

Reprint from:  
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### **How Cold is Cold?**

(From *The Rose Leaf* Archives, February 1971, Bob Whitaker Editor)

It's time to turn over a new Leaf, and what better way than with a report obtained from our Research & Development Department headed by Dave Register.

Rosarians are often perplexed by winter temperatures devastating one garden and allowing another location to escape injury. The data herein reproduced may provide part of the answer.

The Department of Agriculture has compiled research which demonstrates the effect winds play in causing a body (whether human or rose plant) to lose heat from its surface at a given rate. Should the temperature be zero with no wind-- we do not lose heat as rapidly as when the temperature is 20° and the wind 18 m.p.h.

The summary table below gives the Equivalent Temperature experienced from combining a 20°F Dry Bulb Temperature with a Chill Factor (Equivalent Temperature) developed from various wind speeds.

Wind (MPH) with Temperature 20° F	Equivalent Temperature	Forecast Term
10 mph	2	Very Cold
20 mph	-10	Bitter Cold
35 mph	-20	Extreme Cold

If you like to figure all these things out for yourself we have reproduced a complete wind Chill Chart at the bottom of this page. What does all this mean to a rose grower though? I know Dave goes out and takes the temperature of his plants to see if they have caught a cold or are running a fever, but you don't expect me to do that do you? Growing roses such as Heat Wave, Orange Flame and Fire King isn't the answer either to keeping the temperature up. One suggestion would be to plant your beds away from windswept areas of your property. If that is impractical, you can plant or construct natural windbreaks to protect rose beds from damaging winds. Knowledge is power--so those who recognize these conditions on their own property can provide more substantial means of winter protection. Nothing discourages more than losing a high percentage of plants to winter (or perhaps wind-er) kill.

(The technical data was supplied compliments of Mr. John V. Vaikanoras, N.A.A.A. State Climatologist, U. S. Department of Agriculture.)

Equivalent Temperature (°F)

Calm	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45	
W	5	32	27	22	16	11	6	0	-5	-10	-15	-21	-26	-31	-36	-42	-47	-52
	10	22	16	10	3	-3	-9	-15	-22	-27	-34	-40	-46	-52	-58	-64	-71	-77
i	15	16	9	2	-5	-11	-18	-25	-31	-38	-45	-51	-58	-65	-72	-78	-85	-92
	20	12	4	-3	-10	-17	-24	-31	-39	-46	-53	-60	-67	-74	-81	-88	-95	-103
n	25	8	1	-7	-15	-22	-29	-36	-44	-51	-59	-66	-74	-81	-88	-96	-103	-110
	30	6	-2	-10	-18	-25	-33	-41	-49	-56	-64	-71	-79	-86	-93	-101	-109	-116
d	35	4	-4	-12	-20	-27	-35	-43	-52	-58	-67	-74	-82	-89	-97	-105	-113	-120
	40	3	-5	-13	-21	-29	-37	-45	-53	-60	-69	-76	-84	-92	-100	-107	-115	-123
S	45	2	-6	-14	-22	-30	-38	-46	-54	-62	-70	-78	-85	-93	-102	-109	-117	-125
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**WIND CHILL CHART**

Wind Chill  Reset

<b>Wind Chill Table</b>								
When thermometer reads (F°)	When the wind blows at the m.p.h. below, it reduces the temperature (F°) to:							
	5	10	15	20	25	30	35	40
+50	48	40	36	32	30	28	27	26
+40	37	28	22	18	16	13	11	10
+30	27	16	9	4	0	-2	-4	-6
+20	16	4	-5	-10	-15	-18	-20	-21
+10	6	-9	-18	-25	-29	-33	-35	-37
0	-5	-21	-36	-39	-44	-48	-49	-53
-10	-15	-33	-45	-53	-59	-63	-67	-69
-20	-26	-46	-58	-67	-74	-79	-82	-85
-30	-36	-58	-72	-82	-88	-94	-98	-100
-40	-47	-70	-88	-96	-104	-109	-113	-116
-50	-57	-85	-99	-110	-118	-125	-129	-132
-60	-68	-95	-112	-124	-133	-140	-145	-148

LITTLE DANGER INCREASING DANGER GREAT DANGER </STRONG<  
CENTER~