

## POLLINATION OF FRUIT TREES

In order for fruit to develop, *pollination* must occur at blossom time. Pollination is the transfer of pollen from the male part of the flower to the female part of the flower. Some types of fruit trees may be pollinated with their own pollen and are considered *self-fruitful* or *self-pollinating*. Other types of trees require pollen from a different variety of the same type of tree and are considered *self-unfruitful*. The transfer of pollen from one variety to a different variety of the same type of tree is called *cross-pollination*. *Cross-pollination* is **essential** for apples, pears, most sweet cherries, and most Japanese plums. *Cross-pollination* is not essential, but does improve the number of fruit that form on apricots, European plums/prunes, tart cherries, peaches and nectarines.

Pollen is primarily transferred by honeybees. Trees placed more than 100 feet away may result in poor pollination. Bees work best when temperatures above 65°F. Cool weather, rain, winds, or high smoke levels may prevent bees from leaving their hives. Most pesticides are toxic to bees and should not be used during bloom time.

### APPLES

The best way to insure a good apple crop is to provide adequate **cross-pollination** of two or more varieties. Flowering crabapples are becoming a popular pollination method with commercial growers. Crabapple bloom times are generally longer than other apple species and crabapples are easily cared for. The bloom dates for crabapples must be selected to coincide with the bloom of the main cultivars.

<i>Early Bloom Varieties:</i>	<i>Mid Bloom Varieties:</i>	<i>Late Bloom Varieties:</i>
Dolgo Crabapple Manchurian Crabapple	Delicious Crabapple Spartan Crabapple	Golden Raindrops Crabapple Silver Moon Crabapple

### APPLE CROSS-POLLINATION TABLE

**Directions for use:**

1. Select a cultivar you are interested in growing from left hand column.
2. Check across chart.
3. Select a cultivar from list above a square marked with an X.

**Key**

- X Acceptable Pollinizer
- O Partially self-fruitful, but a pollinizer is suggested.
- Should be pollinated by another variety.

	Akane	Chehalis	Cortland	Earligold	Empire	Gala	Gingergold	Golden Delicious	Gravenstein	Idared	Jonagold	Liberty	Lodi	McIntosh	Paulared	Prime	Priscilla	Red Delicious	Rome Beauty	Sir Prize	Spartan	Tydemans's Early	Yellow Trans
Akane	■	X	X		X	X	X	X			X	X	X	X	X			X	X		X	X	X
Chehalis	X	■	X		X	X					X	X	X								X		X
Cortland	X	X	■		X	X	X	X		X	X	X	X	X	X			X			X	X	X
Earligold				O		X						X									X		
Empire	X				■	X	X	X				X						X	X				X
Gala	X	X	X		X	■	X	■					X	X				X	X		X		X
Gingergold	X		X		X	X	■	X				X						X	X		X	X	
Golden Delicious	X		X		X	■	X	O				X		X				X	X		X	X	X
Gravenstein		X							■	X				X									X
Idared			X		X	X				■	X	X	X	X				X			X		
Jonagold (triploid)					X		X	■			■			X	X			X	X		X	X	X
Liberty	X	X	X		X	X	X	X		X		■						X			X	X	X
Lodi	X	X	X		X	X		X			X		O	X	X			X			X	X	X
McIntosh	X	X	X		X	X		X			X	X	X	■	X			X			X	X	X
Paula Red	X		X		X	X		X					X	X	■			X			X	X	X
Prime																■							
Priscilla																	■						
Red Delicious	X				X	X		X					X	X				■		X		X	X
Rome Beauty																			■				
Sir Prize	X	X	X		X	X					X	X	X								■		
Spartan	X					X	X	X		X		X						X				X	
Tydemans's Early						X	X	X				X						X	X			O	
Yellow Transparent	X	X	X		X	X		X			■	X	X	X	X			X			X	X	O

## PEARS

Pears require another cultivar for **cross-pollinization**. European and Asian pears will **cross-pollinate** if blooming at the same time.

Directions for use of the following charts:

1. Select a cultivar you are interested in from the left hand column
2. Check the chart for a compatible pollinizer.

PEARS	COMPATIBLE POLLINIZERS
Bartlett	d'Anjou - Bosc - Comice
Bosc	Bartlett - Comice -d'Anjou - Seckel
Comice	Bartlett- Bosc- d'Anjou- Seckel
d'Anjou	Bartlett-Bosc- Comice- d'Anjou- Seckel
Seckel	Bosc - Comice - (Bartlett <u>is not</u> compatible)

ASIAN PEARS	COMPATIBLE POLLINIZERS
Chojuro	Shinseike - Bartlett
Nijisseiki (Twentieth Century)	Chojuro - Shinseike - Bartlett
Hosui	Partially self-fruitful. Any other pear in same bloom time will pollinate.
Shinseike	Chojuro

## PLUMS / PRUNES

Most European type plums will set fruit with their own pollen, but will produce better crops with pollinizers nearby.

Directions for use of the following charts

1. Select a cultivar you are interested in from the left hand column
2. Check the chart for a compatible pollinizer.

EUROPEAN PLUMS /PRUNES	COMPATIBLE POLLINIZERS
Damson	Self-fertile - Green Gage - Stanley
Earliblue	Green Gage - Stanley - Italian
Green Gage (Reine Claude)	Self- fertile - Stanley - Damson - Earliblue - Italian
Italian	Self-fertile - Green Gage- Stanley- Damson- Earliblue
Stanley	Self-fertile - Green Gage - Damson- Earliblue - Italian

JAPANESE PLUMS	COMPATIBLE POLLINIZERS
Burbank	Santa Rosa - Shiro - Satsuma
Elephant Heart	Santa Rosa
Santa Rosa	Self Fertile - Shiro- Satsuma - Burbank
Satsuma	Santa Rosa - Shiro - Burbank
Redheart or Wickson	If available these are excellent pollinizers

## CHERRIES

Sweet cherries except the new **self-fertile** types (Stella, Compact Stella) require **cross-pollination** between two different cultivars. Some cultivars are not compatible with each other or may not overlap sufficiently in bloom period. Tart or sour cherries are **self-fertile** and do not need a pollinator. They are capable of fertilizing sweet cherries but generally bloom too late to be considered dependable pollinizers.

CHERRIES, (SWEET)	COMPATIBLE POLLINIZERS
Bing	Sam - Van - Montmorency -Rainer - Stella- Compact Stella - Garden Bing
Lambert	Sam - Van - Montmorency - Rainer - Stella -Compact Stella - Garden Bing
Rainer	Sam - Van - Bing - Royal Ann - Lambert - Montmorency - Stella -Compact Stella - Garden Bing
Royal Ann	Sam - Van - Montmorency - Rainer - Stella- Compact Stella - Garden Bing
Stella, Compact Stella, Garden Bing	Self - fruitful
Van	Sam - Bing - Royal Ann- Lambert- Montmorency- Rainer- Stella - Compact Stella - Garden Bing
Montmorency (Sour)	Self-fruitful

## APRICOTS

Many apricots such as ‘Tilton’ are self-fruitful. Provide another variety for Goldrich, Moorpark and Perfection. Rival requires an early blooming pollinizer such as Perfection for best results.

## PEACHES

Most varieties of peaches and nectarines are self-fertile. However those with Hale in their parentage will require another variety as a pollinizer. Examples are ‘Early Hale’ and Hale Haven’.