NOTES

2009 PLANT PHENOLOGY JOURNAL

This journal contains the average cumulative degree-days for phenological events at Secrest Arboretum at Wooster, Ohio from 1997-2001. These data were compiled by Daniel A. Herms, Department of Entomology, The Ohio State University, Ohio Agricultural Research and Development Center, Wooster, Ohio.

This phenological sequence can be used as a biological calendar to forecast pest activity because it remains highly constant from year to year. Cumulative degree-days were calculated using a base temperature of 50 degrees Fahrenheit and a starting date of January first.

Phenological observations pages have been included to monitor plant and pest activity. First bloom is defined as the date on which the first flower bud on the plant opens revealing pistils and/or stamens. Full bloom is defined as the date on which 95% of the flower buds on the plant have opened. Additional information can be obtained at: phenology.osu.edu.

LINK TO CHECK DEGREE-DAYS

http://www.oardc.ohio-state.edu/gdd/

NOTES

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LINK TO CHECK DEGREE-DAYS

http://www.oardc.ohio-state.edu/gdd/

34 **GDD** Silver Maple First Bloom	40 Cornelian Cherry Dogwood First Bloom	42 Silver Maple Full Bloom	44 Red Maple First Bloom
60 **Japanese** **Pieris** **First Bloom**	75 Red Maple Full Bloom	**83** **Star Magnolia** **First Bloom**	86 Forsythia First Bloom

NOTES

34 **GDD** Silver Maple First Bloom	40 Cornelian Cherry Dogwood First Bloom	42 Silver Maple Full Bloom	44 Red Maple First Bloom
60 **Japanese** **Pieris** **First Bloom**	75 Red Maple Full Bloom	**83** **Star Magnolia** **First Bloom**	86 Forsythia First Bloom

NOTES

2008 DATA

	FIRST BLOOM		FULL BLOOM	
	DATE	DEGREE DAY	DATE	DEGREE DAY
FORSYTHIA				
ROYAL STAR MAGNOLIA				
PJM RHODODENDRON				
KOREANSPICE VIBURNUM				
CORALBURST CRABAPPLE				
COMMON LILAN CHARLES JOLY				
VANHOUTTE SPIREA				
MISS KIM LILAC				
RED TWIG DOGWOOD				
RED PRINCE WEIGELA				
ARROWWOOD VIBURNUM				
GOLDFLAME SPIREA				
POTENTILLA ABBOTTS-WOOD				
OAKLEAF HYDRANGEA				
CUTLEAF ELDERBERRY				
ROSE-OF-SHARON				

92 **GDD** Eastern Tent Caterpillar Egg Hatch	96 Cornelian Cherry Dogwood	116 Norway Maple First Bloom Forsythia Full Bloom	127 Sargent Cherry First Bloom
128 Larch Casebearer Egg Hatch	129 Red Maple Full Bloom	**133** **Saucer Magnolia** **First Bloom**	137 Flowering Quince First Bloom

2008 DATA

	FIRST BLOOM		FULL BLOOM	
	DATE	DEGREE DAY	DATE	DEGREE DAY
FORSYTHIA				
ROYAL STAR MAGNOLIA				
PJM RHODODENDRON				
KOREANSPICE VIBURNUM				
CORALBURST CRABAPPLE				
COMMON LILAN CHARLES JOLY				
VANHOUTTE SPIREA				
MISS KIM LILAC				
RED TWIG DOGWOOD				
RED PRINCE WEIGELA				
ARROWWOOD VIBURNUM				
GOLDFLAME SPIREA				
POTENTILLA ABBOTTS-WOOD				
OAKLEAF HYDRANGEA				
CUTLEAF ELDERBERRY				
ROSE-OF-SHARON				

92 **GDD** Eastern Tent Caterpillar Egg Hatch	96 Cornelian Cherry Dogwood	116 Norway Maple First Bloom Forsythia Full Bloom	127 Sargent Cherry First Bloom
128 Larch Casebearer Egg Hatch	129 Red Maple Full Bloom	**133** **Saucer Magnolia** **First Bloom**	137 Flowering Quince First Bloom

