

1. **Lesson1. For Teachers:** Please have the students read the sentences one at a time and correct their pronunciation of each sentence then have them repeat after you. Wait until after they read the sentence (use the number in place of the missing word) to have the students choose the correct answer to fill in the blank. When the students finish the article, move on to the further questions.

2. Since their introduction to the market in the early 1990s, genetically engineered (GE) crops have incited controversy. Proponents feel using biotechnology to improve the strength and yield of crops by altering their genetic makeup is unquestionably beneficial. Tests have found no adverse effects on human health, and there is broad consensus among scientists that such crops are safe for consumption. Still, public opinion remains divided. For example, nearly half of British consumers surveyed in 2012 harbored concerns about GE crops. Their skepticism is encouraged by the ongoing campaign of critics, who contend that, in a process known as “gene flow,” the manipulated genes may pass to other organisms through cross-pollination or consumption. This, in turn, could lead to a reduction in biodiversity, the creation of dangerous new viruses and bacteria, and other harmful consequences. Opponents also voice fears that widespread cultivation of GE crops would give the powerful companies that own patents on the crops disproportionate control over the world’s food supply.

3. **Further Questions***Ask student to answer the question on their own at first. If the student can't answer correctly, have him look at the last page and read the “example answer” for the question. Have the student try to memorize the answer, if it's too long or difficult, you should divide the sentence into 2 or 3 parts to make it easier to remember. Once they have memorized the answer, the teacher should ask the question one last time so that the student can practice answering. Also if you find any mistakes, please mark the page and let me know ASAP.

4. **1) How do proponents feel about GE crops?**

5. 支持者たちは遺伝子組み換え作物についてどのように感じていますか。

Proponents feel using biotechnology to improve the strength and yield of crops by altering their genetic makeup is unquestionably beneficial.

6. **2) What is the public opinion in Britain regarding GE crops?**

7. 遺伝子組み換え作物に関する英国の世論はどのようなものですか。

8. *Nearly half of British consumers surveyed in 2012 harbored concerns about GE crops.*

9. **3) What do opponents of GE crops fear about them?**

10. 遺伝子組み換え作物の反対者たちは遺伝子組み換え作物について何を恐れていますか。

11. *They fear that widespread cultivation of GE crops would give the powerful companies that own patents on the crops disproportionate control over the world’s food supply.*

Golden Rice, a GE crop that was created by scientists in response to a pressing humanitarian problem, seems beyond such criticisms. It was developed to mitigate vitamin A deficiency (VAD), a condition that causes between one and two million deaths and more than 500,000 cases of blindness annually.

Overreliance on a single food source is one of the causes of VAD, and the condition is prevalent in impoverished countries where people's diets consist predominantly of rice. By modifying the DNA of rice, scientists have managed to produce strains that contain beta-carotene, an important source of vitamin A. This gives the rice the distinctive gold color for which it is named. To many scientists, Golden Rice exemplifies the benefits biotechnology can deliver.

12. Further Questions

- 4) Why was Golden Rice developed? ゴールデンライスは何で開発されたのですか。
- It was developed to mitigate vitamin A deficiency (VAD).*
- 5) What are the effects of VAD? ビタミン A 欠乏症の影響は何ですか。
- It causes between one and two million deaths and more than 500,000 cases of blindness annually.*
- 6) How did scientists create Golden Rice?
- 科学者たちはどのようにしてゴールデンライスを作り出しましたか。
- By modifying the DNA of rice, scientists have managed to produce strains that contain beta-carotene, an important source of vitamin A.*

- Not everyone is convinced, however. Geneticist Dr. Mae-Wan Ho of the Institute of Science in Society characterizes the rice as a “giant PR exercises to cover up the inherent hazards of gene-altered crops.” Critics are also suspicious of the company that owns the patents for Golden Rice. The licensing fees for farmers in developing countries are waived, but critics fear this apparent altruism is a ploy to establish GE crops in countries that have so far avoided them. However, supporters maintain that Golden Rice will combat VAD far more effectively and cheaply than alternate measures such as providing vitamin supplements.

