

## Algae could be the most promising food supplements: an accelerated future outlook

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### ABSTRACT

The running 21st century is facing two burning issues like malnutrition and pollution. It is a great challenge to feed the ever increasing human population. Malnutrition or nutritional deficiency is an acute problem in all developing countries. Hunger is a curse of vagarious climate change due to pollution and global warming. Very recently FAO, 2017 has published an alarming data that out of 9 people 1 people is affected by Protein Energy Malnutrition (PEM). According to GHI 2020 report (Global hunger index), India is 94th position among 107 countries. The situation is grim and the country is battling widespread hunger. FAO, United Nations 2017 has projected that world population will reach 9.73 billion by 2050 and 11.2 billion by 2100. Due to climate change, it will bring negative impact on agricultural production in some regions and while other regions will benefit but overall balance expected to be negative. To meet the demand of food for all people without creating a burden on this planet there should be invented another potential route to produce more nutritious food. The potential route may be domestication of microalgae as a source of food, feed and other value added products. Photo-autotrophic growth of algae is environmentally sustainable. Numerous algae are nutritionally complete food in terms of essential amino acid and caloric value. Several attempts had been taken from the time immemorial for the domestication of conventional crops by breeding, strain selection, lately genetic engineering tools and advanced strain selection to get desired yield, like way here the primary focus of the current research will be to improve algal biomass towards nutritious and value added food supplements generations.

**Keywords:** Malnutrition, PEM, hunger, genetic engineering, photo-autotrophic, domestication, sustainability.