142 **GDD** Bradford Pear First Bloom	144 European Pine Sawfly Egg Hatch	145 Weeping Higan Cherry First Bloom	147 PJM Rhododendron First Bloom
149 Norway Maple Full Bloom	150 Inkberry Leafminer Adult Emergence	151 Sargent Cherry Full Bloom Star Magnolia Full Bloom	153 Allegheny Serviceberry First Bloom

2007 DATA

	FIRST BLOOM		FULL BLOOM	
	DATE	DEGREE DAY	DATE	DEGREE DAY
FORSYTHIA				
ROYAL STAR MAGNOLIA				
PJM RHODODENDRON				
KOREANSPICE VIBURNUM				
CORALBURST CRABAPPLE				
COMMON LILAN CHARLES JOLY				
VANHOUTTE SPIREA				
MISS KIM LILAC				
RED TWIG DOGWOOD				
RED PRINCE WEIGELA				
ARROWWOOD VIBURNUM				
GOLDFLAME SPIREA				
POTENTILLA ABBOTTS-WOOD				
OAKLEAF HYDRANGEA				
CUTLEAF ELDERBERRY				
ROSE-OF-SHARON				

142 **GDD** Bradford Pear First Bloom	144 European Pine Sawfly Egg Hatch	145 Weeping Higan Cherry First Bloom	147 PJM Rhododendron First Bloom
149 Norway Maple Full Bloom	150 Inkberry Leafminer Adult Emergence	151 Sargent Cherry Full Bloom Star Magnolia Full Bloom	153 Allegheny Serviceberry First Bloom

2007 DATA

	FIRST BLOOM		FULL BLOOM	
	DATE	DEGREE DAY	DATE	DEGREE DAY
FORSYTHIA				
ROYAL STAR MAGNOLIA				
PJM RHODODENDRON				
KOREANSPICE VIBURNUM				
CORALBURST CRABAPPLE				
COMMON LILAN CHARLES JOLY				
VANHOUTTE SPIREA				
MISS KIM LILAC				
RED TWIG DOGWOOD				
RED PRINCE WEIGELA				
ARROWWOOD VIBURNUM				
GOLDFLAME SPIREA				
POTENTILLA ABBOTTS-WOOD				
OAKLEAF HYDRANGEA				
CUTLEAF ELDERBERRY				
ROSE-OF-SHARON				

2006 DATA

	FIRST BLOOM		FULL BLOOM	
	DATE	DEGREE DAY	DATE	DEGREE DAY
FORSYTHIA				
ROYAL STAR MAGNOLIA				
PJM RHODODENDRON				
KOREANSPICE VIBURNUM				
CORALBURST CRABAPPLE				
COMMON LILAN CHARLES JOLY				
VANHOUTTE SPIREA				
MISS KIM LILAC				
RED TWIG DOGWOOD				
RED PRINCE WEIGELA				
ARROWWOOD VIBURNUM				
GOLDFLAME SPIREA				
POTENTILLA ABBOTTS-WOOD				
OAKLEAF HYDRANGEA				
CUTLEAF ELDERBERRY				
ROSE-OF-SHARON				

155 **GDD** Spring Snow Crabapple First Bloom	162 Spruce Spider Mite Egg Hatch	164 Bradford Pear Full Bloom	169 Allegheny Serviceberry Full Bloom
174 Saucer Magnolia Full Bloom	178 PJM Rhododendron Full Bloom	179 Weeping Higan Cherry Full Bloom	182 Chokeberry First Bloom

