

Taming biofuel-loving microbes

March 7 2018

Most people are cautious around gasoline and diesel for good reason, but some microbes love the stuff—especially biofuels that contain fatty acid derivatives. So, as the world tries to go "green," it also has to consider the slime that such microbes leave behind, clogging up equipment and killing engines. An article in *Chemical & Engineering News (C&EN)*, the weekly newsmagazine of the American Chemical Society explores the issue and what's being done about it.

Senior Correspondent Mitch Jacoby explains that these [microbes](#) are not much of a concern for the typical motorist. But for airlines and other organizations that store large amounts of [fuel](#), contamination could be a problem. The U.S. Air Force, for example, has a mandate to rely more on biobased fuels in the coming years. Before using biofuels, military personnel made sure that the substances wouldn't interact badly with other materials it would come into contact with. However, they didn't consider the effects of microbiology. And as fleet operators started using blends of biodiesel and conventional fuels, they noticed contamination where none had existed. This caused some experts to look down on the [alternative fuels](#).

But scientists are on the case. One team recently identified several bacteria and fungi wreaking havoc in actively used fuel tanks. The microbes coated metal panels placed in the tanks with orange and red slime, and caused corrosion and pitting. Another group has been analyzing genomes to help understand how microbes metabolize the fuels, and their findings could lead to safer ways of preventing contamination. Much more work is needed to sort through all of the

possible factors, but scientists are well prepared to tackle this puzzle.

More information: "Why efforts to use green fuels sometimes run afoul," cen.acs.org/articles/96/i10/ef...fuels-sometimes.html

Provided by American Chemical Society

Citation: Taming biofuel-loving microbes (2018, March 7) retrieved 20 September 2024 from <https://phys.org/news/2018-03-biofuel-loving-microbes.html>

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