

# No Patents on Life! Campaign Newsletter

Autumn 2019

(The complete version is available only in Japanese: [https://www.columban.jp/ja/4\\_life/](https://www.columban.jp/ja/4_life/))

## Plants

### Failure of Monsanto's drought tolerant maize

March 2019

A recent US Department of Agriculture report reveals that performance of corn (maize) varieties transformed with the GE trait claimed to be DT is poor in terms of both yields and adoption rates, as compared with non-GE DT corn.

<https://www.acbio.org.za/en/failure-monsantos-drought-tolerant-maize-pushed-africa-confirmed-us>

### Amaranth resistant to GM crop herbicides

August 2019

Scientists in the US are sounding the alarm about Palmer amaranth, a crop-smothering weed that is growing resistant to multiple herbicides used on GM herbicide-tolerant crops. Palmer amaranth growing in the Kansas State University's study fields survived applications of 2,4-D at 18 times the rate called for on the label.

<https://www.gmwatch.org/en/news/latest-news/19078-king-of-weeds-palmer-amaranth-resistant-to-herbicides-used-on-gm-crops>

### Insect Resistance to GE Corn in Canada

June 2019

The European corn borer, an insect, has developed resistance to the GM trait designed to kill it.

<https://cban.ca/first-canadian-case-of-insect-resistance-to-genetically-engineered-corn-discovered/>

### Herbicide use increases with GM crops in Canada

November 2018

Industry promised that GM crops would reduce the use of pesticides in farming. Herbicide sales in Canada increased by 199% since GM herbicide-tolerant crops were introduced.

<https://cban.ca/gmos/issues/pesticides/>

### Bayer to pay for GM seed pollution

March 2019

Bayer will pay around 20 million Euros to French and German farmers who had to dig up over 10,000 hectares of canola crops after Bayer's GM varieties banned in Europe were found in their fields. Bayer has halted seed production in Argentina, from where the GM contaminated seed was imported.

[GM-free and Gene Ethics Action Alert March 2019 \(email\)](#)

### Genome-edited crops quickly appearing

August 2019

The US venture Cybus has announced that it will soon launch the sale of four varieties of the genome-edited rapeseed seed 'Falco'. Taking its cue from Calyxt, which launched the sale of its genome-edited high-oleic acid soybeans as 'non-GMO', Falco will also be marketed as non-GMO. Falco has resistance against sulfonylurea herbicides. Calyxt has received notification from USFDA that the white mildew resistant wheat and

the high-amylose wheat will not be subject to regulations or safety evaluations.

<http://www5d.biglobe.ne.jp/~cbic/english/2019/journal1908.html>

## **Monsanto**

### **Monsanto ran black ops 'spy' campaign**

May 2019

Bayer recently announced that it's planning to cooperate with French authorities in pursuing justice against Monsanto executives who engaged in unethical, and possibly illegal, black ops spying and surveillance programs against journalists, lawmakers and regulators in Europe.

<http://gmo.news/2019-05-17-french-authorities-catch-monsanto-running-black-ops-spy-campaign-on-journalists.html>

### **Massive Cover-up and Fraud**

April 2019

Monsanto concealed evidence of harm for decades and colluded with regulators to keep us in the dark. In one of the latest revelations, Monsanto did more than cook the books in a study on glyphosate. They COOKED THE SKIN! Apparently, they were not happy with the actual amount of glyphosate that penetrated human skin in earlier tests, so they took skin from a cadaver and baked it! Then they froze it. It became leather-like and basically impervious. From this rigged research, they pretended that glyphosate doesn't get past our skin. Tell that to the 11,200 plaintiffs suing Monsanto for their non-Hodgkin's lymphoma that entered their bodies through the skin.

[Institute for Responsible Technology email April 23, 2019](#)

### **Doctor wanted to "beat the shit out of" mothers**

September 2019

Advocacy group Moms Across America wrote an open letter asking Monsanto to discontinue the use of the pesticide glyphosate and to stop producing GM seeds. Leaked emails from scientists feature company leaders in 2013 wishing they could "beat the shit out of" Moms Across America.