2006 DATA

	FIRST BLOOM		FULL BLOOM	
	DATE	DEGREE DAY	DATE	DEGREE DAY
FORSYTHIA				
ROYAL STAR MAGNOLIA				
PJM RHODODENDRON				
KOREANSPICE VIBURNUM				
CORALBURST CRABAPPLE				
COMMON LILAN CHARLES JOLY				
VANHOUTTE SPIREA				
MISS KIM LILAC				
RED TWIG DOGWOOD				
RED PRINCE WEIGELA				
ARROWWOOD VIBURNUM				
GOLDFLAME SPIREA				
POTENTILLA ABBOTTS-WOOD				
OAKLEAF HYDRANGEA				
CUTLEAF ELDERBERRY				
ROSE-OF-SHARON				

155 **GDD** Spring Snow Crabapple First Bloom	162 Spruce Spider Mite Egg Hatch	164 Bradford Pear Full Bloom	169 Allegheny Serviceberry Full Bloom
174 Saucer Magnolia Full Bloom	178 PJM Rhododendron Full Bloom	179 Weeping Higan Cherry Full Bloom	182 Chokeberry First Bloom

185 **GDD** Korean Spice Viburnum First Bloom	189 Japanese Flowering Crabapple First Bloom	191 Eastern Redbud First Bloom	192 Gypsy Moth Egg Hatch
197 Donald Wynman Crabapple First Bloom	205 Korean Spice Viburnum Full Bloom	206 Azalea Lacebug Egg Hatch	209 Spring Snow Crabapple Full Bloom

2005 DATA

	FIRST BLOOM		FULL BLOOM	
	DATE	DEGREE DAY	DATE	DEGREE DAY
FORSYTHIA				
ROYAL STAR MAGNOLIA				
PJM RHODODENDRON				
KOREANSPICE VIBURNUM				
CORALBURST CRABAPPLE				
COMMON LILAN CHARLES JOLY				
VANHOUTTE SPIREA				
MISS KIM LILAC				
RED TWIG DOGWOOD				
RED PRINCE WEIGELA				
ARROWWOOD VIBURNUM				
GOLDFLAME SPIREA				
POTENTILLA ABBOTTS-WOOD				
OAKLEAF HYDRANGEA				
CUTLEAF ELDERBERRY				
ROSE-OF-SHARON				

185 **GDD** Korean Spice Viburnum First Bloom	189 Japanese Flowering Crabapple First Bloom	191 Eastern Redbud First Bloom	192 Gypsy Moth Egg Hatch
197 Donald Wynman Crabapple First Bloom	205 Korean Spice Viburnum Full Bloom	206 Azalea Lacebug Egg Hatch	209 Spring Snow Crabapple Full Bloom

2005 DATA

	FIRST BLOOM		FULL BLOOM	
	DATE	DEGREE DAY	DATE	DEGREE DAY
FORSYTHIA				
ROYAL STAR MAGNOLIA				
PJM RHODODENDRON				
KOREANSPICE VIBURNUM				
CORALBURST CRABAPPLE				
COMMON LILAN CHARLES JOLY				
VANHOUTTE SPIREA				
MISS KIM LILAC				
RED TWIG DOGWOOD				
RED PRINCE WEIGELA				
ARROWWOOD VIBURNUM				
GOLDFLAME SPIREA				
POTENTILLA ABBOTTS-WOOD				
OAKLEAF HYDRANGEA				
CUTLEAF ELDERBERRY				
ROSE-OF-SHARON				

PHENOLOGY GARDEN OBSERVATION

LOCATION _____

	FIRST BLOOM		FULL BLOOM	
	DATE	DEGREE DAY	DATE	DEGREE DAY
FORSYTHIA				
ROYAL STAR MAGNOLIA				
PJM RHODODENDRON				
KOREANSPICE VIBURNUM				
CORALBURST CRABAPPLE				
COMMON LILAN CHARLES JOLY				
VANHOUTTE SPIREA				
MISS KIM LILAC				
RED TWIG DOGWOOD				
RED PRINCE WEIGELA				
ARROWWOOD VIBURNUM				
GOLDFLAME SPIREA				
POTENTILLA ABBOTTS-WOOD				
OAKLEAF HYDRANGEA				
CUTLEAF ELDERBERRY				
ROSE-OF-SHARON				

