

Japan Airlines Tests Biofuel Made From Rice Oil Byproduct

日本航空（JAL）は山形空港で、こめ油を作る過程で生まれる副産物を活用したバイオ燃料の実証実験を行っています。こめ油由来のバイオ燃料を空港で使用するのは世界初の試みです。これまで捨てられていたものを新たな資源として生かす技術は、私たちの暮らしや社会をどのように変えていくのでしょうか。あなたは、身の回りのどのようなものが新たな資源として活用できると思いますか。



1. Article

Read the following article aloud.

Japan Airlines (JAL) is conducting a demonstration at Yamagata Airport using biodiesel fuel (BDF) made from a byproduct of rice oil production to power airport support [equipment](#). It is the world's first airport [trial](#) using BDF derived from rice oil [production](#).

The fuel is made from rice bran fatty acids, a solid byproduct generated during the rice oil manufacturing [process](#). It is refined into high-purity BDF using an ion exchange resin method developed by Tohoku University.

On a rainy day at Yamagata Airport, a JAL Embraer 190 regional jet arrived at the boarding bridge as usual. A towing tractor then moved in to transport cargo and baggage containers from the aircraft. The only unusual sight was a sign on the front of the vehicle reading "vehicle using biodiesel."

Continued on next page.

Source: Japan Airlines Tests Biofuel Made From Rice Oil Byproduct

Japan Forward

本教材は、一般社団法人ジャパンフォワード推進機構、株式会社産経デジタルより許諾を得て、産経ヒューマンラーニング株式会社が編集しています。
テキストの無断転載・無断使用を固く禁じます。

1. Article

JAL said the trial marks the first time BDF produced using this technology has been used at an airport. Some of the rice used in the oil production process was grown locally in Yamagata Prefecture, one of Japan's leading rice-producing regions.

JAL already uses BDF made from used cooking oil at 23 airports across Japan. However, as global demand for used cooking oil continues to rise, the airline is exploring [alternative](#) sources of biofuel.

Takaaki Sakamoto, an assistant manager in JAL's Ground Handling Planning Department, said Yamagata Airport was selected for the trial because its location in a basin exposes it to significant seasonal temperature changes, allowing the fuel to be tested under a range of weather conditions.

The airport's proximity to Tohoku University in Sendai, which developed the refining technology, was another factor.

"Biofuels made from used cooking oil are becoming increasingly difficult to secure, so it is important to explore other options," Sakamoto said.

The demonstration will continue through May next year. JAL will evaluate the tractor's performance, monitor any effects on the vehicle, and test the BDF supply system with the aim of eventually putting the fuel into practical use.

Source: Japan Airlines Tests Biofuel Made From Rice Oil Byproduct

Japan Forward

本教材は、一般社団法人ジャパンフォワード推進機構、株式会社産経デジタルより許諾を得て、産経ヒューマンラーニング株式会社が編集しています。
テキストの無断転載・無断使用を固く禁じます。

2. Key phrases and vocabulary

First repeat after your tutor and then read aloud by yourself.

1. equipment 設備

The university laboratory has new equipment for testing materials.

2. trial 試み

The game company began a trial of its newest sports games last month.

3. production 生産

The yogurt factory increased production to match customer demand.

4. process 工程

The process of writing a high-quality book takes months or years, not seconds.

5. alternative 代替の

To reduce air pollution and help stop climate change, we need to find an alternative to plastic bags.

3. Questions

Read the questions aloud and answer them.

1. What exactly is this new biodiesel made from?

2. Why was Yamagata Airport chosen for the biodiesel fuel trial?

3. Why is JAL turning to this kind of biofuel?

4. What other waste materials could be used to make useful fuels or products? Think of as many as you can.

5. Would you be willing to use products made from recycled or waste materials? Why or why not?

4. こめ油の副産物で燃料、山形空港でJAL作業車を動かす 地元のコメ、東北大の技術で実現

日本航空（JAL）は、こめ油製造工程で発生する副産物を原料に製造したバイオディーゼル燃料（BDF）を、山形空港の作業車両（トーイングトラクター）の一部で使う実証実験を行っている。BDFは、東北大が開発した「イオン交換樹脂法」という技術で精製されたもので、こめ油由来のBDFを空港内で使用するのは世界初。こめ油の原料のコメの一部は地元で収穫されたものだという。

「米ぬか脂肪酸」を活用

小雨の降る山形空港。JALの小型機E190が機体をボーディング・ブリッジに横付けすると、貨物や手荷物搬送用コンテナを牽引（けんいん）するトーイングトラクターが近づき、機体から次々と荷物を降ろしていく。どこでも見られる空港の風景だが、1台だけフロントに「バイオディーゼル使用車両」という表示があった。

出典：こめ油の副産物で燃料、山形空港でJAL作業車を動かす 地元のコメ、東北大の技術で実現
[Japan Forward](#)