

Many reasons for abundance of acorns

**ASK A
MASTER
GARDENER**



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Master Gardener

Question: I can't believe how many acorns are in my yard this year! Never seen anything like it! Does this have some kind of ominous meaning, like we're going to have a harsh winter?

Answer: When you see an unusual abundance of acorns on the ground, this is known as a heavy "mast" year.

The term mast comes from the word "to masticate," or to chew, referring to food. Mast is the fruit and seed volume of forest trees. With oak trees and other nut trees such as walnuts, there can be good years and bad years as far as acorn production goes. Bumper crop years occur on an average of two out of ten years.

So what causes a heavy mast year? Well, there are many variables, primarily weather-driven. They can also be very localized by microclimates, so in one area of the county you will see lots of acorns, but not so much in another area.

The most important weather factors influencing nut production are spring frosts, summer droughts and fall rains, the primary factor being spring frosts.

The reason for this is that it's in the spring that the female oak flowers (which are practically unnoticeable, they're so small) will tend to open when danger of frost has passed. Once the buds flower, they bloom for only one week, during which time they are pollinated by the wind, blowing the pollen from the male catkins to the flowers.

But should a late frost occur during this time, this will stop the flowering process, resulting in a limited acorn production in the fall, regardless of the weather occurrences in the summer or fall.

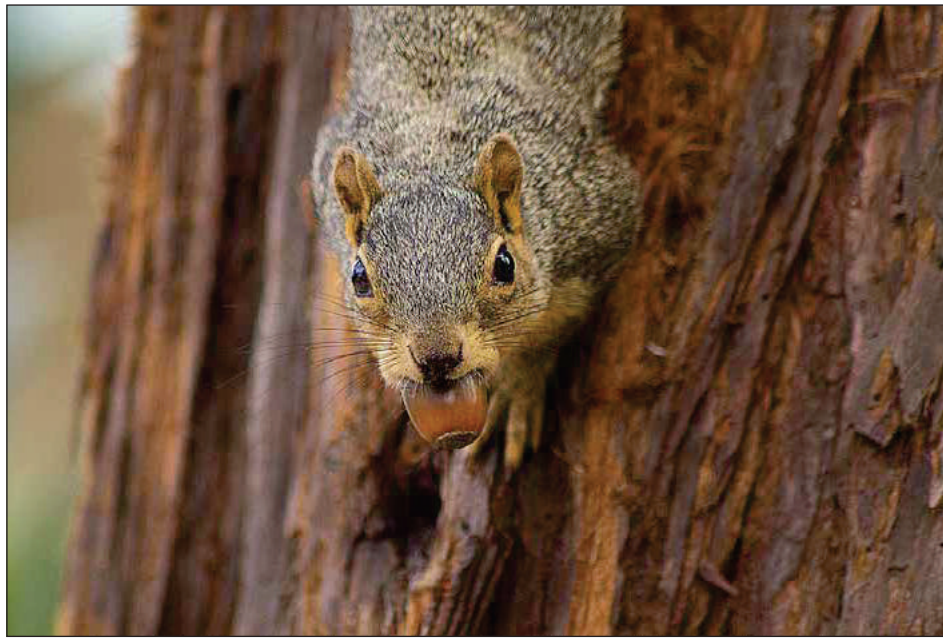
Besides this, even if there is a good spring fruit set, a summer drought can cause fungal problems that limit acorn production. But on the other hand, if there are abundant rains in the fall, this will ensure the trees will be ready for a great flower set the following spring.

This is why oak trees are one year behind the weather occurrences



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A mass amount of acorns, known as a heavy mast year, is an indication of what happened earlier in the year or some other weather-related driving force.



Squirrels, as well as mice, chipmunks, voles, blue jays, turkeys, deer and bears are amongst the wildlife known to favor acorns.

which affects the amount of mast they produce.

Microclimates will also affect acorn production. Trees which are located in the valleys and less susceptible to frost will produce more acorns generally.

Another theory of why some years see a heavy acorn production has to do with the wildlife populations which eat the acorns such as squirrels, mice, chipmunks, voles, blue jays, turkeys, deer and bears, to name a few.

Should oak trees produce a steady acorn crop each year, these populations that eat them would remain steady as well, reducing the chances of these acorns surviving to become seedlings. So the theory goes that the oak trees occasionally produce huge amounts of acorns to overwhelm the animals and birds that eat them, which in turn increases the chances of acorns germinating.

As the critter populations increase, so

will their predators, so we may see more fox, coyotes, bobcats, hawks and owls after a heavy mast year. Unfortunately, animals like mice and deer that benefit from large acorn production years also may carry Lyme disease-bearing ticks, so with these acorn booms, we may see more ticks the following year as well.

Some of the major consumers of acorns actually help the oak population survive. Since acorns germinate best if buried about an inch deep in the soil, squirrels and blue jays help plant a lot of acorns when they bury them in the ground for later consumption, then forget to retrieve them.

So rather than being a prognosticator of dire weather ahead, understand that all those acorns on your sidewalk, making you slip and slide like you're walking on marbles, is just an indication of what happened earlier in the year or some other weather-related driving force.

Do you have a gardening question? Contact the Douglas County Master Gardeners via email at douglasmg@oregonstate.edu, by phone at 541-672-4461 or visit 1134 SE Douglas Ave., Roseburg. Douglas County Master Gardeners are trained volunteers who help the OSU Extension Service serve the people of Douglas County.