

CARNAL SIN

by Giulia Innocenzi

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GIULIA INNOCENZI OFFSCREEN

Singapore, the city-state with a population of 5 million people, is getting ready to celebrate the 58th anniversary of its Independence from Malesia on August 9. Banks and trades have made Singapore the world's third-largest GDP pro capita and the third country by population density.

That is why the city has developed in height and adopted innovative methods to keep some green areas.

CLARABELLE CHEW –MARKETING MANAGER - PARK ROYAL COLLECTION

Welcome to the Park Royal Collection. Behind the desk is this 13-metre wall inspired by a Chinese painting. Plants are real and watered through an automated system. More than 2,400 different plants are in this hotel; they purify the air and lower the temperature by 2 degrees.

GIULIA INNOCENZI

This is the garden on your rooftop.

CLARABELLE CHEW –MARKETING MANAGER - PARK ROYAL COLLECTION

More than 60 species of vegetables, fruit and flowers are planted in our urban vegetable garden. They are used to prepare the food in our restaurant. This garden guarantees we are independent and self-sufficient in terms of food.

GIULIA INNOCENZI OFFSCREEN

A peculiar detail since, after the urban development, Singapore was left without farmlands, and it is now obliged to import more than 90% of the food they consume. This is why the Government subsidises roof gardens and vertical farming, namely vegetables and fruit grown vertically.

VIVEK JADHAV – CEO AND DIRECTOR - PRECEDE – INDOOR VERTICAL FARMS

We grow 35 varieties with 50- or 70-times higher production than a traditional crop, using 97% less water.

GIULIA INNOCENZI

Your basil is very green.

VIVEK JADHAV – CEO AND DIRECTOR - PRECEDE – INDOOR VERTICAL FARMS

This is what real food should look like. Supermarkets sell highly-processed food, while we don't even need to use pesticides. Taste it and tell me what you think.

GIULIA INNOCENZI

It seems fake. Wow, what a nice smell.

VIVEK JADHAV – CEO AND DIRECTOR - PRECEDE – INDOOR VERTICAL FARMS

Imagine an Italian pesto prepared with this basil.

GIULIA INNOCENZI

Gorgeous, really good. In Singapore, producing your own food has become a priority after Covid has forced you to block imports.

VIVEK JADHAV – CEO AND DIRECTOR - PRECEDE – INDOOR VERTICAL FARMS

We used to take all for granted with globalisation. The Government has decided that by 2030, 30% of our food should be produced internally, now. With today's global warming and increasingly difficult access to food, this measure is undoubtedly necessary.

GIULIA INNOCENZI OFFSCREEN

The need to produce its food made Singapore the first country to authorise cultured meat, namely, the one grown in a lab. Here, Huber's Butcher shop has this meat for sale.

JAIME TAN - MARKETING MANAGER - HUBER'S BUTCHERY

We serve meat from all over the world: Australia, New Zealand, the United States, Japan. A lot of beef, but also chicken and pork meat.

GIULIA INNOCENZI

You have Italian meatballs here.

JAIME TAN - MARKETING MANAGER - HUBER'S BUTCHERY

Pork meatballs prepared according to the Italian recipe. And here is cultured meat.

GIULIA INNOCENZI

This is cultured meat, lab-grown from stem cells.

JAIME TAN - MARKETING MANAGER - HUBER'S BUTCHERY

Our clients find this lab-grown chicken very interesting.

GIULIA INNOCENZI

Why did you decide to sell lab-grown meat?

JAIME TAN - MARKETING MANAGER - HUBER'S BUTCHERY

Good Meat's lab-grown meat is the only product whose sale was authorised by the Singapore Food Agency. Eating it is safe and demonstrates that you can have meat without slaughtering animals.

GIULIA INNOCENZI

Why did you start with a chicken-based product instead of pork or beef?

JEFF YEW - GOOD MEAT PRODUCT DEVELOPER

Chicken is the most eaten animal on earth, and rice and chicken is the national dish in Singapore. We will move to the production of beef and pork later.

GIULIA INNOCENZI

Your cultured chicken is sold in this butcher shop on Thursdays only.

JEFF YEW - GOOD MEAT PRODUCT DEVELOPER

We started by selling small quantities. At first, we grew in a laboratory, and now we are using our partner's factory, pending the completion of our plant. It will be the largest bioreactor in Asia.

GIULIA INNOCENZI OFFSCREEN

The chef is making us a dish sold for 18 dollars, equivalent to 12 euros. The recipe is orecchiette pasta with con broccoli, mushrooms and fried lab-grown chicken.

JUN CHONG - CHEF - HUBER'S BUTCHERY

It truly looks like real chicken.

GIULIA INNOCENZI

Yes, it looks like chicken! Do you know that Italians never combine chicken and pasta?

JUN CHONG - CHEF - HUBER'S BUTCHERY

I hope you will like it anyway.