<https://www.commondreams.org/news/2019/08/28/monsanto-doctor-wanted-beat-sht-out-group-mothers-emails>

### **Effort to intimidate IARC cancer researchers**

August 2019

IN 2015, the World Health Organization's cancer research arm, the International Agency for Research on Cancer, classified glyphosate, an active ingredient in the herbicide Roundup, as a 'probable carcinogen'. Over the last four years, Republicans in Congress have excoriated and pushed to defund the IARC. According to a recent trove of documents, the ongoing political assault on the IARC has been scripted in part by Monsanto.

<https://theintercept.com/2019/08/23/monsanto-republicans-cancer-research/>

### **FDA: Novartis withheld data problem**

August 2019

US regulators want to know why Novartis didn't disclose a problem with testing data until after the Swiss drugmaker's \$2.1 million gene therapy was approved. The Food and Drug Administration said Tuesday the manipulated data involved testing in animals, not patients.

<https://mainichi.jp/english/articles/20190807/p2g/00m/0fe/036000c>

## Animals & Chimeras

### First human-monkey chimera raises concern

August 2019

A report claims a team of researchers led by Prof Juan Carlos Izpisua Belmonte from the Salk Institute in the US have produced monkey embryos containing human cells, ie monkey-human chimeras. The research was conducted in China ‘to avoid legal issues’. Chimeras are seen as a potential way to address the lack of organs for transplantation, as well as problems of organ rejection.

<https://www.theguardian.com/science/2019/aug/03/first-human-monkey-chimera-raises-concern-among-scientists>

### GM exploits animals

January 2019<sup>[SEP]</sup>

CRISPR GM methods are being widely used to tailor make animals for industrial production systems, including as bioreactors to produce drugs and other materials. But off-target effects abound. For instance, genetic engineers deleted a gene to make leaner rabbits but also enlarged their tongues. New Genetic Manipulation tools have kick-started GM animal research globally, with more than 300 pigs, cattle, sheep and goats created so far.

[Gene Ethics; GM-free Action Alert \(email\)](#)

### US regulators clear path for GM salmon

March 2019

The Food and Drug Administration gave the green light to salmon genetically modified to grow about

twice as fast as normal. The agency said the fish would be subject to a new regulation that will require companies to disclose when a food is bioengineered.

<https://mainichi.jp/english/articles/20190309/p2g/00m/0in/055000c>

## Medical

### “They said I’d go blind.”

January 2019

In October 2018, Prof. Robert MacLaren successfully completed the world’s first gene therapy trial for choroideremia, a condition that causes blindness.

<https://www.theguardian.com/science/2019/jan/19/they-said-i-would-go-blind-gene-therapy-has-changed-that>

### Teenager recovers from near death

May 2019

A British teenager has made a remarkable recovery after being the first patient in the world to be given a genetically engineered virus to treat a drug-resistant infection.

<https://www.theguardian.com/science/2019/may/08/teenager-recovers-from-near-death-in-world-first-gm-virus-treatment>

### First 'in body' gene editing?

February 2019

US scientists think they have achieved the first gene editing inside the body, altering DNA in adults to try to treat Hunter syndrome and Hurler syndrome, although it is too soon to know if this will help. Preliminary results suggest that two men with a rare disorder now have a corrective gene at very low

levels, which may not be enough to make the therapy a success.

<https://www.japantimes.co.jp/news/2019/02/08/world/science-health-world/tests-suggest-scientists-achieved-first-body-gene-editing-bid-treat-disease/>

### Leftover embryos challenge clinics, couples

January 2019

Tens of thousands of embryos are stuck in limbo in fertility clinics, leftovers from pregnancy attempts. Some are outright abandoned by people who quit paying storage fees and can't be found. In other cases, couples are struggling with tough decisions. Jenny Sammis can't bring herself to donate nearly a dozen of her extras to research.

<http://mainichi.jp/english/articles/20190118/p2g/00m/0fe/010000c>

## New Technology

### Synthetic biology video

June 2019

The expert group that will be filing a report with recommendations to the UN Convention on Biodiversity met in early June, and examined a variety of emerging uses of synthetic biology. Increasingly, syn bio is moving out of the lab, and companies are conducting experiments and even genetic engineering in the wild – for example, by using viruses or gene drives to change genetic structures in nature.

In this 5 minute video, Jim Thomas outlines some of the issues discussed by the CBD's Ad Hoc Technical Expert group, and how we can respond to increasing attempts to engineer ecosystems for profit.

