WUR from within: straight, sharp, transparent

No 06

# Resource

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The journalism platform for all at Wageningen University & Research

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## FOREWORD

## Views and perspectives

At the start of this week, Design@WUR organized a session in Impulse in which four Wageningen researchers talked about the projects they presented at the recent Dutch Design Week event. They included Catalina Rey-Hernández, who wanted to redefine a river in Ecuador by producing a map based on how local residents experience it: that's the tributary where the gringos often stop, that's the plain with loads of wild animals – that will disappear if the plans for the hydro power plant go ahead. And so she sketched the landscape as seen through their eyes. When she showed the locals the result, they were not that enthusiastic at first. Something was wrong: the river course was shown as horizontal, but water can't flow if there is no height difference. Rey-Hernández realized what she had to do and she produced a new map with the river running vertically from top to bottom. Problem solved. Sometimes you need a change of perspective to understand one another. It would be good if more people realized that.

Talking about new perspectives, or views at any rate, the *Resource* editorial office has moved. Through the revolving door at Atlas and on the left – that's where we are now. You can't miss us. Feel free to drop in with tips, ideas or feedback.

**Marieke Enter**
Editor


# POLITICS IN THE PUB

**About 300 students turned up for the WSV Ceres politics event on Thursday evening last week. Outgoing minister Rob Jetten (Climate and Energy Policy) was interviewed by second-year student and Ceres member Bart Dekker and students in the audience. This was followed by a debate between representatives of the parties Volt, D66, CDA, Ja21, CU and PvdAGL. The event was streamed live on YouTube and can still be viewed there.** LZ

Photo Sven Menschel

# NO MORE WAITING LISTS FOR STUDENT PSYCHOLOGIST

Photo shutterstock

**There used to often be waiting lists for the WUR student psychologists but that has not been the case for some time now. It is not yet clear whether this means students in Wageningen are doing better.**

In the past, the waiting list was fairly stable as the number of students the psychologists were able to see was about the same as the number of new students seeking help. The waiting list persisted due to a lack of capacity in the team of psychologists.
There are several possible reasons why the waiting list has now been eliminated. The new exam policy probably played a role. There were no resits at the end of the last academic year in August, which meant all students had more time off in the summer. 'The student psychologist team thinks that gave students more time and space to recover from the past academic year,' says Student Service Centre (SSC) head Ingrid Hijman. The calm summer period also meant there was enough room in the student psychologists' diaries after the summer to schedule any requests for help immediately, marking an end to the waiting list. But the number of requests for help from the psychologists is also slightly down on previous years. 'We have built up a good student support system,' explains Hijman. 'There are now many more places students can go for help in addition to the psychologist. Often a different solution is more appropriate for the student's problem, which is why we have improved our screening.'

> **'There are more places students can go for help in addition to the psychologist'**

That means when a student applies for help, the university first looks at what kind of solution is most appropriate. 'That could involve talking to a psychologist, but equally working with a peer coach or a life coach, or doing a training course via Student Training & Support or online. This way, the student can get the right kind of help faster.'

## NO FIRM CONCLUSIONS

It is also possible students are simply doing slightly better. Hijman: 'The pandemic had a massive impact for a long time. I can imagine students now feel they want to get out and enjoy life. But it is difficult for us at SSC to determine whether that is actually the case because we mainly see the students who are not coping. And although there is less demand for the psychologists, the counsellors are actually seeing more students so it's hard to draw firm conclusions.' LZ

## NATIONWIDE SURVEY

Statistics Netherlands recently published new figures showing young people were still experiencing a lot of mental health issues. Those figures were for 2022.
Next February, WUR will publish its annual report on the student psychologists and counsellors. Then it will be possible to say more about how Wageningen's students are doing. Ingrid Hijman, head of the Student Service Centre, adds, 'WUR also took part in a study by Trimbos on student welfare and substance use. The results of that study will be published on 30 November.' Hijman hopes that will give a better understanding of students' mental health. 'We want to discuss the results with students and based on that, figure out if there is anything else we need to do.'

# 2147

A petition calling for Wageningen's student flat bars to be kept has been signed by over 2100 people. The people organizing the petition are afraid that student accommodation provider Idealis will close the Woeste Hoeve and Bunker bars when they renovate those blocks of flats, like they are doing with Annie's Bar. The renovation work is scheduled for the coming years. If the student flat bars go, dozens of student organizations without their own premises will no longer have a place to meet up. Idealis has not yet decided what to do with Woeste Hoeve and the Bunker. LZ

## Whistle-blower takes action

WUR researcher Marc Bracke has started a whistle-blower procedure. The animal welfare researcher is deeply concerned about scientific integrity at WUR. Bracke has been at loggerheads with WUR for some time. The immediate cause was his removal from a project team in early 2022 after a critical personal tweet about crowded pig stalls in Denmark. Various things can be deduced from his tweet. However, neither Bracke nor the board of WUR can comment while the procedure is still ongoing. Since being removed from the team, Bracke has submitted objections to WUR's Scientific Integrity Committee (CVI) and the Netherlands Board on Research Integrity (LOWI). Both bodies rejected his complaint, saying it was a workplace dispute and not a violation of scientific integrity. Now Bracke is trying to win his case through the whistle-blower scheme. An external firm is investigating some of the allegations of abuses mentioned by Bracke. RK

# 40 million euros for new research facilities

**WUR is set to get 40 million euros from the Ministry of Economic Affairs and Climate Policy for four new high-grade research facilities. This is the first time in years that funding on this scale has been made available for research facilities.**

Two of the four planned facilities will be for Wageningen Plant Research, and the other two for Wageningen Food & Biobased Research and Wageningen Food Safety Research.
Wageningen Plant Research will invest in two research greenhouses at Unifarm and 22 advanced climate chambers for studying various functions, interactions and processes in plants down to the molecular level. In addition, Bleiswijk will get a new cluster of greenhouses for research on the fossil-free, zero-emissions cultivation of resilient crops with minimal use of chemicals. These facilities will of course have the latest technological features, such as artificial intelligence, data control, robotics and sensors.
Wageningen Food & Biobased Research will get a budget to set up a hypermodern food-tech facility, for use in various kinds of research relating to food processing technology, product formulation and consumer research, all with the support of AI techniques.

