

## BIOFUEL

## Loose ends delay biofuels investment

Loose ends in biofuel policy need to be tied up so that feedstock production and investment in the industry can take place, delegates heard at the recent Combined Congress in Durban. Policy uncertainty made the 2007 National Biofuels Industrial Strategy's short-term target of 400 million litres of biofuel by 2013 impossible.

"Biofuel and bio-energy policy is so unclear that it's acting as a barrier to investment. The number of inconsistent policies between departments and between national and provincial government is causing confusion," said Prof Graham Jewitt, Umgeni Water chairperson of Water Resources Management and director of the Centre of Water Resources Research (CWRR) at the University of KwaZulu-Natal.

One of the major concerns was uncertainty about water policy, as the Department of Water Affairs (DWA) didn't support the irrigation of biofuel feedstocks.

### INDUSTRIAL TARIFFS

DWA couldn't stop farmers with existing water-use licences from converting to biofuel crops. But if the farmer supplied irrigated feedstock to biofuel processing plants, the DWA intended to impose industrial tariffs on the irrigated water, and not the usual subsidised agricultural tariff, said CWRR researcher Richard Kunz.

Two bio-ethanol processing plants were ready to be built in Cradock, in the Eastern Cape, and Bothaville, in

the Free State. Both will use existing cultivated land to produce feedstock from grain sorghum. However, despite environmental impact assessments having been completed, the Cradock plant was experiencing policy problems regarding irrigation water, said Kunz. The Department of Energy has proposed mandatory blending rates of 2% to 10% bio-ethanol in petroleum, equivalent to at least 240 million litres of biofuel annually.

This required an annual production of at least 600 000t grain sorghum, said Kunz.

But, in terms of the National Water Act, it was necessary to assess the potential water-use of biofuel feedstock production before permission was granted to grow it. And, depending on a crop's water productivity, a water-use licence may even be required for rainfed crops.

### 'A WATER-USE LICENCE MAY EVEN BE REQUIRED FOR RAINFED CROPS.'

Kunz is part of a CWRR-led project working to determine the water productivity of biofuel feedstock crops, including sugar beet, sweet sorghum, grain sorghum, sugarcane and soya bean.

The DWA and the WRC wanted to know if changing land-use to biofuel feedstock production would compromise water required for basic human needs or the health of river systems.

### DRAFT POLICY

"More than 80% of Southern Africa's rainfall is returned as evaporation and transpiration. If we change land-use to high yielding bio-energy crop production, then evapotranspiration may increase and the proportion of run-off reaching the rivers may decrease," said Jewitt. Farmsecure Energy's Dr Johan van Biljon said finding crops that could produce 15t to 20t dry matter/ha without irrigation was "a big challenge". Farmsecure has opted to go mainly into anaerobic digestion and direct combustion (DC), and will be ready to build DC plants within three months.

However, it won't start construction until "all loose ends are fully under control," said Van Biljon.

"My biggest concern about bio-energy is that the water use of natural

vegetation is being used as a baseline to measure crop water use. The implication is that you need a water-use licence for every crop production unit and that can take more than two years to obtain," he said.

A DWA delegate, speaking unofficially, said the department was still working on a draft policy in terms of biofuels, which would be distributed for comment. – *Robyn Joubert*