

**2002 GROWTH STAGES - NW Michigan Horticultural Research Station
Traverse City, MI**

Date	Time	Growing Degree Days - Base 42	Bartlett Pear	Potomac Pear	Mac	Gala	Red Delicious	Golden Delicious	Montmorency	Balaton	Hedelingen	Gold	Napoleon	Chardonnay	58.900.12 Plum	Apricot
4/16/02	9:30 AM	122	Swollen Bud	Swollen Bud	Silver Tip	Green Tip	Silver Tip	Silver Tip	Swollen Bud	Swollen Bud	Swollen Bud	Swollen Bud	Swollen Bud	Scale Cracked	Swollen Bud	
4/17/02	3:00 PM	150	Early bud burst	Bud Burst	1/2" green	1/2" green	1/2" green	1/2" green	Swollen Bud	Early bud burst	Swollen Bud	Early bud burst	Early bud burst	Early bud swell	Bud Burst	
4/18/02	2:30 PM	173	Bud Burst	Bud Burst	1/2" green	1/2" green	1/2" green	1/2" green	Swollen Bud	Early bud burst	Early bud burst	Bud Burst	Bud Burst	Early bud swell	Early green cluster	Pink
4/22/02	1:30 PM	176	Bud Burst	Bud Burst	1/2" green	1/2" green	1/2" green	1/2" green	Swollen Bud	Early bud burst	Tight Cluster	Tight Cluster	Tight Cluster	Early bud swell	Green Cluster	Bloom
4/23/02	3:30 PM	179	Late Bud Burst	Bud Burst	1/2" green	1/2" green	1/2" green	1/2" green	Swollen Bud	Early bud burst	Tight Cluster	Tight Cluster	Tight Cluster	Early bud swell	Green Cluster	Bloom
4/25/02	4:00 PM	192	Late Bud Burst	Late Bud Burst	1/2" green	1/2" green	1/2" green	1/2" green	Swollen Bud	Early bud burst	Tight Cluster	Tight Cluster	Tight Cluster	Early bud swell	Early white bud	Bloom
4/29/02	3:00 PM	193	Late Bud Burst	Late Bud Burst	1/2" green	1/2" green	1/2" green	1/2" green	Early bud burst	Early tight cluster	Early white bud / open cluster	Tight Cluster	Early white bud / open cluster	Early bud swell	Early white bud	Petal fall
5/4/02	5:00 PM	215	Green cluster	Green cluster	Tight Cluster	Tight Cluster	Tight Cluster	Tight Cluster	Early white bud	Green cluster	25% Bloom	White Bud	50% Bloom	Late bud swell	White Bud	Petal fall
5/6/02	9:00 AM	225	Green cluster	Green cluster	Tight Cluster	Tight Cluster	Tight Cluster	Tight Cluster	Early white bud	Early white bud	Full Bloom	First Bloom	Full Bloom	Late bud swell	White Bud	Petal fall
5/7/02	12:00 PM	236	Green cluster	Green cluster	Tight Cluster	Tight Cluster	Tight Cluster	Tight Cluster	Early white bud	Early white bud	Full Bloom	10% Bloom	Full Bloom	Late bud swell	White Bud	Petal fall
5/8/02	4:00 PM	246	Green cluster	Green cluster	Tight Cluster	Tight Cluster	Tight Cluster	Tight Cluster	Early white bud	Early white bud	Full Bloom	50% Bloom	Full Bloom	Late bud swell	First Bloom	Petal fall
5/9/02	4:30 PM	253	Green cluster	Early white Bud	Early Pink	Early Pink	Early Pink	Tight Cluster	First Bloom	White Bud	Full Bloom	Full Bloom	Full Bloom	Late bud swell	Full Bloom	Fruit Set - Shuck on
5/10/02	3:30 PM	260	Green cluster	Early white Bud	Early Pink	Early Pink	Pink	Tight Cluster	First Bloom	First Bloom	Petal Fall	Full Bloom	Petal Fall	Late bud swell	Full Bloom	Fruit Set - Shuck on
5/13/02	3:30 PM	272	White Bud	White Bud	Early Pink	Early Pink	Pink	Early Pink	10% Bloom	10% Bloom	Petal Fall	Full Bloom	Petal Fall	Late bud swell	Full Bloom	Fruit Set - Shuck on
