

### 1988 HUDSON VALLEY MCINTOSH GROWTH STAGES, WETTING PERIODS, AND APPLE SCAB INFECTION PERIODS

Date	McIntosh growth stage	Scab ascospore information <sup>1</sup>		Wetting periods <sup>2</sup>						Mill's rating	
		% mature spores	cumm. % discharged	date	% of total season's ascospores <sup>3</sup>	start time	duration	avg. temp (F)	Rain-fall (in.)	1°	2°
Mar 30	Silver tip	2	0	Apr 1	1.7%	10:00	26	48		M	
Apr 4	Green tip	-	-	Apr 3	0.0%	23:00	14	57		M	
Apr 5	1/4-in green	19	1								
Apr 9	1/2-in. green										
Apr 12	3/4-in green	33	1								
Apr 15	3/4-in green			Apr 15	2.9%	6:30	32	38	0.38	-	
				Apr 18	3.5%	3:00	16	38	0.02	-	
Apr 19		48	7	Apr 23	1.2%	14:30	23	46	0.10	L	
				Apr 27	13.8%	22:00	18	50	0.11	M	Split
Apr 28	Tight cluster	29	10	Apr 28	0.0%	21:00	12	42	1.23		
				May 2	5.2%	15:00	17	46	0.11	-	
May 5	<u>Prk</u>			May 5	14.4%	14:00	42	54	0.84	H	
May 8	King bloom	32	25	May 10	29.9%	0:15	34	58	0.17	H	Split
May 11	50% bloom, 5-6 lvs.										
May 12	Full bloom			May 13	1.2%	19:00	13	51	0.54	L	
May 16		36	26								
May 17	<u>50% petal fall</u>			May 17	24.1%	1:00	80	54	2.37	H	H
May 19	Full petal fall			May 21	1.1%	21:00	29	61	0.07	H	H
				May 22	0.0%	23:00	12	61	0.02	L	M
May 23		14	71	May 25	1.2%	0:00	32	49	1.24	H	H
				Jun 1	0.0%	17:00	6	59	Tr.	-	-
Jun 2		5	92	Jun 3	0.0%	14:00	19	51	0.41	-	H
				Jun 9		5:30	9	52	0.20	-	L
				Jun 16		20:00	13	64	0.43	-	H
				Jun 23		4:30	7	75	0.02	-	L
				Jul 1		16:00	18	58	0.06	-	H
				Jul 9		01:00	33	78	1.54	-	H
				Jul 12		23:00	13	69	0.26	-	H
				Jul 14		22:30	14	69	0.75	-	H
				Jul 17		17.45	18	74	0.49	-	H
				Jul 19		08:00	9	80	0.82	-	L
				Jul 21		1:00	36	68	2.29	-	H
				Jul 23		20:00	14	69	1.98	-	H
				Jul 24		18:00	15	70	0.03	-	H
				Jul 26		11:00	22	67	0.26	-	H
				Jul 27		20:00	9	71	0.09	-	M
				Jul 28		20:00	12	69	Dew	-	H
				Jul 30		2:00	7	73	0.01	-	L
				Jul 31		4:00	8	73	0.12	-	M
				Jul 31		23:00	10	73	Dew	-	M
				Aug 2		1:00	8	71	0.01	-	M

1988 HUDSON VALLEY MCINTOSH GROWTH STAGES,  
WETTING PERIODS, AND APPLE SCAB INFECTION PERIODS, continued

date	start time	duration	avg. temp (F)	Rain-fall (in.)
Aug 7 <sup>4</sup>	02:00	9	75	.24
Aug. 11	07:00	4	79	dew
Aug. 23	22:00	13	56	1.59
Aug. 25	02:00	8	57	dew
Aug. 26	05:00	7	60	dew
Sept. 4	04:00	31	63	1.41
Sept. 7	06:00	6	?	dew
Sept. 8	10:00	3	?	dew
Sept. 13	07:00	8	68	0.11
Sept. 17	15:00	2	58	dew
Sept. 17	23:00	11	60	dew
Sept. 19	02:00	11	67	dew
Sept. 20	02:00	15	69	0.03
Sept. 21	03:00	5	64	dew
Sept. 23	07:00	5	63	0.08
Sept. 26	05:00	8	56	dew
Oct. 2	20:00	12	58	0.20

<sup>1</sup>Ascospore maturity and cumulative percent of ascospores discharged were determined by performing pseudothecial squash mounts using leaves from the lab orchard collected on the dates indicated. <sup>2</sup>Wetting periods were determined using a DeWitt Leaf Wetness meter. Rainfall was measured with a tipping bucket rain gauge, and mean temperatures were calculated using data from hygrothermograph charts. <sup>3</sup>The percent of the total season's ascospores discharged was determined by counting apple scab ascospores trapped with a Burkard spore trap. <sup>4</sup>Rainfall and wetting periods from August 7 until October 2 include some estimates where data were incomplete.