

Energy Crops in the Contemporary Agriculture

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Introduction. Leading investors have joined the growing chorus of concern about governments and companies rushing into producing biofuels as a solution for global warming, saying that many involved in the sector could be jeopardising future profits if they do not consider the long-term impact of what they are doing carefully.

As far as biofuels are concerned, however, a clean energy future will not be limited to corn-based ethanol, but will include a wide variety of alternative energy crops, or feedstocks. Such feedstocks can be used for both ethanol and biodiesel, grown in varied climates and farming systems, and lead to more diversity on the farm. The studies on energy crops in biofuel production show that they are quite an economical and environmentally beneficial way of sustainable energy production. Today most of the developed countries use staples such as corn, sugar beet, soybean, rapeseed, and wheat in order to obtain energy. Moreover, bioethanol is mostly produced from sugarcane and corn and biodiesel from oilseed plants. Therefore, these produced raw materials compete with food and feed production. Consequently, the use of those energy crops which are used as food products for biofuel production is an important issue which must be considered in terms of the current food safety. Some energy crops, such as miscanthus, switchgrass and sweet sorghum, that are called C4 crops, can grow with high biomass yield even in infertile land. Thus, these crops are used in energy farming – a new type of agriculture. Furthermore, C4-type crops possess the features of resistance to aridity, high photosynthetic yield and a high rate of CO₂ capture when compared with C3 crops. In conclusion, C4 crops tend to produce more biomass than C3 crops. Therefore, these crops are investigated, focused on, and elaborated on in this paper.

Conclusions. Production of corn and soya beans has increased dramatically in the last years as an eco-friendly alternative to fossil fuels but environmental and human rights campaigners are worried that this will lead to destruction of rain forests. Food prices could also go up as there is increased competition for crops as both foodstuffs and sources of fuel. Last week, the UN warned that biofuels could have dangerous side effects and said that steps need to be taken to make sure that land converted to grow biofuels does not damage the environment or cause civil unrest. There is already great concern about palm oil, which is used in many foods in addition to being an important biofuel, as rain forests are being cleared in some countries and people driven from their homes to create palm oil plantations. An analyst and author of the investors' report says that biofuels are not a cure for climate change but they can play their part as long as governments and companies manage the social and environmental impacts thoroughly. There should also be greater measure taken to increase efficiency and to reduce demand.

References:

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