

## Bloom Time Master Sheet

Table 2

| 1 Variety            | Tight pink | Loose pink          | Kings open                       | Full bloom                              | Petal fall                               | Comments               | Location               |
|----------------------|------------|---------------------|----------------------------------|---|--|------------------------|------------------------|
| 74818                | 5/26/2014  |                     | 5/30/2014,<br>40%                |   | 6/4/2014<br>spent                        |                        |                        |
| 75413                | 5/28/2014  | 5/30/2014           | 6/1/2014<br>only 1 of 25<br>open | 6/4/2014<br>viable                      |  |                        | spur                   |
| 3 Sisters            |            |                     | 5/24/2014                        | 6/1/2014,<br>50%                        |  |                        |                        |
| Adanac               |            |                     |                                  | 5/30/2014                               |  |                        |                        |
| Alexander            |            |                     | 5/24/14 first<br>kings           |   | 6/6/2014,<br>spent                       | large blooms           | spur & 6"<br>shoottips |
| Alkmene              | 5/26/2014  |                     | 6/1/2014                         |   |  | many unfilled clusters | spur                   |
| Almata               | 5/21/2014  |                     |                                  | 5/30/2014,<br>past viable, a<br>few new |  | tip and spur           | tip/spur               |
| Anoka                |            | 5/24/2014           | 5/28/2014                        | 5/30/2014,<br>25%, 6/2                  | 6/6/2014,<br>spent spurs,<br>viable tips | spur, tip              | spur/tip               |
| Antonovka 109        |            | 5/26/2014           |                                  | 5/30/2014,<br>40%                       |  |                        | spur                   |
| Antonovka 114        |            | 5/26/2014           |                                  |   |  |                        |                        |
| Antonovka 126        |            |                     | 5/30/2014                        |   |  | huge blooms            |                        |
| Antonovka 126        |            |                     | 5/27/2014,<br>just               |   | 6/2/2014<br>petal drop, a<br>few new     |                        |                        |
| Antonovka 128        |            |                     | 5/30/2014                        |   |  |                        |                        |
| Antonovka 37         |            |                     |                                  | 5/29/2014                               | 6/2/2014<br>first drops                  |                        |                        |
| Antonovka 37         |            |                     | 5/24/2014                        | 5/26/2014,<br>20%                       |  | earliest bloom in area |                        |
| Antonovka 38         |            |                     | 5/30/2014                        |   |  |                        |                        |
| Antonovka 38         |            |                     | 5/26/2014,<br>just               |   |  |                        |                        |
| Antonovka 40         |            |                     |                                  | 5/26/2014,40<br>%, 5/30                 |  |                        |                        |
| Antonovka 48         |            | 5/24/2014,<br>close | 5/26/2014                        | 5/30/2014,<br>100%                      | 6/2/2014<br>petal drop, a<br>few new     |                        |                        |
| Antonovka 49         |            |                     | 5/26/2014<br>and tp              | 6/2/2014,<br>5/30/2014,<br>80%          | 6/4/2014 p<br>fall , a few<br>new        | small fruited          | spur                   |
| Antonovka 52         |            |                     | 5/30/2014                        |   |  |                        |                        |
| Antonovka 81         | 6/2/2014   |                     |                                  |   |  |                        | tip/spur               |
| Ashmead's Kernel     |            | 5/28/2014           |                                  | 6/1/2014,<br>60%,<br>6/5/2014           |  |                        | spur                   |
| Atlas                | 5/26/2014  | 5/28/2014           |                                  | 6/1/2014,<br>50%                        | 6/6/2014,<br>spent                       | big flowers            |                        |
| Audrey's Transparent |            | 5/24/2014           | 5/28/2014                        | 6/2/2014                                | 6/4/2014 p<br>drop                       |                        | spur                   |