### Viruses

Wageningen Food Safety Research (WFSR) will get what is termed a Biosafety Level 3 facility for research on new high-risk pathogens, including multi-resistant micro-organisms and viruses, that can be transmitted via food or animal feed. This will let WFSR prepare for future microbiological risks.
The millions of euros are from the first round of funding in the Ministry of Economic Affairs' scheme for Applied Research Facilities. Nationwide, a total of 14 projects secured 184 million euros. That WUR (or more accurately WR) is getting a fifth of that budget is partly due to the close and strategically smart collaboration between the various organizational units, says Monique Bremer of Shared Research Facilities. 'Last year, we drew up a Roadmap for Research Facilities to make sure our investment proposals would be of the highest quality. That approach has clearly paid off, and should also help in the new investment rounds still to come.' ME

**'Our approach with a Roadmap for Research Facilities clearly paid off'**

# Think up a test with AI

**Using AI to do a test assignment is officially forbidden at WUR. It is not allowed unless explicit permission has been given. But how could you use AI in tests? The student who comes up with the best answer will be rewarded with a 50 euro Bol.com voucher. That the idea behind the AI-Enhanced Education Challenge. 'We are asking students to think about the education they get,' says test expert Jolanda Soeting, who is also involved in GenAI, an intranet group about Generative Artificial Intelligence. 'Can they come up with an efficient and effective way of using AI in assignments that lets you achieve the learning objectives?' WUR is working hard on incorporating AI in its education. Soeting: 'Students can find information about Generative AI on the Student Support website. There is also an intranet page with best practices especially for teachers, there's a newsletter and we arrange workshops.' Students have until the start of January to submit their ideas. The Challenge regulations don't say whether you are allowed to use ChatGPT for your idea.** RK

*Scan the QR code to go to the Challenge*

# Easier for non-EER students to be student assistants

Any student from outside the European Economic Area (the EU plus Liechtenstein, Norway and Iceland) who wanted to become a student assistant used to face loads of obstacles. Now WUR is trying to make this option easier for this group with a new policy. The biggest obstacle for WUR teams wishing to hire a non-EER student as a student assistant is the need to apply for a work permit from the Employee Insurance Administration Agency (UWV). That takes five to eight weeks and costs 545 euros. Now the Executive Board is making money available that will at least eliminate the financial obstacle. The application, which is done via HR, will still take just as long though.
The Education and Student Affairs is currently working on infographics that will explain how to appoint non-EER students. The infographics will be circulated via the intranet, MyWURToday and other channels. LZ

*Read more at resource-online.nl*

## A ban on fire pits?

As of 2025, Utrecht municipality is banning the burning of wood in fire pits in public areas because they produce too many fine particulates in the air. WUR campus also has fire pits. A sustainable institution like WUR really should not be allowing this, says researcher Bert Heusinkveld (Meteorology and Air Quality). This spring, he set up a network of sensors in Wageningen for measuring fine particulates. However, it didn't include the campus so there is no measurement data as yet. Even so, he advocates getting rid of the fire pits. 'Fine particulates soon disperse, but those peaks close by have a big impact on health. There are signs all over campus saying no smoking. I feel ambiguous about that. Research shows that the smoke from burning wood could be more harmful than passive smoking.' RK

**resource-online.nl**

## *The Sower* smeared with oil

Activists from End Fossil Occupy WUR defaced *The Sower* with oil on Thursday night last week. The wanted to draw attention to the death of environmental activists in their fight against Shell's operations in Nigeria. WUR is not happy about the action, says spokesperson Jan-Willem Bol. 'We allow room for protests, but pouring oil over a statue is going too far.' Despite this, WUR has not reported the vandalism to the police. RK

Photo *Resource*

# HEAT CAN WORSEN EFFECT OF PESTICIDES

**The toxicity of pesticides for aquatic life is usually measured at a constant temperature. But that is not appropriate, shows research by Markus Hermann, a PhD candidate at Wageningen Environmental Research.**

Using apparatus he designed himself, he simulated the impact of warming (+4°C) and heatwaves (+8°C) on the effect of the widely used 'bee poison' imidacloprid and the fungicide carbendazim.
Hermann's climate machine is essentially a piece of equipment that lets him create any temperature regime he wants in eco-

**'It is not the general warming but the extreme weather that poses the greatest threat for the future'**

Research location in Spain where PhD candidate Markus Hermann studies temperature regimes in ecosystems he creates himself (a kind of aquarium with aquatic organisms, plants and sediment) ◆ Photo Markus Hermann

systems, both large and small, he makes himself. Such an ecosystem is basically a kind of aquarium with aquatic organisms, plants and sediment. But without fish, because the ecosystems he uses are too small for that.
The research was prompted by an article from 2019. 'A young researcher had discovered a pesticide could be six times more toxic than thought if you took the daily variation in temperatures into account in the study. Tests are normally done at a constant temperature. My work takes experiments with multiple stressors to an ecologically more realistic level.'
The results are more realistic, but the interpretation is also more complex. That applies to the effecting of global warming, for example. Pesticides may break down faster when temperatures are higher. 'I see that in my experiments too,' says Hermann. 'But that doesn't necessarily mean warming is a good thing. The breakdown products of a pesticide can be more toxic than the pesticide itself, for example.'

## Rapid reproduction

What is more, organisms differ in how sensitive they are to warming and pesticides. Dragonfly larvae even seem to thrive with climate change. 'One possible explanation,' says Hermann, 'is that some organisms respond to stress by reproducing more quickly. But the question is: how long will that effect continue? Is the increase in numbers only a short-term effect, and will the population eventually decline after all because conditions become too stressful?'
An increase in the temperature speeds up the metabolism, which leads to faster population growth, as Hermann's experiments show. In that sense, climate change can have a positive effect. 'But as soon as insecticides are included in the mix, the situation can go in reverse. The positive temperature effect does not offset the impact of the pesticides.'
A test Hermann did with insects showed how disastrous the combination of imidacloprid and heat can be. The biomass of insects fell by almost 50 per cent during the experiment. 'These were insects that were caught on the water's surface. So it is not only the larval stage that is affected, it's the whole life cycle of the insects. Studies like this are rare because they are so labour-intensive.'
So Hermann believes extreme weather should be taken into account more in the chemical risk assessment of pesticides. 'Extreme weather can be quite devastating and destroy whole populations because the organisms are not able to adapt or recover. It is not the general warming but the extreme weather that poses the greatest threat for the future.' RK

## [Live&Learn]

**A failed experiment, a rejected article: in academia such things tend to be labelled failures. As for talking about it? Not done! But that is just what WUR co-workers do in this column. Because failure has its uses. This time we hear from Cristina Llavata Peris, a teacher of Virology.**

Illustration Stijn Schreven

‘Towards the end of my doctoral research in Wageningen, I was faced with a decision: what would be the next step in my career? A natural progression would be a postdoctoral research position abroad. However, my partner had a permanent post in the Netherlands so he didn’t want to relocate to another country with me. And yet a tempting opportunity presented itself in Germany. It involved research