213 **GDD** Carolina Silverbell First Bloom	214 Flowering Quince Full Bloom	215 Birch Leafminer Adult Emergence	217 Coralburst Crabapple First Bloom
219 Elm Leafminer Adult Emergence	221 Chokeberry Full Bloom	224 Alder Leafminer Adult Emergence	227 Honey Locust Spider Mite Egg Hatch

PHENOLOGY GARDEN OBSERVATION

LOCATION _____

	FIRST BLOOM		FULL BLOOM	
	DATE	DEGREE DAY	DATE	DEGREE DAY
FORSYTHIA				
ROYAL STAR MAGNOLIA				
PJM RHODODENDRON				
KOREANSPICE VIBURNUM				
CORALBURST CRABAPPLE				
COMMON LILAN CHARLES JOLY				
VANHOUTTE SPIREA				
MISS KIM LILAC				
RED TWIG DOGWOOD				
RED PRINCE WEIGELA				
ARROWWOOD VIBURNUM				
GOLDFLAME SPIREA				
POTENTILLA ABBOTTS-WOOD				
OAKLEAF HYDRANGEA				
CUTLEAF ELDERBERRY				
ROSE-OF-SHARON				

213 **GDD** Carolina Silverbell First Bloom	214 Flowering Quince Full Bloom	215 Birch Leafminer Adult Emergence	217 Coralburst Crabapple First Bloom
219 Elm Leafminer Adult Emergence	221 Chokeberry Full Bloom	224 Alder Leafminer Adult Emergence	227 Honey Locust Spider Mite Egg Hatch

229 **GDD** Wayfaring Tree Viburnum First Bloom	230 Honey Locust Plant Bug Egg Hatch	234 Common Lilac First Bloom	245 Ohio Buckeye First Bloom Eastern Redbud Full Bloom
251 Donald Wyman Crabapple Full Bloom	253 Hawthorne Lacebug Adult Emergence	260 Hawthorne Leaf Miner Adult Emergence	263 Flowering Dogwood First Bloom Coral Burst Crabapple Full Bloom

PHENOLOGY GARDEN PERENNIAL OBSERVATION

PREVIOUS DATA

2008 DATA		2007 DATA	
DATE	DEGREE DAY	DATE	DEGREE DAY

229 **GDD** Wayfaring Tree Viburnum First Bloom	230 Honey Locust Plant Bug Egg Hatch	234 Common Lilac First Bloom	245 Ohio Buckeye First Bloom Eastern Redbud Full Bloom
251 Donald Wyman Crabapple Full Bloom	253 Hawthorne Lacebug Adult Emergence	260 Hawthorne Leaf Miner Adult Emergence	263 Flowering Dogwood First Bloom Coral Burst Crabapple Full Bloom

PHENOLOGY GARDEN PERENNIAL OBSERVATION

PREVIOUS DATA

2008 DATA		2007 DATA	
DATE	DEGREE DAY	DATE	DEGREE DAY

PHENOLOGY GARDEN PERENNIAL OBSERVATIONS

LOCATION _____

	FIRST BLOOM	
	DATE	DEGREE DAY
LENTEN ROSE		
SIBERIAN IRIS		
FALSE INDIGO		
LEOPARDBANE		
BEE BALM		
BEARDTONGUE		
JAPANESE ANEMONE		
BUTTERFLY WEED		
DIANTHUS		
PURPLE CONEFLOWER		
GERANIUM		
DAYLILY		
GARDEN PHLOX		
MAY NIGHT SALIVA		
AUTUMN JOY SEDUM		

274 **GDD** Imported Willowleaf Beetle Adult Emergence	281 Red Chokeberry First Bloom	290 Wayfaring Tree Viburnum Full Bloom	303 Pine Needle Scale Egg Hatch First Generation
308 Cooley/Spruce Gall Adelgid Egg Hatch Eastern Spruce Gall Adelgid Egg Hatch	309 Vanhoutte Spirea First Bloom	315 Common Lilac Full Bloom	328 Winterking Hawthorne First Bloom