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|                          |           |                                |                         |                                       |  |  |          |
|--------------------------|-----------|--------------------------------|-------------------------|---------------------------------------|--|--|----------|
| Autumn Artic             | 5/24/2014 |                                | 5/30/2014               | 6/2/2014                              | 6/4/2014<br>spent  |  | spur     |
| Battleford               |           | 5/30/2014                      | 6/1/2014                |                                       |  |  |          |
| Beacon                   | 5/24/2014 | 5/26/2014                      | 5/28/2014,ju<br>st      | 5/30/2014,<br>30%                     | 6/4/2014 p<br>fall, half<br>viable                           |  |          |
| Beautiful Arcade         | 5/28/2014 |                                |                         |                                       | 6/4/2014<br>spent  |  |          |
| Bedford                  |           |                                |                         | 6/1/2014                              |  |  |          |
| Bethel                   | 5/26/2014 |                                | 5/29/2014.<br>just      | 6/1/2014                              | 6/6/2014,<br>spent   | late bloomer   |          |
| Black Oxford             | 5/26/2014 |                                | 6/1/2014,<br>just       |                                       |  | clusters not filled<br>late bloomer  | tip/spur |
| Blue Pearmain            | 5/24/2014 |                                |                         |                                       |  |  |          |
| Bowing                   |           |                                | 5/24/2014               | 5/28/2014                             |  |  |          |
| Breaky                   |           | 5/24/2014                      | 5/25/14 25%<br>open     | 5/28/2014,<br>6/1/2014                |  | very white blooms  |          |
| Britemac                 | 5/26/2014 |                                | 6/1/2014                |                                       | 6/6/2014,<br>variable,<br>spurs spent,<br>tips new           | few blooms per<br>cluster  |          |
| Bud 157-33               |           |                                | 5/26/2014               |                                       |  | red blooms   |          |
| Bud 57-233               |           |                                | 5/28/2014               | 5/30/2014                             |  | attractive puple and<br>white bloom  |          |
| Bud 9                    |           | 5/26/2014                      | 5/28/2014               | 5/30/2014                             | 6/2/2014<br>petal fall                                       | the b9 seedling is<br>precocious in<br>contrast to 118,490   |          |
| Burgundy                 |           |                                | 5/26/14 tight<br>& open | 6/1/2014,vari<br>able                 | 6/9/2014,<br>successive,<br>closed to<br>petal drop          | the wide variance in<br>tp to bloom reflects<br>long harvest<br>window,gradual<br>bloom offers frost<br>protection |          |
| Centennial Crab          |           | 5/26/2014,<br>most tight       | 5/30/2014               | 6/1/2014                              | 6/6/2014,<br>spent   |  |          |
| Cherry                   |           |                                | 5/24/2014,<br>1%        |                                       |  |  |          |
| Chestnut Crab            | 5/24/2014 |                                | 5/26/2014               | 6/1/2014,<br>75%                      | 6/5/2014,<br>spent   | more spur than tip,<br>garlanding  | spur/tip |
| Collet                   |           | 5/27/2014                      | 5/30/2014               |                                       | 6/6/2014,<br>spent   |  | tip      |
| Connell Red              |           |                                | 5/26/2014,<br>and tp    | 5/30/2014,<br>30%                     | 6/3/2014 p<br>fall, new<br>blooms,<br>6/6/2014<br>most spent |  |          |
| Cox's Orange Pippin      |           | 5/26/2014,<br>one king<br>open | 5/30/2014,<br>25%       | 6/4/2014<br>variable, tp<br>to p fall | 6/6/2014,<br>spent a few<br>ok                               |  |          |
| Crab 24 False Yarlington |           | 5/26/2014                      | 5/30/2014, +            |                                       | 6/2/2014,<br>petaldrop<br>starting                           | small blooms   |          |

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|                 |           |           |                    |                              |  |                                   |          |
|-----------------|-----------|-----------|--------------------|------------------------------|--|-----------------------------------|----------|
| Cranberry       |           |           | 5/26/2014          | 6/1/2014                     |  | loaded, purple blooms, precocious | spur     |
| Creekside Crab  |           | 5/26/2014 | 5/29/2014          |                              |  | retain some pink in bloom         |          |
| Crimson Beauty  |           |           |                    | 5/28/2014, 25%, 6/1/2014     |  |                                   |          |
| Davey           |           |           |                    |                              |  | no blooms, but cropped in 2013    |          |
| Dayton          | 5/25/2014 |           |                    | 6/1/2014, 50%                | 6/5/2014, spent                                      |                                   |          |
| Dolgo (grafted) |           |           |                    | 5/26/2014, 5/30/2014         | 6/2/2014 30% petal drop, some viable, 6/4/2014 spent | very white blooms, early blooming |          |
| Dolgo sdl 2     |           |           |                    | 5/26/14 petal drop, red leaf |  |                                   |          |
| Dolgo sdl 4     |           |           |                    | 5/26/14, 50% very white      |  |                                   |          |
| Dolgo sdl 5     |           |           |                    | 5/26/2014                    |  |                                   |          |
| Dolgo sdl 6     |           |           | 5/24/2014          | 5/26/2014                    |  |                                   |          |
| Dolgo sdl 7     |           |           | 5/26/14 pink tinge |                              |  |                                   |          |
| Duchess         |           | 5/29/2014 | 6/1/2014           | 6/2/2014                     | 6/6/2014, spent                                      |                                   | spur     |
| Dudley          |           |           | 5/26/14, first     | 6/1/2014                     | 6/6/2014, spent                                      | spur and tip, mostly spur         | spur/tip |
| Early Cortland  | 5/28/2014 | 6/1/2014  |                    |                              | 6/4/2014 viable, some not                            |                                   | tip      |
| Early Harvest   |           |           | 5/26/2014          |                              | 6/6/2014, variable new and spent                     |                                   |          |
| Elstar          | 5/26/2014 | 5/30/2014 |                    | 6/2/2014                     | 6/4/2014 p fall, spent                               | some clusters missing             | king     |
| Empire          | 5/28/2014 |           |                    |                              |  |                                   |          |
| Equinox         |           |           | 5/26/2014          | 5/27/2014, 25%, 6/2/2014     | 6/4/2014 p fall 90%                                  | loaded, mostly spur               | tip/spur |
| Erwin Bauer     |           | 5/26/2014 | 5/29/2014          |                              |  |                                   | spur     |
| Fameuse         |           |           | 5/26/2014          | 6/1/2014, 75%                | 6/6/2014, variable, new and old                      |                                   |          |
| Fantazja        |           | 6/1/2014  |                    |                              |  |                                   | tip      |

