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Manuscript Number:	2014_JAERI_14395
Title of the Manuscript:	ALGAECULTURE: AN ALTERNATIVE TO SOLVING ENERGY SUSTAINABILITY CRISES IN DEVELOPING COUNTRIES
Type of the Article	Review Article

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<u>Compulsory</u> REVISION comments	<p>1 There is no sufficient support to illustrate that algae fuel is more suitable replace fossil fuel in developing country as author mentioned in the title whereas several algae fuel demo-processes were first realized in developed country such as US, Australia or EU. Algae to Fuel is not easy work but very difficult especially in industrial scale.</p> <p>2 The composition of algal biomass is very complex and the techniques for dewatering and separation of lipid, polysaccharide and protein are difficult and hard to be proceed in large scale economically. However, the seed of crops or plants with high lipid content can be simple obtained. Therefore, lipid for producing biodiesel may be easier and first obtained through planting economic crops or plants other than culturing algae. In fact, there is few of out-door culturing , separating and oil-converting in commercial scale even though some demo-plant established in America with limited scale and operating time.</p> <p>3 The description“ideal ”competitor with fossil fuel is not correct as algal ful is still unable to be produced from algae continuously as there are so many barrier to be overcome although the efforts have been done for more than ten years and so many big bio-tech and algal producing corporation have involved. Sothat, algal fuel would be considered as potential competitor but not ideal</p>	



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	<p>based the experiences during this decade.</p> <p>4 the content of lipid and the ratio of bio-diesel using te lipid per kg algal biomass was extremely exaggerated. Chesti's paper published in 2007 was based on the lab-culturing data and estimated data. Since then many paper and review have been published either on the content of lipid or the productivity of biomass of algae such as our paper and cited references.</p> <p>5 "10-50 times of terrestrial plants" is hard to be believed even compared in either dry weight of biomass or lipid which can be used to produce methyl ester (bio-diesel). Furthermore, the biomass productivity and composition of algae are closely dependent on their species, climate and territorial scope. Totally comparison between algae and plant is not meaningful.</p> <p>Considering there have been many reviews on similar topic but few of them was based on the long-period(1year) or large scale(1 hectare) , this review should be revised with real large scale demo-process data achieved during these years to verify the annual productivities of algal biomass, lipid and bio-diesel.</p>	
<u>Minor</u> REVISION comments		
<u>Optional/General</u> comments		

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