5/14/02	3:30 PM	279	White Bud	White Bud	Pink	Early Pink	Pink	Early Pink	25% Bloom	25% Bloom	Petal Fall	Petal Fall	Petal Fall	Late bud swell	Full Bloom	Fruit Set - Shuck on
5/15/02	4:00 PM	290	White Bud	First Bloom	Pink	Early Pink	Pink	Early Pink	60% Bloom	60% Bloom	Petal Fall	Petal Fall	Petal Fall	Late bud swell	Full Bloom	Fruit Set - Shuck on
5/17/02	3:00 PM	294	White Bud	50% Bloom	Pink	Pink	Pink	Early Pink	Full Bloom	Full Bloom	Petal Fall	Petal Fall	Petal Fall	Late bud swell	Petal Fall	Fruit Set - Shuck on
5/21/02	3:00 PM	301	First Bloom	Full Bloom	Pink	Pink	Pink	Pink	Full Bloom	Full Bloom	Petal Fall	Petal Fall	Petal Fall	Late bud swell	Petal Fall	Fruit Set - Shuck on
5/23/02	2:30 PM	326	50% Bloom	Full Bloom	First Bloom	First Bloom	First Bloom	First Bloom	Early Petal Fall	Early Petal Fall	Petal Fall	Petal Fall	Petal Fall	Bud Burst	Petal Fall	Fruit Set - Shuck on
5/24/02	3:30 PM	330	50% Bloom	Full Bloom	First Bloom	First Bloom	First Bloom	First Bloom	Early Petal Fall	Early Petal Fall	Petal Fall	Petal Fall	Petal Fall	Bud Burst	Petal Fall	Fruit Set - Shuck on
5/28/02	10:30 AM	358	Petal Fall	Petal Fall	40% Bloom	25% Bloom	50% Bloom	10% Bloom	Late Petal Fall	Late Petal Fall	Shuck Split	Shuck Split	Shuck Split	Bud Burst	Petal Fall	Fruit Set
6/3/02	3:30 PM	498	Fruit Set	Fruit Set	Mid Petal Fall	Mid Petal Fall	Mid Petal Fall	Mid Petal Fall	Fruit Set	Fruit Set	11 mm	9 mm	11 mm	1" - 3" Shoots	Fruit Set	-
6/7/02	4:00 PM	558	10 mm	Fruit Set	Fruit Set	Petal Fall	Petal Fall	Petal Fall	9 mm	10 mm	12 mm	10 mm	12 mm	4" - 8" Shoots	6 mm	-
6/10/02	12:00 PM	610	11 mm	No Fruit	Fruit Set	Fruit Set	Fruit Set	Fruit Set	11 mm	10 mm	12 mm	11 mm	12 mm	4" - 8" Shoots	6 mm	-
6/14/02	2:30 PM	716	11 mm	No Fruit	12 mm	12 mm	11 mm	10 mm	13 mm	13 mm	13 mm	12 mm	12 mm	10" - 16" Shoots	6 mm	-
6/18/02	8:30 AM	761	12 mm	No Fruit	14 mm	14 mm	12 mm	11 mm	13 mm	13 mm	14 mm	13 mm	13 mm	10" - 16" Shoots	6 mm	-
6/24/02	9:00 AM	925	-	-	22 mm	23 mm	21 mm	20 mm	13 mm	13 mm	15 mm	13 mm	15 mm	10" - 16" Shoots	17 mm	-
7/2/02	10:30 AM	1200	-	-	1.25"	1.125"	1.25"	1.125"	15 mm	13 mm	17 mm	16 mm	19 mm	Full Bloom	23 mm	-
7/8/02	4:30 PM	1416	-	-	1.5"	1.25"	1.5"	1.25"	19 mm	16 mm	20 mm	19 mm	20 mm	Buckshot Berries	25 mm	-
7/15/02	2:00 PM	1618	-	-	1.75"	1.5"	1.5"	1.5"	21 mm	21 mm	21 mm	21 mm	20 mm	Buckshot Berries	25 mm	-
7/22/02	8:30 AM	1827	-	-	1.87"	1.75"	1.75"	1.75"	23 mm	21 mm	Harvest	Harvest	Harvest	Buckshot Berries	27 mm	-
7/29/02	12:00 PM	2070	-	-	2"	2"	2"	2"	23 mm	22 mm	Post Harvest	Post Harvest	Post Harvest	Berry Touch	29 mm	-
8/5/02	9:00 AM	2265	-	-	2.34"	2"	2"	2"	Harvest	Harvest	Post Harvest	Post Harvest	Post Harvest	Green Fruit	29 mm	-
8/12/02	10:30 AM	2485	-	-	2.5"	2.25"	2.25"	2.5"	Post Harvest	Post Harvest	Post Harvest	Post Harvest	Post Harvest	Green Fruit	34 mm	-
8/19/02	9:30 AM	2668	-	-	2.6"	2.5"	2.5"	2.5"	Post Harvest	Post Harvest	Post Harvest	Post Harvest	Post Harvest	Green Fruit	36 mm	-
8/26/02	3:00 PM	2870	-	-	2.8"	2.6"	2.6"	2.5"	Post Harvest	Post Harvest	Post Harvest	Post Harvest	Post Harvest	1st Color	37 mm	-
9/3/02	8:30 AM	3063	-	-	2.8"	2.6"	2.75"	2.6"	Post Harvest	Post Harvest	Post Harvest	Post Harvest	Post Harvest	Soft Fruit	37 mm	-