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|                     |           |           |                                       |  |   |                  |                        |
|---------------------|-----------|-----------|---------------------------------------|--|---|------------------|------------------------|
| Fireside            |           | 5/26/2014 |                                       | 5/30/2014,<br>50%,6/2/2014<br>4 80%,<br>6/4/2014 p<br>fall just<br>beginning | 6/6/2014,<br>spent, a few<br>ok                   |                  | spur and<br>8"shootips |
| Freedom             | 5/26/2014 |           |                                       | 5/30/2014,<br>variable,6/4/<br>2014 75%<br>bloom                             | 6/5/2014,<br>petal fall,<br>spent                 | gradual bloom    | spur and 8"<br>shoots  |
| Frostbite           | 5/30/2014 |           |                                       |  |   |                  |                        |
| Garland             |           | 6/1/2014  |                                       |  |   |                  |                        |
| Gideon              | 5/26/2014 |           | 6/1/2014                              |  |   | small blooms     | tip                    |
| Gingergold          |           |           | 5/28/2014                             | 6/1/2014   |   |                  |                        |
| Golden Lights       | 5/25/2014 | 5/26/2014 |                                       |  |   |                  |                        |
| Golden Russt        | 5/30/2014 |           |                                       |  |   |                  |                        |
| goodland            |           | 5/24/2014 | 5/28/2014,ju<br>st                    | 6/2/2014   | 6/4/2014<br>spent                                 |                  |                        |
| Gravenstein         | 5/26/2014 |           | 5/29/2014                             | 6/1/2014,<br>25%   |   |                  |                        |
| Greenglade          | 5/26/2014 |           | 6/1/2014                              |  | 6/5/2014, p<br>fall, some<br>viable               | late             |                        |
| Greensleeves        | 5/26/2014 |           | 6/1/2014,<br>variable, tip<br>to subs |  |   | gradual blooming |                        |
| Haralred            | 5/21/2014 |           | 5/27/2014,ju<br>st                    | 5/30/2014,<br>50%,<br>6/1/2014,<br>80%                                       | 6/4/2014 p<br>fall                                |                  |                        |
| Haralson            | 5/24/2014 |           | 5/26/2014                             | 5/30/2014,6/<br>1/2014, 30%  | 6/4/2014 p<br>fall                                |                  |                        |
| Hazen               |           |           |                                       | 6/5/2014,<br>spent, except<br>viable tip                                     |   |                  |                        |
| Heyer 12            | 5/24/2014 | 5/26/2014 |                                       |  |   |                  |                        |
| Heyer 12            |           | 5/26/2014 |                                       | 6/1/2014   |   |                  | tip                    |
| Heyer 2             | 6/1/2014  |           |                                       |  |   |                  |                        |
| Hidden rose         |           |           |                                       | 6/4/2014<br>spent  |   |                  |                        |
| Honeycrisp          | 5/21/2014 |           | 5/27/2014,<br>just                    | 6/1/2014,<br>50%   | 6/5/2014,<br>early p. fall,<br>some viable        |                  | most spur              |
| honeygold           | 5/26/2014 |           | 5/29/2014,<br>and tp                  | 6/2/2014   | 6/5/2014, p<br>fall, some<br>viable, 6/9<br>spent | gradual blooming | spur                   |
| Howgate Wonder      |           | 5/26/2014 |                                       | 6/1/2014   |   |                  |                        |
| Hudson's Golden Gem | 5/28/2014 |           |                                       | 6/2/2014<br>bloom and tp   |   |                  | spur and<br>8"shoots   |

