Picking and Storing Apples and Pears

Ashley Thompson, Kelsey Galimba and Eliott Gloeb



'Honeycrisp' apples

Credit: Kelsey Galimba, © Oregon State University

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For the best apples and pears, home orchardists and small farmers pick fruit at optimum maturity. Apples and pears harvested at the right time taste better than fruit picked at other times. They store better, too. This guide to harvesting apples and pears will help you time it right.



Climate and weather

Typically, a given variety of apple (*Malus domestica*) or pear (*Pyrus communis*) will reach maturity around the same time each year. Climatic conditions in different areas affect when fruit reaches maturity. Fruit will mature earlier in warmer regions than in colder regions.

Harvest time for a specific region can vary slightly from year to year due to weather conditions. For example, later-than-normal flowering due to cold spring temperatures can mean a later harvest.

Oregon apple and pear production can be divided into four regions, based on when fruit typically reaches maturity:

- Early: Jackson County, Milton-Freewater and Wasco County
- Middle: Lower Hood River Valley, Malheur County, Douglas County and Josephine County
- Mid to late: Willamette Valley, Upper Hood River Valley
- Late: High mountains and plateaus and the coast

Early regions may begin harvest 10 days earlier than midseason regions. Late regions typically begin 10 days later than the midseason regions.

Picking apples and pears

Pick apples and pears from the tree using the gentle motions described in "Ease of separation." Do not shake fruit off the tree — this causes bruising and damage. Bruised and damaged fruit is not fit for storage and must be used quickly.

Apples

Table 1 shows typical harvest maturity dates for common apple varieties. There are several signs of apple maturity:

- Color
- Firmness
- Flavor
- Ease of separation
- Dropping

These characteristics can help you determine when to harvest your apples. But the simplest way to test the maturity of your fruit is to cut it open and taste it.

Table 1. Maturity dates for apples in midseason climates

Variety	Harvest timing	Skin color at maturity
Gravenstein	Mid-August	Yellow with red stripes
Pristine	Mid-August	Yellow with pink blush
Gala	August-September	Yellow with red stripes
Zestar	August-September	Yellow with red blush
Liberty	Early September	Red
Akane	Mid-September	Yellow with red stripes
Ambrosia	Mid-September	Red-orange
Golden Delicious	Mid-September	Yellow
Honeycrisp	Mid-September	Yellow with red blush
McIntosh	Mid-September	Yellow with red blush
Cameo (Carousel)	September-October	Red
Cosmic Crisp	September-October	Red
Empire	September-October	Red
Fuji	September-October	Red
Jonagold	September-October	Yellow with red stripes
Melrose	September-October	Yellow-green with red stripes
Red Delicious	September-October	Dark red
Braeburn	Mid-October	Yellow with red blush and red stripes
Enterprise	Mid-October	Red
Pink Lady (Cripps Pink)	Mid-October	Pink
Spitzenburg	Mid-October	Yellow with red stripes
Winesap	Mid-October	Red
(Yellow) Newtown Pippin	Mid-October	Yellow-green
Granny Smith	Late October	Green



The "ground" color of this unripe 'Gala' apple is green.

Credit: Kelsey Galimba, © Oregon State University



The ground color of this ripe 'Gala' apple is yellow.

Credit: Kelsey Galimba, © Oregon State University

Color

The color of the skin and flesh can indicate maturity. Ripe apples come in red, yellow, green or a combination of these colors. Typically, the skin of yellow, red, blush and striped varieties remains green until they are mature, or close to mature.

You can also check the "ground color" — the base color of the apple skin. The ground color is most noticeable at the bowl of the stem, particularly in striped and blush varieties like 'Gala' and 'Honeycrisp'. As the apple ripens to maturity, the ground color will change from green to yellow.

Skin color in some varieties can be misleading. Some red apple varieties, such as 'Red Delicious', become red before they are fully mature. You can also look at flesh color — it should be white or cream-colored, not green.

