

No More Spring Panic Here... *Maybe*

Although spring can be the best time of year for most of the population, spring at a field production nursery can yield hair on fire anxiety. Every year we go like hell to get the deciduous plants dug before they come into full leaf, and every year the deadline looms at a different date.

During the spring of 2020 I decided to do something about the unknown. You will recall in February the headline was spring will be 2-3 weeks early. With our orders up and 2 men missing -boarder issues- panic set in before we got started.

I felt we could better understand the issue of spring digging panic if we monitored plant development as a function of degree days. I was really anxious to do this and started to survey 71 different plants on March 20. This was too soon but I was anxious to get started. After 6 weeks, the excitement dropped to “do I have to do this again”? I ended the data collection on April 24. In most years we have dug all the deciduous material by then; this year we were substantially finished on April 10. We continued to dig smaller, local orders

(continued on next page)



Cercis cultivars on April 17, 2020.

IT'S TIME FOR SHARING (Continued)

into May for plants I felt would be fine.

Our first general grass mowing started on April 8; about 146 DD.

First, you need to know my data collection was subjective for what I saw. Five different data collectors may have come up with five different observations. Yet, I think when it was all done, I collected the data I needed to be useful in future years.

Second, all growers have a different threshold for risk taking related to how far we can push the window for digging. Most believe the end of April in typical years marks the end of deciduous digging – plus or minus a week. However, we all have our anecdotal memories of when we got burned and when we did not

for a given genus. About 10 years ago a good landscape contracting customer in New Jersey called in late April requesting two full trailer loads of deciduous shrubs that had to be installed before Memorial Day. We said no; wait until the new flush hardened off - like mid-June. They called every day, begging. I got tired of it and said okay. We finally dug a variety of well over 200 plants in mid-May. We treated the plants with Vapor Guard and Bioplex. They lost a total of 2 plants.

Third, as you review the observations versus date and degree days, the last column is undecided as to whether it could be dug or not. You may not remember the third full week of April, 2020. Here we had two frosts and the

degree days only increased by 10 for the week. In any event, we had most of our deciduous material dug on April 10 except Hibiscus cultivars which could have been dug through mid-May; they were so slow I began to wonder if the buds had frozen.

Ilex cultivars were extremely slow to flush. Most terminal buds froze and eventually secondary buds produced one of the best flushes ever. (See photo below right)

An old 'rule of thumb' is that most plants can be dug in flower and cannot be dug after the flowers are off. I am not sure this is a universal rule for all plants but based on my ratings, it comes close.

Our production does not contain many shade trees and therefore this work focuses on shrubs and smaller ornamental flowering trees.

Most Buxus cultivars froze on top with new growth noted below on the sides. They never really recovered from the frost and showed uniform but limited growth later in the summer.

Forth, I do not use the data from the IPM report to determine degree days. I use <http://www.greencastonline.com/growing-degree-days/home> because I find it easy to enter beginning and ending dates very easily to compare year over year data. Further, the results come out about the same as the IPM data and I think the model collects data closer to the farm – we are a low spot and tend to be colder. In any event, we are talking about relative values that may not exactly tell us when to stop digging. (See photo page 15)



Fagus sylvatica on April 17, 2020



Cornus officinalis on March 27, 2020

As you can see from the chart, February and March, 2020 were warmer than 2019 but April 2020 was substantially colder than April, 2019 with frost here on April 8 and 12 and 2 frosts the week of April 20; note below that activity slowed during this period. Therefore the ‘forecasted early spring’ turned out to be late compared to 2019. In the future we can monitor degree days on a weekly basis to predict how developed a particular genus should be. We can then focus digging on the plants that will likely be in front of the line avoiding the panic.

Although I had a sense of which plants would develop sooner, I was surprised at how many were delayed compared to my recollection. This is useful information.