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|                |           |           |                        |   |   |   |               |
|----------------|-----------|-----------|------------------------|---|---|---|---------------|
| Hyslop Crab    |           |           | 6/1/2014               |   |   | 2 cl 7 blooms each,<br>3cl with 6 blooms<br>each! blooms very<br>white  | spur/tip      |
| Ingrid Marie   |           | 5/28/2014 |                        |   |   |   |               |
| Irish peach    | 5/26/2014 |           |                        | 6/1/2014                                    |   |   | tip           |
| Island winter  | 5/26/2014 |           | 6/1/2014, 20<br>%kings |   | 6/6/2014, p<br>fall, still<br>some viable                             | latest variety  |               |
| Jonathan       | 5/27/2014 |           |                        |   | 6/6/2014,<br>spent  |   | spur & 8" tip |
| Jordan Russet  | 5/24/2014 |           |                        |   |   |   |               |
| Kazakh 739     |           |           | 5/26/2014              |   |   |   |               |
| Kazakh 740     |           | 5/24/2014 | 5/26/2014              |   |   | slightly more<br>advanced than 739  |               |
| Kazakh 741     | 5/26/2014 |           |                        |   |   |   |               |
| Kazakh 742     |           |           | 5/26/2014              |   |   |   |               |
| Kazakh 746     |           | 5/26/2014 |                        |   |   |   |               |
| Kazakh 746     | 5/24/2014 |           |                        |   |   |   |               |
| Kazakh 759     |           |           | 5/26/2014              |   |   |   |               |
| Kazakh 761     |           |           | 5/26/2014              |   |   |   |               |
| Kazakh 762     |           | 5/24/2014 | 5/24/2014              |   |   |   |               |
| Keepsake       | 5/21/2014 |           | 5/26/2014              | 6/2/2014,<br>50%                            | 6/6/2014,<br>spent, a few<br>ok                                       | Keepsake kings<br>opened before hc,<br>but hc secondaries<br>open before<br>keepsake secondaries<br>(same area) | spur          |
| Kerr (grafted) | 5/26/2014 |           |                        |   |   |   |               |
| Kitchell Red   |           | 5/28/2014 |                        |   |   |   |               |
| Lakeland       | 24-May    |           |                        |   |   |   |               |
| leo            | 5/21/2014 |           | 5/26/2014              | 5/30/2014<br>40%,<br>6/1/2014<br>90%        | 6/4/2014<br>spent, total<br>drop                                      |   |               |
| Liberty        | 5/24/2014 |           | 5/28/2014              | 6/1/2014,<br>75%                            | 6/4/2014, p<br>fall, some<br>viable,<br>6/6/2014,<br>spent            |   |               |
| Lobo           | 5/26/2014 |           | 5/29/2014              | 6/4/2014                                    |   |   |               |
| Lodi           | 5/24/2014 |           | 5/28/2014              | 6/2/2014                                    | 6/4/2014<br>petal fall,<br>gradual some<br>new;<br>6/5/2014,<br>spent |   |               |
| Lord Lambourne | 5/26/2014 |           |                        | 6/1,<br>6/9/2014,<br>successive<br>blooming | 6/12/2015   | gradual blooming  | tip/spur      |

