



## Production of Fatty Acids from Agricultural Waste via Non-Photosynthetic Microbe

**UW ID: 18-003**

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**Patent Status:**

Patent Pending

### Description of Technology

Fatty acids (FA) are a valuable chemical and can be used in a variety of applications, including the creation of biodiesel fuel. Currently, biodiesel is produced from vegetable oils, animal fats, and algal lipids. The current production method is limited by high cost and low efficiency. Biodiesel has the potential to greatly reduce the dependence on fossil fuels and foreign oil if a better production method is found.

Researchers at the University of Wyoming have invented a new way of creating fatty acids from agricultural waste, instead of either engineered feedstocks or dedicated crops like current methods, which lowers costs. The new method works by growing a fungal plant pathogen on the agricultural waste which accumulates FA as it grows. The new method also creates FA in a single-step process compared to the current two-step process, further reducing costs and increasing production. The fatty acids produced using this new method could then be used to create biodiesels at a lower cost.

### Applications

The invention is used to create fatty acids in a more cost effective and efficient manner. These fatty acids can then be used to create biodiesel fuels for less cost.

### Features & Benefits

- Creates fatty acids from agricultural waste
- Produces fatty acids in only one step
- Microbe and feedstock combinations do not exist in nature making this process truly unique
- Can run process as either single pass or multi-pass

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