

Next generation biofuel: Genetically-modified duckweed can grow in wastewater, and it yields seven times more oil than soybeans

While plants such as corn and soybeans are major sources of biofuel, they're grown on land that could otherwise be used for food crops. With that problem in mind, scientists have genetically engineered oil-producing duckweed that could be grown in wastewater.

The study was conducted by researchers from the US Department of Energy's Brookhaven National Laboratory and New York's Cold Spring Harbor Laboratory. They started with an existing type of duckweed known as *Lemna japonica*, to which they added multiple genes which were already known to drive oil production and storage in other plants.

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Its oil yields are also seven times higher than those of soybeans. Unlike soybeans, however, crops of the duckweed wouldn't take up farmland, as they'd be grown in large vessels or ponds. In fact, the scientists suggest that duckweed crops could be grown in the liquid waste runoff from pig and poultry farms, which the plants would help to clean up by drawing excess nutrients out of the water.

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The researchers are now looking into methods of growing the duckweed and extracting oil from it on a commercial scale.

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