

# Raspberries: a Source for Food and Medicine?

Ref: [Ohio State University - OARDC](#)

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The same raspberry used to make fruit juice could one day help stop the growth of cancer in humans, said OARDC scientist Winston Bash.

Farmers could become "pharmers," raising food for medical uses. There are a number of natural food sources that scientists have proved to be toxic to cancer cells, Bash said. Ohio State cancer researcher Dr. Gary Stoner, a professor in the College of Medicine, has shown that a food compound present in raspberries prevents esophagus cancer in 60 percent of rats given a high dosage of carcinogen.

Medical researchers think the compound will stop cancer growth when injected into humans, Bash said. The rats were fed dried raspberries, so the highest concentration of the substance was in the esophagus.

The cancer-killing food source, called ellagic acid, exists in raspberries, strawberries, and blackberries.

"We're looking at three varieties of each berry and harvesting them at three different maturity levels -- before, at, and past prime ripeness -- to see when the most ellagic acid is present," he said.

Bash also is trying to find out if the ellagic acid is produced in the seed, pulp, skin, or another part of the berry. An initial problem was the lack of an accurate technique to measure ellagic acid content. Bash worked with Steven Schwartz, Ohio State food scientist and professor in the food science and technology department, to modify an existing method, so it takes the measurements they need.

The ultimate goal for Bash, as director of Ohio State's Food Industries Center, is to come up with another way for berry producers to make money from their crop. The Center's purpose is to develop value-added crops for Ohio farmers.

"If we find out that the best ellagic acid source is the seeds, then berry growers can sell the seeds and make juice from the rest of the berry," he said. "Hopefully, by having several purposes for one crop, raspberry growers would be able to increase their profits."

If the acid is found in the pulp or skin, the best looking berries can

be sold on the fresh market, while culls are sold for ellagic acid, Bash said. On average, Ohio red raspberries sell fresh for \$1.70 per pound, and black raspberries for \$2 per pound.

Raspberries are typically grown in small fields, because most producers have to hire workers to hand pick them. Higher profits as a result of this research could encourage growers to increase their plots from five to 25 acres, Bash said. The introduction of a mechanical berry harvester in Ohio two years ago makes it possible to harvest more acres.

"With the harvester, a grower only has to rely on himself and a few others, and does not have to wait for a large group of people to show up and pick by hand," Bash said. Ellagic acid research is in the early stages and will take several more years for work to be finalized, Bash said.

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