

cause the efficiency of production will be increase, built up the new applications and new opportunities of bioplastics. Furthermore, the future market for bioplastics will be is increasing owing to its sustainability. Besides, the biotechnology of microorganism gives an opportunity to bioplastic manufacture because it could significantly apply and commercialize for various industries such as agriculture, medical, pharmaceutical, veterinary, etc.

Hence, a new guideline and standard for bioplastics should be develop for production, usage and waste management of bioplastics over the world. Thus, labeling legislation must be enhanced depend on products raw material usage, energy consumption, emissions from manufacture and use.

The biobased materials or biodegradable materials have major potential of being compostable purpose. Recent developing of technology, continued innovation and global support is important to commercialize and demonstrate the bioplastics.

But nevertheless, the bioplastics must be based on an integrated environmentally friendly to increase the sustainability of materials and processes throughout its lifetime. Bioplastics materials must be not competing with traditional sources and reduce in need of non-renewable resources in long term.

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