The color of the seed coat will change from white to brown when fruit is mature.

Firmness and flavor

The firmness of an apple and its flavor are useful guides to maturity. A mature apple will be firm, crisp and sweet with a well-developed flavor characteristic of the variety. Apples harvested too early are hard, tart and starchy. Apples harvested too late are soft and mushy — often described as mealy — with poor flavor.



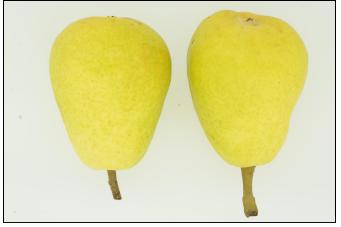
To pick apples, gently grasp the fruit in your palm and twist upwards.

Credit: Lynn Ketchum, © Oregon State University



Unripe 'Bartlett' pears are green.

Credit: Kelsey Galimba, ${\mathbb C}$ Oregon State University



Ripe 'Bartlett' pears are yellow.

Credit: Kelsey Galimba, © Oregon State University

Ease of separation

Mature apples are easily separated from the tree. The best way to pick an apple is to gently grasp the bottom of the apple in the palm of your hand. Gently twist the fruit upwards. Pulling down on the apple can cause the stem to separate from the fruit or the spur to break off the tree.

Gently grasping with your palm reduces the likelihood of bruising the fruit with your fingers. Bruised apples and apples without stems do not store well. Be gentle when harvesting your fruit.

Fruit drop

When a few sound apples drop to the ground, the apples on the tree are nearly mature.

Pears

Unlike apples, most pear varieties do not ripen to good quality while still on the tree. Pears ripen from the core outward and from the neck towards the calyx end. Pears that ripen on the tree will develop a coarse, mealy texture. Their cores often break down.

The two types of European pears — summer and winter pears — are classified by harvest dates and the postharvest conditions required for them to ripen. Pick both types when mature but not ripe.

As with apples, it's important to know the usual period of maturity.

Color

The skin of 'Bartlett', 'D'Anjou' and 'Comice' will change from a bright green to a lighter green, slightly yellow color as they reach maturity. This trait is most apparent in 'Bartlett'. The skin of some pears, like 'Bosc' and 'Starkrimson', will not change color. Pear flesh will become whiter and the seeds will be brown.

Firmness and flavor

Harvest your pears when they are still hard. Pears that are hard but sweet are ready to pick.

Firmness and flavor are not the best measures of maturity for pears in the home orchard. Pears that ripen on the tree will be poor in flavor and texture.

Harvest your pears when they are still hard. Pears that are hard but sweet are ready to pick. If they are hard and

starchy, they need more time on the tree. This rule is more important for early and midseason pears.

Ease of separation

Mature pears usually detach easily when tilted to the horizontal position from their vertical hanging position. 'Bosc' pears, however, are always difficult to remove from the spur. Like with apples, grasp pears gently with your palm to reduce the likelihood of bruising the fruit with your fingers.

Fruit drop

Unlike as in apples, fruit drop is not considered a key maturity trait for pears.

Table 2. Maturity dates for pears

Variety	Harvest timing	Period of cold storage before ripening	Skin color when ripe
Starkrimson	August	N/A	Crimson-red
Bartlett	August-September	None	Yellow-gold
Clapps Favorite	August-September	None	Yellow with red blush
Gem	August-September	None	Yellow with red blush
Red Bartlett	August-September	None	Red
Bosc	September	None	Cinnamon with russeting
Comice	September	1 month	Green with red blush
Forelle	September	1 month	Yellow with red lenticels
Seckel	September	None	Green with red blush
Taylor's Gold	September	N/A	Cinnamon with russeting and red blush
Concorde	September-October	N/A	Yellow-green with russeting
Green Anjou	September-October	2 months	Green with red blush
Red Anjou	September-October	2 months	Maroon
Winter Nelis	September-October	1 month	Green with russeting

Storing apples and pears

Proper storage conditions help you make the most of your harvest. Store fruit immediately after picking. Store apples and pears in clean wooden or cardboard boxes. Use boxes that are ventilated to allow air circulation. You can place fruit in unsealed or perforated plastic bags. Do not line the boxes with paper or individually wrap the fruit.