GIULIA INNOCENZI

Thank you. Let's taste this cultured chicken. It's just like normal chicken; it also has a soft texture. Maybe it is less striped. The fried part is exactly like fried chicken skin. If blindfolded, I could not distinguish between real chicken and this one.

JUN CHONG - CHEF - HUBER'S BUTCHERY

This is what our clients say too. Most people would not be able to recognise the lab-grown chicken.

CLIENT

Bon appétit, guys!

GIULIA INNOCENZI

Are you tasting lab-grown meat for the first time?

CLIENT

Yes, I'm so excited.

GIULIA INNOCENZI

How is it?

CLIENT

Good. I like it. It tastes like chicken. The texture may not be the same, but the taste, yes. It has been one year since I don't eat meat.

GIULIA INNOCENZI

How come?

CLIENT

I love animals. But if I had this cultured meat, I would return to eating it.

GIULIA INNOCENZI

Italy has banned lab-grown meat. What do you think about it?

JEFF YEW - GOOD MEAT PRODUCT DEVELOPER

In Italy, you want to protect your culture and farmers. But we should also find more sustainable ways to produce meat. Who knows... maybe in the future, we might be able to grow Parma ham in a laboratory. We should make the Government try it, so they will realise it is not so different.

GIULIA INNOCENZI

The Italian Minister of Agriculture may come here and taste this lab-grown meat.

JEFF YEW - GOOD MEAT PRODUCT DEVELOPER

I promise that I will cook a chicken carbonara just for him.

SIGFRIDO RANUCCI FROM THE TV STUDIO

Well, no offence, chef, but we would rather eat carbonara here in Italy. I think Minister Lollobrigida agrees with us. However, the tale behind synthetic or lab-grown meat must be told without ideological barriers from both sides. First, what cells are used to produce it?

Cells are taken from beef, chicken, swine and fish by biopsy. Mostly stem and embryo cells are drawn, or adult cells from the muscle tissue. Then, these cells replicate in bioreactors, machines also used for must fermentation to produce wine or beer fermentation. The cells are fed a fluid containing water, sugars, salts and vitamins. Sometimes foetal bovine serum, taken from pregnant bovines, is also added.

This system is more expensive, and only some companies exploit it, as it poses some ethical problems.

Though, the production of cultured meat opens scenarios, so far unimaginable: we might, for instance, recreate mammoth or lion's meat. Or we might culture Japanese Kobe, which is now the sole prerogative of the rich; in any case, investing is necessary. Europe and the world have started investing based on some principles: first, animal killing is no longer needed, as intensive farming.

The process is quite costly. For example, producing the chicken that Giulia was eating costs 90 euro per kg; however, we would have to increase the demand and develop ways to make it. And this requires investments. Someone has committed to this cause, and so far, famous VIPs such as Leonardo DiCaprio and the renowned Bill Gates have already managed to collect around three billion euro.

On the other hand, our government is the last remaining worldwide not to authorise the marketing, production and importing of lab-grown meat.

On what conditions? Giulia Innocenzi will talk about this.

28/03/2023 – PRESS CONFERENCE – COUNCIL OF MINISTRIES

FRANCESCO LOLLOBRIGIDA – MINISTER OF AGRICULTURE AND FOOD SOVEREIGNTY

Italy is the first country to reject synthetic food and the so-called lab-grown meat. The Government stated its position on the topic through an official petition organised by Coldiretti to commit to banning the production, marketing and importing of synthetic food in our territory.

28/03/2032 – COLDIRETTI FLASHMOB

Stop, stop, stop synthetic food!

GIULIA INNOCENZI OFFSCREEN

Coldiretti, the stepfather of this law, is out, waiting for the Prime Minister, who will arrive in a few moments from Palazzo Chigi.

28/03/2023 – COLDIRETTI RALLY

ETTORE PRANDINI – PRESIDENT OF COLDIRETTI

Special thanks go to our Prime Minister and to our Minister of Agriculture, Francesco Lollobrigida. Today, we are glad and proud to be Italian, as Italy is the first country worldwide to ban the production and marketing of synthetic food.

GIULIA INNOCENZI

Can we call it synthetic meat?

MARKUS LIPP – SENIOR FOOD SAFETY OFFICER - FAO

Calling it synthetic meat doesn't make sense, as these products come from animal cells that grow and multiply like they would inside an animal. To be as much neutral and inclusive as possible, we prefer to call it cell-based meat.

STEFANO AUGUSTO MARIA BIRESSI – PROFESSOR OF MOLECULAR BIOLOGY - UNIVERSITY OF TRENTO

Cultured meat comes from the cells taken from animal tissue, beef or swine, by biopsy.

GIULIA INNOCENZI

A living animal.

