STEP1級 模擬問題演習

Read the passage below and choose the best answer from among the four choices for each question.

Genetically Modified Humanity

The eighteenth century is known as the age of Enlightenment: liberal democracies were established, science fed technological progress, the arts and literature flourished across Europe. There was a belief in progress and that man could forge a better world through the employment of logic, reason and science. Given this, the current widespread suspicion of genetic modification (GM) is both disturbing and mystifying.

It is disturbing because the current antipathy to GM crops reflects an inversion of the enlightenment proposition that human reason and logic is bound to triumph over superstition, ignorance and fear. It is mystifying, because we have no reason to reject the approaches that have served the modern world so well. Those of us lucky enough to live in the developed world enjoy a level of prosperity and health unimaginable to previous generations — and it is still human reason, science and technology that continues to solve our problems.

Human reason did not, of course, begin in the eighteenth century. Reason is the motor of human cultural evolution. It is reason that makes us human and separates us from the animals. Humans have developed greater choice over how they live their lives, rather than constantly being at the mercy of nature and the elements. This has meant the choice to develop agriculture and with it civilized society instead of the chance of hunting and gathering with no control over food supply.

So how is it that the twenty-first century has seen superstition, ignorance and fear triumph over human reason in the GM debate? The current superstition is a reincarnation of the belief that species are immutable, and that we are 'playing God' by moving genes between them. A similar irrational fear of change can be observed in the reaction to Darwin's theory of evolution. Darwin's suggestion that life forms were in a constant state of flux threatened people's sense of security at the permanence of the human condition; and when people feel insecure, fear and superstition thrive.

GM is a continuing process, not a product. There is amazing degree of ignorance about the nature of GM. One common misconception is that GM is a new type of crop product. But there is no GM spray, no GM seed. Each new

crop variety needs to be carefully evaluated on a case-by-case basis, but there is nothing intrinsically dangerous about this GM process. GM is simply a new tool for plant breeding. Tools for plant breeding can be traced as far back as the earliest humans; indeed, it wouldn't be inaccurate to say that the ability to manipulate nature is an essential aspect of humanity.

In developing his theory of natural selection, Darwin obtained his first examples from the selective breeding of plants and animals in agriculture that had developed domesticated species from wild ancestors. For example, wolves were bred into dogs, and wild grasses were bred into wheat, rye, oats and barley. Darwin called this process *artificial selection*, where artificial simply means by human action — by the exercise of human choice rather than by biological chance. GM is simply another form of artificial variation: it allows us to choose which genes we want in a new crop variety, rather than having to rely on the chance of random mutations in nature or by mutation breeding. GM is a more precise tool for plant breeding.

So where is the evidence that the current generation of GM crops are beneficial for neither people nor planet? Is there any real cause for concern beyond an irrational fear of the new and the unknown? Modern agriculture is certainly more than capable of damaging the environment: over the past 50 years, the need to increase food production has resulted in the loss of one-fifth of the world's topsoil, one-fifth of its agricultural land and one-third of its forests. One solution is to develop new technologies to make agriculture more efficient. Greater efficiency means less agricultural land is required, and so more land can be left wild. Modern agriculture involves the use of powerful toxic pesticides — including copper, often used by organic farmers — which enter the groundwater and can damage the environment and human water supply. Spraying pesticides requires expensive equipment and protective clothing, and can also damage the health of farmers who have to spray them. It is GM technology that offers the ecologically-friendly, biological solution that organic farmers should embrace.

The story of humanity is the story of the harnessing of the power of nature through reason, logic and science. All the darkest chapters in human history can be traced to a lack of belief in the power of reason and an irrational faith in the romantic or the superstitious. GM technology offers an alternative that follows in the best traditions of human ingenuity. This is just the beginning. The future holds promise for new GM crop varieties with increased tolerance of drought, heat and cold, with improved disease resistance or nutritional value. Do we have the faith in our humanity necessary to grasp this opportunity?

(1) What is the author's opinion of the dangers of GM crops?