**‘I turned down the postdoc in Germany and chose a job in Wageningen. Then came the blow’**

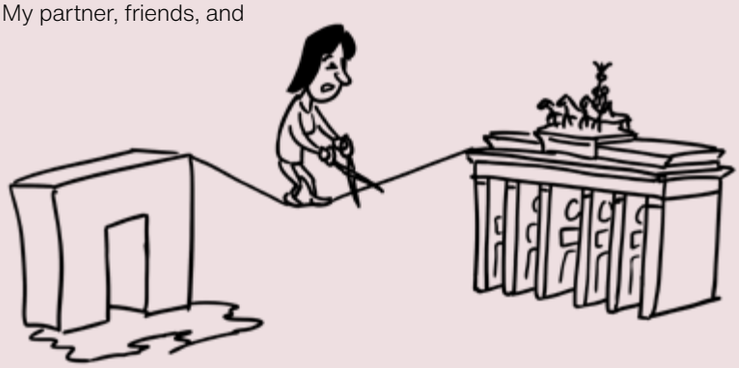
that seamlessly aligned with my doctoral work, and the team leader and colleagues were very nice. Everything seemed to fall into place. The job was mine if I wanted it.

Simultaneously, another job application was in progress in Wageningen. This role was less aligned with my expertise and interests, but it meant my partner and I wouldn't have to endure a long-distance relationship. It became a personal dilemma. My partner, friends, and family all stated that the decision was mine to make. Their support was kind, but it placed the weight of the choice on my shoulders.

The prospect of a long-distance relationship ultimately tipped the scales. I turned down the job in Germany and chose the one in Wageningen. But then came the blow: Wageningen did not choose me. I went from having two potential jobs to having none. To me, it felt like a failure. Ironically, one of the researchers from the German laboratory secured the position in Wageningen.

Months later, I finally landed a new job. It wasn't a postdoc position, and it didn't involve plant research. Instead, it was a research position at a company specializing in the production of proteins using fungi. I remained there for four years until the company relocated to Leiden. Once again, I chose to stay in the vicinity of Wageningen, and I currently work as a lecturer at WUR. While I had to switch fields repeatedly due to my decision to stay in the Netherlands, I no longer harbour regrets about my previous decisions. In fact, I have now found my place in education.’

NVTWH



## More chilli means less chewing

**Cong Lyu, a PhD candidate in Sensory Science and Eating Behaviour, studied the effect of eating hot food. The results may not be that surprising, but they give new clues on how the sensory qualities of food affect our eating behaviour.**

‘In contrast to food texture, we don’t know much at all about how our eating behaviour is affected by hot and spicy food,’ says Lyu. ‘We wanted to find out how the burning sensation in your mouth when you eat spicy food influences the way you eat.’

**‘Participants chew less per mouthful when eating spicy rice and hamburgers’**

Lyu served meals to the participants in his study, with varying degrees of spiciness due to variations in the amount of chilli powder. ‘We prepared tomato soup, curry rice and hamburgers ranging from slightly spicy to very hot.’

‘When participants ate the tomato soup with a hot and spicy taste, they drank twice as much water, and the time between mouthfuls of soup became longer,’ says Lyu. ‘We saw the same effect with the hot curry rice and hamburgers, only the participants made fewer chewing motions per mouthful and they did not keep the food so long in the mouth. They were probably doing this to reduce the discomfort of the burning mouthfeel.’

### New line of research

‘This study is the start of a new line of research. The results may not be very surprising, but they give new insights into how sensory signals from the food influence our chewing behaviour.’

Lyu also sees potential applications. ‘The underlying idea is to increase the spiciness of food slightly as a way of getting consumers to eat more slowly and eat less. Future studies should show whether this can work. Spicier food might also be a way of getting people to drink more during a meal.’ DV

Sustainable farms have lower costs; they spend less on the purchase of feed, among other things ◆ Photo Shutterstock

# Sustainable dairy farms are financially healthier

This conclusion comes from a study Wageningen Economic Research performed for the dairy sector organization ZuivelNL. In a group of some 200 dairy farms, the best-performing 25 per cent in the key Sustainable Dairy Sector areas of biodiversity, climate and degree of land use were compared with the remaining 75 per cent. The more sustainable group turned out to perform better financially too.

The sustainable farms had both lower costs and higher revenues, as a result of which their annual profits averaged 28,500 euros more than for the other farms, even though the sustainable farms were smaller on average. They produced an average of 838,000 kilos of milk per farm, while production at the remaining farms was 150,000 kilos higher.

## Costs and benefits

The sustainable farms spent less on purchases of feed and the removal of manure (2.13 euros and 0.25 euros less per 100 kilos of milk respectively). That is largely due to the fact that they are less intensive, with more land per cow than the remaining farms. The sustainable farms produced almost 14,400 kilos of milk per hectare while the average for the other farms was over 3,000 kilos higher.

The sustainable farms had relatively high revenues — a difference of 3.30 euros per 100 kilos of milk. Half of that difference is because they get a better price for sustainably produced milk, including through compensation from label organizations. The other half is explained by changes in stock levels and valuation and by payment rights (EU funding under the Common Agricultural Policy).

## Cannot generalize

The sustainable farms tend to be found in Overijssel, Friesland and Groningen, provinces that suffer less from drought than other places. The farmers also tended to be older (aged 45 to 55), and therefore to have more experience and different financial burdens than their younger colleagues.

The research findings do not mean that it is financially attractive for all dairy farmers to make their farms more sustainable, warn the researchers. Specific farm characteristics such as loans, landholdings and barn capacity have a big influence on the outcome. ‘Being an extensive farm is not the same as becoming one,’ notes the report. ME

# Animal diseases could return

If dairy farmers all switch to a more nature-inclusive approach, that may mean the return of animal diseases that are rarely seen on modern farms, as the pathogens could be reintroduced via wild animals. Not only are today’s cows not robust enough to cope with this, it is also a risk for humans as many diseases are zoonotic. This warning comes from Ad Koets, a researcher at Wageningen Bioveterinary Research. He is not opposed to a change of system, but he is calling for a different approach to disease symptoms among young animals. ‘At present, farmers see the symptoms as undesirable, but they are necessary to build up a robust immune system.’ He also stresses the importance of properly monitoring pathogens in the natural environment so that appropriate measures can be taken in good time. ME

# PhD theses in a nutshell

### Grass cuttings as fertilizer

Grass cuttings from road verges can be used to improve the soil, Maartje van der Sloot has proven. Verge compost can halve the nitrogen consumption of fields of maize and winter wheat without affecting the yield. This was shown by a large-scale three-year trial run by Van der Sloot. The only problem was the litter. You do have to extract that from the compost first. This is one of the reasons farmers are still hesitant about using verge cuttings. Moreover, the nitrogen and carbon content of the compost has to be exactly right to have the desired effect on the soil. *Road verge cuttings as organic amendment on arable fields*
**Maartje van der Sloot ◀ Supervisor David Kleijn**

