

PHENOPHASE QUICK-GUIDE

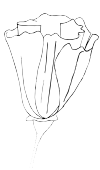

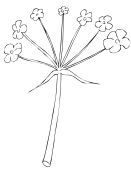
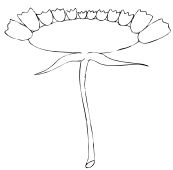

When determining the date of a phenophase, simply determine the habit and flowering architecture of your plant and find the appropriate cell in the table of phenophase definitions. We have provided three tables of phenophase definitions: leafing phenophases, first flower, and last flower.

DEFINITIONS OF LEAFING PHENOPHASES

	Leaf budburst		First full leaf		Entire plant leaf-out	
	Simple leaf	Compound leaf	Simple leaf	Compound leaf	Simple leaf	Compound leaf
Habit						
Forb	Not applicable (forbs don't produce dormant winter buds)	Not applicable	The date on which the first leaf has expanded to its final size (can be tricky when leaves take a long time to fully expand)	The date on which the first leaf has fully expanded; the midrib has reached its final length (individual leaflets need not be fully expanded)	The date on which all leaves have fully expanded. Be aware that plants with indeterminate (continuous) growth may continue to produce leaves throughout the season.	The date on which all leaves have fully expanded. Be aware that plants with indeterminate (continuous) growth may continue to produce leaves throughout the season.
Shrub or Tree	The date on which the third bud "bursts", revealing green leafy tissue	The date on which the third bud "bursts", revealing green leafy tissue	The date on which the third leaf has fully expanded, and the pedicels are visible	The date on which the third leaf has fully expanded; the midrib has reached its final length (individual leaflets need not be fully expanded)	The date on which all leaves on the plant have fully expanded. Be aware that plants with indeterminate (continuous) growth may continue to produce leaves throughout the season.	The date on which all leaves on the plant have fully expanded. Be aware that plants with indeterminate (continuous) growth may continue to produce leaves throughout the season.



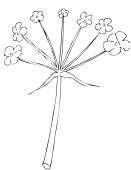
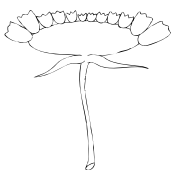

DEFINITIONS OF FIRST FLOWER

Note that a flower is considered to be “open” as soon as the petals open far enough to reveal the reproductive structures (anthers and/or stigmas) inside.

	Inflorescence Type				
	Solitary Flower	Spike-like inflorescences	Umbel-like inflorescences	Heads	Cymes
					
Habit					
Forb	The date on which the first flower on the plant opens	The date on which the first flower opens on any spike	The date on which the first flower opens on any umbel	The date on which the first <i>disk flower</i> opens in any head	The date on which the first flower opens on any cyme
Shrub or Tree	The date on which the third flower on the plant opens	The date on which at least one flower has opened on three spikes	The date on which at least one flower has opened on three umbels	The date on which at least one <i>disk flower</i> has opened in three heads	The date on which at least one flower has opened on three cymes

DEFINITIONS OF LAST FLOWER

Note that a flower is considered to be "open" as soon as the petals open far enough to reveal the reproductive structures (anthers and/or stigmas) inside.

	Inflorescence Type				
	Solitary Flower	Spike-like inflorescences	Umbel-like inflorescences	Heads	Cymes
					
Habit					
Forb	The date on which the last flower has opened on the plant; any remaining buds remain closed	The date on which the last flower has opened on the plant; any remaining buds remain closed	The date on which the last flower has opened on the plant; any remaining buds remain closed	The date on which the last disk flower opens in any head on the plant (look for the last-opening disk flowers towards the center of the head)	The date on which the last flower has opened on the plant; any remaining buds remain closed
Shrub or Tree	The date on which the last flower has opened on the plant; any remaining buds remain closed	The date on which the last flower has opened on the plant; any remaining buds remain closed	The date on which the last flower has opened on the plant; any remaining buds remain closed	The date on which the last disk flower opens in any head on the plant (look for the last-opening disk flowers towards the center of the head)	The date on which the last flower has opened on the plant; any remaining buds remain closed