Don't wash apples and pears before storing them. The excess moisture from washing will hasten fruit decay. Do not store bruised apples or pears or fruit with insect and disease damage. Damaged fruit will spoil in storage. The presence of spoiled fruit can cause healthy fruit to ripen and rot more quickly.

Temperature

Temperature control is vital to fruit storage.

Most apples and pears store best in dark conditions. Temperature should range between 30°F and 32°F.although fruit may be stored at temperatures up to 40°F. Some apple varieties, such as 'McIntosh' and 'Honeycrisp', are prone to chilling injury. Store these at 38°F.

It is easiest to control and monitor temperature in a refrigerator. But an unheated garage, cold basement or root cellar may work if you can maintain temperatures between 30°F and 45°F. Storing fruit at lower or higher temperatures can hasten spoilage or loss of quality.

Apples and pears freeze at 29°F. You can sometimes salvage partially frozen pears, but freezing ruins apples.

Apples and pears spoil faster at temperatures above 45°F.

Humidity

Store pears and apples at 90% relative humidity. This can be challenging to achieve in certain conditions. Place fruit in unsealed or perforated plastic bags to help maintain humidity while allowing excess moisture to escape. You can also place an open pan of water in storage to increase humidity. Low humidity can cause fruit to dehydrate and shrivel,

Table 3. Approximate storage life of apples and pears

Variety	Days storage life at 30°F–32°F	Days storage life at 40°F–42°F
Pears		
Bartlett	30-45	15–20
Bosc	50-70	30–40
D'Anjou	120-140	70–80
Comice	79–90	45–55
Winter Nelis	160–180	90–100
Apples		
Gravenstein	60-80	40-50
Tydeman's Red	60-80	40-50
McIntosh	*	60-80
King	120-180	90–105
Golden Delicious	130-150	75–85
Red Delicious	120-180	90–105
Rome Beauty	120-180	90–105
(Yellow) Newtown Pippin	120–180	90–105
Melrose	120–180	90–105
Honeycrisp**	*	-
Pink Lady	N/A	N/A
Fuji	N/A	N/A
Gala	N/A	N/A

^{*}Subject to cold temperature injury. Hold at 38°F–42°F.

Quality and ripening

The storage life of apples and pears varies according to the variety and storage temperature. Pears held beyond their normal storage life will not ripen after removal from storage. Apples held too long will be soft and mealy and may have internal breakdown.

^{**}Store at 50°F for one week before cold storage

Ripen pears before you eat them. Remove the fruit from cold storage and place it at room temperature (60°F –70°F) for three to 10 days. 'D'Anjou' and 'Comice' pears will not ripen unless they have been held in cold storage for at least eight to 10 weeks before ripening.

How do I know when a pear is ripe?

The best way to determine if a pear is ripe is to "check the neck."

The skin of 'Bartlett' pears will change from green to a lighter yellow-green color. Most other pear varieties do not exhibit a dramatic change in skin color when ripe.

The best way to determine if a pear is ripe is to "check the

neck." Apply light pressure to the stem end (the neck) of the pear with your thumb. A ripe pear will yield to the gentle pressure.

You can slow down the ripening process and save your ripe pear for up to five days by placing it in the refrigerator.

About the authors



Ashley Thompson (https://extension.oregonstate.edu/people/ashley-thompson)

Assistant Professor of Horticulture

Kelsey Galimba (https://extension.oregonstate.edu/people/kelsey-galimba)

Assistant Professor

Eliott Gloeb (https://extension.oregonstate.edu/people/eliott-gloeb)

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