### Restoring the balance

Babies' guts are sensitive to antibiotics, which disturb the normal development of the gut flora. And that can affect the child's susceptibility to diseases later in life. Martha Florencia Endika, from Indonesia, researched whether supplements in baby food (certain indigestible hydrocarbons) can restore those gut flora. You can guess the answer. Yes, they can, but it depends which antibiotic is used, what the gut flora looked like before it was given, and what you add to the baby food. She didn't test it on real babies, by the way, but on an *in vitro* model.
*Gut Rebalancing Acts* **Martha Florncia Endika ◀ Supervisors Hauke Smidt and Koen Venema (Maastricht University)**

### A goner

*Fusarium* fungi are a serious threat to global banana cultivation. Einar Martínez de la Parte, from Cuba, studied the sensitivity of 18 Cuban varieties of eating and cooking bananas to the *Fusarium* fungus Tropical Race4. Bad news: none of them proved resistant. This makes the pathogen a potential threat to 56 per cent of Cuba's current banana plants. But there's more bad news: the fungus survives easily in various weeds, and strikes from that base. The researcher says his study shows how important it is to protect the crop from the fungi. If we don't, the banana will be a goner.
*Fusarium wilt of banana in Cuba*
**Einar Martínez de la Parte ◀ Supervisor Gert Kema**

## THE PROPOSITION

PhD candidates explain the most thought-provoking proposition in their thesis. This time it's Nathan Meijer, who received his PhD on 13 October. His study was about the effects of dietary exposure to insecticide residues on *Hermetia illucens* and *Alphitobius diaperinus* reared for food and feed.

‘Scientists underestimate the impact of visual storytelling to amplify the societal impact of their scientific results.’

‘It's common to see presenters at scientific conferences using slides with large tables filled with text taken directly from their papers. I often feel disconnected from such slides and find they bore the audiences. In my opinion, if you're going to present an account of your scientific work, it's important to be aware of how you're doing it.
I used to work in the legal field and was used to using lots of text in a presentation slide. Until I realized that “a picture is worth a thousand words” and put it into practice. I immediately noticed a significant improvement in the audience's response. Presentations aside, I think it is a very good development that some journals now require a visual abstract of the paper, as it forces you to condense your research into a single graphic that readers can easily relate to.
Scientists are usually paid from public funds. I think it is as important for us to share our results with society, which funds our research, as it is with the scientific community. Our results can be used by audiences outside the scientific community, such as policy makers. Although it's easy to copy text and tables from a paper to a presentation slide or report, it's better to translate them into visual aids and easy-to-understand graphics that suit our audience and convey the specific messages we want to get across.’ NF

# Omnia

Joshua Wambugu

WUR continues to grow and improve at a fast pace across the spectrum. This includes the quality of the education and innovative research, numbers of students and staff, and an improved working environment with buildings and facilities. It is hard to miss the new buildings mushrooming on campus, such as Upfield, Unilever's Hive, Aurora and Omnia. Some of these buildings have attracted critics in relation to the activities and institutions hosted in them. Omnia is a good example. I'm curious: since its opening last year, has Omnia lived up to its objective?
In 2017, a plan was hatched to build a Dialogue Centre on the campus to replace the Aula. The Aula, famous for its WUR academic ceremonies, was viewed as outdated because it didn't have enough rooms or adequate catering facilities. The new Dialogue Centre (now Omnia) was designed as a multifunctional building for the university and other diverse campus communities to hold meetings, debates, seminars and official events. While Omnia's objective is to be a centre for Wageningen's dialogue with society, at present the dialogue is often about Omnia itself, particularly its Hall of Fame. It consists of portraits of previous rectors and professors, showing a patriarchal history (and weirdly a mystery man in a portrait that the university couldn't identify). But there is also criticism of the inconvenience and poor accessibility (lack of parking close by) and the expensive catering fees. Interestingly, the building naming process experienced rejection by the Executive Board, which arguing that the suggested names didn't reflect its intended functions, and the jury had to go back to the drawing board.

**'While Omnia's objective is to be a centre for WUR's dialogue with society, at present the dialogue is often about Omnia itself'**

Omnia is the Latin word for 'everything'. However, 'everything' seems not to be everything considering the criticisms of Omnia shortcomings. I believe Omnia's managers have heard these critics and are able to take action on things to adjust or improve. I miss the Aula's organ, so maybe the Hall of Fame with portraits can be decorated with organ pipes to blend in music and melodies to offer a welcoming atmosphere. It is time for the dialogue to be about the university and society rather than about Omnia.

**Joshua Wambugu (40), from Kenya, is a PhD candidate in the Marine Animal Ecology and Environmental Policy groups. He is a Social Safety Guide with the DARE Project and a member of the project's coordinating team. He loves cooking, hiking and birdwatching.**

The world has moved on from Covid, but

# ‘My life will never be the same again’

‘The country is opening up again,’ declared Dutch Health minister Ernst Kuipers in February 2022, and so it was. After two years of lockdowns, curfews, working from home, self-testing and social distancing, the world started to get back to business as usual. Now, Covid seems like a thing of the past, but that is not the case for everyone. Some people are still wrestling with the effects of Long Covid. Three WUR folk share their stories.

Text Luuk Zegers, Coretta Jongeling and Dominique Vrouwenvelder

## ‘Suddenly I had to break my life down into the tiniest chunks’

**Rogier Schulte (49)**, full professor, Farm Systems Ecology Group

‘I can still vividly remember lying in bed and feeling as though my head was on fire. I could feel the physiological short-circuit in my head. I knew then that something was very wrong. Things went wrong in March 2022. It started out as a mild cold, but the symptoms weren’t gone several weeks later. At first, I scaled down my work to half days but it soon became obvious that I had to go right down to zero: I turned out to have Post-Covid Syndrome.

Someone with boundless energy: that’s how I would have described my former personality. My mantra was that there is always a solution, if only you put enough time and energy into the matter in question. I led my chair group with inspiration and enthusiasm. I was a bit chaotic too: my thoughts and ideas often raced ahead to the next task. Suddenly I had to break my life down into the tiniest chunks. Everything I did, who I was, and even what I ate and drank. When I was allowed to start working again, I did so in blocks of 20 minutes max. After each task I took a 20-minute break, and then worked on something different for 20 minutes, followed by another break. It took a lot of puzzling to find out how these blocks of time fit together, and which activities could follow each other. I got help from an ergo-therapist; I could not have worked this out on my own. By keeping a diary, we figured out what worked for me.

