IEEJ: February 2009

Jatropha curcas L.: Development of a new oil crop for biofuel (Summary)

Chew Chong Siang, Researcher
New and Renewable Energy Group
Strategy and Industry Research Unit

The Institute of Energy Economics, Japan (IEEJ)

The biofuel development boom has sparked concerns over deforestation and food issues and created a tendency to level criticism on the diversion of edible oil to fuel production. The nonfood oil plant *Jatropha curcas L*. appeared on the scene as the favorite response to this criticism. But, experience cultivating *Jatropha curcas L*. as a crop is still shallow and agricultural techniques have yet to be established. A period of R&D will be needed to establish *Jatropha curcas L*. as a plantation crop that can be cultivated on a commercial basis. Regardless, many countries and companies are going ahead and injecting capital into the development of large-scale plantations, which is an alarming situation. Accordingly, this paper provides as much basic information as possible about *Jatropha curcas L*. as a plant, given that there is a dearth of such information at present. Further, the paper introduces the existence of a number of barriers and challenges that must be overcome to develop *Jatropha curcas L*. as raw material crop, including the establishment of upstream cultivation techniques, improved breeds, farm management know-how, intermediary distribution, processing, and refinement methods, and application technologies in the downstream market. The paper also summarizes the development of *Jatropha curcas L*. in Asia and considers the future potential of this industry.

Inquires: report@tky.ieej.or.jp