<http://www.etcgroup.org/content/video-lab-field-forest>

### First living organism with fully redesigned DNA

May 2019

Cambridge scientists have created the world's first living organism that has a fully synthetic and radically altered DNA code. The lab-made microbe, a strain of bacteria that is normally found in soil and the human gut, is similar to its natural cousins but survives on a smaller set of genetic instructions. The bug's existence paves the way for organisms whose biological machinery is commandeered to make drugs and useful materials, or to add new features such as virus resistance.

<https://www.theguardian.com/science/2019/may/15/cambridge-scientists-create-worlds-first-living-organism-with-fully-redesigned-dna>

### US military research disperses GM viruses to plants

October 2018

A research program called the Insect Allies Program, funded by the US Defense Advanced Research Projects Agency (DARPA), aims to use insects to disperse infectious viruses that have been genetically engineered to alter the chromosomes of plants through 'genome editing' directly in field. Until now, genetic engineering of commercial seeds occurred only in laboratories, introducing modifications in the targeted crops. The new DARPA approach would allow for genetic modifications to be implemented quickly and at a large scale on crops already growing in fields. An opinion paper in the journal Science warns that the regulatory, biological, economic, and societal implications of dispersing such horizontal environmental genetic alteration agents (HEGAAs)

into ecosystems are profound, and call for a broad social, scientific and legal debate of the issue. The authors highlight that the program is largely unknown, even in expert circles.

<https://biosafety-info.net/articles/biomedical-applications/biological-weaponsbiodefence/us-military-research-that-disperses-gm-viruses-to-plants-could-be-misused-as-bioweapon/>

### **Regulators Biased?**

#### **Driving Under the Influence**

June 2019

In May 2019, the IUCN published an assessment of a highly controversial field of biotechnology: synthetic biology. In reviewing those involved with this report, evidence suggests a majority of the authors hold a pre-existing bias towards strongly supporting synthetic biology and gene drives in particular. In addition, many of them have conflicts of interest, not all of which were disclosed in their signed Conflict of Interest statements to IUCN.

<http://www.etcgroup.org/content/driving-under-influence>

<https://corporateeurope.org/en/2019/06/efsa-gene-drive-working-group-fails-independence-test>

#### **Google taking sides on medicine, vaccines, GMOs**

August 2019

With the most recent Google 'Core' update, which took place in June, substantial changes were made to the search results that users pull up when querying topics like vaccine safety, genetically-modified organisms (GMOs), cancer, pharmaceuticals, and climate change – with Google now actively censoring independent viewpoints that

run contrary to the controlled narrative on these and other controversial issues.

<http://gmo.news/2019-08-14-google-taking-sides-on-medicine-cancer-vaccines-gmos-climate-change.html>

### **Life Patents**

#### **Cattle genome patent to be permitted**

Meat and Livestock Australia has lost a legal battle to block a US company's cattle genome patent. After a series of amendments, the Federal Court has decided to allow a patent application filed by a US company, which Australia's peak livestock research body says will have a chilling effect on genomic research for Australian cattle.

Meat and Livestock Australia (MLA) launched legal action against Branhaven LLC in 2016, appealing a decision by IP Australia to grant a patent which describes methods for identifying important traits in cattle, such as growth rates, milk production and fat marbling.

<https://www.abc.net.au/news/rural/2019-01-23/federal-court-grants-controversial-cattle-genome-patent/10738820>

#### **Patent applications 'seeds to meat', 'maize to milk'**

June 2019

The European Patent Office has granted a patent covering salmon and trout reared on specific plants. The patent monopoly covers the rearing and feeding of the fish, along with the fish itself. Several similar European patent applications are pending. Syngenta claims not only genetically engineered maize as its 'invention', but also the production of milk and meat from animals fed with such plants.

<https://www.no-patents-on-seeds.org/en/node/590>

### **Syngenta patent on tomatoes revoked**

January 2019

After mass opposition, Syngenta has withdrawn its patent on tomatoes. As a consequence, the European Patent Office now has officially revoked patent EP1515600. In its patent Syngenta claimed tomato seeds, plants and fruits as its invention. However, all of these actually originate from crossings with tomato plants discovered in Peru and Chile, and supposedly having a higher vitamin content. The plants are not genetically engineered but are derived from conventional breeding. 65,000 individuals from 59 countries and 32 organisations participated in the opposition.

