

**2012 GROWTH STAGES - NW Michigan Horticultural Research Station  
Traverse City, MI**

Date	Time	Growing Degree Days - Base 42	Bartlett Pear	Potomac Pear	Mac (* tree change to 80)	Gala	Red Delicious	Golden Delicious	Montmorency	Balaton	Hedeltingen	Gold	Napoleon	Chardonnay	58.900 A2 Plum	Apricot
3/8/12	3:00 PM	15	Dormant	Dormant	Dormant	Dormant	Dormant	Dormant	Dormant	Dormant	Dormant	Dormant	Dormant	Dormant	--	Dormant
3/15/12	11:00 AM	62	Ear. Bud Swell	Ear. Bud Swell	Dormant	Dormant	Dormant	Dormant	Swollen Bud	Swollen Bud	Swollen Bud	Ear. Green Tip	Swollen Bud	Dormant	--	Swollen Bud
3/17/12	7:30 PM	98	Bud Swell	Bud Swell	Silver Tip	Silver Tip	Silver Tip	Silver Tip	Early Green Tip	Early Green Tip	Early Green Tip	Green Tip	Early Green Tip	Dormant	--	Early Red Tip
3/19/12	9:00 AM	140	Bud Swell	Bud Swell	Silver Tip	Silver Tip	Late Silver Tip	Silver Tip	Green Tip	Green Tip	Green Tip	Green Tip	Green Tip	Dormant	--	Red Tip
3/20/12	10:30 AM	170	Bud Burst	Bud Burst	Ear. Green Tip	Green Tip	Green Tip	Ear. Green Tip	Green Tip	Late Green Tip	Late Green Tip	Late Green Tip	Late Green Tip	Dormant	--	Late Red Tip
3/21/12	8:00 AM	190	Late Bud Burst	Late Bud Burst	1/4" Green	1/2" Green	1/2" Green	1/4" Green	Late Green Tip	Early Bud Burst	Late Green Tip	Early Bud Burst	Late Green Tip	Early Scale Crack	--	White Bud
3/21/12	4:00 PM	210	Ear. Tight Cluster	Ear. Tight Cluster	1/4" Green	1/2" Green	1/2" Green	1/4" Green	Late Green Tip	Early Bud Burst	Early Bud Burst	Early Bud Burst	Early Bud Burst	Early Scale Crack	--	20% Bloom
3/23/12	9:00 AM	250	Green Cluster	Ear. Green Cluster	1/2" Green	Early Tight Cluster	Early Tight Cluster	1/2" Green	Early Bud Burst	Bud Burst	Late Bud Burst	Late Bud Burst	Ear. Wht. Bud	30% Scale Crack	--	90% Bloom
3/24/12	9:00 AM	255	--	--	--	--	--	--	--	--	--	--	1st Bloom	--	--	--
3/26/12	9:00 AM	269	Green Cluster	Ear. Wht. Bud	1/2" Green	Early Tight Cluster	Early Tight Cluster	1/2" Green	Bud Burst	Late Bud Burst	White Bud	Ear. Wht. Bud	1st Bloom	30% Scale Crack	--	Ear. Petal Fall
3/30/12	11:00 AM	280	Green Cluster	Ear. Wht. Bud	1/2" Green	Early Tight Cluster	Early Tight Cluster	1/2" Green	Bud Burst	Late Bud Burst	White Bud	Ear. Wht. Bud	70% Bloom	30% Scale Crack	--	Ear. Petal Fall
4/2/12	10:30 AM	285	Early White Bud	White Bud	Early Tight Cluster	Tight Cluster	Tight Cluster	Early Tight Cluster	Late Bud Burst	Early White Bud	50% Bloom	White Bud	80% Bloom	Scale Crack	--	Petal Fall
4/4/12	4:30 PM	297	White Bud	White Bud	Early Tight Cluster	Tight Cluster	Tight Cluster	Early Tight Cluster	Late Bud Burst	Early White Bud	90% Bloom	First Bloom	Full Bloom	Scale Crack	--	Late Petal Fall
4/6/12	4:30 PM	300	White Bud	White Bud	Early Tight Cluster	Tight Cluster	Tight Cluster	Early Tight Cluster	Early White Bud	Early White Bud	Full Bloom	First Bloom	Full Bloom	Scale Crack	--	Late Petal Fall
4/9/12	4:30 PM	315	Popcorn	Popcorn	Early Tight Cluster	Tight Cluster	Late Tight Cluster	Early Tight Cluster	First Bloom	First Bloom	Early Petal Fall	60% Bloom	Full Bloom	Scale Crack	--	Late Petal Fall
4/13/12	1:00 PM	325	First Bloom	First Bloom	Tight Cluster	Tight Cluster	Early Pink	Early Tight Cluster	30% Bloom	20% Bloom	Early Petal Fall	90% Bloom	Early Petal Fall	Scale Crack	--	In Shuck
4/17/12	9:30 AM	376	Full Bloom	Full Bloom	Open Cluster	Open Cluster	Open Cluster	Open Cluster	80% Bloom	Full Bloom	Petal Fall	Full Bloom	Petal Fall	Early Bud Swell	--	In Shuck
