

Bill Gates says ①rich countries should shift entirely to synthetic beef

1 In his new book “How to Avoid a Climate Disaster”, Bill Gates requires people in developed countries to eat “100% synthetic beef” in order to eliminate greenhouse-gas emissions driving climate change.

2 The Microsoft founder and billionaire philanthropist has invested in (a) range of ‘synthetic meat’ startups such as ② *Impossible Foods*(\*1), *Beyond Meat*(\*2), *Memphis Meats*(\*3) and *Hampton Creek Foods*(\*4). Under the tagline “Eat Meat. Save the Planet,” *Impossible Foods* claims its soy-based burger use 87% less water, takes 96% less land, and has 89% lower greenhouse gas emissions than beef burger.

3 Experts agree that without a major shift away from animal meat in our diets, we won't be able to meet  
 ③the global community's climate targets. "You can get used to the taste difference, and the synthetic beef  
 will taste even better over time," Mr. Gates says.

(\*1) カリフォルニア州レッドウッドシティに本部を置く植物由来の人工肉や乳製品を製造・開発する食品テクノロジー企業。

(\*2) カリフォルニア州エル・セグンドに本部を置く植物由来の人工肉を製造・開発する食品テクノロジー企業

(\*3) カルフォルニア州バークレーに拠点を置く、人工培養肉製造のベンチャー企業

(\*4) カルフォルニア州サンフランシスコに拠点を置く、卵製品に代わる植物ベースの代替品を開発・販売するペンチャー企業

entirely=completely    synthetic 合成の・人工の    eliminate ~ =get rid of ~    philanthropist 慈善家

invest 投資する in a range of ～:様々な～ startup 新興企業 tagline 企業のキャッチコピー

soy-based 大豆をベースにした    diet 食事    ※学んだ語( )

burger ... meat or other food made into a round, fairly flat shape, fried and usually eaten between two halves of a bread roll [Cambridge Dictionary]

※burger は「ハンバーガー」という意味でも使われますが、ここでは「パテ」(patty:ひき肉を丸い形にして焼いたもの)の意味です。※ちなみに patty はフランス語

Q1 Who is Bill Gates?

Q2 下線①とほぼ同じ意味を表す語句を1段落から抜き出しましょう。

Q3 Why does Bill Gates say some people must eat synthetic beef?

Q4 下線②の会社が生産している製品には、どんな利点がありますか。

Q5 下線③について説明しましょう。



Inside Beyond Meat, The Plant-Based Company Disrupting A Trillion Dollar Industry  
【NBC Nightly News/English/2 mins】

<https://www.youtube.com/watch?v=XkspNVNkxKU>

植物由来の人工肉を製造・開発する Beyond Meat を取材したニュース番組

4 Ingredients commonly found in plant-based meat include legumes such as soybeans or lentils, grains like quinoa, vegetable proteins like peas, coconut oil, and vital wheat gluten, better known as seitan. An increasing number of people in the U.S. are eating plant-based meat for health or environmental reasons.

5 First, from the viewpoint of health, plant-based meat can provide essential nutrients and fiber, and may be lower in saturated fats than meat. However, they may contain lower levels of some nutrients, such as protein, vitamin B12, or zinc, than a regular meat product. It is important to note that people eating a plant-based diet can get adequate nutrients by including a variety of whole foods and supplementing vitamin B12. It's better to look at the ingredients list to choose nutrient-dense products.

6 Second, for the environment, we all need to curb the effects of climate change by reducing our carbon footprint. We can switch to LED lightbulbs, drive hybrid cars, and work on recycling. In addition, we can change our diets to include less meat (or without meat) and a lot more plants. One way to do that is swapping your beef, chicken, and poultry for plant-based meat.

