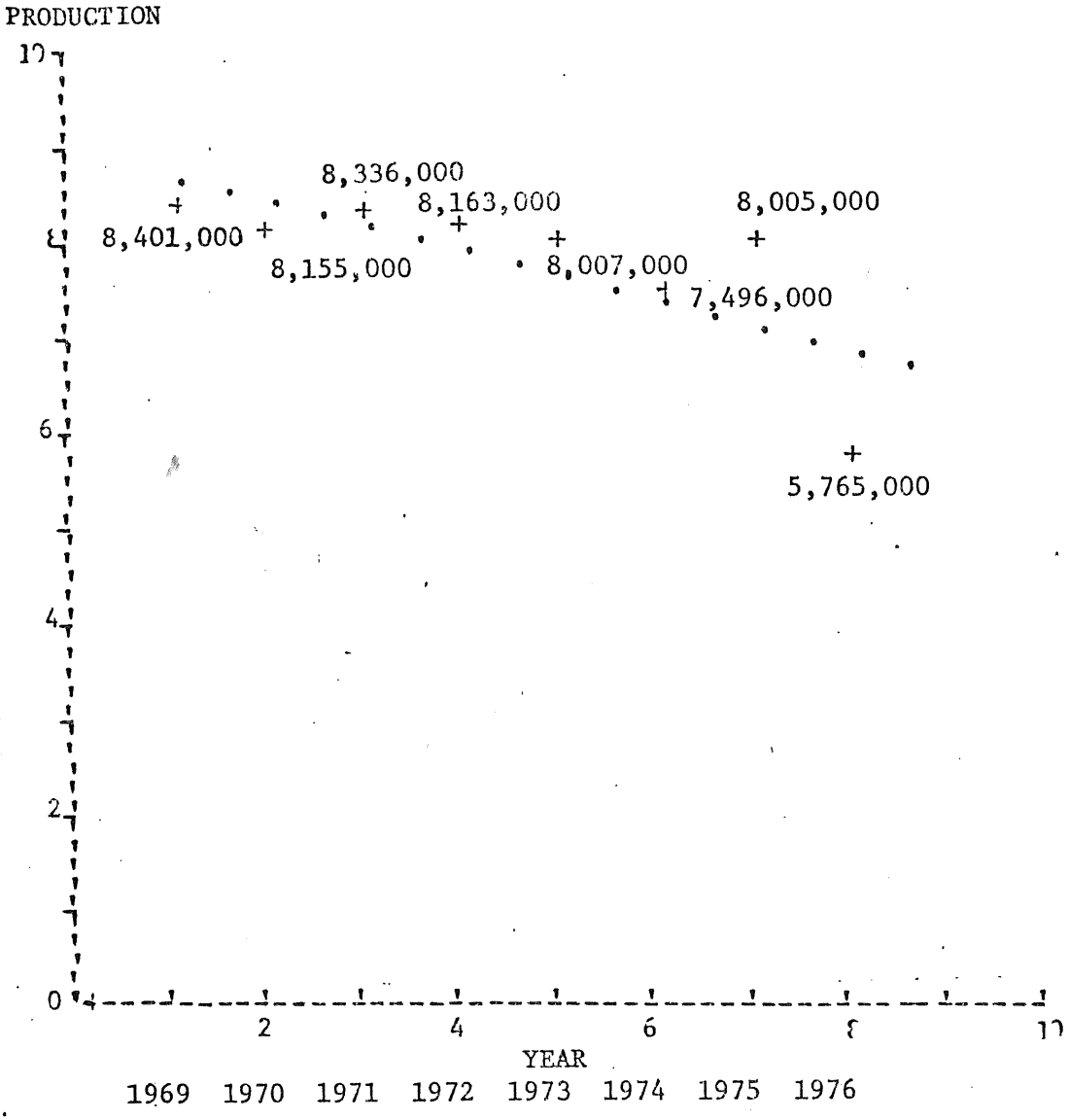
MINNESOTA CORN PRODUCTION



MINNESOTA OATS PRODUCTION



MINNESOTA HAY PRODUCTION



MINNESOTA POTATOES PRODUCTION