<https://www.no-patents-on-seeds.org/en/node/540>

### **US Special 301 Report on Intellectual Property**

July 2019

On 25 April, 2019, the Office of the United States Trade Representative released the annual Special 301 report for 2019. This report is a unilateral review and characterization of selected countries' intellectual property (IP) laws and practices on IP protection and enforcement. The report reflects the strong influence of domestic industry actors on the foreign IP and trade policy of the United States of America. The report is a means to pressure countries bilaterally to increase IP protection and enforcement measures beyond existing international standards with disregard to public interest considerations.

[https://www.southcentre.int/wp-content/uploads/2019/07/PB65\\_Time-for-a-Collective-Response-to-the-United-States-Special-301-Report-on-Intellectual-Property- EN.pdf](https://www.southcentre.int/wp-content/uploads/2019/07/PB65_Time-for-a-Collective-Response-to-the-United-States-Special-301-Report-on-Intellectual-Property- EN.pdf)

### **Impoverished Countries**

#### **Africa must ban glyphosate now!**

August 2019

We see a marked increase in countries putting in place either full bans or partial bans on the use of glyphosate and glyphosate-based herbicides (GBHs). Yet in Africa only Malawi has temporarily suspended the importation of GBHs. However, their Ministry of Agriculture has indicated this may soon be revoked.

As industrialized countries ban glyphosate and GBHs, manufacturers will seek to dump these in countries where they are still permitted. Then, after successful bans on glyphosate and GBHs across the African continent, other toxic pesticides will flood markets as substitutes.

<https://www.acbio.org.za/acbio/web/en/africa-must-ban-glyphosate-now>

#### **More poisoning of South Africa's staple food**

September 2019

The African Centre for Biodiversity is extremely concerned about impending approvals by the South African government in regard to three new genetically modified maize varieties designed to withstand the extremely toxic herbicide, 2,4-D.

<https://www.gmwatch.org/en/news/latest-news/19123-more-poisoning-of-south-africa-s-staple-food>

#### **South Africa targeted for testing of new technology**

February 2019

The African Centre for Biodiversity (ACB) has lodged an objection against Pioneer Hi-Bred's

application for field trials of RNAi /gene silencing (DP-566113-9) GM maize, since the risks to the health of the environment and humans are, as yet, unknown.

<https://www.acbio.org.za/en/south-africa-targeted-testing-risky-new-gene-silencing-technology-benefit-corporate-maize-seed>

### **GMOs in India: Magic seeds, broken promises**

September 2019

In the early 2000s, Bt cotton was being heavily promoted in India on the basis it would cut pesticide use dramatically, boost yields and contribute to the financial well-being of farmers. However, pesticide use is back to pre-Bt levels and yields have stagnated or are falling. Moreover, some 31 countries rank above India in terms of cotton yield and of these only 10 grow GM cotton. Farmers now find themselves on a chemical-biotech treadmill and have to deal with an increasing number of Bt/insecticide resistant pests and rising costs of production. For many small-scale cotton farmers, this has resulted in greater levels of indebtedness.

<https://www.gmwatch.org/en/news/latest-news/19124-gmos-magic-seeds-broken-promises>

### **Gene Drives and Africa**

Gene drive technologies are not ready for deployment, yet there have already been concerted campaigns to promote the technology as the next saviour for those suffering from malaria in Africa. The conduct of the Gates-funded Target Malaria's ongoing project shows a clear lack of transparency and little information provided to the public. The African Centre for Biodiversity (ACB) has produced a 22-page report: Gene drive organisms

— What Africa should know about actors, motives and threats to biodiversity and food systems.

[https://acbio.org.za/sites/default/files/documents/Gene\\_drive\\_organisms\\_What\\_Africa\\_should\\_know\\_about\\_actors\\_motives\\_and\\_threats\\_to\\_biodiversity\\_and\\_food\\_systems.pdf](https://acbio.org.za/sites/default/files/documents/Gene_drive_organisms_What_Africa_should_know_about_actors_motives_and_threats_to_biodiversity_and_food_systems.pdf)

### **Gene Drives: Legal, Regulatory Issues: Book Intro** July 2019

There is an urgent need for effective international and legally binding regulation of gene drive organisms (GDOs). Existing biosafety rules, established for 'conventional' genetically modified organisms (GMOs), are deficient and not fully equipped to manage the unique risks of GDOs. With GDOs, spread and persistence are their *raison d'être*, posing different legal and regulatory challenges, because of their high potential to spread beyond national borders, particularly in the case of GDOs containing 'global' gene drives. Fredros Okumu, director of science at the Ifakara Health Institute in Dar es Salaam, Tanzania, says gene drives are unlike any ecological fix ever tested before. "Gene drives will spread by themselves," he says. "We've got to prepare people and share information openly with all the countries concerned."