1 The current generation of GM crops is still in its infancy, therefore is beneficial for neither people nor our planet.

2 Agriculture has been continuously damaging the environment for the last fifty years, so the dangers of GM crops are only minor.

3 The author is not convinced that GM crops contain any dangers.

(2) What is the author's main argument in this passage?

1 The author is arguing that the current debate surrounding GM crops is counter to the best traditions of the Enlightenment.

2 The author is claiming that there is a high level of ignorance of the dangers of GM crops and more research is required.

3 The author holds the view that GM crops break the bonds between humanity and nature and the elements.

(3) Why does the author introduce Darwin into the debate about GM crops?

1 Darwin was also interested in the human talent for manipulating nature, which is such an important element of GM technology.

2 The reaction to Darwin's work was as equally superstitious and illogical as the fear of GM technology.

3 Both Darwin and GM technology have threatened the permanence of the human condition, making people feel threatened and afraid.

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Genetically Modified Humanity

＜解説資料＞

★<u>要約英文</u>（トピックセンテンス＋サマリーセンテンス）

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(It is disturbing because) The cu[illegible]ent [illegible]ntip[illegible]th[illegible] to GM crops reflects an inversion of the enlightenment pr[illegible]osition. (Still) it is human reason, science and technology that continues to sol[illegible] [illegible] problems.

Human reason did not (, of co[illegible]rs[illegible]) beg[illegible]n in the eighteenth century, which means the choice to de[illegible]p agri[illegible]ultu[illegible]e and with it civilized society instead of the chance of hunting a[illegible]d g[illegible]he[illegible]ing with no control over food supply.

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In developing his theory of natural selection, Darwin obtained his first examples from the selective breeding of plants and animals in agriculture that had developed domesticated species from wild ancestors. GM is a more precise tool for plant breeding.

So where is the evidence that the current generation of GM crops are beneficial for neither people nor planet? It is GM technology that offers the ecologically-friendly, biological solution that organic farmers should embrace.

The story of humanity is the story of the harnessing of the power of nature through reason, logic and science. The future holds promise for new GM crop varieties with increased tolerance of drought, heat and cold, with improved disease resistance or nutritional value. Do we have the faith in our humanity necessary to grasp this opportunity?

★要約和文

18世紀は啓蒙の時代である。そして、今日の遺伝子組み換えに対する広範な疑念は迷惑な話であると同時に人を惑わすものである。

今日の遺伝子組み換え作物に対する反感には、啓蒙思想の命題を転倒[ひっくり返し]したものが映し出されている。がそれでもなお、私たちの諸問題を引き続いて解決してくれる野は人間の理性であり科学であり科学技術なのである。

人間の理性というものはなにも18世紀に始まったものではない。つまりそれは、農業を発達させ、それによって、食糧供給を思うに任せない狩猟採集の代わりに文明社会を発達させる道を選択したときに始まる。

では、21世紀の遺伝子組み換え論争において、迷信と無知と不安が人間の理性に勝利を収めてきたのは何故なのか。それは、人々が確信を持てないときに不安や迷信がはびこる、ということである。

遺伝子組み換えは一つの継続的な工程[過程]であって、一個の製品ではない。自然を操作する能力は人類の本質的で重要な側面であると言っても当たらずとも遠からずであろう。

自らの自然淘汰論を展開するに当たり、ダーウィンはその最初の例を農業における動植物の選択[選別]や飼育から得ることとし、野生の先祖からその動物種を家畜化した。

であれば、ここに現代の遺伝子組み換え作物が人間にもこの惑星にも有益でないとする証拠があるというのか。遺伝子組み換え技術こそが環境にやさしい生物学的解決法を提供するものであり、有機栽培農家が受け入れるべきものである。

人類の歴史[物語]は、理性と論理と科学を通じて自然界の力を利用する歴史でもある。(新種の遺伝子組み換え作物の未来が約束されている)この機会を捉えるのに必要な、人類に対する信頼というものが私たちにあるだろうか。