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|                      |           |           |   |  |   |                             |                               |
|----------------------|-----------|-----------|---|--|---|-----------------------------|-------------------------------|
| Lowland raspberry    |           | 5/26/2014 |   | 6/2/2014   |   |                             | spur and shoottips            |
| Mac Summerland Red   | 5/26/2014 |           | 6/1/2014                                  |  |   |                             | 8" shoottips                  |
| Macfree              |           | 5/26/2014 | 5/28/2014                                 | 6/1/2014<br>25%  | 6/4/2014<br>pfall just beginning,<br>6/6/2014,<br>spent mostly,<br>a few loose pink |                             |                               |
| Malinda              | 5/24/2014 |           | 6/4/2014                                  |  |   | small blooms                | all spur                      |
| Mantet               | 5/21/2014 | 5/24/2014 | 5/26 first king                           | 5/30/2014<br>50%, 6/3  | 6/5/2014,<br>spent  |                             |                               |
| Marlin Stephens      |           | 5/26/2014 |   | 5/30/2014,<br>30%  | 6/6/2014,<br>spent mostly   | all spur                    | spur                          |
| McIntosh             | 5/26/2014 | 5/29/2014 | 5/30/2014                                 | 6/1/2014,  | 6/6/2014  |                             |                               |
| Melba                |           | 5/26/2014 | 5/28/2014                                 | shady  | 6/5/2014,<br>spent  |                             | spur                          |
| Milwaukee            |           |           | 5/26/2014                                 | 5/30/2014<br>40%,<br>6/1/2014<br>80%                                     | 6/5/2014<br>spent,<br>6/4/2014<br>spurs done,<br>tips good                          | tip and spur, gradual bloom | tip/spur                      |
| Mn 852299            |           |           |   | 6/1/2014,<br>50%   |   |                             | tip                           |
| Mordon 359           | 5/26/2014 |           | 6/1/2014, tp,<br>bloom and<br>petal drop! |  |   |                             | 25% spur,<br>75% 8"<br>shoots |
| N Lights             |           | 5/28/2014 | 6/1/2014                                  |  |   |                             |                               |
| Niagara              |           | 5/26/2014 | 5/30/2014                                 | 6/2/2014   | 6/4/2014<br>spent   |                             |                               |
| Noran                |           |           | 5/26/2014                                 | 6/1/2014,<br>petal fall<br>beginning                                     |   | dolgo like flowers          | tip                           |
| Norda                |           |           |   |  |   |                             | 80 % tip                      |
| Norland              |           |           | 5/23/2014                                 | 5/26/2014,<br>50%  | 6/2/2014,<br>petal fall and<br>new  |                             |                               |
| Norson               |           | 5/26/2014 |   | 6/1/2014   |   |                             | tip/spur                      |
| Northern Lights      |           |           | 6/1/2014,<br>just                         | shady  |   |                             |                               |
| Northern Lights Gold |           |           |   | 6/1/2014,<br>50%   |   |                             |                               |
| Nova                 |           | 5/24/2014 | 5/26/2014                                 | 6/1/2014,<br>75%;<br>6/4/2014<br>petal drop<br>50%, tips still<br>viable | 6/6/2014,<br>spent  |                             |                               |
| NW Greening          |           | 5/26/2014 | 6/2/2014                                  | 6/6/2014   | 6/11 leaf fall  |                             |                               |

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|               |           |                         |                         |                         |  |                                   |           |
|---------------|-----------|-------------------------|-------------------------|-------------------------|--|-----------------------------------|-----------|
| Oriole        |           |                         | 5/30/2014               |                         |  |                                   | spur      |
| Ortley        |           |                         | 6/1/2014                |                         |  | many clusters fewer than 5 blooms |           |
| Parkland      |           | 5/24/2014, close        | 5/25/2014               | 5/26/2014, 5/30/2014    | 6/2/2014 petal fall, few new blooms        |                                   |           |
| Patterson     | d         |                         | 5/26/2014               | 6/1/2014                | 6/4/2014 p drop 50% tips closed still      |                                   | tip/spur  |
| Paula Red     |           | 5/26/2014               |                         | 6/1/2014, 20%, variable |  | gradual blooming                  |           |
| Peace Garden  |           | 5/25/14 kings loosening | 5/26/2014, just opening | 6/1/2014, 50%           | 6/5 p fall                                 |                                   |           |
| Peach         |           |                         |                         | 5/29/2014               | 6/1/2014, some petalfall                   | early                             |           |
| Perriwinkle   | 5/26/2014 |                         |                         | 6/2/2014                |  | spur, poor year                   | spur      |
| Pink Pearl    |           |                         | 5/30/2014               | 6/2/2014                | 6/6/2014, petal fall                       | pink bloom                        | spur      |
| Pomme Gris    |           |                         | 5/26/2014               | 6/1/2014 75%            | 6/5/2014, spent                            |                                   | spur      |
| Pound Sweet   |           |                         |                         |                         |  |                                   | tip       |
| Prairie Spy   | 5/24/2014 | 5/26/2014               | 5/27/2014               | 5/30/2015               | 6/2/2014 light petal drop, 6/6/2014, spent | ropes of bloom right to tips      | spur/tip  |
| Quebec belle  | 5/28/2014 |                         | 6/1/2014                | 2-Jun                   | 6/5/2014, spent                            | late                              |           |
| Quinte        |           |                         | 5/26/2014, just opening | 6/1/2014                |  |                                   |           |
| Rambo         |           |                         | 30-May                  | 6/1/2014                | 6/6/2014, spent mostly                     |                                   |           |
| Ranetka       |           |                         | 5/26/2014               | 6/1/2014                |  | very white                        | tip/spur  |
| Red Baron     |           | 5/26/2014               | 5/27/2014               | 5/30/2014               | 6/4/2014 some viable                       |                                   | most spur |
| Red Astrachan |           |                         | 5/28/2014, just         | 6/1/2014                |  |                                   |           |
| Red Burke     | 5/24/2014 | 5/26/2014               | 5/28/2014               | 6/1/2014                | 6/6/2014, spent                            |                                   |           |
| Red Wealthy   |           | 5/26/2014               | 5/30/2014               | 6/2/2014, 75%           | 6/5/2014, petal fall                       |                                   | spur/tip  |
| Redcort       | 5/28/2014 |                         | 6/1/2014                |                         | 6/5/2014                                   | later bloomer                     |           |
| Redrock       |           |                         | 1-Jun                   | 6/4/2014                |  | late bloom                        |           |
| Regent        |           |                         | 5/28/2014               |                         |  |                                   | spur      |
| Rodgers Red   |           |                         | 5/30/2014               | 3-Jun                   | 6/6/2014, spent                            |                                   |           |

