

UNIVERSITE Joseph KI-ZERBO  
Office du Baccalauréat

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Série C

Année 2021  
Session Normale  
Epreuve du 2<sup>ème</sup> tour  
Durée : 2 heures  
Coefficient : 2

### EPREUVE ECRITE D'ANGLAIS

Cette épreuve comporte une (1) page

#### The discovery of a genetically modified rice

Scientists from 12 universities in eight countries are working to develop a new strain of hyper efficient, drought-resistant rice known as C4. And in a world with a rapidly changing climate where nearly a billion people live in hunger, it could have a huge impact. It also produces a greater yield in warmer temperatures while using less water.

Over 3 billion people across the globe depend on rice for survival. It's one of the most widely consumed food crops, providing over one fifth of the calories consumed by humans worldwide. As populations grow, this demand will increase. According to the International Rice Research Institute, each hectare of land (about 2.5 acres) used to cultivate rice in Asia provides food for 27 people. But by 2050, that same hectare will feed 43 people.

Meanwhile, climate change will make production more difficult. Increased global temperatures will bring more erratic weather pattern, including more frequent and more intense drought, and this will increase water scarcity and the cultivation of this vital crop ever more difficult. "The planet is set to increase to 9 billion by 2043," says Paul Quick, a principal scientist at the International Rice Research Institute in the Philippines. "As the world gets hotter, we have to think of new and novel ways of improving agriculture to meet the food demands for the future."

Scientists are quietly hopeful of a breakthrough soon; the Massachusetts Institute of Technology named the C4 project one of the "Breakthrough Technology of 2015". If successful, C4 rice could revolutionize a planet in which a steadily changing climate is putting the world's food supply at risk. "A stable supply of food in emerging economies would be an incredible boost to the global economy," says Hibberd. "It could also create greater societal stability worldwide."

Adapted from Newsweek Magazine.com, March 3<sup>rd</sup>, 2016.

#### Vocabulary:

Breakthrough: discovery or significant development.

#### I) Guided commentary (14 points)

- 1) Basing on the text, give two (2) characteristics of the new rice C4. (2 points)
- 2) Find in the text two (2) facts which show the importance of rice in the world. (3 points)
- 3) Relying on the text, give two (2) advantages of growing the new rice C4 in hot countries. (4 points)
- 4) According on the text, name two (2) problems that climate change can cause to agriculture. (5 points)

#### II) Essay writing (6 points)

Are genetically modified seeds a solution to arrive at food self-sufficiency?  
Give three (3) ideas and organise them coherently in paragraphs, in about 100 words.

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