STEFANO AUGUSTO MARIA BIRESSI - PROFESSOR OF MOLECULAR BIOLOGY - UNIVERSITY OF TRENTO

A living animal. We can obtain higher quantities of cells from just a tiny amount by stimulating their growth in bioreactors similar to those used to make beer.

GIULIA INNOCENZI OFFSCREEN

He is Stefano Biressi. He works in a team with Luciano Conti and two other researchers from the University of Trento for Bruno Cell, the first and only Italian startup that, four years ago, decided to invest in cell-based meat.

LUCIANO CONTI – PROFESSOR OF APPLIED BIOLOGY – UNIVERSITY OF TRENTO

Inside this container, there are growing cells. This red liquid ensures their growth.

GIULIA INNOCENZI

What is the red liquid made of?

LUCIANO CONTI – PROFESSOR OF APPLIED BIOLOGY – UNIVERSITY OF TRENTO

The red liquid contains water, salts, vitamins, amino acids and sugars.

GIULIA INNOCENZI

Inside it, we would put the cell, for instance, of a bovine.

LUCIANO CONTI – PROFESSOR OF APPLIED BIOLOGY – UNIVERSITY OF TRENTO

Exactly.

GIULIA INNOCENZI

In this picture, we can see...

LUCIANO CONTI – PROFESSOR OF APPLIED BIOLOGY – UNIVERSITY OF TRENTO

Each of them is a cell.

GIULIA INNOCENZI

...it is a photo of this container.

LUCIANO CONTI – PROFESSOR OF APPLIED BIOLOGY – UNIVERSITY OF TRENTO

Right, it shows what is at the bottom of this container.

GIULIA INNOCENZI

These small strips are cells.

LUCIANO CONTI – PROFESSOR OF APPLIED BIOLOGY – UNIVERSITY OF TRENTO

They are growing cells. We can take just a few cells and multiply them to obtain billions.

GIULIA INNOCENZI

Which animal is this?

LUCIANO CONTI – PROFESSOR OF APPLIED BIOLOGY – UNIVERSITY OF TRENTO

This is from a pig.

GIULIA INNOCENZI

And with these, we can make...

LUCIANO CONTI – PROFESSOR OF APPLIED BIOLOGY – UNIVERSITY OF TRENTO

The easiest product to make from this would be a wurst or a pork sausage.

GIULIA INNOCENZI

We could make a sausage BBQ with these cells then.

LUCIANO CONTI – PROFESSOR OF APPLIED BIOLOGY – UNIVERSITY OF TRENTO

Somewhat.

GIULIA INNOCENZI OFFSCREEN

Minister Lollobrigida banned the sale of synthetic meat in Italy and its production, carried out through bioreactors by replicating the lab procedure on a large scale.

02/04/2023 – SOL&AGRIFOOD

FRANCESCO LOLLOBRIGIDA – MINISTER OF AGRICULTURE AND FOOD SOVEREIGNTY

We could install the bioreactors here, but it is not convenient. We might want to install them where the rights of workers and the environment are not protected, as they are less expensive and great corporations have every interest in producing food in those lands. We need to maintain food production in the hands of our entrepreneurs.

GIULIA INNOCENZI OFFSCREEN

Our entrepreneurs also produce bioreactors. These are 7 meters tall and fully automated. Solaris, a company established 20 years ago close to Mantua, produces them. Fully made in Italy. Initially, bioreactors were used in the pharmaceutical industry. Now, they are employed in cosmetics, for the production of specific materials such as these skis, and in the food industry to make products such as champagne, beer, cheese and meat. Last but not least: cell-based meat.

GIULIA INNOCENZI

What happens if I place cultured meat cells here?

MATTEO BROGNOLI – FOUNDER OF SOLARIS BIOTECH

After some weeks, the cells generate muscle tissues that are collected and placed on the scaffold. The latter is a platform used to organise the fat-derived cells in a pattern for the salmon and obtain an effective piece of meat.

GIULIA INNOCENZI OFFSCREEN

Solaris mainly sells its bioreactors for cultured meat to the US and Singapore and are now working to make chicken, beef and salmon.

GIULIA INNOCENZI

Have you ever tried it?

MATTEO BROGNOLI – FOUNDER OF SOLARIS BIOTECH

Yes, I have. We have a big client in San Francisco. Organoleptically speaking, it is identical. No one would be able to tell the difference by looking at it. They are still working on the texture, or fibres, to make it even more similar.

GIULIA INNOCENZI OFFSCREEN

Solaris' bioreactors are famous worldwide. One of their bioreactors was on show in the Massachusetts Institute of Technology Museum, the Temple of Science. In 2021 an American company bought it.

The new law issued by Francesco Lollobrigida not only stops the production of cell-based meat but also hinders local excellencies, such as Solaris and its state-of-the-art bioreactors, from doing business in Italy, and pushes them to find their market abroad, as researchers already do.