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|                   |           |           |                                 |                                       |   |   |                       |
|-------------------|-----------|-----------|---------------------------------|---------------------------------------|---|---|-----------------------|
| Rumpus            | 5/26/2014 |           | 6/1/2014,<br>some still tp      |                                       | 6/6/2014  | late, loaded                              |                       |
| Safstaholm        |           |           | 5/26/2014                       |                                       |   | early bloomer                             | spur                  |
| Sakhi's Bitter    |           |           | 5/29/2014                       |                                       | 6/5/2014,<br>spent                                |   |                       |
| Sansa             |           | 6/1/2014  |                                 |                                       |   |   |                       |
| Scott Winter      |           |           | 5/26/2014                       | 5/29/2014,90<br>%                     | 6/6/2014,<br>spent                                |   |                       |
| Selkirk           |           | 5/26/2014 | 5/28/2014                       | 6/1/2014                              | 6/5/2014,<br>spent                                | ropes of bloom right<br>to tips           |                       |
| Shafer            |           |           | 5/26/2014                       | 6/1/2014                              | 6/4/2014<br>some viable<br>still                  |   |                       |
| Smokehouse        |           | 5/26/2014 |                                 | 6/6/2014,<br>variable, new<br>and old |   | gradual bloom offers<br>frost protection  | tip                   |
| Spencer           | 5/26/2014 |           | 5/30/2014                       | 6/2/2014                              | 6/6/2014  |   | spur                  |
| St. Lawrence      |           |           | 5/26/2014                       | 6/1/2014                              | 6/4/2014  |   |                       |
| Summer Pearmain   |           |           | 5/26/2014                       | 6/1/2014,<br>variable                 | 6/6/2014,<br>variable, tips<br>are viable         | gradual blooming                          | tip/spur              |
| Summerred         |           |           | 5/24/2014 all<br>kings          | 5/28/2014                             | 6/4/2014 p<br>fall                                |   |                       |
| Sunrise           | 5/26/2014 |           | 5/28/2014                       | 6/1/2014                              |   |   | spurs and<br>8"shoots |
| Sweet 16          | 5/26/2014 |           | 6/1/2014                        | 6/3/2014,<br>some tight<br>pink       | 6/10/2014   | loaded                                    | spur                  |
| Sweet Mac         | 5/30/2014 |           |                                 |                                       |   |   | on short<br>shootips  |
| Tasty             |           |           | 5/24/2014                       | 5/26/2014                             |   | very white blooms,<br>very early blooming |                       |
| Treehouse Vanilla |           | 5/24/2014 |                                 | 5/26/2014,<br>30%                     |   | early bloomer                             |                       |
| Trent             |           |           | 5/26/2014,<br>some<br>secondary | 5/30/2014                             | 6/5/2014<br>spent                                 | loaded                                    | spur                  |
| Utter             | 5/30/2014 |           |                                 |                                       |   |   | spur                  |
| Vista Bella       |           | 5/26/2014 |                                 | 6/1/2014,<br>50%                      | 6/6/2014,<br>variable,<br>some new,<br>some spent |   |                       |
| Wacota            |           |           |                                 | 6/5/2014,<br>loose to fb              |   | later bloomer                             |                       |
| Wagener           |           |           | 5/26/2014                       | 6/1/2014                              |   | blooms in a rope of<br>spurs              |                       |
| Walden Calville   |           | 5/26/2014 | 5/30/2014,<br>25%               | 6/2/2014                              |   |   | tip                   |
| Walden Golden     | 5/24/2014 |           | 5/30/2014,<br>25%               | 6/3/2014                              | 6/10/2014,<br>petal fall                          |   | spur/tip              |
| Walden Sunset     |           |           |                                 | 6/3/2014                              |   |   |                       |

