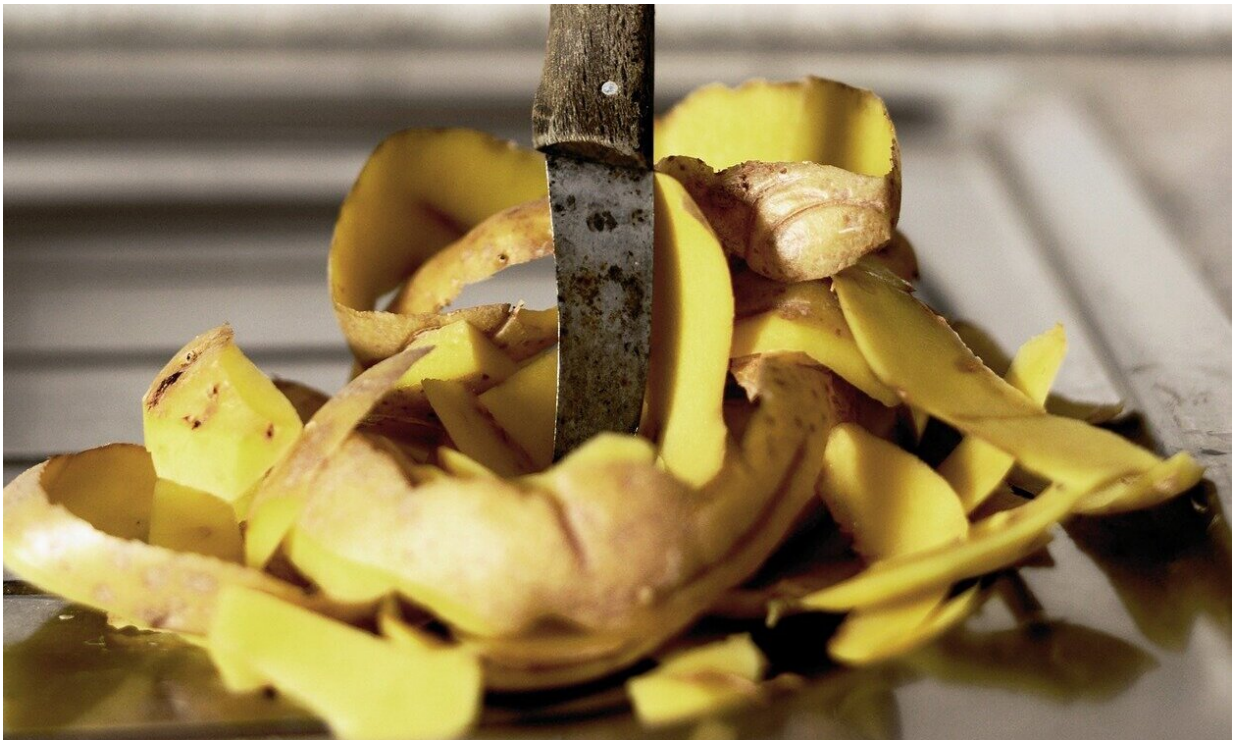


How to benefit from food waste in the age of climate change

April 24 2020, by David Bradley



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Humanity bounces from one crisis to another as history shows us. Food waste and climate change are perhaps part of the same crisis. Now, research published in the *International Journal of Global Warming* suggests that finding secondary uses for food waste might reduce the overall impact of this problem.

Mustafa Özilgen and colleagues at Yeditepe University, in Istanbul, Turkey, explain how the issue is a self-perpetuating problem: "Global warming increases the food [waste](#); in return, the food waste causes further increase in [global warming](#)," they say. Remedies that have been suggested at least for kitchen waste suggest that burning such waste instead of fossil fuels might help. The team has now used thermodynamic calculations to show that food waste from a fast food outlet after compression and drying to produce one ton of waste could be used to generate 3.5 gigawatts.

They have estimated that all the fruit and vegetable waste in Turkey, including agricultural waste, could produce 7.2 gigajoules of energy each year. Of course, part of the problem of food waste is the plastic and paper packaging and some of this will be a component of the overall dried and compressed material from the [food outlets](#).

"Our analysis indicates that trying to find a secondary use for food waste is not a feasible process, when compared with electric power production via combustion in a Rankine cycle with regeneration," the team reports. There may well be niche secondary uses for normally inedible fruit peel, vegetable stems, and other unusable plant materials that do not simply involve burning them for energy, but thermodynamically we would benefit more from burning such [food waste](#) instead of fossil fuels.

More information: Sungur Kaan Gökbülak et al. How to benefit from the food waste in the era of global warming, *International Journal of Global Warming* (2020). [DOI: 10.1504/IJGW.2020.106595](https://doi.org/10.1504/IJGW.2020.106595)

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