Available online at www.scholarsresearchlibrary.com

Scholars Research Library

Journal of Natural Product and Plant Resources, 2021, 11 (7): 1

(http://scholarsresearchlibrary.com/archive.html)

Welfare: Biomass and Bioenergy

James Watson*

Managing Editor, Journal of Natural product and Plant Resources, Heathrow Stockley Park Lakeside House Heathrow, UK

***Corresponding Author:** James Watson, Managing Editor, Journal of Natural product and Plant Resources, Heathrow Stockley Park Lakeside House Heathrow, UK.*

INTRODUCTION

Biomass is regarded as a most important renewable source of energy because it can be used as an alternative source for energy production. Natural sources for energy production are becoming extinct day by day. The main reason behind biomass energy production is that it can be produced from wood, plant and animal wastes, forestry wastes which indicate that biomass can be produced from those materials that are regarded as wasted materials which are again re-used and energy is produced. Biomass does not emit any harmful gases, produces clean energy, abundant and renewable, and reduces the usage of fossil fuels for energy production and also it can be used to create different products. The main reason behind biomass usage is it reduces emission of greenhouse gases.

Biomass Processing Technologies

These technologies can then be followed by an array of secondary treatments (stabilization, dewatering, upgrading, refining) depending on specific final products. The wide range of biomass sources available in nature includes feedstock characterized by different chemical compositions, physical status, toxicity and energy content. The feedstock quality represents a relevant aspect influencing the decision on the most suitable valorization technology to be adopted. In particular, despite the energy recovery efficiency should represent the key driver for the choice, economic competitiveness and market opportunity play the main role towards the commercial development of new technologies and strategies.

Biomass Applications

Biomass is pre-treated and then transformed to synthesis gas via gasification. The resulting syngas is then cleaned preliminary to conversion to liquid biofuels, typically via Fischer Tropsch or the Mobil process. There are two main biomass-based liquid propellant in the market place today, ethanol and biodiesel. Some 20 Mm 3 y -1 of ethanol is produced with an energy content of 425 PJ, manufacturing this the second most important biofuel. A much smaller amount of biodiesel is used in the USA and Europe. Generally a tonne of cane produces between 125 and 140 kg of raw sugar, or between 70 and 80 litres of ethanol, although a tonne of maize, with about 70% to 75% starch content, will produce between 440 and 460 L t -1 with wet and dry corn crushing, respectively.

Biomass Conversion Technologies

Wind energy development has grown rapidly from past few years in order to meet the needs of people as an alternative source of energy. Predominantly, the production of biomass energy from various metamorphoses methods are invented and developed. Biomass transformation is the process of transforming biomass feedstock into the energy that can be pre-owned to generate heat and electricity. Bioenergy can be changed into power through thermo-chemical cycles i.e. combustion, gasification and pyrolysis or bio-chemical operations like anaerobic digestion. Renewable technologies have made up to 7% of electricity generated in 2010-this will arise as the UK aims to meet its EU target of generating 30% of its electricity from renewable sources by 2020.