Bloom Time Master Sheet

Table 2

|                    |           |                               |                                      |                          |  |  |          |
|--------------------|-----------|-------------------------------|--------------------------------------|--------------------------|--|--|----------|
| Wealthy            |           |                               | 5/26/2014,<br>just                   | 5/30/2014                | 6/4/2014 p<br>fall                                       |  |          |
| Wedge              | 5/26/2014 |                               |                                      | 5/30/2014                | 6/5/2014,<br>spent                                       | loaded   |          |
| Westfield SNF      |           |                               | 5/28/2014,<br>just                   | 6/1/2014                 |  |  | spur     |
| Westland           | 5/26/2014 |                               |                                      | 6/1/2014<br>variation    |  | spurs open before<br>tips, this later<br>blooming tip is<br>apparent in other<br>varieties as well | tip/spur |
| White angel        |           | 5/26/2014                     | 5/28/2014                            | 6/1/2014                 | 6/5/2014,<br>spent                                       |  |          |
| White Pippin       | 5/26/2014 |                               |                                      | 6/1/2014                 |  | spur   | spur     |
| Whitney            | 5/26/2014 | 5/28/2014                     | 5/29/2014                            | 6/1/2014,<br>50%         | 6/4/2014<br>petal drop                                   |  |          |
| Winesap            |           |                               | 5/26/2014                            | 6/1/2014                 |  |  |          |
| Winter Banana      |           |                               | 6/1/2014, 2<br>of 10 cl open<br>only | 6/2/2014                 | 6/6/2014,<br>spent                                       | late bloomer   | tip      |
| Wodarz             |           | 5/26/2014                     |                                      | 6/1/2014                 | 6/6/2014,<br>variable, new<br>and spent                  |  |          |
| Wolf River         |           | 5/25/14<br>kings<br>loosening | 5/26/2014                            | 6/1/2014                 | 6/4/2014<br>petal fall                                   |  |          |
| Yellow Bellflower  |           |                               |                                      | 6/1/2014                 |  |  |          |
| Yellow Transparent |           |                               |                                      | 5/30/2014                |  |  |          |
| Zabergau Reinette  |           |                               |                                      | 6/1/2014                 |  | spur   | spur     |
| David pear         |           |                               |                                      | 5/18/2014                | 5/26/2014,<br>50% petal<br>drop ;<br>5/30/2014,<br>spent |  |          |
| Hill Pear          |           |                               |                                      | 6/1/2014                 | 6/2/2014<br>petal fall<br>beginning,<br>spent ny 6/4     |  |          |
| Illinka Pear       |           |                               |                                      | 5/20/2014                | 5/28/2014<br>petal fall                                  | blooms with David  |          |
| Luscious Pear      |           |                               |                                      | 5/26/2014,<br>50%        | 6/2/2014<br>petal fall                                   |  |          |
| Okolo Pear         |           |                               |                                      | 5/28/2014                |  |  |          |
| Shinseiki Pear     |           |                               |                                      | 5/28/2014                |  |  |          |
| Staceyville Pear   |           | 5/24/2014                     |                                      | 5/26/2014                | 6/2/2014,<br>petal fall                                  | just behind Walden<br>by 3-4 days  |          |
| Summercrisp Pear   |           | 5/24/2014                     |                                      | 5/28/2014                | 5/30/2014,<br>petal drop                                 |  |          |
| Walden Large Pear  |           | 5/24/2014                     |                                      | 5/30/2014                |  |  |          |
| American plum      |           |                               |                                      | 5/30/2014,<br>petal drop |  |  |          |
| aronia             |           |                               |                                      | 6/5/2014,                |  |  |          |

