Golden rice

Golden rice Vitamin A is one of the most important vitamins to humans, and it plays an inevitable role in our daily life, thus Vitamin A deficiency (VAD) affects millions of people, causing serioushealthproblems. Therefore, scientists are searching for the most effective method to let people obtain enough Vitamin A as possible. As a consequence, the scientific program of cultivating Golden Rice has attracted people's attention. " Golden Rice is a new type of rice that contains beta-carotene, a source of Vitamin A " (Golden rice, para.). This newtechnologyhas aroused many controversial debates. Some organizations and individuals think that Golden Rice poses unknown threats to theenvironmentand human health, even preventing people from diversifying their diet. In contrast, others hold the opinion that Golden Rice has more benefits than harm to humans, helping to release the severe situation about VAD. This issue is a worth exploring in the aspects of technology, economy and efficiency.

As a new project with high-tech content, Golden Rice needs reliable technical supports. Until now, many developing countries, such as African country, have no chances of benefiting from bio-technology, while developed countries have already enjoyed the new invention to obtain their mental health. Many people from the developing country recommend that, since the last green revolution had been missed, they do not want to miss this one, which may allow them to have the opportunity to lift millions of people out of hunger.

What is more, International Rice Research Institute(IRRI) is optimistic about the prospects for the Golden Rice project, and they believe that it may open up a kind of new research model creating partnerships with the private

institution. On the contrary, people consider that this technique needs to establish its reliability before it becomes available to the general public. Methods such as testing should be done, making sure it could suit the local environment. Moreover, this advanced agriculture technology needs to be promoted through marketing subjects in order to assure its safety.

As far as I am concerned, bio-safety cannot be guaranteed. As we know, data on the potential health risks of Genetically Modified Foods (GMO) foods are scanty, which has made it impractical to remove the risk. There is a concern that the transgenic crop may endanger biodiversity, and lead to the extinction of valuable bio-resources, thus it is unwise to take this risk. Beyond that, the economic factors cannot be ignored. For people from developing countries, Golden Rice was thought to be contributed to reach self-sufficient infoodto climb out ofpoverty.

After all, economic turmoil and social instability may well happen without food security. It is also significant for the independence of nation and peace to the world. Besides, the IRRI thought they could seek economic help for private sectors, so that they do not have to worry about the funding issues. On the other hand, Friends of the Earth (FOE) found that such a project can hardly get nearly the amount of funding they deserved according to the data of past years.

It is said that" more than $100 million dollars has been spent on developing golden rice, and another $50 million has been budgeted for advertisements touting the crops' future benefits "(Pollan, 2001, p. 15). How many cases of blindness could be averted right now if the industry were to divert this investment from advertising spending to a few of the programs such as

providing free seeds to poor famers to help more people? In addition, the main purpose of this research is to solve the VAD and the poverty problem.

However, malnutrition, diseases and poverty are deeply rooted in social soil, associating with economic and political systems, such as, the unfairness of income distribution. Hence, the Golden Rice has done little to address the fundamental problem. With all these essentials, the other important factor is on effectiveness on consuming. There is no denial that Golden Rice can supply a certain amount of Vitamin A, and it is necessary for developing countries to operate as stakeholders, instead of just accepting the decision made by government from developed countries.

However, the fact is that Golden Rice has too little Vitamin A, a woman has to eat 16 pounds of cooked rice a day to satisfy her minimum daily requirement of Vitamin A, according to the research made by FOE. Hence, FOE advocate diet diversification. “ Previous studies either focused solely on effects of the rice on Vitamin A intakes without considering health outcomes, but used only highly aggregate intake data without taking into account important nutritional features like dietary heterogeneity” (Stein, Sachdev, & Qaim, 2006, P. 4-10). In addition, Krawinkel argued that the general issue is that nutritional deficiencies are rarely focused on one nutrient (e. g. , vitamin A, iron, selenium, zinc or others). In most cases, they are complex conditions and many sources for the various nutrients (Krawinkel , 2007, p. 9). It can be seen easily that the technical issue, economic issue and efficiency of Golden Rice have connected with each other closely.

Essentially, I tend to think that disadvantages of developing Golden rice outweigh the benefits, located with three main reasons including doubting

about the safety of genetically modified (GM) crops, reasoning the huge payout with small output and disagreeing with the monotonous diet, instead of a diverse diet. From my point of view, developing the varied diet is not only the most radical way to get all the nutrients we need but also helping to improve the life quality as well as developing a healthy lifestyle. References IRRI. (n. d.). Golden rice.

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