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From Garden to Table:

My Potatoes Turned Green Now What?

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Potatoes (tubers) are enlarged, underground stems that have been consumed for thousands of years. Potato tubers are inexpensive, versatile and nutritious.

A medium-sized potato (5.3 ounces) has 110 calories with no sodium or cholesterol. When eaten with the skin, a medium tuber provides potassium (18 percent of the Daily Value, or %DV), fiber (8 %DV), vitamin C (45 %DV), vitamin B6 (10 %DV) and iron (6 %DV).

Potato tubers can be stored for long periods, but the storage time will depend on the variety and conditions. Unfortunately, sometimes your potatoes do not last as long as you would like them to last. Tubers can be overcome with diseases, grow sprouts, dehydrate and become shriveled, or turn green.

Have you ever wondered why potatoes turn green? Have you wondered when you should discard potatoes?

Why do my potatoes turn green?

Potato tubers turn green when they are exposed to sunlight during growth or storage. The green comes from the pigment chlorophyll. Potato tubers exposed to light will become green naturally as the plant seeks to harvest the light.

Potato varieties can differ in their sensitivity to light. In general, white-skinned varieties tend to turn green more easily than red- or russet-skinned varieties.

Are green potatoes safe to eat?

Although chlorophyll is a natural plant pigment that is tasteless and harmless, the green of potato tubers should signal us to be aware of another substance that is forming inside tubers. This substance is known as solanine, and it forms when any part of a potato plant is exposed to light.

Solanine is a toxic substance that is produced naturally in potatoes and other plants to aid in resistance of insects and animals. Solanine is present in all parts of the potato plant, including the sprouts, roots, leaves, flowers and fruits.

Solanine has a bitter taste and can cause stomach symptoms such as vomiting and diarrhea if you eat enough of it. If ingested in large amounts, it can cause illness or even death in extreme cases. Because of the bitter taste, most people do not eat enough to get sick. In addition, consumers always should avoid consuming sprouts.

Small tuber sprouts contain the highest levels of solanine to protect new growth and provide solanine to the growing plant. If tubers have sprouts, remove the sprouts prior to cooking and consumption.

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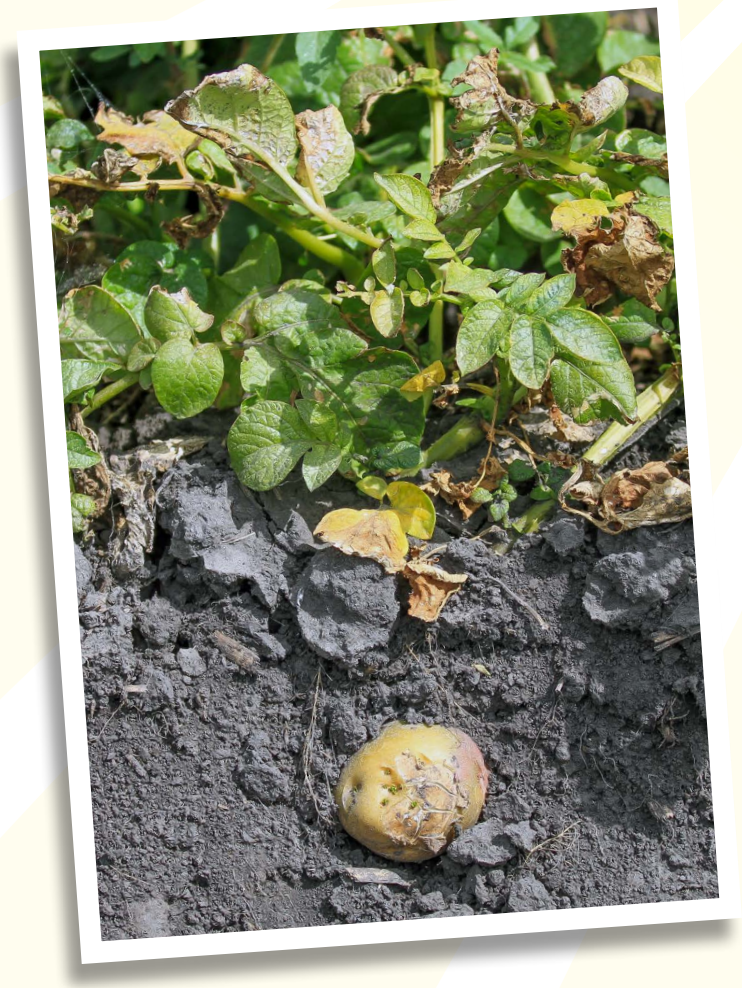
How can I prevent my potatoes from turning green?

To keep tubers from turning green, avoid exposing them to light. When purchasing potato tubers, check for green coloring before purchasing them.

You can prevent potatoes from turning green by storing them in a cool, dark area with good air circulation and high humidity. The ideal environment for storing potato tubers for long periods is 45 to 50 F with 90 to 95 percent relative humidity and darkness. Even though these conditions typically are not found in homes, strive to find similar conditions for long-term storage.

Store potatoes in a cellar or basement. Keep them away from warm areas such as around appliances that are giving off heat (refrigerator or dishwasher). If potato tubers will be consumed soon, they can be stored in a cupboard or paper bag.

In addition to greening, stresses such as light, cold, heat or injury to the tuber will promote the production of solanine. Careful handling and proper storage prevent potatoes from turning green.



What should I do with a green potato?

Always use caution if small areas of greening are found in tubers because they contain elevated levels of solanine. Removing the green portions by simply cutting them out will eliminate most of the toxin.

However, if more extensive greening occurs, throw the tuber away. Never eat tubers that are green beneath the skin. Only potato tubers should be consumed; other parts of the potato plant can be toxic to consume.

As a gardener, how do I prevent potatoes from turning green?

Prevent green tubers by ensuring sufficient soil is mounded around each plant. The mounding of soil around a potato plant often is referred to as “hilling” because a small hill of soil is built around the plant to provide enough soil to cover growing tubers. A large hill would measure 3 feet wide by 1 to 1.25 feet tall at the widest and tallest points at the final hilling.

The height often is reduced throughout the season by rain and/or irrigation. This is the reason why hills often are made so high. As potato plants grow and tubers expand, they need plenty of soil around them to ensure tubers do not come in contact with light.

When hills are not large enough, tubers can grow too close to the soil surface. Some potato varieties have longer stolons (underground stems or runners), making the tubers grow further away from the plant. In these cases, a larger hill is important to keep these tubers covered with soil.

The following steps can help prevent greening:

- Plant seed tubers at proper depths (4 to 6 inches).
- Hill or mound potato plants with soil while they are emerging and after they are about 4 to 6 inches tall. If growth is rapid and tubers begin to grow close to the surface, more hilling can be done, but use caution to avoid accidentally cutting roots and tubers.
- Eliminate exposure to artificial light after harvesting and storing.

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