

## WILD RICE PRODUCTION RESEARCH - 1996

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It was generally cooler in 1996 compared to 1995 at all four locations. The average number of growing degree days over the 4 locations was fewer in 1996 by 212 (Tables 1 and 2). The season, April and May, started cool as it did in 1995 and continued cool through June which was much cooler than in 1995. July was also cooler in 1996 compared to 1995 at the four locations and so was August except at Waskish. At Waskish August was warmer in 1996 compared to 1995.

Compared to the long term average, the growing season at the locations of Aitkin, Grand Rapids and Crookston were cooler (Tables 1 and 2). The total seasonal growing degrees at Waskish was greater for 1996 compared to the average. At all four locations, April and May were cooler than the average. June was warmer at all four locations than the long term average. July 1996 was cooler than the long term average at Aitkin, Grand Rapids and Crookston but not at Waskish. August was warmer in 1996 at all four locations than the long term average.

Table 1. Growing degree days<sup>a</sup> comparisons for 1995, 1996, and normal (61-90).

Month	Aitkin			Grand Rapids		
	1995	1996	Normal	1995	1996	Normal
----- GDD -----						
April	30	38	127	30	34	130
May	370	335	417	420	359	434
June	818	690	646	874	712	674
July	796	769	779	824	789	858
August	<u>824</u>	<u>800</u>	<u>683</u>	<u>890</u>	<u>856</u>	<u>768</u>
Total	2838	2632	2652	3038	2750	2864

<sup>a</sup>Maximum + minimum temp. - 40°F; data from Mark Seeley, Department of Soil, Water and Climate, U of MN.

Month	1994	1995	Normal	1995	1996	Normal
	----- GDD -----					
April	10	20	103	35	33	151
May	326	300	369	394	393	488
June	810	652	518	907	803	743
July	764	714	642	852	828	926
August	<u>794</u>	<u>818</u>	<u>563</u>	<u>904</u>	<u>883</u>	<u>867</u>
Total	2704	2504	2195	3092	2940	3175

<sup>a</sup>Maximum + minimum temp. - 40°F; data from Mark Seeley, Department of Soil, Water and Climate, U of MN.  
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Total precipitation for the growing season was less at all four locations in 1996 compared to 1995 (Tables 3 and 4). At Aitkin and Grand Rapids precipitation was less for all months of the 1996 growing season compared to 1995 except for June which was wetter (Table 3). At Waskish, April, May and June were wetter in 1996 than 1995 while July and August were drier (Table 4). At Crookston April and May were wetter in 1996 than in 1995 while the other 3 months were drier especially August (Table 4).

Compared to the long term precipitation averages over the growing season the totals were less in 1996 (Tables 3 and 4). At Aitkin all months in 1996 compared to the long term average were drier except July; this was also true for Waskish. At Grand Rapids, April, May and August were drier in 1996 while June and July were wetter than the long term average. At Crookston, April, June and August were drier in 1996 compared to the long term average while May and July were wetter.

The weather during 1996 was generally favorable for wild rice even though it started out cool. There were no severe storms or continuous rain during harvest resulting in good yields.

Table 3. Precipitation comparisons for 1995, 1996, and normal (61-90)<sup>a</sup>.

Month	Aitkin			Grand Rapids		
	1995	1996	Normal	1995	1996	Normal
----- inches -----						
April	1.93	1.37	2.30	1.46	1.81	2.10
May	3.07	1.69	2.88	2.55	1.43	3.04
June	1.42	3.15	4.09	1.53	5.17	4.11
July	6.28	5.54	4.14	8.55	6.13	3.89
August	<u>3.18</u>	<u>1.21</u>	<u>3.83</u>	<u>6.25</u>	<u>1.29</u>	<u>3.59</u>
Total	15.88	12.96	17.24	20.34	15.83	16.73

<sup>a</sup> Data from Mark Seeley, Department of Soil, Water, and Climate, U of MN.

Table 4. Precipitation comparisons for 1995, 1996, and normal (61-90)<sup>a</sup>.

Month	Waskish			Crookston		
	1995	1996	Normal	1995	1996	Normal
----- inches -----						
April	0.64	1.28	1.70	0.33	0.42	1.45
May	1.33	1.90	2.33	1.78	3.17	2.45
June	1.81	3.47	4.25	2.05	1.73	3.44
July	7.64	4.84	3.42	7.56	5.57	2.77
August	<u>2.89</u>	<u>2.50</u>	<u>3.32</u>	<u>3.27</u>	<u>0.33</u>	<u>2.88</u>
Total	14.31	13.99	15.02	14.99	11.22	12.99

<sup>a</sup> Data from Mark Seeley, Department of Soil, Water, and Climate, U of MN.

Total cultivated production in Minnesota was about 40% greater in 1996 compared to 1995 while in California it was about 18% greater (Table 5). The greater 1996 production in Minnesota compared to 1995 was partly due to good weather in 1996, particularly during harvest as compared to the storms that occurred during 1995. The total cultivated production for the two states was about 24% higher in 1996 compared to 1995.



Table 5. Minnesota and California paddy wild rice production<sup>a</sup> (1000 processed pounds).

Year	Production		Year	Production	
	Minnesota	California		Minnesota	California
1968	36	0	82	2697	880
69	160	0	83	3200	2500
70	364	0	84	3600	2500
71	608	0	85	4200	7900
72	1496	0	86	5100	9000
73	1200	0	87	4200	4200
74	1036	0	88	4000	3500
75	1233	0	89	3978	4000
76	1809	0	90	4800	4200
77	1031	0	91	5500	5500
78	1761	100	92	6100	7500
79	2155	200	93	5300	7500
80	2320	400	94	5300	5000
81	2274	500	95	4500	6440
			96 <sup>b</sup>	6000	7600

<sup>a</sup> 1968-1982 Minnesota values from Winchell and Dahl and 1983-1995 from Minnesota Department of Agriculture; California values from Marcum, Cooperative Extension Service, University of California.

<sup>b</sup>Estimated value for 1996.

The estimated value of the Minnesota production was \$9,00,000 which is more than it was for the previous 3 years (Table 6). The higher value in 1996 is due to the higher production compared to 1995.

Table 6. Processed wild rice harvested and value from cultivated fields in Minnesota.

Year	Production 1,000 lb	Price \$/lb	Value \$ Millions
1968	36		
1969	160	3.30	0.12
1970	364	2.55	0.41
1971	608	2.80	1.02
		2.70	1.64
1972	1,496		
1973	1,200	2.30	3.44
1974	1,036	2.05	2.46
1975	1,233	2.37	2.46
		2.50	3.08
1976	1,809		
1977	1,031	2.70	4.88
1978	1,761	4.35	4.48
		5.10	8.98
1979	2,155		
1980	2,320	5.01	10.80
1981	2,274	4.47	10.37
1982	2,697	3.79	8.62
		3.41	9.20
1983	3,200		
1984	3,600	3.35	10.72
1985	4,200	3.30	11.88
1986	5,100	2.97	12.47
		2.60	13.26
1987	4,200		
1988	4,000	1.50	6.30
1989	3,978	1.65	6.60
1990	4,800	1.65	6.56
		1.70	8.16
1991	5,300		
1992	6,100	1.70	9.01
1993	5,300	1.70	10.37
1994	5,300	1.65	8.74
1995	4,300	1.65	8.74
1996 <sup>a</sup>	6,000	1.50	6.45
		1.50	9.00

<sup>a</sup>Estimated values for 1996.