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To eat or not to eat?

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Less-than-perfect garden produce





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Season: All season



Fruit and vegetable spots

Insects and disease can affect fruits and vegetables in the garden. Most damage poses no health risk. This series of fact sheets helps you answer the question: **Is it safe to eat?**

Crops commonly affected

- Apples
- Melons
- Pears
- Pumpkins
- Asparagus
- Beans
- Cucumbers
- Leafy greens
- Peppers
- Tomatoes

Sspots on fruit and vegetables are caused by insects, disease, and physical damage. Causes of fruit and vegetable damage may vary, but the result is often the same.

Spots on the outer fruit skin may be of little concern, especially if the fruit will be cooked before it is consumed. Many fruit spots are simply blemishes on the outside of the skin. This is especially true of fruits with thick outer skins or rinds, such as pumpkins and watermelons.

Some fruit spots will penetrate the skin and affect the edible parts of the fruit or may cause cracking of the fruit's outer surface or skin. **Discard the fruit whenever the skin is broken or if the skin blemish is accompanied by a softening or discoloration.**

Mild scabby browning on the outside of many vegetables can be caused by weather damage or insect feeding. If the damage only affects the outer skin and does not penetrate into the vegetable's flesh, the produce can be used. However, the affected area should be removed before the vegetable is consumed.

The produce should be discarded if the vegetable spots continue beneath the vegetable's skin. These types of spots may indicate the existence of rots, mold, or vegetables with an off taste. Broken skin can create a way for human pathogens to enter the vegetable.



T.A. Zitter, Cornell University



University of Maryland Extension/HGIC



Elmer, W.H.





Leaf spots

Insects and disease can affect fruits and vegetables in the garden. Most damage poses no health risk. This series of fact sheets helps you answer the question: **Is it safe to eat?**

Crops commonly affected

- Cabbage
- Chard
- Leafy greens
- Green onions
- Spinach

Leaf spots are common on every kind of vegetable, but are especially problematic in cool, wet years. These spots can be a variety of colors, sizes, and shapes, but are of concern only on plants with edible leaves.

Leaf spots can be caused by insects, leaf spot diseases, or the weather. Neither kind of leaf spot will cause foodborne illness. The greatest concern with leaf spots is cosmetic. Leaves with a few spots or spots that are not easily apparent may be acceptable to clients. However, remove leaves with many or large spots.

Other leaves that are part of the same bunch can still be used. Leaves with leaf spots may continue to decline in refrigeration. **Inspect the leaves for signs of mold, slime, or other rots that may make them inedible before distribution.**



Margaret T. McGrath, Cornell University



Melodie Putnam, Oregon State University

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Odd shapes

Insects and disease can affect fruits and vegetables in the garden. Most damage poses no health risk. This series of fact sheets helps you answer the question: **Is it safe to eat?**

Perfectly shaped carrots or tomatoes may seem normal at the grocery store, but gardeners know it isn't simple to produce picture perfect fruits and vegetables. Many things can come between a fruit or vegetable and perfection, but few are cause for alarm.

Soil quality can alter the way root crops grow. Imperfect pollination changes the shape of zucchini and berries, and environmental conditions can cause all sorts of strange shapes. The important thing to know is oddly shaped fruits and vegetables are still edible.

Although these strange-looking vegetables are edible, they tend to spoil more quickly than normally shaped produce, so keep an eye on them and use them quickly.

Crops commonly affected

- All crops



Piglet in Portugal







Mold

Insects and disease can affect fruits and vegetables in the garden. Most damage poses no health risk. This series of fact sheets helps you answer the question: Is it safe to eat?

Many kinds of molds can affect fruits and vegetables. Some molds occur because of the growing conditions in the field and others occur during storage.

Molds can be a variety of colors, such as white, gray, black, tan, blue, and green, but they all signal the same thing: Plant tissue is being broken down.

It is also possible for mold to develop on fruits and vegetables during storage. Check all stored produce before distributing for signs of mold or decay.

As the molds break down the fruit or vegetable, wounds are opened in the plant that can allow foodborne illness to enter. **Discard all fruits and vegetables contaminated with mold.**

Crops commonly affected

- Apples
- Beans
- Berries
- Carrots
- Cucumber
- Leafy greens
- Melon
- Pears
- Peppers
- Potatoes
- Tomatoes



Bob Mulrooney, University of Delaware



Claire Collie and 'Wintergreens at UNH'



William M. Brown, Jr., Bugwood

Season: All season



Rot

Insects and disease can affect fruits and vegetables in the garden. Most damage poses no health risk. This series of fact sheets helps you answer the question: **Is it safe to eat?**

Crops commonly affected

- All crops

Rot on fruits and vegetables can be caused by many different things. Some insects or diseases cause damage that leads to rot. Weather conditions and improper handling of fruits and vegetables can lead to rot. Even if none of these things occur, fruits and vegetable will eventually rot.

Rot is a natural process. In our own homes, we might simply cut off part of a fruit or vegetable that has begun to decay. However, it is not recommended that produce that has begun to rot be distributed. Rot and any other process, natural or not, that breaks the skin of a fruit or vegetable opens produce to the risk of contamination by a foodborne illness.

Fruit and vegetables that show signs of rot should be discarded. Ripe or overripe fruit should be monitored for signs of rot.



Dr. Matt Ruark, University of Wisconsin



Chewing damage

Insects and disease can affect fruits and vegetables in the garden. Most damage poses no health risk. This series of fact sheets helps you answer the question: **Is it safe to eat?**

Crops commonly affected

- Beets
- Carrots
- Melons
- Potatoes
- Pumpkins
- Squash

People aren't the only ones who like fruits and vegetables. Many critters will feed on everything from beets to squash.

Most chewing damage that isn't done by worms and caterpillars is caused by members of the rodent family. Mice, voles, rabbits, and groundhogs are common culprits. It is especially common in drought years when other sources of moisture are limited.

Rodent damage can be easily identified by the teeth marks left behind. They chew with their front teeth, leaving two small grooves with a raised area in between. The size of the grooves will depend on the size of the animal.



Courtesy of Missouri Botanical Garden

Most vegetables will callus over chewing damage, creating a new outer skin that is similar to the rest of the vegetable. Regardless of how well the skin is callused, **fruits or vegetables with chewing damage should not be distributed.**



Whitney Cranshaw, Colorado State University, Bugwood.org





Worms and maggots

Insects and disease can affect fruits and vegetables in the garden. Most damage poses no health risk. This series of fact sheets helps you answer the question: **Is it safe to eat?**

Crops commonly affected

- Apples
- Broccoli
- Cabbage
- Carrots
- Cauliflower
- Onions
- Potatoes
- Radishes
- Turnips

Worms and maggots attack many different fruit and vegetable crops. Some worms feed above the ground on leaves and others feed below ground. Maggots tend to feed by burrowing into the host plant.

Worms and maggots pierce the outer skin or leaf surface of the crops they attack. Produce with maggot damage should be discarded. There are many soft rots that may also cause damage to the produce once maggots have infested the produce.

Produce with worm damage should be evaluated. Superficial damage to the outside of root crops (e.g., potatoes, radishes, and turnips) is not a food safety risk. **Produce with internal damage should be discarded.**



Department of Entomology, University of Minnesota



Courtesy of Missouri Botanical Garden



Andy Jensen, Washington State Potato Commission
2004