PHENOLOGY GARDEN PERENNIAL OBSERVATIONS

LOCATION _____

	FIRST BLOOM	
	DATE	DEGREE DAY
LENTEN ROSE		
SIBERIAN IRIS		
FALSE INDIGO		
LEOPARDBANE		
BEE BALM		
BEARDTONGUE		
JAPANESE ANEMONE		
BUTTERFLY WEED		
DIANTHUS		
PURPLE CONEFLOWER		
GERANIUM		
DAYLILY		
GARDEN PHLOX		
MAY NIGHT SALIVA		
AUTUMN JOY SEDUM		

274 **GDD** Imported Willowleaf Beetle Adult Emergence	281 Red Chokeberry First Bloom	290 Wayfaring Tree Viburnum Full Bloom	303 Pine Needle Scale Egg Hatch First Generation
308 Cooley/Spruce Gall Adelgid Egg Hatch Eastern Spruce Gall Adelgid Egg Hatch	309 Vanhoutte Spirea First Bloom	315 Common Lilac Full Bloom	328 Winterking Hawthorne First Bloom

330 **GDD** Lilac Border Adult Emergence	351 Red Chokeberry Full Bloom	353 Doublefile Viburnum First Bloom	363 Pagoda Dogwood First Bloom
365 Red Weigela First Bloom	374 Ohio Buckeye Full Bloom	375 Holly Leafminer Adult Emergence	406 Vanhoutte Spirea Full Bloom

NATIONAL PHENOLOGY NETWORK

CHINESE LILAC

Stage	Date
First Leaf	_____
95% Leaf	_____
First Bloom	_____
Full Bloom	_____
End Bloom	_____

	2008	2007
First Leaf	_____	_____
95% Leaf	_____	_____
First Bloom	_____	_____
Full Bloom	_____	_____
End Bloom	_____	_____

	2006
First Leaf	_____
95% Leaf	_____
First Bloom	_____
Full Bloom	_____
End Bloom	_____

330 **GDD** Lilac Border Adult Emergence	351 Red Chokeberry Full Bloom	353 Doublefile Viburnum First Bloom	363 Pagoda Dogwood First Bloom
365 Red Weigela First Bloom	374 Ohio Buckeye Full Bloom	375 Holly Leafminer Adult Emergence	406 Vanhoutte Spirea Full Bloom

NATIONAL PHENOLOGY NETWORK

CHINESE LILAC

Stage	Date
First Leaf	_____
95% Leaf	_____
First Bloom	_____
Full Bloom	_____
End Bloom	_____

	2008	2007
First Leaf	_____	_____
95% Leaf	_____	_____
First Bloom	_____	_____
Full Bloom	_____	_____
End Bloom	_____	_____

	2006
First Leaf	_____
95% Leaf	_____
First Bloom	_____
Full Bloom	_____
End Bloom	_____

Some first bloom observations by Henry Thoreau in and around Concord, Massachusetts as indicated in his journal in 1852.

Hazel Alter	April 8
American Elm	April 15
Quaking Aspen	April 15
Hazelnut	April 16
Marsh Marigold	April 25
Dandelion	April 25
Chickweed	April 26
Pussytoes	April 27
Buttercup	April 28
Red Maple	April 28
Aspen	April 29
Meadow Rue	May 5
Wild Columbine	May 6
Bog-rosemary	May 6
Wild Strawberry	May 7
Hop-hornbeam	May 8
White Willow	May 8
Downy Serviceberry	May 9
Lilac	May 19

417 **GDD** Beauty Bush First Bloom	422 Miss Kim Lilac First Bloom	435 White Fringe Tree First Bloom	444 Doublefile Viburnum First Bloom
445 Snowmound Spirea First Bloom	446 Red Prince Weigela First Bloom	467 Black Locust First Bloom	478 Common Ninebark First Bloom

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445 Snowmound Spirea First Bloom	446 Red Prince Weigela First Bloom	467 Black Locust First Bloom	478 Common Ninebark First Bloom