STEFANO AUGUSTO MARIA BIRESSI - PROFESSOR OF MOLECULAR BIOLOGY - UNIVERSITY OF TRENTO

We are concerned about a reduction in investments, which would also impact research. At that point, our discoveries may fail to be appreciated.

GIULIA INNOCENZI

You will keep studying to give your tests' scientific results to foreign companies.

STEFANO AUGUSTO MARIA BIRESSI - PROFESSOR OF MOLECULAR BIOLOGY - UNIVERSITY OF TRENTO

There won't be other ways, yes.

GIULIA INNOCENZI OFFSCREEN

With this ban, Italy won't probably attract as much money as today. 2021 was a record year for investments in cell-based meat and fish worldwide: 1.3 billion dollars, for a total of 2.78 billion dollars-investment in the industry.

Who are the investors? From stars like Leonardo DiCaprio to entrepreneurs like Richard Branson, the owner of Virgin, to Bill Gates, according to whom wealthy countries should quit traditional steaks and replace 100% of them with lab-grown ones.

Among others, the Italian startup Bruno Cell has also attracted private investments, equal to hundreds of thousands of euros so far. The company's sole director is Stefano Lattanzi, who feels uncomfortable discussing his new business.

STEFANO LATTANZI – SOLE DIRECTOR OF BRUNO CELL

I am in a conflict of interest. As a job, I deal with traditional meat every day. However, cultured meat is an amazing thing that I am very proud of. The problem is that my colleagues from the meat industry might notice that I am investing in this intimidating sector for their business. This would create a lot of issues for my work relations.

GIULIA INNOCENZI OFFSCREEN

In other words, he is afraid he could lose clients if they knew about his investments in synthetic meat. Instead, those who are not afraid are the big meat producers worldwide.

It sounds insane, but they are competing over investing in cultured meat. The Brazilian giant JBS has announced the construction of the largest factory for cell-based meat ever realised in Spain, with an investment of 41 million dollars.

Though the US and the Middle East are now attracting the most investments in this sector, cultured meat was synthesised in Europe by the Dutch scientist Mark Post, who created the first cell-based hamburger.

Ten years have passed since then, and now his Mosa Meat has opened the world's largest factory producing cultured meat.

ROBERT E. JONES – HEAD OF PUBLIC RELATIONS - MOSA MEAT

We have just opened our fourth factory. The opening event, held two days ago, was also attended by the representative of the Dutch Ministry of Agriculture.

GIULIA INNOCENZI

The first hamburger produced by Mosa Meat's Founder, Mark Post, had a price of 250 thousand euro.

How much did you lower the price of cultured meat?

ROBERT E. JONES - HEAD OF PUBLIC RELATIONS - MOSA MEAT

Ten years ago, we did not have the technology for large-scale production. Thanks to the studies and research carried out so far, we expect to sell it at the same price in five or seven years.

GIULIA INNOCENZI OFFSCREEN

Mosa Meat has worked a lot on the culture medium needed to feed the cells, which highly increases production costs. To do so, they relied on European funding of 2 million euro. Moreover, the Dutch company is involved in another research project financed by the EU for 10 million euro. The project is called Giant Leaps and is carried out at the University of Wageningen, 70 km south of Amsterdam.

PAUL VOS – COORDINATOR OF THE GIANT LEAPS PROJECT

This is part of the European strategy: looking for a more sustainable way to produce food. The various alternative proteins studied in this project also include cultured meat.

GIULIA INNOCENZI OFFSCREEN

The fact that Europe and, therefore, the Italian taxpayers finance research projects on cell-based meat has become an issue for the Italian Minister of Agriculture, Lollobrigida.

23/11/2022 – QUESTION TIME**FRANCESCO LOLLOBRIGIDA – MINISTER OF AGRICULTURE AND FOOD SOVEREIGNTY**

We are discussing the European decision to use European money to finance companies which produce synthetic food. In this regard, Italy expresses its strong opposition to introducing products on the market that I could hardly define meat, milk and chicken.

GIULIA INNOCENZI OFFSCREEN

However, Europe doesn't stop, and some States are hitting even more on the gas pedal. The Netherlands has announced a 65-million-dollar investment in cultured meat, the largest public investment ever made in this industry. Along with them, other States are betting on cell-based meat.

The American Congress has just passed 6-million-dollar financing for research on alternative protein; California allocated 5 million more to its three laboratories, while Israel is hosting Upside Foods, the startup that managed to attract a record amount in investments last year: 400 million dollars.

This can be explained by the fact that the Israeli Government is betting a lot on this sector. As early as 2020, Benjamin Netanyahu was the first Prime Minister to try cultured meat.

09/12/2020**BENJAMIN NETANYAHU – PRIME MINISTER OF ISRAEL**

It's incredible. How can I define it... tasty, compassionate, and clean. It's not bad at all. I will eat some more. There are many startups in this industry. I think Israel might become the world's leading country in this sector.