In the “Degree Days vs. Plant Development” charts on pages 16 - 18, I have indicated hesitancy on Friday, April 24 for many plants. That is I gave some both a ‘no dig’ and ‘dig’ rating. I would risk digging if needed but hold the plants for a week to see what would happen after digging. ✦

What did happen to our ‘early spring’ in 2020. Summary of Degree Days			
01-Jan-20	0	01-Jan-19	0
31-Jan-20	8.5	31-Jan-19	0
01-Feb-20	8.5	1-Feb-19	0
29-Feb-20	14.5	28-Jan-19	9
01-Mar-20	14.5	01-Mar-19	9
31-Mar-20	96.5	31-Mar-19	49.5
01-Apr-20	96.5	01-Apr-19	49.5
30-Apr-20	204.5	30-Apr-19	329



Jerry Faulring
 Waverly Farm
 1931 Greenfield Road
 Adamstown, MD 21710
 310-874-8300

Degree Days vs. Plant Development

	March 20, 2020	March 27, 2020	April 3, 2020	April 10, 2010			April 17, 2020			April 24, 2020		
Plant	28 Degree Days	96.5 Degree Days	96.5 Degree Days	146 Degree Days	ok to dig	do not dig	160.5 Degree Days	ok to dig	do not dig	175.5 Degree Days	ok to dig	do not dig
Acer griseum	tight bud	buds swelling	same	same	x		same	x		10% leaves	x	
Acer palmatum cvs	slight bud swell	tiny leaves	10% leaves	30% leaves	x		50% leaves		x	90% leaves		x
Acer rubrum	hard bud	same	70% flower	100% seeds/ tiny leaves	x		100% seeds/tiny leaves	x		5% leaves	x	
Aesculus	buds swelling	same	same	20% leaves	x		same	x		90% leaves		x
Amelanchier	hard bud	5% flr	10% flr, tny leaves	20% flr/ 5% leaves	x		20% flr/ 5% leaves	x		50% leaves	x	x
Aronia	5% leaves	10% leaves	20% leaves	20% leaves	x		50% leaves/ flr show	x		50% leaves & flrs		x
Betula	hard bud	some bud show	very tny leaves	tiny leaves	x		5% leaves	x		20% leaves		x
Buxus 'Green Mountain'	starting to flush	more flush	10-15% flush	same	x		same	x		30% leaves	x	
Buxus 'Green Velvet'	flowering	same	flush starting	same	x		same	x		10% flrs	x	
Carpinus	buds softening	buds showing	same	tiny leaves	x		20% leaves	x		30% leaves	x	
Castane mollissima	hard bud	same	same	tiny leaves	x		tiny leaves	x		5% leaves	x	
Cercidiphyllum	Buds swelling	5% leaves	same	10% leaves	x		50% leaves	x	x	80% leaves		x
Cercis	10% flr	good color	50% flr	full bloom/no leaves	x		full bloom/tiny leaves	x		10% leaves & 5% flrs	x	
Chionanthus virginicus	hard bud	same	same	buds swell	x		buds swell	x		same	x	
Cladrastis	hard bud	same	same	tiny leaves	x		tiny leaves	x		leaves frozen	x	
Clethera cvs	hard bud	same	same	tiny leaves	x		tiny leaves	x		5% leaves	x	
Cornus alternifolia	5% bud	buds showing	small leaves	5% leaves	x		20% leaves	x		30% leaves	x	
Cornus florida	buds swelling	tiny leaves	10% flower	50% flr	x		Full bloom	x		Full blm, 10% leaves	x	
Cornus kousa	buds swelling	same	same	same	x		5% leaves	x		20% leaves	x	x
Cornus mas/ officinalis	50% flowers dropped	tiny leaves	same	flrs off/tiny leaves	x		10% leaves	x		30% leaves	x	
Cornus 'Wolf Eyes'	hard bud	same	same	5% leaves	x		10% leaves	x		80% leaves	x	x
Cornus x 'Aurora'	buds swelling	tiny leaves	same	5% leaves	x		10% leaves	x		30% leaves, flr forming	x	
Fagus sylvatica cvs	buds softening	same	same	same	x		same	x		variable, 50% leaves		x
Fothergilla	hard bud	same	same	10% flr/ no leaves	x		50% flr/ tiny leaves	x		Frost damage, 10% leaves	x	
Ginkgo	hard bud	green buds	tiny leaves	same	x		10% leaves	x		50% leaves	x	x
Halesia	hard bud	hard bud	buds swell	tiny leaves	x		10% leaves/ flr off	x		same	x	
Hammamelis ' cvs	75% flowers dropped	tiny buds	same	flrs off/tiny leaves	x		flrs off/tiny leaves	x		20% leaves	x	
Heptacodium	10-20% leaves	20% leaves	30% leaves	50% leaves	x		75% leaves	x		90% leaves	x	x
Hibiscus syriacus cvs	hard bud	tiny bud swell	tiny buds showing	variable/tiny leaves	x		variable/tiny leaves	x		same	x	
Hydrangea paniculata cvs	5-10% buds	same	10% leaves	same	x		variable/10% leaves	x		30% leaves		x