479 **GDD** Pagoda Dogwood Full Bloom	497 Oyster Shell Scale Egg Hatch	498 Miss Kim Lilac Full Bloom	517 White Fringe Tree Full Bloom
534 Arrowwood Viburnum First Bloom	547 Bronze Birch Borer Adult Emergence	548 Black Locust Full Bloom Multiflora Rose First Bloom	565 Red Java Weigela Full Bloom

Project Budburst Plants

Native Tress & Shrubs

American Linden	Eastern White Pine
Aspen	Flowering Dogwood
Black Locust	Bearberry
Box Elder	Paper Birch
Choke cherry	Red Maple
Common Snowberry	Redosier Dogwood
Douglas Fir	Shrubby Cinquefoil
Eastern serviceberry	Tulip Tree

Native Flowers

Common Yarrow	Mayapple
Eastern Red Columbine	Spiderwort
Jack In The Pulpit	Trout Lily
Lanceleaf Spring Beauty	Virginia Bluebells
Large Flowered Trillium	Woods Strawberry

Common Ornamentals

Forsythia	Common Lilac

Common Weeds

Dandelion	White Clover

Link to project Budburst:
http://www.windows.ucar.edu/citizen-science/budburst/

479 **GDD** Pagoda Dogwood Full Bloom	497 Oyster Shell Scale Egg Hatch	498 Miss Kim Lilac Full Bloom	517 White Fringe Tree Full Bloom
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Common Ornamentals

Forsythia	Common Lilac

Common Weeds

Dandelion	White Clover

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Wildflower First Blooms taken from the
2009 Wisconsin Phenology Calendar

Skunk cabbage begins	March 24
Pasque flower	April 10
Dutchman's breeches	April 16
Prairie smoke	April 20
Marsh marigold	April 22
Serviceberry	April29
Large trillium	May 2
Birdfoot violet	May 4
Columbine	May 10
Shooting star	May 11
Wild geranium	May 12
May-apple	May 13
Choke cherry	May 14
Wild lupine	May 15
Jack-in-the-pulpit	May 17
Lilacs	May 21
Pink prairie phlox	May 24
Anemone	May 26
Wild iris	May 29
Yarrow	June 7
Black-eyed susan	June 15
Butterfly weed	June 20
Common milkweed	June 22
Marsh milkweed	June 27
Purple coneflower	July 5
Purple loosestrife	July 7
Prairie dock	July 11
Ironweed	July 16
Joe-pye weed	July 22
Rough blazing star	July 28
Cardinal flower	Aug 1
New England aster	Sept 3

566 **GDD** Sweet Bay Magnolia First Bloom	568 Potato Leafminer Adult Emergence	571 Juniper Scale Egg Hatch	577 Black Vine Weevil First Adult Feeding
583 Snow Mound Spirea Full Bloom	592 Beauty Bush Full Bloom	593 Chinese Dogwood First Bloom	596 Common Ninebark Full Bloom

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583 Snow Mound Spirea Full Bloom	592 Beauty Bush Full Bloom	593 Chinese Dogwood First Bloom	596 Common Ninebark Full Bloom

621 **GDD** Arrowwood Viburnum Full Bloom	622 Japanese Tree Lilac First Bloom	624 Bumald Spirea First Bloom	635 Washington Hawthorne First Bloom
643 Mulitflora Rose Full Bloom	702 Greater Peach Tree Border Adult Emergence	727 Fuzzy Deutzia First Bloom Red Prince Weigela Full Bloom	731 Washington Hawthorne Full Bloom

WILDLIFE PHENOLOGY

The dates listed below were obtained from the 2009 Wisconsin Wildlife Phenology Calendar. The information was gathered by the daughter of Aldo Leopold; Nina Leopold Bradley, from 1974 through 2000 in southern Wisconsin. The calendar uses Nina's dates and averages them, thereby determining the date on which each event may occur. The list below is a partial list from the calendar. To apply these dates to a different area, apply Hopkins Law, which in part states that the phenological events vary at the rate of one day for each 15 minutes of latitude and one for each one hundred feet of elevation to be used as a reference point for the events below would be 43 degrees 30' and 800 feet.

