

**SOCIO-ECONOMIC, ETHICAL AND CULTURAL CONSIDERATIONS  
QUESTIONNAIRE**

**To the STRP:**

Study each evidence carefully and any comment must be specific on any particular issue. The basis of any conclusion arrived at should be clearly explained and relevant comments on all questions should be provided.

**BASIC INDICATORS**

**1. Socio-economic Issues**

*Commodity/Industry Profile*

- How significant is the GM product in terms of production, consumption and trade?  
**Not applicable. GR2E rice is not yet approved for production in any country.**
- Will the GM product change drastically the current patterns of production, consumption/utilization (as food, feed, fiber, fuel), and trade (domestic and international) trade?  
**Not applicable in the context of this FFP application. In future, should GR2E rice be approved for propagation and adopted, its production is not anticipated to change current patterns of production and trade. It is anticipated that some proportion of rice consumption will be replaced by GR2E rice; however, there are no anticipated effects on total rice consumption or utilization.**
- What perceived effects would it have on these changing patterns?  
**None.**

*Productivity*

- Does the GM product exhibit increases/decreases in yields?  
**Not applicable in the context of an FFP application. Furthermore, the introduced trait in GR2E rice was not intended to affect the agronomic performance of rice, including yield.**

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- Does the GM product require drastic changes in farm management to attain higher yields?

**Not applicable in the context of an FFP application.**

- Aside from the seed as a production input, are there other complementary inputs necessary to ensure higher yields different from conventional farm management practices?

**Not applicable in the context of an FFP application.**

### *Cost Efficiency*

- Does the GM product decrease the cost of production due to changes in input utilization such as herbicide, fertilizer, seeds and other pesticides?

**Not applicable in the context of an FFP application.**

- How much is the cost of the GM seed relative to its conventional counterpart? Does seeds cost significantly affect the profitability of the farm?

**Not applicable in the context of an FFP application.**

- Are there improvements in overall resource use efficiency with the introduction of the GM product?

**Not applicable in the context of an FFP application.**

### *Net Farm Income/Food Security*

- Does the GM product improve the profitability of farms compared to conventional products?

**Not applicable in the context of an FFP application.**

- Are the levels of income generated by the GM product able to contribute to the minimum food security and poverty thresholds of the average households in the rural areas?

**Not applicable in the context of an FFP application.**

- Does the GM product intensification contribute to reduction of employment possibilities in the rural areas?

**Not applicable in the context of an FFP application.**

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- Does the introduction of the GM product contribute to solving the “perennial” problem of rural unemployment? How?  
**Not applicable in the context of an FFP application.**
- Is there an impact of the GM crop to overall food security and income inequality in the rural communities?  
**Not applicable in the context of an FFP application.**

### *Competitiveness*

- Does the GM product enhance global competitiveness in terms of foreign exchange savings (import substitute) or foreign exchange earnings (export trade regime)?  
**Not applicable in the context of an FFP application.**
- Can the GM product meet cost, price, quality (sanitary, phytosanitary) and quantity requirements for export in the future?  
**Not applicable in the context of an FFP application.**

### *Intellectual Property Rights*

- Since the GM product is IP protected, does this limit potential public institution to pursue research that serves the interest of the poor?  
**GR2E rice was developed for humanitarian purposes for deployment by public sector institutions to address the nutrition security needs of the poor.**
- Are there any concerns over corporate control of agriculture?  
**Not applicable in the context of an FFP application.**

## 2. Social Issues

### *Health*

- Are there perceived effects of the GM product on health of producers, farming communities and consumers due to changes in pesticide use?  
**[NOTE: the scope of this question has been expanded to include a consideration of other health benefits.]**

**Vitamin A is an essential nutrient required for normal functioning of the visual system and protection from disease and infection. In south and southeast Asian countries, where two-thirds or more of daily calories are obtained from rice, many people are battling against vitamin A deficiency due to an**

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**imbalanced diet with limited access to fresh fruit, vegetables, and animal products. Persistent vitamin A deficiency (VAD) is the leading cause of childhood blindness and increases the risk of death from common childhood infections.**

**Despite significant progress since 2003, VAD remains a serious public health nutrition problem in the Philippines, particularly among preschool age children where the prevalence ranges from 19.6 percent for 1–5-year olds up to 27.9 percent for children under one year of age.**

**GR2E rice is intended to complement existing VAD control efforts, such as food fortification, vitamin A supplements, and dietary diversification, by supplying up to 30–50 percent of the estimated average requirement for vitamin A for preschool age children and pregnant or lactating mothers.**

### *Choice*

- Is there a risk on increased structural dependency like access to complementary herbicide, contractual obligations or license cost? Include other inputs.  
**Not applicable in the context of an FFP application.**

### *Cultural Aspects*

- Does the GM product squeeze out production of the traditional production techniques of crop varieties?  
**Not applicable in the context of an FFP application.**
- Will the autonomy of the local population be negatively affected by the introduction of the GM product (e.g. regarding their decisions about GMO-free production)?  
**Not applicable in the context of an FFP application.**

### *Social Cohesion*

- Will agricultural practices change, causing negative effects on the social structures especially in rural areas?  
**Not applicable in the context of an FFP application.**
- What are the possible risks of conflicts between people benefiting from GMO-technology and those who do not benefit or between neighboring farmers (co-existence)? How do you overcome it?  
**Not applicable in the context of an FFP application.**

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- Will the adaptability of society to changes regarding problem solving skills as a result of this new technology be reduced?  
**Not applicable in the context of an FFP application.**
- Are there any negative impacts on adapting the new GM product among today's and future generations? Expound.  
**Not applicable in the context of an FFP application.**
- Will the basic human needs be negatively affected?  
**Not applicable in the context of an FFP application.**
- Is there an impact of the GM product introduction to social participation of farmers in community activities?  
**Not applicable in the context of an FFP application.**

### 3. Ethical Issues

#### *Morality*

- Will the ethical principles of the population at large be violated?  
**Not applicable in the context of this FFP application. In future, when GR2E rice may be approved and adopted for propagation in the Philippines, there will always be grower and consumer choice. There may be segments of the population that for various ideological, ethical, or other reasons would decide not to utilize GR2E rice, and their right to decide will be maintained.**
- Is there a risk of marketing and sales conflict with ethical norms and values?  
**Not applicable in the context of this FFP application. The Philippines is the intended country of origin for GR2E rice and marketing and sales will not occur prior to approval for propagation in the Philippines.**
- Is there a risk of conflict with the ideals of human solidarity and equality (e.g. risk of the effects on the weaker group of society)?  
**Not applicable in the context of this FFP application.**

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*Minority's Right*

- Will the GM product expose the indigenous people, people with strong ties to their traditional cultures and weaker groups of society to serious adverse consequences of the decisions of mainstream society?

**Not applicable in the context of this FFP application. Furthermore, and as previously noted, pending future approval for propagation of GR2E rice in the Philippines, the rights of all individuals, including members of minorities and indigenous groups, to decide whether or not to utilize GR2E rice will be maintained.**