Degree Days vs. Plant Development

	March 20, 2020	March 27, 2020	April 3, 2020	April 10, 2010			April 17, 2020			April 24, 2020		
Plant	28 Degree Days	96.5 Degree Days	96.5 Degree Days	146 Degree Days	ok to dig	do not dig	160.5 Degree Days	ok to dig	do not dig	175.5 Degree Days	ok to dig	do not dig
Hydrangea quercifolia	5% leaves	10-15% leaves	same	20% leaves	x		30% leaves	x		50% leaves		x
Ilex (blue holly cvs)	hard bud	hard bud	same	fir bud swell	x		fir bud swell	x		same		x
Ligustrum ovalfolium	10% leaves	15% leaves	30% leaves	50% leaves	x		50% leaves	x		90% flrs	x	x
Magnolia Butterflies	hard bud	80% bloom	full blm	full bloom/small leaves	x		flrs off/ 10% leaves	x		same	x	
Magnolia 'Galaxy'	full bloom	same	fir done/tiny leaves	flrs off/ 10% leaves	x		flrs off/ 10% leaves	x		20% flrs	x	
Magnolia 'Leonard Messell'	90% flower	dropping flowers	flrs done/small leaves	flrs off/ 5% leaves	x		30% leaves	x		60% flrs		x
Magnolia Little Girls	50% bloom	no leaves 70% flower	full blm/no leaves	50% flrs off/ small leaves	x		90% flrs/ 10% leaves	x		30% leaves, frost damage	x	
Magnolia soulangiana	full bloom	full bloom	full blm/tiny leaves	flrs off/ 10% leaves	x		flrs off/ 10% leaves	x		20% leaves	x	
Magnolia stellata cvs	full bloom	holding flrs, no leaves	flush done/small leaves	20% flrs left/ small leaves	x		30% leaves	x		50% leaves		x
Malus 'Snowdrift'	15% leaves	20% leaves	30% leaves/flrs showing	full bloom/ 50% leaves	x		full blm/ 80% leaves		x	full leaves		x
Malus 'Tina'	10% leaves	20% leaves	same/some flrs	30% leaves	x		full blm/ 30% flrs		x	Flrs off, 20% leaves		x
Myrica pennsylvanica	10% flowers	same	same	same	x		same	x		90% flrs	x	x
Parottia	Buds softening	buds showing	tiny leaves	5% leaves	x		10% leaves	x		90% flrs	x	
Picea pungens cvs	hard bud	not showing	same	same	x		same	x		Caps bright	x	
Pinus Thunderhead	hard bud	10% candles	same	60% candle		x	60% candle		x	90% candles		x
Platanus	soft bud	swell	same	tiny leaves	x		tiny leaves	x		5% leaves	x	
Prunus Kwanzan	flowers 80% off - bud swell	no leaves	same/flowers off	60% leaves		x	60% leaves/ some flrs		x	90% leaves	x	x
Prunus mume	flowers off - bud swell	small leaves	same	tiny leaves	x		10% leaves	x		40% leaves	x	x
Punus Yoshino	20% flower	full bloom no leaves	full blm/sm leaves	flrs of/ 50% leaves		x	60% leaves/ some flrs		x	90% flrs	x	x
Rhamnus frangula 'Columnaris'	hard bud	hard bud	buds swell	tiny leaves	x		tiny leaves	x		5% flrs	x	
Spiraea vanhouttei	5-10% leaves	same	50% leaves/ no fl	50% leaves/ no flr	x		50% leaves/ no flr	x		75% leaves, small flr		x
Styrax japonicus	hard bud	hard bud	same	5% leaves	x		30% leaves	x		lLeaves frozen	x	x
Syringa meyeri 'Palibin'	20% flower	same	20% leaves / 50% flower	same	x		30% leaves/ 50% flrs	x		50% flrs, 50% kvs	x	x
Syringa preston cvs	buds swelling	fat buds	10% leaves	same	x		50% leaves/ no flr		x	70% leaves, no flr		x
Syringa reticulata	40% leaves	50% leaves	50% leaves	70% leaves/ no flr		x	80% leaves/ no flr		x	flrs forming	x	
Syringa vulgaris cvs	10% flowers	20% leaves flrs showing	20% leaves flrs showing	50% bloom		x	75% blm/ 50% leaves		x	full bloom, 75% leaves		x
Taxus cvs	hard bud	same	same	buds swell	x		flrs show	x		Variable, frost damage	x	