02/04/2023 – SOL&AGRIFOOD**FRANCESCO LOLLOBRIGIDA – MINISTER OF AGRICULTURE AND FOOD SOVEREIGNTY**

The certainty that Italy would lose in the case of product standardisation should be clear to all, including other countries. I have discussed this topic with the Spanish and French Ministers, who, like us, see the products' quality as an added value that needs to be preserved.

SIGFRIDO RANUCCI FROM THE TV STUDIO

The French Minister of Agriculture gave an interview to a far-right magazine, expressing disapproval against cell-based meat, as it would entail the manipulation of living beings. On the other hand, we heard that in Spain, JBS – the world's leading company in the traditional meat market – has announced the construction of the largest synthetic meat factory worldwide. The facility will be located in San Sebastián, in northern Spain. Value: 41 million dollars, which will also benefit from governmental and public funds. The Spanish Foreign Trade Institute has invested 750 thousand euro in a company specialised in biotechnology, in charge of studying the synthetic meat industry; anyway, at the moment, the US is attracting the most investments, and they have just authorised two new types of lab-grown chicken. Good Meat produces one that is already on sale in Singapore.

Then, there is the Middle East, led by Israel and its best sponsor Netanyahu, who expressed his appreciation for synthetic meat. And at the tail end, there are Europeans. The irony is that Mark Post, the Dutch researcher, was the first in the world to produce a synthetic hamburger ten years ago, and he has now opened the largest factory for cell-based meat under his brand Mosa Meat.

He has also benefited from European funding, and now Europe fears being cut off from future markets.

In its five-year plan, China has also included synthetic meat production. According to some analysts, by 2040, lab-grown meat could capture from 10 to 35% of the global meat market. The only ones at risk of being cut off, in short, are Italians. Entrepreneurs like Stefano Lattanzi carry out investments on the sly. While investing in synthetic meat through the Bruno Cell startup, he keeps allocating funds to traditional meat with another company. In other words, he secretly invests in cell-based meat to avoid ruining his relations in the industry, as Minister Lollobrigida and Coldiretti proved to be adamant on this decision and invoked the food security issue. According to which standards?

GIULIA INNOCENZI

Good morning, Minister. I am Giulia Innocenzi from Raitre. My question is, based on which data did you decide to ban cultured meat?

FRANCESCO LOLLOBRIGIDA – MINISTER OF AGRICULTURE AND FOOD SOVEREIGNTY

Based on the precautionary principle provided by Europe as a guarantee when there are no adequate scientific studies to ensure the citizens' health.

GIULIA INNOCENZI

It is remarkable to have a Minister adopting the precautionary principle, but how often was this applied?

While introducing the draft law, Francesco Lollobrigida said that the marketing and production ban rested on a petition by Coldiretti, which has been at war with synthetic meat for a long time.

GIULIA INNOCENZI

Mr. Prandini good morning, Giulia Innocenzi from Report.

ETTORE PRANDINI – PRESIDENT OF COLDIRETTI

Yes. I know you pretty well.

GIULIA INNOCENZI

Fine. May I ask you why you oppose so firmly to cultured meat?

ETTORE PRANDINI – PRESIDENT OF COLDIRETTI

I have already made myself available to come to your TV studio to explain this in person. I will be glad to do this under the right conditions.

GIULIA INNOCENZI

Nobody is interviewed in the studio; usually, we come here and ask questions.

ETTORE PRANDINI – PRESIDENT OF COLDIRETTI

But I would rather come to the studio to avoid cuts in my interviews...

GIULIA INNOCENZI

If you answer us now, we won't cut anything. So, why this opposition?

ETTORE PRANDINI – PRESIDENT OF COLDIRETTI

Because it puts consumers at risk. All physicians and major research centres agree on this. First, it was said to be a more sustainable mechanism to protect the environment, but some US universities are proving that the opposite is true. This industry has an environmental impact 26 times higher than the traditional one.

GIULIA INNOCENZI OFFSCREEN

Probably, Prandini is quoting a study by the University of California, published a couple of months ago, which still needs to be peer-reviewed and validated by the scientific community. The researchers who conducted the study also affirmed that some data is still missing.

Meanwhile, an independent research committee, FRESH, was established in Singapore at the University of Nanyang to fully support the first process to authorise cell-based meat.

BENJAMIN SMITH – DIRECTOR OF FRESH – FUTURE READY FOOD SAFETY HUB

The Authority for Food Safety immediately contacted all the companies involved and asked them to share their information. The data was shared with scientists, making it possible for the Food Authority to complete the authorisation procedure.

GIULIA INNOCENZI OFFSCREEN

And how did the UN Food and Agriculture Organization - FAO and the WHO issue a report on cell-based meat and assess its safety?