Eastern bluebird spring arrival	Mar 11
Red-winged blackbird spring arrival	Mar 14
Killdeer spring arrival	Mar 16
Wood duck spring arrival	Mar 23
Eastern phoebe spring arrival	Mar 26
Chorus frogs and spring peepers begin calling	Mar 28
Common garter snakes coming out of hibernation	Mar 30
Canadian geese begin laying eggs	Mar 31
Tree swallow spring arrival	Apr 8
House wren spring arrival	Apr 22
Barn swallow return	Apr 24
Purple martins begin to arrive	Apr 27
Warbler spring migration begins	May 3
Scarlet tanager spring arrival	May 6
Indigo bunting spring arrival	May 7
Rudy-throated hummingbirds spring arrival	May 8
Monarch butterfly arrival	May 31

621 **GDD** Arrowwood Viburnum Full Bloom	622 Japanese Tree Lilac First Bloom	624 Bumald Spirea First Bloom	635 Washington Hawthorne First Bloom
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Indigo bunting spring arrival	May 7
Rudy-throated hummingbird spring arrival	May 8
Monarch butterfly arrival	May 31

NOTES

748 **GDD** Calico Scale Egg Hatch	767 European Fruit Lecanium Scale Egg Hatch	783 Striped Pinescale Egg Hatch	808 Japanese Lilac Full Bloom
815 Rhododendron Borer Adult Emergence	830 Dogwood Borer Adult Emergence	835 Oakleaf Hydrangea First Bloom	851 Cottony Maple Scale Egg Hatch

NOTES

748 **GDD** Calico Scale Egg Hatch	767 European Fruit Lecanium Scale Egg Hatch	783 Striped Pinescale Egg Hatch	808 Japanese Lilac Full Bloom
815 Rhododendron Borer Adult Emergence	830 Dogwood Borer Adult Emergence	835 Oakleaf Hydrangea First Bloom	851 Cottony Maple Scale Egg Hatch

867 **GDD** Fall Webworm Egg Hatch	874 Minosa Webworm Egg Hatch	884 Fuzzy Deutzia Full Bloom	892 Winged Euonymus Scale Egg Hatch
894 Spuce Bud Scale Egg Hatch	899 Greenspire Littleleaf Linden First Bloom	913 Southern Catapa First Bloom	917 Bumald Spirea Full Bloom

NOTES

867 **GDD** Fall Webworm Egg Hatch	874 Minosa Webworm Egg Hatch	884 Fuzzy Deutzia Full Bloom	892 Winged Euonymus Scale Egg Hatch
894 Spuce Bud Scale Egg Hatch	899 Greenspire Littleleaf Linden First Bloom	913 Southern Catapa First Bloom	917 Bumald Spirea Full Bloom

NOTES

NOTES

924 **GDD** Panicled Goldenrain Tree First Bloom	957 Azalea Bark Scale Egg Hatch	970 Japanese Beetle Adult Emergence	1047 Green Spirea Littleleaf Linden Full Bloom
1073 Southern Catapa Full Bloom	1158 Bottlebush Buckeye First Bloom	1251 Panicled Goldenrain Tree Full Bloom	1347 Rose of Sharon First Bloom

NOTES

924 **GDD** Panicled Goldenrain Tree First Bloom	957 Azalea Bark Scale Egg Hatch	970 Japanese Beetle Adult Emergence	1047 Green Spirea Littleleaf Linden Full Bloom
1073 Southern Catapa Full Bloom	1158 Bottlebush Buckeye First Bloom	1251 Panicled Goldenrain Tree Full Bloom	1347 Rose of Sharon First Bloom

1923 **GDD** Euonymus Scale Egg Hatch	1978 Magnolia Scale Egg Hatch	2145 Banded Ash Clearwing Borer Adult Emergence	

NOTES

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