Degree Days vs. Plant Development

	March 20, 2020	March 27, 2020	April 3, 2020	April 10, 2010			April 17, 2020			April 24, 2020		
Plant	28 Degree Days	96.5 Degree Days	96.5 Degree Days	146 Degree Days	ok to dig	do not dig	160.5 Degree Days	ok to dig	do not dig	175.5 Degree Days	ok to dig	do not dig
Viburnum 'Alleghany'	5-10% flr	tiny leaves	20% flr/ 20% leaves	50% bloom/ 30% leaves	x		70% bloom/ 5% leaves	x		full bloom, 50% leaves	x	
Viburnum carlesii	20% flr	40% flr./ tiny leaves	30% leaves/ full bloom	full bloom/ 50% leaves	x		bloom off/ 70% leaves		x	90% leaves	x	x
Viburnum dentatum cvs	hard bud	hard bud	10% buds	10% leaves	x		10% leaves	x		50% leaves	x	
Viburnum 'Mohawk'	hard bud	hard bud	10% leaves/ 90% flrs	full bloom/ 20% leaves	x		full bloom/ 50% leaves		x	75% leaves	x	x
Viburnum plicatum cvs	10-20% leaves	20% leaves flrs	50% leaves	50% flr/ 50% leaves		x	same w frost damage		x	50% flrs, 70% leaves	x	x
Viburnum pragnense	hard bud	hard bud	5% leaves	5% leaves	x		10% leaves/ 50% flr	x		same, frost damage	x	
Viburnum rhytidophyllum 'Cree'	flowers swelling	20% flowers	same	same	x		50% flr/ 10% leaves	x		70% flrs, 30% leaves	x	
Viburnum trilobum 'Redwing'	10% leaves	20% leaves	30% leaves	50% leaves	x		50% leaves	x		70% leaves, no flr	x	x
Viburnum x burkwoodii	hard bud	10% leaves	20% leaves/ 80% flr	full blomm/ 10% leaves	x		full blm/20% leaves	x		flrs off, 20% leaves	x	
Viburnum x 'Conoy'	hard bud	hard bud	50% flower	full bloom/ small leaves	x		bloom fade/ 10% leaves	x		same	x	
Viburnum x 'Nantucket'	hard bud	40% bloom /no leaves	50% flrs/ no leaves	90% bloom/ small leaves	x		full bloom/ 10% leaves	x		full bloom, 20% leaves	x	
Viburnum x 'Winterthur'	hard bud	buds showing	tiny leaves	5% leaves	x		10% leaves	x		20% leaves	x	
Vitex	hard bud	same	same	same	x		bud swell	x		same	x	