<https://biosafety-info.net/new-publications/new-book-gene-drives-legal-and-regulatory-issues/>  
<https://www.nature.com/articles/d41586-019-02087-5>

### **Dutch patent on teff: biopiracy?**

May 2019

A gluten-free cereal that is high in protein, iron and fibre, teff has been cultivated in Ethiopia and neighbouring Eritrea for over 2,000 years. It is

ground into flour and used to make the country's staple dish, injera.

The patent for the processing of teff flour and related teff products ended up in the hands of a company in the Netherlands. Dr Bula Wayessa, an expert in indigenous crops, believes the Dutch teff patent stripped millions of Ethiopian farmers of their rights. "The flaws in the international legal system that give private companies patent ownership without thorough investigation are disproportionately affecting developing countries such as Ethiopia."

<http://www.bbc.com/travel/story/20190508-did-the-dutch-steal-this-african-food>

### Dysfunctional Plant Variety Protection System

April 2019

In 1999, under the influence of Geneva-based institutions, developed countries and their seed industry, Organisation Africaine de la Propriété Intellectuelle (OAPI) introduced Annex X on plant variety protection<sup>[1]</sup> into the regional Bangui Agreement. The adoption of Annex X followed promises of agricultural transformation through emergence of a competitive commercial seed sector, foreign investment in breeding, the availability of new foreign plant varieties, significant royalty incomes for national research institutes and overall greater benefit for all levels of society.

A working paper by The Association for Plant Breeding for the Benefit of Society (APBREBES) points to a dysfunctional plant variety protection system that does not fit the socio-economic and agricultural conditions prevailing in the region. While benefits have hardly been realized, states are burdened with the costs of implementation.

[https://www.twn.my/announcement/APBREBES/APBREBES\\_OAPI\\_EN\\_def.pdf](https://www.twn.my/announcement/APBREBES/APBREBES_OAPI_EN_def.pdf)

### Expanding FAO Seed Treaty: concerns

June 2019<sup>[1]</sup>

In November 2019 a Working Group of the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) will present a draft plan to fix the Treaty's failed Benefit Sharing Fund. The paper concludes that that an expansion of the Treaty's coverage to "all PGRFA" will be undesirable for many indigenous peoples, local communities, and developing countries because of the serious risks that it poses of generating social and economic injustices to Farmers' Rights, and to the human rights of indigenous peoples and local communities. That these communities, who are at the forefront of in situ conservation of PGRFA, would be potentially alienated from their genetic resources and have their interests harmed by the Treaty is a terrible irony, given the Treaty's ostensible goal of supporting them.

[https://www.twn.my/title2/biotk/2019/btk190602/Seed%20Treaty%20Expansion\\_final\\_16%20June%202019.pdf](https://www.twn.my/title2/biotk/2019/btk190602/Seed%20Treaty%20Expansion_final_16%20June%202019.pdf)

### Status of patenting plants in the South

December 2018

Over the last few decades, the number of patents on plants and plant parts has greatly increased in various parts of the world. Most research into the spread of plant patents, however, has focused exclusively on developed countries – the USA and European Union, in particular – while little is known about the extent to which plants are being patented in other parts of the world. This research report aims to fill this information gap by providing

an overview of the status of patenting plants in the developing countries and emerging economies of the Global South. Oxfam is concerned that the growing number and scope of patents on plants, plant parts and DNA sequences will threaten food and nutrition security by blocking the free availability of these materials for further breeding and re-planting by all stakeholders”.

<https://knowledge4food.net/the-status-of-patenting-plants-in-the-global-south/>

## Japan

### Illegal cultivation of GM cotton discovered

December 2018

GM cotton has not been approved for cultivation in Japan, but when the Japan Family Farmers Movement Food Research Laboratory analyzed samples in December 2018, three samples turned out to be GM cotton. It is thought that they originate from GM seeds imported from China, which were at one time sold in Japan.

