

Saving food for clean energy

By Wu Jiao

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The government is set to increase the use non-food products to make bio-fuel to strike a balance between food security and the growing demand for energy. To ensure that, it has changed its bio-fuel policy, banning any new plants from using corn.

It will subsidize demonstration projects producing ethanol from non-staple products such as cellulose, sweet sorghum and cassava, or making bio-diesel from forest products. It will make it easier for such projects to get bank loans, too.

Projects that are up to approved industrial standards will be rewarded with 20 to 40 percent of their total investment, the deputy director of the Ministry of Finance's Department of Economic Development, Zeng Xiao'an, has said. Also, bio-fuel producers who lose money when crude oil prices fall will get flexible subsidies.

Previously, supportive policies used to be reserved for the four approved corn-based ethanol producers, which got a 1,000-yuan subsidy for every ton of ethanol they produced. They enjoyed deductions in their sales tax, too.

"The new policy of making bio-fuel from non-food products signals a major change in shifting production resources," says Kuang Tingyun, of the Chinese Academy of Sciences. The country has to chalk out a pragmatic bio-fuel strategy, taking its biomass and major technological breakthroughs into consideration. "The lack of arable land means bio-fuel cannot rely on food products."

Experts favor the use of crops such as cellulose, sweet sorghum and cassava to make bio-fuel because they can be grown even in the arid and desert areas. Forest products, including tung-oil and coral trees, are also "ideal raw material" for the bio-fuel industry, says on-field market analyst Cao Zhi.

The incentives offered are not bad because farmers can get a 3,000-yuan (\$405) subsidy for each hectare of forest products used to make bio-fuel, and 2,700 yuan for each hectare of crops.

Technological breakthrough is a must to advance the bio-fuel production process if non-food products are to be used because China lags behind other countries in productivity and efficiency, experts say. In China, for instance, 12 tons of water is needed to make one ton of ethanol from corn, but in the US, producers can do with only 1.8 tons, says an AT Kearny report on China's bio-fuel industry. Moreover, in China, 3.3 tons of corn is needed to make one ton of ethanol, whereas in the US only 2.8 tons is suffice.

Kuang says the government should change its subsidy policy on the four existing corn-ethanol producers because they are finding it difficult to get enough corn. The Tianguan Group in Henan Province is already using cassava to make 20 percent of its 300,000 tons of ethanol a year.

The four corn-based bio-fuel plants were set up in 2001 because the country then had a large corn reserve. But the sharp increase in industrial use of corn and the subsequent increase in its global demand have created a shortage of the cereal in the domestic market, which in turn has driven up pork and other food products' prices.

Bio-fuel is fuelling a new market expansion as China tries to raise its ethanol production from 1 million tons a year to 2 million tons in 2010, and 10 million tons by 2020. China National Cereals, Oils and Foodstuffs (COFCO) will be the major investor in the sector because it has stakes in three of the four corn-based ethanol producers.

Last year, a COFCO bio-fuel department plan showed that three bio-fuel projects, using mainly cassava, will go into operation in 2008, and will have an annual output capacity of 800,000 tons. Plus, a 200,000-ton capacity factory in the Guangxi Zhuang Autonomous Region, will start running by the end of this month .

Other energy giants such as Sinopec and PetroChina aim to get a big share of the bio-fuel market, too, because they are the main organizations that will eventually mix bio-fuel with oil before it is transported to gas stations.

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