

Sustainable fertilizer: Urine and wood ash produce large harvest

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Human urine and wood ash appear to make a potent, inexpensive fertilizer combination for boosting the productivity of food crops, scientists say. Credit: Wikimedia Commons

Results of the first study evaluating the use of human urine mixed with wood ash as a fertilizer for food crops has found that the combination can be substituted for costly synthetic fertilizers to produce bumper crops of tomatoes without introducing any risk of disease for consumers. The study appears in the current issue of ACS' *Journal of Agricultural and Food Chemistry*, a bi-weekly publication.

In the study, Surendra Pradhan and colleagues point out that [urine](#), a good source of nitrogen, has been successfully used to fertilize cucumber, corn, cabbage, and other crops. Only a few studies, however,

have investigated the use of wood ash, which is rich in minerals and also reduces the acidity of certain soils. Scientists have not reported on the combination of urine and wood ash, they say.

The new study found that plants fertilized with urine produced four times more tomatoes than nonfertilized plants and as much as plants given synthetic fertilizer. Urine plus wood ash produced almost as great a yield, with the added benefit of reducing the acidity of acid soils. "The results suggest that urine with or without wood ash can be used as a substitute for mineral fertilizer to increase the yields of tomato without posing any microbial or chemical risks," the report says.

More information: "Stored Human Urine Supplemented with Wood Ash as [Fertilizer](#) in Tomato (*Solanum lycopersicum*) Cultivation and Its Impacts on Fruit Yield and Quality", [Journal of Agricultural and Food Chemistry](#)

Source: American Chemical Society ([news](#) : [web](#))

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