

BREVET DE TECHNICIEN SUPERIEUR AGROEQUIPEMENT

LANGUE VIVANTE ETRANGERE EPREUVE D'ANGLAIS

DUREE : 3 HEURES
COEFFICIENT : 1

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Dès que le sujet vous est remis, assurez-vous qu'il soit complet.
Le sujet comporte 3 pages, numérotées de 1 à 3.

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Stay self-sufficient with biofuel

Farmers self-sufficient in fuel - it's a dream that's becoming a reality according to one biodiesel specialist. **Charlie McCarron reports**

JAMES HYGATE started Green Fuels just over a year ago from his parents' garage in Cheltenham, Glos.

Since then his biofuels business has grown significantly and he is now selling over 20 biodiesel processors each month.

The company has now entered a joint venture with crop processing specialist Alvan Blanch to present farmers across the country with the opportunity to produce their own road-legal fuel.

Biodiesel is by no means a new idea. It has been available in Germany for over 15 years but its profile has only been raised in the UK over the last few years and usually as a blend with mineral diesel.

Farmers have another option - the oilseed rape they grow can be crushed and converted to fuel on farm.

Green Fuels maintains that one tonne of oilseed rape will, when crushed, produce on average 350-litres of oil. The remaining 650kg of cake can be sold as a mix for cattle feed at about £80/t.

Alvan Blanch is to provide an oil press capable of crushing 150kg of rape per hour, while Green Fuels will provide the equipment to process the oil and produce biodiesel.

Turning oil into fuel is a simple enough process as Mr Hygate demonstrates.

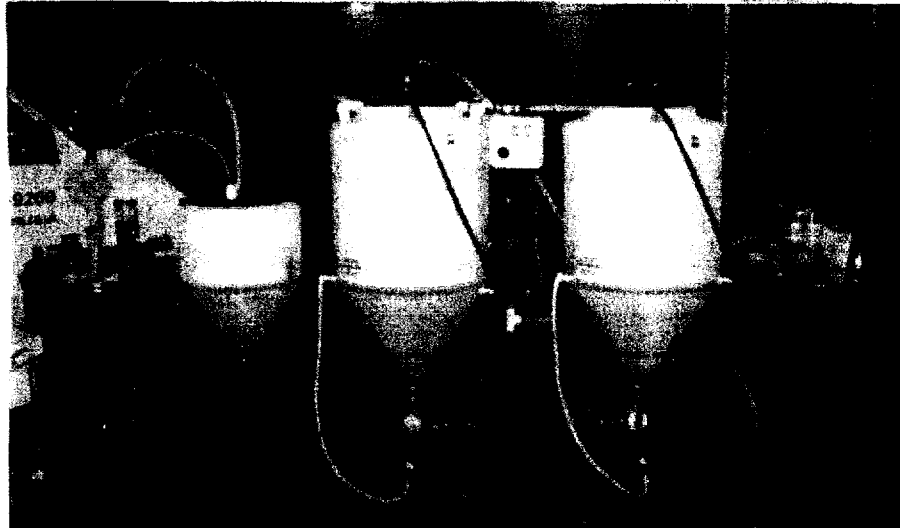
Using the FuelMeister 300LE biodiesel processor, the oil is heated to 60deg and filtered.

A chemical analysis is then carried out to determine how much caustic-soda and methanol is to be added to the mixture.

A reaction takes place when these are added to the oil and two products are produced, glycerine and unwashed biodiesel.

The biodiesel is pumped into a wash-tank and a process which passes a mist of water over the surface of the fuel washes out any remaining traces of soap and caustic.

The set-up, which includes Alvan Blanch's new XT150 press and Green Fuels' processing plant, will produce 300-litres each day and is anticipated to cost in the region of £15,000.



The FuelMeister 300LE biodiesel processor can be situated in a space of 4m by 2m and is capable of producing 300 litres of fuel a day.

INVESTMENT

"Although this seems to be a fairly high capital cost, it's an investment which will easily pay for itself within a year," says Mr Hygate.

"Those people using high volumes of white diesel have the chance to make some fairly significant savings."

He says he has faced concerns from potential customers regarding the effects of biodiesel on modern engines.

To prove that the fuel is safe and reliable, he has been running a number of vehicles on 100% biodiesel - including a new Citroen C2 - for over 12-months.

He says he has customers processing and using over 5m litres per year with no ill effects.

"The C2 is fitted with a common rail diesel engine, and we have been running it on 100% locally grown and processed rape-seed biodiesel.

"In total the company's vehicles have clocked up over 35,000 miles using 100% biodiesel."

Mr Hygate claims that conventional fossil fuels leave a deposit within the engine and when biodiesel is used it breaks down these residues to effectively clean it out. ■

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BIODIESEL ADVANTAGES

- Biodiesel advantages
- Costs 55p/litre to make*
- 80% lower emissions than mineral diesel
- Can be used alone or mixed with mineral diesel
- Zero engine modification
- Biodegradable



James Hygate says that the agreement between Alvan Blanch and his Green Fuels company presents farmers the opportunity to produce road-legal biodiesel - all from a crop which can be established and grown for a relatively low cost.

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I – COMPTE RENDU : 12 points

L'encadré fait partie de l'article et doit être intégré dans le compte rendu.

Rédigez **en français** le compte rendu de l'article et indiquez le nombre de mots utilisés.

300 mots (10% en plus autorisés).

II – EXPRESSION : 8 points

Rédigez **en anglais**

Vous appartenez à un syndicat agricole. Lors d'une réunion vous essayez de convaincre l'assemblée des avantages de ce biocarburant ou d'autres. Vous évoquez différents aspects : économique, agronomique et environnemental.

150 mots (plus ou moins 10%)

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