20. Further Questions

- 7) How does Dr. Mae-Wan Ho characterize the rice?
- メイワーン・ホー博士はゴールデンライスをどのように特徴づけていますか。
- He characterizes it as a “giant PR exercises to cover up the inherent hazards of gene-altered crops.”*
- 8) What do supporters say about Golden Rice?
- 支持者たちはゴールデンライスについて何と語っていますか。
- Supporters maintain that Golden Rice will combat VAD far more effectively and cheaply than alternate measures such as providing vitamin supplements.*

Another charge, though, may be harder to **discount**. According to Indian environmental **activist** Dr. Vandana Shiva, the real issue surrounding Golden Rice is not that it is a GE crop, but rather that scientists have focused on VAD **in isolation**. Shiva notes the **root cause** of VAD in India has been the shift from **biodiverse** farming to large-scale production of rice alone. This **monoculture** approach has lowered the cost of food, but has also led to **excessive** dependence on rice while **displacing** vitamin A-rich crops traditionally grown in India, such as **amaranth** and pumpkin. Shiva insists the solution to dietary problems in developing countries lies in **rediscovering** and **conserving** such crops. Even if Golden Rice accomplishes all its **proponents** hope for, it will only **reinforce** the lack of dietary variety brought about by modern farming methods.

27. ***Choose the correct answer from these choices.**

28. **(32)** According to the author of the passage, what is one factor that has influenced public perceptions of GE crops? この文章の筆者によると、遺伝子組み換え作物に対する人々の認識に影響を与えてきた1つの要因はなんですか。

- 1 Critics of GE crops have attempted to prove that **genetic engineering** does little to improve the strength and yield of crops.
29. 2 Countries where GE crops are cultivated on a widespread basis have been shown to hold a **secure grip** on the global food supply.
30. 3 Opponents of GE crops have made **persistent** **clams** highlight the potential ecological consequences of gene modification.
31. 4 Researchers have determined that the “gene flow” associated with GE crops may in fact be prevented through methods such as cross-pollination.

32. **(33)** Those who are against the introduction of Golden Rice to developing countries

- 発展途上国へのゴールデンライス導入に反対する人々は、
33. 1 have pointed to evidence showing that GE crops cause human health problems similar to those that have been linked to vitamin supplements.
 34. 2 fear efforts to make it easily accessible are actually a **scheme** to **pave the way for** cultivation of GE crops in countries where they are not established.
 35. 3 acknowledge that the DNA modifications involved in creating the crop are likely harmless, but **object** to the methods being used to market it.
 36. 4 say it is unfair that farmers in wealthy countries will have to pay licensing fees for it even though farmers in developing countries can avoid such fees.

37. **(34)** In Vandana Shiva’s view, what is the chief drawback for Golden Rice?

38. バンダナ・シバの考えでは、ゴールデンライスの一まさの欠点は何ですか。にその 単一の

39. 1 It will encourage the very model of uniform agricultural production that brought about the problem of VAD in the first place. そもそも
40. 2 It presents too much of an economic risk for Indian farmers, so they are unlikely to give up the land they currently used to production traditional crops.
41. 3 It will be difficult to introduce in India because most farming methods in use there were developed for mixed-crop production. 混作栽培
42. 4 It was developed based on the false assumption that VAD is the most dangerous dietary-related health condition in developing countries. 前提

43. **Answers for “Further Questions”**



1) **How do proponents feel about GE crops?**

Proponents feel using biotechnology to improve the strength and yield of crops by altering their genetic makeup is unquestioningly beneficial.

2) **What is the public opinion in Britain regarding GE crops?**

Nearly half of British consumers surveyed in 2012 harbored concerns about GE crops.

3) **What do opponents of GE crops fear about them?**

They fear that widespread cultivation of GE crops would give the powerful companies that own patents on the crops disproportionate control over the world's food supply.

4) **Why was Golden Rice developed?**

1. *It was developed to mitigate vitamin A deficiency (VAD).*

5) **What are the effects of VAD?**

2. *It causes between one and two million deaths and more than 500,00 cases of blindness annually.*

3. **6) How did scientists create Golden Rice?**

4. *By modifying the DNA of rice, scientists have managed to produce strains that contain beta-carotene, an important source of vitamin A.*

5. **7) How does Dr. Mae-Wan Ho characterize the rice?**

6. *He characterizes it as a “giant PR exercises to cover up the inherent hazards of gene-altered crops.”*

7. **8) What do supporters say about Golden Rice?**

8. *Supporters maintain that Golden Rice will combat VAD far more effectively and cheaply than alternate measures such as providing vitamin supplements.*

解答: (32) 3 (33) 2 (34) 1