I’ve been working fulltime again since September this year. I can cope with two 90-minute meetings a day, and two 90-minute periods of concentrated computer work. I still need to take breaks in between. That means I have

Illustration Valerie Geelen

to plan everything in a very disciplined way – quite unlike my old, more spontaneous self.

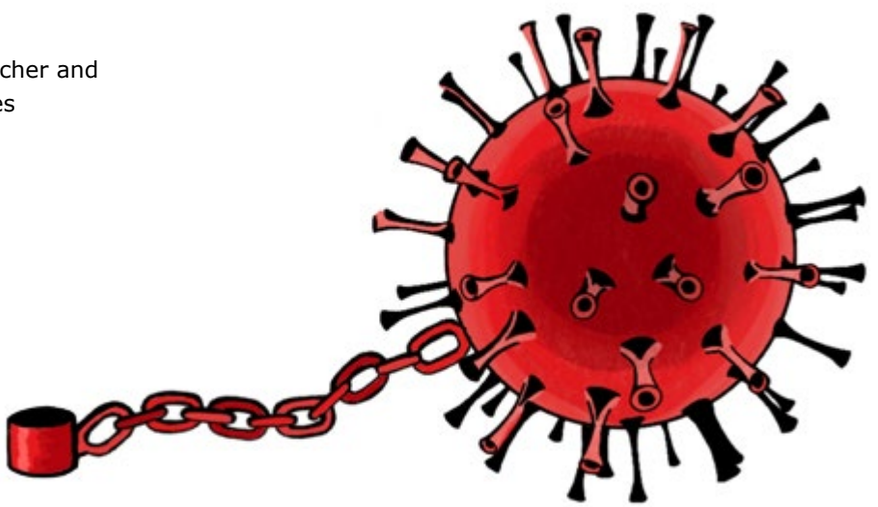
By now, I have accepted that my life will never be the same again. I'm trying to find a new way of life that is meaningful and enjoyable. Post-Covid Syndrome has taken all the spontaneity out of my life. I miss being able to say 'yes' to a suggestion to go out this evening. For the first time in 18 months, I do now have the headspace to plan a social activity every week. It's so nice to do something that isn't work-related.

I get frustrated by how little recognition there is for Post-Covid Syndrome in the Netherlands. That frustration is shared by my fellow sufferers. We do have a patients' organization, but everyone struggles with dosing their energy. So it's ironic: the last thing we've got the energy for is setting up an organization and actively contributing to it.

I started having hyperbaric oxygen therapy at the end of October. Israeli research shows that this therapy has a positive effect on the cognitive variant of Post-Covid Syndrome – in the short term, at least. There is a chance that this therapy will heal my invisible handicap and that I will no longer need to think about planning all day. That will make it all a lot more enjoyable.'

# ‘Last week I made a date with my best friends for the first time in a year and a half’

**Carla Oonk (56)**, education coordinator, teacher and researcher at Education and Learning Sciences



‘In June 2022, we had just started teaching on campus again when I got Covid. I tested positive three days after my first seminar, so I went into quarantine. One day later, my head seemed to shut down. My vision was blurred and I was dizzy and nauseous. My head felt heavy, as if a tight band was squeezing it. My heart rate went through the roof and I had inflammation everywhere. My whole body was messed up.

I’m super-healthy normally. I can’t have had more than three days off sick in the 20 years I’ve been working at WUR. So I thought: I’ll just report sick and I’ll be back at work within two weeks. That’s not how it went.

I enjoy my job and I did my best to go on working. The company doctor wrote to my line manager saying: this woman wants to do too much. Not to push myself too hard, I started working from home, with strict limits: half an hour of work, then a walk, and then a lie-down. At my lowest point I worked for just an hour a day.

My social life was at a standstill, it took too much energy. And I didn’t celebrate Christmas with the family. At home I’m lucky: my husband and my sons are quiet and understanding. It must be awful if you’ve got young children, or live alone. Last week I made a date with my best friends for the first time in a year and a half, and that was a milestone.

By March 2023 I was able to work four hours a day. Around that time an article needed writing about Boundary Crossing, a project I’ve worked on a lot. A nice test to see whether I could cope with something like that. I noticed that it was too much for me, really, but I was determined to get it done. In May I totally crashed, which happens quite often with Long Covid if you come under too much pressure too soon. I was back to square one, and I struggled with unbelievable tiredness that I’d never experienced before.

In consultation with the company doctor, I decided to build up slowly again. In the summer I went cycling in England with my husband, and that did me good. Then I started building up, adding half an hour every two weeks. Now I’m working four hours a day, so there’s progress.

Difficult as it has been, I didn’t fall into a pit of despair. I kept in touch with my colleagues by email and stayed in the loop, thanks to their fantastic support, and that of my line manager, the company doctor and the ‘‘gatekeeper’’ monitoring my sick leave. But Long Covid did test my patience. It is an uncertain business: some people are still not out of the woods after three years. The heaviest blow was after my relapse, when my line manager told me he was going to look for someone to take over my coordination tasks. Rationally, of course I could see that was necessary, but I had hoped I could prevent it by recovering as fast as possible. At the same time, it’s all relative: when I got Long Covid, I heard that a colleague of mine had breast cancer. Something like that puts my situation in a different light.’

# ‘Sometimes everything hurts and I think: maybe it won’t get better than this’

**Julia Teresa Celis Moreno (34)**, PhD candidate in Cell Biology and Immunology

‘At the beginning of 2020, I had just finished the first year of my PhD. At that time, Covid was only a problem in Asia, or so we thought. One day I suddenly fell ill, with flu-like symptoms and stomach issues, and my whole body was not okay. I couldn’t make an appointment with a GP because I had just moved. A couple of weeks later I ended up going to the Student Medical Centre. The doctor said that I had a severe respiratory infection and sent me to the hospital, where I was given antibiotics.

Looking back, I had all the classic Covid symptoms: I couldn't smell or taste anything, I coughed constantly and had trouble breathing. In the meantime I had a GP and I called him regularly. He prescribed painkillers and cough syrup, but I didn't get better. During the summer, the doctor finally referred me to a pulmonologist. But because I didn't have an acute Covid infection, they didn't treat me for that. I was still coughing and short of breath, and I had brain fog. This continued until December. Then I called in sick again and decided to visit my family in Peru.

I was admitted to hospital in Lima as soon as I arrived there, and was immediately given extra oxygen and medication. After a week in hospital, I stayed with my in-laws in Lima for another month, because I had to go to the hospital for regular check-ups. The rest of the time I mostly slept.

