

Report finds bioenergy production can expand across Africa without displacing food

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Crops can be produced for bioenergy on a significant scale in west, eastern and southern Africa without doing damage to food production or natural habitats, according to a report produced by the Forum for Agricultural Research in Africa (FARA), Imperial College London, and CAMCO International. The study was released today at the 5th African Agriculture Science Week in Burkina Faso.

"If approached with the proper policies and processes and with the inclusion of all the various stakeholders, bioenergy is not only compatible with food production; it can also greatly benefit agriculture in Africa," said Dr. Rocio Diaz-Chavez, the report's lead author and Research Fellow at Imperial College London. "Bioenergy production can bring investments in land, infrastructure, and human resources that could help unlock Africa's latent potential and positively increase food production."

The conclusions of the report, Mapping Food and Bioenergy in Africa, were drawn from a review of existing research and case studies of biofuel production and policy in six countries: Senegal, Mali, Tanzania, Kenya, Zambia, and Mozambique. Among the report's findings is that there is enough land available to significantly increase the cultivation of crops, such as sugar cane, sorghum, and jatropha for biofuels without diminishing food production.

The case studies found that interest is growing across Africa in bioenergy to address both income and energy needs. For example,

ethanol can be blended with fossil fuels to reduce dependence on expensive fuel imports that are a major drag on economic development. Ethanol also can be used in cooking stoves, reducing dependence on unhealthy and environmentally destructive charcoal and wood. In addition, using biodiesel to power electrical generators is of keen interest in many areas, given the challenges facing the [power grid](#) across Africa.

But as global demand escalates for biodiesel and ethanol, a key concern has emerged that a rush to expand production in Africa, particularly for export, could usurp land and resources needed food crops. But Diaz-Chavez said evidence uncovered in the FARA report finds "food versus bioenergy" should not be the choice, and that the more relevant discussion today is how to properly integrate bioenergy into agriculture production systems in different regions of Africa.

For example, the report concludes that sugar cane production for biofuels could be doubled in many areas "without reducing food production or destroying valuable habitats." Furthermore, Diaz-Chavez said it's clear that many African countries are sensitive to potential conflicts with food production and are pursuing policies that address this concern.

"There have been individual instances where bioenergy production has produced negative impacts, but that does not mean it is not possible to develop this sector in a sustainable manner," she said.

For example, Mozambique has adopted a policy that designates only sugar cane and sweet sorghum for ethanol and jatropha and coconut for biodiesel. In South Africa, Parliament has decreed that maize can no longer be used for biofuel. Mali does not allow food crops to be used for [biofuel](#) production. Also, the report finds programs in Mali to increase production of jatropha, a shrub that produces seeds that can be converted into fuel, are benefiting local smallholder farmers "without

compromising food production."

The analysis reveals that the challenge today is not so much whether bioenergy production can co-exist with food production but rather how it can be scaled-up to help African countries realize their potential.

"There are the same challenges you see for any crops, which is if you don't have adequate resources, you cannot boost production," she said. For example, the report concludes that in the less developed countries of Africa, "it is possible to triple yields by using improved management practices, potentially freeing up more land for bioenergy production."

Part of the study was devoted to identifying or "mapping" the wide array of groups in Africa who are getting involved in various aspects of bioenergy production. They include farmers groups, NGOs, industry and, in governments, agriculture, transport, energy, and environment ministries and agencies.

"We know there is intense interest in many sectors, but the problem is they are not necessarily communicating with one another," said Dr. Monty Jones, Executive Director of FARA. "It is a situation that offers an opportunity for FARA, as an organization with partners in the public and private sector across the region, to provide a forum that brings all of these different interests together to form a cohesive and inclusive approach to bioenergy production."

At a discussion of the report during the Science Week, a key issue that emerged was that [bioenergy](#) issues must be part of a broader conversation about how to meet the energy needs of African farmers.

"Energy is the key to modernizing agriculture in Africa," said Dr. Ibrahim Togola, who heads an agriculture industry development group in Mali and is a professor at Mali's Rural Polytechnical Institute. "We need

to make our politicians understand that we will never have an agriculture revolution in Africa without having access to modern energy services," he said.

Provided by Burness Communications

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