BIOFUELS AND BIOENERGY

Prospects of bioethanol production from lignocellulosic rich weeds of North East India

Pankaj Bharali[1], Arup Kumar Das[2] and Mohan Chandra Kalita[2]
[1]Gauhati University, India
[2]Rajiv Gandhi University, India

North East region referred to as “Paradise of the Botanist” exhibits a plethora of trees, shrubs, herbs, epiphytes, ferns cryptogams and houses numerous rare, endangered, and endemic species. Bio-resources in North East India have be exposed to many challenges in recent years. 80% people are farmers relying heavily on agriculture. Weeds are the maj problems in the agricultural elds. e cell walls of the Weeds are rich in the lignocelluloses contents which are a good source of sugar. Lignocellulosic materials consist mainly of three polymers: cellulose, hemicellulose, and lignin. ese Lignocellulosic feedstocks may liberate sugars for fermentation a er aggressive pretreatment to yield a substrate easily by hydrolyzing with commercial cellulolytic enzymes, or by enzyme producing microorganisms. For the collection of organic biomass, weed biomass is one of the easily available sources as compare to other plant products. Due to the favorable climatic condition the is a huge diversity of weed in the agricultural eld of North east India which leads to the production of large weed biomass. Among the 60 recorded weeds of this region Ipomea carnea, Eichhornia crassipes, Mikania micrantha, Cassia occidentalis,

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