MARKUS LIPP – SENIOR FOOD SAFETY OFFICER - FAO

We read several scientific studies, but, more importantly, we accessed the data collected in Singapore: following the signing of an NDA, the companies and the regulatory entity shared this information with us, and we concluded that these products can be deemed safe.

GIULIA INNOCENZI

How could we know cell-based food will not compromise human health in ten years?

MARKUS LIPP – SENIOR FOOD SAFETY OFFICER - FAO

Research has been conducted on cells, genetics and chemical substances. The knowledge acquired can apply to cell-based meat, and if there is no reason to think that the result might be different from what we have already discovered, the conclusion is that this food is as safe as others.

GIULIA INNOCENZI OFFSCREEN

The United States has just given the green light to the chicken cultured by the Israeli startup Upside Foods and the US one Good Meat, already previously approved in Singapore. The EFSA, European Food Safety Authority, has yet to receive any authorisation request, instead.

GIULIA INNOCENZI

The EFSA will decide on the possible marketing of these products. Don't you trust the European Food Safety Authority, Minister?
Wouldn't it be better to wait for the Authority's decision?

PRESS OFFICER OF MINISTER LOLLOBRIGIDA

There is no need to push, be polite.

GIULIA INNOCENZI

Calm down; I have some questions for the Minister!

PRESS OFFICER OF MINISTER LOLLOBRIGIDA

I work with the Minister. There will be a press moment. You should wait. We will tell you when to speak. And stop pushing me, please!

GIULIA INNOCENZI

But I haven't pushed you at all!

PRESS OFFICER OF MINISTER LOLLOBRIGIDA

Don't be pushy.

GIULIA INNOCENZI

But I am not. I have requested an interview with the Minister via mail, and now I want to ask him a couple of questions...

PRESS OFFICER OF MINISTER LOLLOBRIGIDA

Now he will talk... When authorised by us, you can proceed with your interview.

GIULIA INNOCENZI

So far, you said no; maybe it's time to let us talk.

PRESS OFFICER OF MINISTER LOLLOBRIGIDA

Just wait... and calm down.

GIULIA INNOCENZI

Sorry Madame, but I am more than calm!

PRESS OFFICER OF MINISTER LOLLOBRIGIDA

But don't fling yourself at me.

GIULIA INNOCENZI

I am not flinging myself at you. Just one question, and we'll leave.

PRESS OFFICER OF MINISTER LOLLOBRIGIDA

You can only pose questions related to this event. All other questions are out.

GIULIA INNOCENZI

It's a question about food.

PRESS OFFICER OF MINISTER LOLLOBRIGIDA

No other questions are allowed.

GIULIA INNOCENZI

Do you decide which questions to ask the Minister during this food event?

PRESS OFFICER OF MINISTER LOLLOBRIGIDA

Yes, I am his Head of Communication.

GIULIA INNOCENZI

No cultured meat.

PRESS OFFICER OF MINISTER LOLLOBRIGIDA

We will see this later. Just ask the right questions.

GIULIA INNOCENZI

Well, so the questions should be right. This is your decision.

PRESS OFFICER OF MINISTER LOLLOBRIGIDA

Right, related to this event.

GIULIA INNOCENZI

Cultured meat is food.

PRESS OFFICER OF MINISTER LOLLOBRIGIDA

He won't answer you.

FRANCESCO LOLLOBRIGIDA – MINISTER OF AGRICULTURE AND FOOD SOVEREIGNTY

We have already answered you. That's all.

PRESS OFFICER OF MINISTER LOLLOBRIGIDA

He has already answered you. Stop.

GIULIA INNOCENZI OFFSCREEN

The draft law proposed by the Government, and now being discussed at the Senate, also ban imports of call-based meat. But can a Member State prohibit importing a product once the Commission authorises it?

TILLY METZ – GREEN MEP – EUROPEAN FREE ALLIANCE

The European Union relies on a single market, so banning the import of a product is impossible.

GIULIA INNOCENZI

Prandini, in the meantime, what are we doing to tackle the environmental impact of animal husbandry and intensive farming, which is very high considering the current high meat consumption?

ETTORE PRANDINI – PRESIDENT OF COLDIRETTI

Italy is the most sustainable country worldwide.

GIULIA INNOCENZI

Intensive farming contributes to 14.5% of GHG emissions.

ETTORE PRANDINI – PRESIDENT OF COLDIRETTI

This is the figure at the global level. Things are different for intensive farming, like those in Qatar or Saudi Arabia, located in the desert, in sheds where the animals cannot see the daylight.

GIULIA INNOCENZI

We don't have intensive farming in Italy?

ETTORE PRANDINI – PRESIDENT OF COLDIRETTI

Although we define it as intensive, the Italian farming system is not.