Bloom Time Master Sheet

Table 2

|                      |           |  |                           |                                  |   |                           |
|----------------------|-----------|--|---------------------------|----------------------------------|---|---------------------------|
| Avium                |           |  |                           | 5/30/2014,<br>petal drop<br>just |   |                           |
| baneberry            |           |  |                           | 5/29/2014                        |   |                           |
| blackand chokecherry |           |  | 6/1/2014                  |                                  |   |                           |
| blueberry            | 5/26/2014 |  |                           | 6/4/2014                         |   |                           |
| Bounty Plum          |           |  |                           | 5/24/2014                        |   |                           |
| Chokeberry           |           |  | 6/1/2014,<br>first        |                                  |   |                           |
| chokeberry           | 5/26/2014 |  |                           |                                  |   |                           |
| Chokecherry          |           |  | 5/30/2014                 | 6/6/2014                         |   |                           |
| compass plum         | 5/26/2014 |  |                           | 6/1/2014,<br>75%                 |   |                           |
| consort              |           |  |                           | 5/30/2014,<br>berries<br>forming |   |                           |
| Evans                |           |  | 5/24/2014,<br>first few   | 5/26/2014,<br>50%                |   |                           |
| Fir                  |           |  |                           |                                  |   | 3/4" candle on<br>5/24/14 |
| Greengage            |           |  |                           | 5/30/2014,<br>50%                |   |                           |
| Hansen's             |           |  |                           | 6/1/2014                         |   |                           |
| highbush cranberry   |           |  | 6/1/2014                  |                                  |   |                           |
| honeysuckle          |           |  | 6/4/2014                  |                                  |   |                           |
| Lilac                |           |  | 5/30/2014                 |                                  |   |                           |
| lingon               |           |  | 6/4/2014<br>first         |                                  |   |                           |
| mahaleb              |           |  |                           | 6/2/2014                         |   |                           |
| Mesabi               |           |  |                           | 5/30/2014                        | 6/6/2014,<br>spent                      |                           |
| Montmorency          |           |  | 5/24/2014                 | 6/2/2014                         | 6/4/2014<br>most spent, a<br>few viable |                           |
| Mt Royal Plum        |           |  |                           | 5/28/2014                        |   |                           |
| Nanking              |           |  |                           | 5/28/2014                        |   |                           |
| Northstar cherry     |           |  |                           | 5/28/2014<br>petal fall          | 6/1/2014<br>petal fall                  |                           |
| p. americana         |           |  |                           | 5/21/2014                        |   |                           |
| perriwinkle          |           |  |                           | 5/26/2014                        |   |                           |
| pin cherry           |           |  | 5/21/2014,<br>just opened |                                  |   |                           |
| prunus avium         |           |  | 5/21/2014                 |                                  |   |                           |
| Prunus Avium sdl     |           |  |                           | 5/28/2014                        |   |                           |
| purple lilac         |           |  | 6/2/2014 just             |                                  |   |                           |
| ramps                |           |  |                           | up by<br>6/4/2014                |   |                           |
| red berried elder    |           |  |                           | 5/26/2014,<br>50%                |   |                           |
| red currants         |           |  |                           | 5/26/2014                        |   |                           |

Bloom Time Master Sheet

Table 2

|                    |  |  |                         |                                  |                       |                                  |  |
|--------------------|--|--|-------------------------|----------------------------------|-----------------------|----------------------------------|--|
| s pea shrub        |  |  |                         | 6/4/2014                         |                       |                                  |  |
| saskatoons         |  |  | 5/24/2014,<br>first few |                                  |                       |                                  |  |
| saskatoons         |  |  |                         | 5/26/2014                        |                       |                                  |  |
| saskatoons         |  |  |                         | 5/30/2014,<br>petal fall         |                       |                                  |  |
| sawfly capture     |  |  |                         | 6/5/2014,                        |                       |                                  |  |
| Siberian Pea Shrub |  |  | 5/28/2014               |                                  |                       |                                  |  |
| strawberry (dom)   |  |  | 6/1/2014<br>firstbloom  |                                  |                       |                                  |  |
| summercrisp pear   |  |  |                         | 6/2/2014<br>petal drop<br>,spent |                       |                                  |  |
| Superior plum      |  |  |                         | 5/30/2014                        |                       | later than americans,<br>hybrids |  |
| White Lilac        |  |  | 6/1/2014<br>firstblooms |                                  |                       |                                  |  |
| wild strawberry    |  |  |                         | 5/24/2014                        |                       | domestic behind<br>these         |  |
| Juneberry          |  |  |                         |                                  | 5/26/14<br>petal drop |                                  |  |

**How to read this data:**

left out of data were shaded trees, which made differences of up to 5 days progression

spur/tip - predominance of spur

gradual bloom signifies large variance in the bloom of clusters within a particular variety.