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## Jatropha Seed Production in Tanzania – A Chance for Smallholder Farmers?

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### Abstract

The substitution of fossil fuels with biofuels continues to be discussed worldwide. Many international companies investing in biofuel projects have focused their interest on African countries. In Tanzania, *Jatropha curcas* L. – a preferred plant to supply feedstock – has been subject to much attention. While there is no clear legal framework for bioenergy in the country, a number of Jatropha-oil projects are in operation. They aim to increase the use of renewable energy sources and contribute to rural development. Therefore, most projects follow an outgrower-approach where smallholder farmers are contracted to grow and produce the seed supply for the investing company. The few studies which have been carried out mostly rely on assumptions and expectations of production figures that leave the actual economic viability and competitiveness of Jatropha unclear. This article addresses the knowledge gap and presents results of recent case studies including first quantitative research findings on smallholder Jatropha production in Tanzania. The current cultivation practices, the Jatropha value chain and the socio-economic implications for smallholder farmers are discussed. With Jatropha being a new production crop, a lack of knowledge on best practice is found to be common to all stakeholders. Further, the value chain is still in an initial stage where linkages are basic and markets vulnerable. To smallholder farmers though, investing in Jatropha seems profitable if seed yields of 2–3 t ha<sup>-1</sup> can be reached. We conclude that there is potential for economic viability of Jatropha. However, due to the uncertainty of attainable yields and the knowledge gaps in Jatropha cultivation, alternative crops may prove preferable. Therefore, substantial further research is needed and recommendable.

**Keywords:** Biofuel, competitiveness, economic viability, Jatropha, Tanzania