GIULIA INNOCENZI OFFSCREEN

Denying that around 90% of Italian milk and meat come from intensive farming, thus causing significant environmental impact, is a common trend, also shared by Minister Lollobrigida.

GIULIA INNOCENZI

Minister, if I may. What can we do to reduce the environmental impact caused by animal farming?

PRESS OFFICE OF MINISTER LOLLOBRIGIDA

It's done. Stop it.

GIULIA INNOCENZI

This is a question on climate change. Isn't it the right question?

PRESS OFFICE OF MINISTER LOLLOBRIGIDA

The press conference is over. Give her my phone number for the next interview so we can arrange it for her.

GIULIA INNOCENZI

Fine, since we had already requested this interview.

SIGFRIDO RANUCCI FROM THE TV STUDIO

We would have liked to discuss with the Minister a topic that will soon be at the core of the next global political and entrepreneurial debate.

But we are the only Government that expressly banned call-based meat marketing, production and import.

While Lollobrigida calls for precautionary reasons, we suspect it is just a way to adjust to the position imposed by Coldiretti. The marketing ban is, de facto, useless. No food can access Europe without previous authorisation by the EFSA, the European Food Safety Agency.

Lollobrigida is prohibiting something that is already banned. Should the EU approve synthetic meat marketing, Lollobrigida's provision would be worthless as the free trade of goods among the EU member states cannot be blocked.

The only result would be chopping off the legs of Italian businesses, and it would be a pity as our companies represent excellence in designing and building bioreactors.

According to Coldiretti, the production of cell-based meat might develop cancerous cells. On the other hand, FAO stated in its report on cell-based food that there is no scientific knowledge proving the possibility that cancer could be transmitted through sick cells.

Again, Coldiretti spread the information that cultured meat is produced in a bioreactor by an out-of-control proliferation of cells. And it also associated the bioreactor with the symbol of nuclear radioactivity. This is media terrorism, as nuclear energy and radiation have nothing to do with bioreactors. And talking about out-of-control cells is meaningless, as bioreactors have been widely employed for the fermentation of grape must and vinification, as well as for beer fermentation. Moreover, the cells contained in the bioreactor are strictly controlled, and regularly tested, compared to those of bovine meat.

Coldiretti also affirms that producing cell-based meat pollutes more. Probably Prandini refers to a study by the University of California on the environmental impact of synthetic meat production; this study affirms that cell-based meat production pollutes from 4 to 25 times more than traditional meat.

But that study has not been peer-reviewed, and the researchers have stated that further investigations are needed.

The higher rate of pollution resulting from cell-based meat production is a recurrent topic also in some articles. Still, a clarification must be made: if the energy used by synthetic meat production plants comes from clean energy sources, the impact is lower. No doubt about the lower consumption of soil and water than intensive farming, which causes 14.5% of all GHG emissions worldwide.

However, Prandini is right about the fact that Italy is not the worst country concerning the issue of intensive farming. Still, the problem remains global. The researchers of FAO and the European Environment Agency are worried about the expected increase of 73% in meat demand by 2050 and 58% in milk.

This adds to the world population growth, especially involving the most consuming range of people.

We are facing an apocalyptic scenario. An example of what might happen comes from the Netherlands, a small country that is Europe's supermarket. The Government had to pass an unpopular provision to defend the environment there.

GIULIA INNOCENZI OFFSCREEN

Over the last three years, the Dutch farmers have been holding harsh protests that blocked the country. Tractors occupy motorways, and cities and, as in this footage, throw manure on the house of the then Ministry of Agriculture to protest against his law on nitrogen. As a part of the governmental plan to tackle pollution, this provision aims at reducing the number of farmed animals by one-third. It's the first time for a country to take such a drastic measure, and to help the process, the Government has allocated 24 billion euros to compensate the farmers for their losses. Among them is Omgo Nieweg, owner of 200 bovines in Adorp in the North of the Netherlands, who appeared in the national newspapers for a wound on his face obtained while clashing with the police during the assault on the Province Council.

OMGO NIEWEG - FARMER

My father and my grandfather were farmers too. We started in 1985, I was 15 then, and we only had 50 dairy cows.

GIULIA INNOCENZI

I know you have invested money to expand your farm. How will you cope with the next law on nitrogen emissions?

OMGO NIEWEG - FARMER

I will keep on being a farmer as I have always been. Nature and farming go hand in hand. It has always been so.

GIULIA INNOCENZI

But in the Netherlands, nitrogen emissions are three times higher than in the rest of Europe, and they might penetrate water and pollute it.

OMGO NIEWEG - FARMER

I don't think there is a nitrate emergency. We can deal with the issue thanks to technology.

GIULIA INNOCENZI

Is that your son on the tractor?

OMGO NIEWEG - FARMER

Yes, he is my son. He is getting the cowshed ready for the night when the cows will be back. He makes me proud.