7 Bill Gates does not claim to be a vegetarian and is reported to still enjoy the occasional cheeseburgers. However, he has been a strong public and financial supporter of plant and cellular based alternatives to meat for several years, stating that ④farmed animals take a "big toll" on the environment. Livestock produces 14.5% of the world's greenhouse gas emissions, and almost 80% of the world's soybean crop is fed to livestock, especially for beef, chicken, egg and dairy production.

legume マメ科植物 lentil レンズ豆 vital wheat gluten または seitan グルテン粉 from the viewpoint of ~:~  
の観点から言えば nutrient 栄養 fiber 繊維 saturated fat 飽和脂肪 zinc 亜鉛 adequate =  
enough whole food 自然食品 supplement 補う nutrient-dense 栄養価の高い curb 抑制する  
carbon footprint 二酸化炭素排出量 poultry 家禽の肉・鳥肉 cellular based meat (plant-based meat と異なり、研究室で細胞から培養して作る人工肉のこと) alternative 代用品 take a toll 大きな被害を与える  
livestock 家畜 dairy production 乳製品 ★学んだ語( )

Q6 What is plant-based meat made of? ※P.3 の Mark Thompson さんの動画参照

Q7 植物肉を食べる2つの利点を英語で短くまとめました。空欄に当てはまる語を書きましょう。

Plant based meat is good for your ( ) and the ( ).

Q8 植物肉は、栄養的に、どのような点で動物肉より優れていますか。

Q9 反対に、動物肉に含まれているけれど、植物肉に不足しているものは何ですか。

Q10 地球温暖化を食い止めるために私達ができることを4つ、6 段落から抜き出しましょう。

Q11 下線④について具体的に説明しましょう。



Is Plant-Based Meat Better for the Environment?

牛肉・豚肉・鶏肉・魚・植物肉の排出する温室効果ガスの比較グラフを見てみましょう。

<https://www.rd.com/article/plant-based-meats/>

8 KFC(Kentucky Fried Chicken) started selling plant-based fried “chicken” at about 4,000 outlets across the U.S. on January 10<sup>th</sup> for a limited time. The fast food firm has developed the plant-based product with California-based startup *Beyond Meat*, using protein from peas and other ingredients. KFC first introduced the item in 2019 in Atlanta and expanded to more areas the following year.

9 Pizza Hut restaurants in Canada also began selling pizzas featuring plant-based sausages. McDonald's launched marketing tests of its plant-based burger at some US restaurants last November. In Japan, Mos Burger has sold 100% plant-based burger nationwide since May, 2020.

for a limited time 期間限定で

Q12 (1)KFC, (2)Pizza Hut, (3)McDonald's, (4)Mos Burger は、それぞれ、どのような人工肉メニューを開発しているか、まとめましょう。

Q13 Do you think we should stop eating animal meat? Why do you think so?

Q14 How are you trying to have well-balanced diet? Write two things.

	KFC Beyond Fried Chicken Review <a href="https://www.youtube.com/watch?v=ivFo9Eyu500">https://www.youtube.com/watch?v=ivFo9Eyu500</a> 「ケンタッキーの植物肉チキン(Beyond Meat 製)を食べてみた!」の動画 (English/2 mins)
	The SECRET Recipe for PLANT BASED Burgers (That taste just like a burger) <a href="https://www.youtube.com/watch?v=99JG7OlpNvM&amp;t=183s">https://www.youtube.com/watch?v=99JG7OlpNvM&amp;t=183s</a> YouTuber 料理家 Mark Thompson さんが植物だけでハンバーガーを作ります (English/8 mins)

★次の文を3回ずつ読んで、暗唱しましょう。

1. Bill Gates requires people in developed countries to eat “100 percent synthetic beef” in order to eliminate greenhouse-gas emissions.

2. Experts agree that without a major shift away from animal meat in our diets, we won’t be able to meet the global community’s climate targets.

3. First, from the viewpoint of health, plant-based meat can provide essential nutrients and fiber and may be lower in saturated fats than meat.

4. Second, for the environment, we all need to curb the effects of climate change by reducing our carbon footprint.

5. Livestock produces 14.5 percent of the world’s greenhouse gas emissions.

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(和訳)

1. ビル・ゲイツは先進国の人々が、温室効果ガスの排出に終止符を打つため「100%人工肉」を食べることを要請している。

2. 専門家達は、動物肉中心の食事から大々的に切り替えなければ、世界の気候目標を達成することはできないだろうと同意している。

3. まず健康面からいうと、植物肉は必要不可欠な栄養と繊維を提供することができ、動物肉に比べて飽和脂肪も低い。

4. 次に環境にとってだが、私達は二酸化炭素を減らすことによって、気候変動の影響をおさえる必要がある。

5. 家畜は世界全体の温室効果ガスの14.5%を排出している。