I came back to the Netherlands in March and at last, I received treatment here through a Post-Covid programme in which you are then treated by various specialists, such as a physiotherapist, a logopaedist and an ergotherapist.

My GP apologized to me. Now that he had seen all the test results from the hospital in Peru, and had seen other patients with similar complaints, he realized that he could have done more for me. That did me a lot of good. The year before, he had advised me to see a psychologist because he thought it was all in the mind.

Things are going much better now. I started by working for two hours a week and now I am back at 32 hours. When I think of how I was and how things are going now, I am really happy. But sometimes everything hurts and I think: maybe it won't get any better than this. That is extremely frustrating. My supervisor has always been very supportive and the company doctor has also helped me a lot. The most difficult thing at the moment is the financing of my PhD. I should have finished a long time ago. When I asked the department for a contract extension, I was told that there was not enough money for it. Eventually I was given an extra six months through the Covid relief fund, but that is not enough. My supervisor and I are now looking at other options for grants to enable me to complete my PhD. It’s easier to have a broken leg — then everyone can see that something is wrong. If you have Post-Covid, your complaints are a lot less visible.’ ■

**Post-Covid (or Long Covid)**

Some of those who get COVID-19 suffer symptoms for a long time. If their symptoms go on for more than three months, they are considered to have Post-Covid Syndrome (also known as Long Covid). Common complaints among Post-Covid sufferers are fatigue, concentration problems, memory problems, breathlessness, oversensitivity to stimuli, headaches, insomnia and muscle pain. The nature and intensity of the symptoms vary from one person to the next. It is estimated that 1.3 million Dutch people have developed Post-Covid Syndrome. Many of them had relatively mild symptoms and have recovered, but there are also people whose symptoms are so serious and long-lasting that it is hampering their participation in society. How big that group is in the Netherlands is not known. The government’s Social Impact Team estimates that there are about 90,000 people in this category.

Employees who are off sick for more than three months after reporting ill with Covid are labelled as having Post-Covid by the company doctor. In 2022, 100 WUR employees reported sick with Covid to the company doctor. Of this group, 43 developed Post-Covid. In the period January to October 2023, 94 people were off sick with Covid at WUR. It is not yet clear how many of them have Post-Covid.

# VEGGIE MUSCLES

**PhD candidate Jacintha Domić is investigating the effect of a vegan diet on the muscles and general health of the over 65s, and the potential role of strength training. She divided her study subjects randomly into three groups. Theo (80) and Marion (76) are in the most intensive group. Every Wednesday and Friday for the past six weeks, they have been coming to a gym in Wageningen. Twice a week, they do six strength exercises, mainly aimed at the leg muscles, under the supervision of Karlijn Allewijn (on the right in the photo).** DV

Read the full story on Resource-online.nl

Photo Guy Ackermans

# FAIR/UNFAIR ENERGY TRANSITION

WUR is coordinating a large research project on flexible energy communities, an idea aimed at getting the energy transition running more smoothly and fairly. Whether and how the idea will work is being studied close to home: Wageningen municipality is a partner in the project.

Text Marieke Enter

After a hesitant start, the energy transition in the Netherlands is picking up steam, with a big rise in the number of households with solar panels, heat pumps and electric cars. That places a bigger burden on the electricity grid, the expansion of which is not keeping pace: the low-voltage grids are rapidly reaching their limits. And because grid reinforcement is a slow process, it could take months or even years in some neighbourhoods before everyone can make their house more sustainable.
With grid capacity in danger of becoming scarce, a few important questions arise. Firstly: who gets the available capacity, which grids will be reinforced first? Will it be the neighbourhoods where the need is greatest because of the many solar panels, heat pumps and electric cars – in other words, the better-off neighbourhoods? Or should the capacity got precisely to places where going green will save the most energy – the older and often less affluent neighbourhoods?
Another question is whether there are any alternative solutions to the shortage. Could households help each other out by sharing energy, for instance? That is already happening a bit through the more than 700 energy cooperatives the Netherlands boasts, but on the whole, it is done via the grid, whereas that is exactly where the bottleneck is. Also, most energy cooperatives are very locally oriented, and not everyone subscribes to the proverb ‘better a good neighbour than a faraway friend’. Some people would rather share their energy with a distant friend, although they would currently run up against some practical and legal obstacles.

## Flexible communities

Flexible energy communities may be able to offer a solution. These are groups of people or households that exchange electricity through their electric cars, treating them as big batteries on wheels (see inset). The potential of this is huge, as described by project leader Bardia Mashhoodi, assistant professor and research coordinator of Digital Landscape Architecture in the Landscape Architecture and Spatial Planning chair group. ‘Per day, only an average of 15 per cent of an electric car’s battery capacity gets used, leaving 85 per cent “free” for use for energy storage and exchange. If the projections of just under three million electric cars by 2030 come true, we’ll have a massive total capacity: twice the electricity that we currently consume.’

## Identifying needs

The Dutch Research Council, a funding body, sees the potential of the flexible energy community too. A special call for proposals on the theme of ‘The energy transition as a social and technical challenge’ allocated the project 2.5 million euros last year. The other academic consortium partners besides WUR are the University of Groningen and Delft University of Technology.

### Future scenario

The idea of electric cars as ‘mobile batteries’ for ‘energy communities’ may be a bit premature. It assumes that electric cars are capable of supplying electricity to other electric cars (known in the trade as V2V, vehicle to vehicle), to households, and possibly even to the grid (V2G, vehicle to grid). That may be possible in another few years, but most cars can’t do it yet.

A fundamental condition for the intended energy communities is that we obtain an overview of which households are capable of sharing their self-generated energy with others, and what kind of households they are: their compositions, incomes, age groups, and socio-cultural backgrounds. So the researchers are using satellite images and AI models to document which households have solar panels on their roofs, using Wageningen as one of the four case studies. They combine this information with data from distribution system operator Liander on the geographical distribution of 'heavy' grid demand and charging points for electric cars.

## 'SOME GROUPS ARE AT RISK OF POVERTY ON THREE FRONTS: ENERGY, TRANSPORT AND ACCESS TO THE GRID'

'This analysis provides the basis for what we call the "triple poverty" approach to the Wageningen energy transition,' says Sol Maria Halleck Vega, an assistant professor in the Urban Economics Group who is closely involved in the project. She explains: 'Gas and fuel prices have gone up a lot. Well-off households can cope with that partly by investing in solar panels, a heat pump and an electric car. But by no means everyone can afford that, and the people who can't are at risk of poverty on three fronts: energy, transport and access to the grid. This project offers an opportunity to find a solution on all three fronts, so that the energy transition does not unintentionally exclude certain social groups.'