GIULIA INNOCENZI

Aren't you afraid of the new law and its consequences?

FARMER'S SON

Yes, I am. But the only job I want is to be a farmer.

GIULIA INNOCENZI

Would you take the money allocated by the Government to buy your farm?

FARMER'S SON

No, no, no, no.

GIULIA INNOCENZI

Not even for one million euro?

FARMER'S SON

No, it is not about money.

GIULIA INNOCENZI OFFSCREEN

According to Johan Vollebrouk, a chemist by training and a jurist by passion, many farmers will be forced to close their businesses. And thanks to him, or because of him, the Netherlands should adopt the law on nitrogen. He referred his country to the European Court and won the case.

GIULIA INNOCENZI

What kind of legal suit did you bring to the European Court?

JOHAN VOLLENBROEK – EXPERT MEMBER THE 'MOBILISATION FOR THE ENVIRONMENT (MOB)' MOVEMENT

Over the last century, the Netherlands has lost 80% of its biodiversity. This means some species of insects, plants and birds will no longer exist. Our country is dying because of nitrogen. A European Directive states that natural habitats should be preserved to protect biodiversity, but the Netherlands keeps destroying them. So, in 2019, the Council of State froze the permits for all nitrogen-generating activities: since then, new companies and new buildings are not authorised. The damage equals 26 billion euro. A disaster for our economy!

GIULIA INNOCENZI

Do you think that the Netherlands will remain an isolated case?

JOHAN VOLLENBROEK – EXPERT MEMBER OF THE 'MOBILISATION FOR THE ENVIRONMENT (MOB)' MOVEMENT

We have been the first, but the judgement issued by the European Court in 2018 affects all of Europe.

GIULIA INNOCENZI OFFSCREEN

The Netherlands is the first to face these drastic measures to reduce polluting emissions. Though it is one of the smallest countries in the EU, it accounts for 100 million chickens, 11 million pigs and 2 million bovines and goats. It has the highest cow population worldwide, and they generate the most methane pollution. However, the farmers were not ready to compromise, so they founded the BBB Party, which won at the provincial elections held in March, becoming the country's largest party. Eddie van Marum has a funeral home, but he also works for farmers as an advisor. He was elected at the provincial Council of Groningen with 3790 votes.

EDDIE VAN MARUM - GRONINGER PROVINCIAL COUNCILLOR - BBB

The law on nitrogen emissions was the last straw.

GIULIA INNOCENZI

Do you agree that the Netherlands have too many animals and that this number should be lowered to tackle pollution?

EDDIE VAN MARUM - GRONINGER PROVINCIAL COUNCILLOR - BBB

No, I don't think there are too many animals. There are too many rules instead. We will get nowhere until the farmers are forced to lose money to respect the environment and climate instead of earning it. Today, farmers have no choice but to carry out intensive production to survive with the European rules.

GIULIA INNOCENZI

The Government has allocated 24 billion euro to compensate the farmers. Is this amount enough for you?

EDDIE VAN MARUM - GRONINGER PROVINCIAL COUNCILLOR - BBB

Farmers are victims of unjust treatment; they are now considered criminals as their permits are no longer valid. A popular uprising will occur if the next step is closing their farms. The Government still doesn't know what they are capable of.

GIULIA INNOCENZI

The Dutch Farmers' Party has found consensus even around Europe, from the French Prime Minister, Marie Le Pen, to the former President of the US, Donald Trump.

23/07/2022

DONALD TRUMP – PRESIDENT OF THE UNITED STATES (2017 - 2021)

'Farmers in the Netherlands of all places are courageously opposing the climate tyranny of the Dutch Government. Could you believe this? Which wants to dramatically cut Dutch farm production despite growing food shortage. You'll be the next. We stand against the climate fanatics. We stand with the peaceful Dutch farmers who are bravely fighting for their freedom.'

SIGFRIDO RANUCCI FROM THE TV STUDIO

At the national level, they are supported by the far-right party. Following the provincial elections, the representatives of the Farmers' Party found a seat in the Senate.

You can bet they will do everything to avoid the passage of the law on nitrogen. But the Netherlands cannot step back, they have to comply with the EU Directive on environmental and habitat protection. However, a clear signal comes from this country: from now on, whoever will be obliged to pay for the environmental laws tackling climate change, won't be left alone. They will unite and find support from a political party eager to exploit their discontent. Climate change denialism has long been included in the international sovereign agenda. Still, when the choice affects the future of us all, we should eliminate ideologies and work for the common good. For instance, in Singapore, vertical farms allow producing 50 times more vegetables than traditional ones by consuming 97% less water. Why don't we study and adopt this model? Water consumption might lead to civil wars. Even in places you don't expect.

Commentato [GI1]: <https://www.c-span.org/video/?521958-1/president-trump-speaks-turning-points-usa-conference>
testo originale preso dal discorso in inglese.