4/20/12	4:30 PM	384	Full Bloom	Early Petal Fall	Open Cluster	Open Cluster	Late Open Cluster	Open Cluster	Full Bloom	Early Petal Fall	Petal Fall	Petal Fall	Late Petal Fall	Early Bud Swell	--	In Shuck
4/23/12	4:00 PM	395	Late Petal Fall	Petal Fall	Late Open Cluster	Ear. King Bloom	1st King Bloom	1st King Bloom	Full Bloom	Petal Fall	Late Petal Fall	Petal Fall	In Shuck	Early Bud Swell	--	In Shuck
4/27/12	11:30 AM	405	Late Petal Fall	Petal Fall	1st King Bloom	50% King Bloom	70% King Bloom	50% King Bloom	Petal Fall	Late Petal Fall	Late Petal Fall	Late Petal Fall	In Shuck	Early Bud Swell	--	Shuck Split
4/30/12	4:45 PM	422	Late Petal Fall	Petal Fall	1st King Bloom	King Bloom	King Bloom	King Bloom	Petal Fall	Late Petal Fall	In Shuck	Late Petal Fall	In Shuck	Early Bud Swell	--	Shuck Split
5/4/12	1:30 PM	476	Late Petal Fall	Late Petal Fall	80% Bloom	90% Bloom	Full Bloom	Late King Bloom	Petal Fall	Late Petal Fall	6 mm Fruit	In Shuck	5 mm Fruit	Late Bud Swell	--	Shuck Split
5/7/12	4:30 AM	514	Late Petal Fall	Late Petal Fall	Full Bloom	Full Bloom	Full Bloom	90% Bloom	Late Petal Fall	Late Petal Fall	7.5 mm Fruit	4.5 mm Fruit	6 mm Fruit	Late Bud Swell	--	15 mm Fruit (new tree)
5/11/12	2:00 PM	561	7 mm Fruit	5 mm Fruit	Petal Fall	Petal Fall	Petal Fall	Full Bloom	Shuck Split	Shuck Split	10.5 mm Fruit	7 mm Fruit	8.5 mm Fruit	Late Bud Swell	--	19 mm Fruit
5/14/12	1:30 PM	608	8 mm Fruit	6 mm Fruit	6 mm Fruit	6 mm Fruit	6 mm Fruit	Petal Fall	8 mm Fruit	8 mm Fruit	11 mm Fruit	9.5 mm Fruit	10 mm Fruit	Bud Burst	--	26 mm Fruit
5/18/12	2:00 PM	670	9 mm Fruit	7 mm Fruit	8 mm Fruit	6 mm Fruit	8 mm Fruit	6 mm Fruit	11 mm Fruit	10 mm Fruit	12 mm Fruit	11 mm Fruit	12 mm Fruit	1" - 3" Shoots	--	30 mm Fruit
5/21/12	4:00 PM	754	11.5 mm Fruit	10 mm Fruit	11 mm Fruit	7.5 mm Fruit	10 mm Fruit	7 mm Fruit	11.5 mm Fruit	11 mm Fruit	13 mm Fruit	11.5 mm Fruit	13 mm Fruit	4" - 8" Shoots	--	31 mm Fruit
5/25/12	3:30 PM	846	14 mm Fruit	11 mm Fruit	15 mm Fruit	12 mm Fruit	14 mm Fruit	11 mm Fruit	13 mm Fruit	12 mm Fruit	13 mm Fruit	12 mm Fruit	13 mm Fruit	10" - 16" Shoots	--	32 mm Fruit
6/4/12	4:00 PM	1005	18 mm Fruit	16 mm Fruit	24 mm Fruit	18 mm Fruit	20 mm Fruit	16 mm Fruit	14 mm Fruit	13 mm Fruit	15 mm Fruit	14 mm Fruit	16 mm Fruit	10" - 16" Shoots	--	33 mm Fruit
6/11/12	9:30 AM	1195	21 mm Fruit	22 mm Fruit	30 mm Fruit	24 mm Fruit	25 mm Fruit	25 mm Fruit	14 mm Fruit	13 mm Fruit	19 mm Fruit	15 mm Fruit	18 mm Fruit	First Bloom	--	36 mm Fruit
6/18/12	1:00 PM	1378	25 mm Fruit	25 mm Fruit	38 mm Fruit	30 mm Fruit	34 mm Fruit	33 mm Fruit	18 mm Fruit	16 mm Fruit	22 mm Fruit	19 mm Fruit	21 mm Fruit	50% Bloom	--	40 mm Fruit
6/25/12	1:00 PM	1577	27 mm Fruit	29 mm Fruit	43 mm Fruit	35 mm Fruit	37 mm Fruit	38 mm Fruit	22 mm Fruit	21 mm Fruit	Harvest	Harvest	Harvest	Late Bloom	--	47 mm Fruit
7/2/12	1:00 PM	1792	32 mm Fruit	37 mm Fruit	49 mm Fruit	42 mm Fruit	42 mm Fruit	44 mm Fruit	22 mm Fruit	22 mm Fruit	--	--	--	Buck Shot Berries	--	Harvest
7/9/12	11:30 AM	2034	36 mm Fruit	43 mm Fruit	57 mm Fruit	47 mm Fruit	46 mm Fruit	48 mm Fruit	Harvest	Harvest	--	--	--	Berry Touch	--	--
7/16/12	2:00 PM	2270	41 mm Fruit	44 mm Fruit	63 mm Fruit	49 mm Fruit	49 mm Fruit	52 mm Fruit	--	--	--	--	--	Berry Touch	--	--
7/23/12	8:30 AM	2466	45 mm Fruit	50 mm Fruit	65 mm Fruit	52 mm Fruit	53 mm Fruit	57 mm Fruit	--	--	--	--	--	Green Fruit	--	--
8/6/12	10:30 AM	2925	48 mm Fruit	56 mm Fruit	62 mm Fruit*	58 mm Fruit	66 mm Fruit	60 mm Fruit	--	--	--	--	--	Green Fruit	--	--