<http://www5d.biglobe.ne.jp/~cbic/english/2019/journal1901.html>

### Genome-edited foods: labeling not required

July 2019

In June the Japanese Cabinet Office consumer commission decided that genome-edited foods will not need to be labeled. As a result, no regulations involving environmental impact assessments under the Cartagena laws, food safety screening under the Food Sanitary Act and labeling under the Food Labeling Act will be enforced.

<http://www5d.biglobe.ne.jp/~cbic/english/2019/journal1907.html>

### Uni plans experiment to grow human organs in pigs

April 2019

The University of Tokyo plans to start an experiment to grow human pancreases in pigs for transplantation using induced pluripotent stem cells. The decision comes after the Japanese government lifted a ban on producing animals with embryos containing human cells, as the supply of donated organs continues to lag behind demand from patients awaiting transplants.

<https://mainichi.jp/english/articles/20190428/p2g/00m/0na/058000c>

### Scientists grow human organs in manipulated pig

June 2019

Japanese researchers have developed a special pig whose body could be used to grow human internal organs for future transplants. Scientists removed organs that produce immune cells from the pig's body so that it would not reject the human organs as foreign substances.

<http://www.asahi.com/ajw/articles/AJ201906040010.html>

### Kidneys grown in rats — human transplant options

February 2019

Scientists said they have successfully used mice stem cells to grow kidneys in rat embryos, using a technique that could one day help grow human kidneys for transplant.

<https://www.japantimes.co.jp/news/2019/02/06/national/science-health/kidneys-grown-rats-pave-way-human-transplant-options/>

### Researchers extend life span of flies

February 2019

Japanese researchers have pinned down a way to activate autophagy, a key metabolic function in cells, leading to a slower aging process and longer life span in a fruit fly study.

<https://www.japantimes.co.jp/news/2019/02/20/national/science-health/japanese-researchers-extend-life-span-flies-offering-hope-slowing-aging-humans/>

### Japan nears approval of 2 gene treatments

February 2019

Experts in the health ministry issued preliminary approvals for Collatogene, a regenerative treatment for damaged arteries, as well as the anti-leukemia therapy Kymriah.

<https://asia.nikkei.com/Business/Science/Japan-approves-2-gene-treatments-in-bid-to-catch-up>

### Panel OKs gene editing with fertilized human eggs

April 2019

A government research panel specializing in life ethics approved the modification of genes from fertilized human eggs for basic research to treat genetic diseases. As of now, however, the panel will not allow births with gene-modified fertilized eggs due to safety and ethical considerations.

<http://www.asahi.com/ajw/articles/AJ201904230063.html>

### Toshiba to gather genetic info from Japanese staff

September 2019

Toshiba Corp. plans to collect genetic data from 10,000 of its Japanese employees to develop a new business model based on gene-analysis technology specifically tailored to Japanese people.

<http://www.asahi.com/ajw/articles/AJ201909090001.html>

### Pref. Sericultural Tech Center violates Cartagena

May 2019

The Ministry of the Environment and MAFF carried out an administrative action against the Gunma Prefecture Sericultural Technology Center for using GM silkworms without performing the safety screening stipulated by the Cartagena laws. A gene from jellyfish that expresses luminescence has been inserted into these silkworms to produce silk thread that gives off a green light. The silkworms had already been shipped to silk-raising farmers.

<http://www5d.biglobe.ne.jp/~cbic/english/2019/journal1906.html>

### Ministry to prevent plants being taken out

June 2019

The Agriculture, Forestry and Fisheries Ministry is set to launch full-fledged efforts to prevent 'outflows' of domestically developed high-end fruit varieties to other countries. A number of seeds and saplings of Japanese high-end fruit varieties have been taken out of the country without permission and grown abroad.

<https://www.japantimes.co.jp/news/2019/06/16/business/ministry-plans-step-efforts-prevent-seeds-saplings-high-end-fruit-varieties-taken-country/>

### Wagyu ranchers risk losing market to competitors

March 2019

Japan's agriculture ministry is pressing criminal charges against a man who tried to take wagyu sperm and fertilized eggs to China.

<https://asia.nikkei.com/Business/Business-trends/Japan-s-wagyu-ranchers-risk-losing-market-to-overseas-competitors>

Campaign Website:

[https://www.columban.jp/en/4\\_life/](https://www.columban.jp/en/4_life/)

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