Which neighbourhoods should get priority on the grid? The neighbourhoods that use a lot of their energy for solar panels, electric cars and heat pumps, or those where going green will save most energy? The photo shows Wageningen town centre ◆ Photo DroneWageningen

### A fair transition

This inclusiveness is high on Robin Smale's agenda too. Smale works as a Climate and Sustainability policy officer for Wageningen municipality, but knows WUR well too: at the end of 2021, he got his PhD in the Environmental Policy Group for a study on *Smart grids, the human scale*. He says: 'Wageningen municipality aims to be energy neutral by 2040. One of the challenges is that some neighbourhoods will need more energy to heat the houses than others. We are discussing this with Liander, because we set great store by a fair energy transition. The fact that the potential of electric cars is hardly being exploited at all is of great interest – particularly now, when the municipality is working on its spatial planning vision: what is possible, and where? Perhaps Wageningen's mobility hubs can be combined with energy hubs. Knowledge about this sort of issue is very important from a policy point of view. It can help us make the right decisions in creating a sustainable future.' ■

Professor of Crop Physiology Paul Struik is retiring

# A LIFE DEVOTED TO CROPS

Paul Struik has been on the Wageningen scene for 50 years. Now the professor of Crop Physiology has got to retire. Reluctantly. Photos Guy Ackermans

Text Roelof Kleis

He was supposed to retire at 67, actually. But Paul Struik found a loophole that enabled him to go on for another two years. Since spring this year, he has really been a pensioner. His farewell is on 23 November. Well, sort of, because he will go on supervising PhD researchers as before. He has a respectable 123 to his name. 'There will be three more this month and I've got quite a few still in the pipeline,' he says. 'I hope to reach 140.'

Struik thinks he still remembers all their names. 'After all, I worked with them for a long time. Sadly, some have already passed away.' When it comes to numbers of PhDs, he is second only to Professor Richard Visser (with 159). 'But the number itself is not what I'm proud of. I'm proud of the contents of the theses, their diversity and the collaborations they produced. The theses are about many different crops and production systems. Including crops we are not familiar with in the Netherlands. That keeps it very interesting for me.'

Paul Struik started in 1973 on a degree programme in Agricultural Plant Breeding. He grew up in Haarlemmermeer, but not on a farm. 'I occasionally thinned out beets in early spring as a side job. All day on your knees between the rows of beets. It was not a pleasant job.' He really wanted to study Tropical Plant Breeding. 'But I was in a relationship and my fiancée absolutely did not want to go to a tropical country.' He nevertheless travelled a lot to the tropics later in his career. As a professor, you travel a lot. He thinks he has supervised PhD students from about 40 countries.

'I'm disappointed in the natural and social sciences integration; 20 years of interdisciplinary collaboration hasn't broken down many old paradigms'

## How has your academic field developed?

'Back in the 1970s and 80s, we focused a lot on agronomics, looking for the best farming methods. Until at some point that started to be seen as a subject that academics shouldn't be focussing on. It was too applied and too practical for us. Now it's in again, and it's allowed. That is partly because we gained masses of molecular and genetic knowledge, but we forgot to look at what it meant for the farmer. How does a farmer benefit? That's a complex change of focus.'

## Isn't that right up your street?

'I tried to get into that niche. On the one hand, by reformulating important issues for the farming sector as fundamental research questions for molecular scientists. And at the same time, by applying molecular knowledge to crop farming. What changes when you do that? For example, a great deal of research is done

‘The propagation system is not as well organized in many countries. As a result, things can go wrong during propagating and all sorts of pests and diseases can affect generation after generation. I’ve done a lot of work on improving that situation.’

‘A lot of research is done on how photosynthesis works, but what do you do with that on the farm?’

on how photosynthesis works, but what do you do with that on the farm? Very little. The question of how we can make photosynthesis more efficient at crop level is quite different to the question of how you do it at the molecular and enzymatic level.’

**The new photosynthesis institute focuses on improving that practical efficiency. Did you have a hand in that?**

‘I was involved in the preparations, along with many other people. In my farewell lecture, I will show how I think it should be approached. We need to look at what basic biophysical and biochemical processes mean at different levels. You can make processes like photosynthesis very efficient at the leaf level, but it’s got to be efficient at the crop level and what’s more, throughout the entire growing season. Those are different levels of organization, each with their own laws. What do you really need to know about photosynthesis in order to make crops more suitable for production? That involved very different things than the ones we do research on for ages in order to understand the process of photosynthesis. We work a lot on the energy jumps made by electrons in picoseconds. But a farmer doesn’t work with picoseconds.’

### What do you see as your biggest contribution to science?

'Using modelling, my group has developed a much more precise way of experimenting and measuring photosynthesis. That took us 20 years. Initially, we were much better at modelling than at measuring. Now we can measure photosynthesis well too. And we can therefore make more precise models, at different levels from sub-leaf to the whole crop. I have also done a lot of work on propagating material systems for crops that propagate vegetatively, such as potatoes, cassava and sweet potatoes. Non-sexual reproduction is vulnerable to diseases and pests that can be transmitted through the propagating material. The propagation system is not as well organized in many countries. As a result, things can go wrong during propagating and all sorts of pests and diseases can affect generation after generation. That eventually leads to lower yields because the propagation material is thoroughly diseased. I've done a lot of work on improving that situation.'

### Now there is a hybrid potato, which does reproduce via seeds. Problem solved?

'Propagation via seeds goes much faster than the slow vegetative propagation via tubers that you have to plant out. There are hundreds of seeds in one berry, and loads of berries on one plant. Per hectare of land, 25 grams of seed will suffice, as opposed to 2000 kilos of tubers. So the logistics of transport and storage are far simpler. Also, hybrid seed doesn't carry any diseases and can be stored for a long time. But it has its disadvantages as well. A small seed is quite different to a tuber, and it doesn't provide that very early growing power that a young potato plant gets from a tuber. You can solve that by having specialized plant breeders breed and distribute seedlings from seed. It would be even better to get seedlings producing tubers and then distribute those, but then you lose much of the practical advantage of seed. So it's not so easy to develop a good business model for plant breeders.'

### You've worked a lot with social scientists in the course of your career. You were ahead of your time with that multidisciplinary approach. How did it come about?

'It started with a programme in West Africa, in which the task was to define issues together with farmers and arrive at solutions through a joint learning process. That called for collaboration with sociologists, which is not so simple. You have to get to know their language and their academic culture. And they have to learn how agronomists think and work. Then I started doing the same in other programmes and situations. I learned a lot from that collaboration, and I think it's one of the crowning achievements in my work. But I'm also disappointed in the so-called natural and social sciences integration in which PhD researchers integrate two subject areas in their research, with one supervisor from each field. That only works if the supervisor is doing that integrating as well. And that doesn't happen enough. Twenty years of interdisciplinary collaboration hasn't broken down many old paradigms. And I get the feeling that enthusiasm for that collaboration has diminished, partly because it hasn't achieved much scientifically. There aren't many multidisciplinary journals with a high impact factor. If you're pursuing an academic career, natural-social sciences integration is not helpful.'

