



24 with brix at 22.5, the must reached 24 brix by the end of picking on September 29.

The average acidity of 1.09% over the five year period seems high for red must, but in reality was, if anything, low. After malo-lactic fermentation, finished wine in all years was under .6%. In the hotter years, it was reduced almost to the point where the addition of acid would probably be necessary for long time aging. Artificial acid reduction has yet to be used.

With such high percentage of malic acid, one would suspect that the fruit was not fully ripe. However, in 1976 the fruit was literally falling off the stems when picked at 26 brix.

The figures tell little more than that rainfall appears to be well within the range considered acceptable for viticultural areas - 16 - 20 " during the growing season. When the rain falls, over how long a period it falls, to what extent it does or does not reduce sunshine and soil composition are factors that must be taken into consideration in evaluating the extent to which any given

amount of rainfall will add or distract from final wine quality. The conclusion we have reached is that on our light soil we seem to make better wine with less than 16" of total rainfall.

Under these climate conditions, we have made consistently palatable wine. The two commercial vintages which have been released to date (1977 and 1987) have compared very well with their counter parts in other states as well as with wines generally. They have ranked high in national competition and have been given good reviews by both east and west coast critics. There is little doubt that the Millot produces consistently better wine. However, the lighter, softer Foch may be a more widely accepted variety. In conclusion, with good winter mulch, Foch and Millot will give the Minnesota wine maker consistently good fruit from which he can make red wine readily acceptable to the U.S. palates.

Figure 2. Degree Days

Year	May	June	July	Aug.	Sept.*	Total	Picking Date	Brix	Acidity **
1975	353	522	731	585	95	2290	Sept. 13	23.5	1.15
1976	235	578	741	638	161	2243	Sept 11	26.0	1.0
1977	511	534	740	465	50	2300	Sept 6	23.0	.93
1978	324	537	632	605	174	2246	Sept. 9	22.5	1.45
1979	140	501	644	542	290	2117	Sept. 24	22.5	1.45
5 yr Ave	312	534	698	567	154	2240	Sept. 13	23.6	1.09
1940-1970	240	520	675	625	100	2160	Sept 13		

*To picking date, total for month of September is 235

**Foch figures. Millot is slightly lower.

Figure 3. Rainfall

Year	May	June	July	Aug.	Sept**	Total	Picking Date	Brix	Acidity
1975	4.72	7.29	2.18	5.84	1.04	21.07	Sept. 13	23.5	1.15
1976	.74	2.67	2.03	1.78	.25	7.47	Sept. 11	26.0	1.0
1977	4.01	4.05	2.97	4.16	1.0	16.19	Sept. 6	23.0	.93
1978	4.39	4.84	5.0	5.72	.00	19.94	Sept. 9	23.0	.94
1979	3.45	5.40	3.0	6.50	2.44	20.79	Sept. 24	22.5	1.45
5 yr Ave.	3.46	4.85	3.04	4.80	.95	17.10	Sept. 13	23.6	1.09
1940-1970	3.93	4.60	4.0	3.70	1.43	17.66	Sept 13		

*To picking date. Total for month of September is 3.24 average.