



Tropentag, September 14-16, 2010, Zurich

“World Food System —
A Contribution from Europe”

Jatropha curcas as a Potential Driver for Rural Development in Mesoamerica

NILS BERGER

Zamorano University, Agricultural Science and Production, Honduras

Abstract

As the costs and consequences of the world's dependence on fossil fuels grow, the prospect of cultivating bio-fuels is becoming a new paradigm in agriculture being considered in Latin America. One potential biodiesel feedstock crop, *Jatropha curcas* (JC), has generated much interest for its adaptation to dry land cropping and its potential to provide income to small farmers in tropical regions. Although considerable research on JC is being conducted in India, little is known about the crop's productive potential in Mesoamerica, considered to be its centre of origin. Zamorano University in Honduras is executing a long-term programme to understand and improve the cultivation of JC for biofuel production in the region, addressing a value chain approach for Biodiesel production out of JC, evaluating the economic feasibility of its cultivation in Mesoamerica at different scales, and accelerating the use of bio-fuels in developing countries. JC productivity is evaluated with a set of comprehensive agronomic trials installed on 8 hectares of Zamorano land using JC “Cabo Verde” variety. Additionally a collection of regional, Asian and African accessions is studied in a genetic programme to develop improved JC varieties for Mesoamerica. The outcomes of both agronomic research programs are transferred to small and medium scale farmers through a comprehensive extension programme which aims to improve income and to promote a biofuel producing culture among them. In order to support these efforts Zamorano will purchase JC seeds through local collection centres and convert them into biodiesel or PPO fuel in Zamorano's pilot plant. The resulting biofuels will then be used to reduce environmental impact of fossil fuel consumption on Zamorano Campus area and surrounding areas.

Keywords: Biodiesel, biofuel, *Jatropha curcas*, Mesoamerica