### Your work is over, although you will continue to supervise PhDs. You'll have lots of spare time. Any plans?

'I'm going to write a book. An absurdist novel. I started it a few years ago, and now I'm going to finish it. And then I'll put it in a drawer. It doesn't need to be published. Writing is great fun, but I'm not writing this book for a reader's enjoyment. I'm writing it because I enjoy it so much myself. And may I just end by saying this: WUR should pay its secretaries much better.' ■

'And may I just end by saying this: WUR should pay its secretaries much better'

*'From evidence-based practice to practice-based evidence'*

# NEW MASTER'S IN DIETETICS HAS STARTED

When she was appointed special professor of Dietetics, Marian de van der Schueren was asked to write a plan for her professorship. 'The wish was expressed among those in this field for a dietetics programme at Master's level.' That wish is now going to be fulfilled.

Photo Shutterstock

The new Master's started this academic year and is a sub-specialization within the Physiology track of the two-year Master's programme Nutrition and Health. 'That form was chosen for practical reasons. Starting up a whole new programme proved too complex to be done quickly.'

The need for a dietetics programme at Master's level is clear, says De van der Schueren. 'In renowned academic journals the focus is largely on randomized trials in which big groups of participants are divided into a control group and an intervention group in a controlled setting. The data obtained forms the basis for guidelines and protocols: evidence-based practice. That kind of research is important, but the reality is more complex.'

The reality is that dieticians work with individuals or small groups of patients who are following a personal treatment programme. De van der Schueren: 'So the setting can't be compared with others, and yet dieticians are expected to be able to evaluate the effectiveness of their treatments. In this programme, we address the need of practitioners for evidence.'

Dietician Lotte Hulsbergen is closely involved in this programme as coordinator. She recently completed the two-year Master's in Nutrition and Health. 'I lacked the skills to evaluate scientific research critically, and to apply it in practice. That's why I did this Master's programme. And my experience as a dietician is that you rarely have any time to spare to read up properly on the research. Developing research skills could help in overcoming this barrier.'

## Small-scale research

In the vision of the future sketched by the Dutch Association of Dieticians (NVD), which is funding De van der Schueren's chair, one of the principles is that care must be of good quality and effective. 'You need to be able to prove that as a dietician. And effective doesn't always have to mean weight loss. Sometimes you want to know what effect a treatment has on a patient's blood sugar level or quality of life, or on the autonomy or social life of a patient on a complicated diet. You don't usually come across that kind of data in a randomized controlled study. Also, this research is done on a very small scale.'

Hulsbergen: 'We want students to learn to think scientifically and do research, but research that reflects real situations. For example, using datasets with missing values or non-standardized methods, and based on your own patients. We teach students the best possible way to deal with these situations and still provide advice.' ■ DV

*Read more on Resource-online.nl*

Five fallacies about food waste scientifically debunked

# Not all leftovers get wasted

There are many fallacies about food waste, shows research by Erica van Herpen, an associate professor in the Marketing and Consumer Behaviour group. With reference to five papers published this year, Van Herpen debunks five common misconceptions about food waste by consumers.

Text Dominique Vrouwenvelder

Two billion kilos of food go to waste in the Netherlands annually. 'If you put all our discarded food into trucks, you'll have a queue from Utrecht to Barcelona,' says Van Herpen. 'Food waste throughout the supply chain is responsible for about nine per cent of our greenhouse gas emissions.'

Van Herpen's research focuses on food waste that the consumer has a hand in. 'For instance, leftover food that you don't keep, as well as ingredients that you forget you've got, which never even reach your plate, or food that you leave on your plate in a restaurant.'

Using five papers published this year, Van Herpen debunks five common misconceptions about food waste by consumers.

## 1

### Good planning is the key to reducing food waste.

**Not true because: strict planning is at odds with the hectic pace of daily life.**

'Families with children, in particular, find that their kids' friends stay for dinner, or their kids make last-minute plans to eat at a friend's house. Or you go for dinner with friends spontaneously, or you just grab something to eat at the office. Then you've suddenly got food left over, in spite of your planning. Planning meals is a good thing in itself, but the most efficient way is to factor in a leftovers day.

'In Canada and the United States, we did research using flexible recipes. They didn't have fixed ingredients, but ingredient categories instead. That way we encouraged consumers to use "vegetables" or "meat or a meat substitute", without specifying exactly which one. A leftovers day with flexible recipes reduced food waste by 31 per cent in Canada and by 47 per cent in the United States.'

## 2

### Bulk discounts, like two for the price of one, encourage waste.

**Not true because: bulk discounts create concern about waste, leading to less of it.**

'Impulse buys are certainly linked to food waste, but bulk discounts – like the Albert Heijn's special offer weeks – create awareness and concern about waste. Research actually shows that consumers freeze food or eat it sooner if they consciously buy more of it than usual. That triggers the concern. This doesn't apply to normal reductions, though. Nor does it apply if you're used to always buying in bulk.'

3

### You need discounts to get consumers to buy products that are close to their use-by date.

**Not true because: consumers are willing to buy these products based on their moral compass.**

‘Even if there’s no discount on products that are close to their use-by date, consumers are willing to buy them as long as we explain that they will otherwise go to waste. That message appeals to consumers and gives them a good feeling about such a purchase. What is more, we saw that consumers are more careful about using these products than they are with products that will last longer. Products that are close to their use-by date get frozen or consumed sooner. People don’t buy these things only to throw them out at home.’

4

### Families with lots of leftovers will waste a lot.

**Not true because: by no means everyone hates leftovers.**

‘There are people who hate leftovers and people who love them. Those who love them have more of them and really do eat them up. Others can’t stand eating leftovers. They may subscribe to the misconception that they are not as healthy, or they just don’t like them, or they want variety in their meals. But this doesn’t mean that people who dislike leftovers automatically waste more food, because they are often better at preventing leftovers.’

5

### Concerns about wasting money prompt consumers to waste less food.

**Not true because: moral considerations outweigh other motives.**

‘We know of four main motives consumers have for trying to waste less food: environmental considerations, financial considerations such as “waste costs money”, moral considerations such as “waste is wrong”, and social considerations such as “what would other people think of me?” Not all these motives influence our behaviour around food waste. But the moral and environmental considerations do, and the moral considerations outweigh the others. They make consumers feel “this shouldn’t be allowed to happen, there are people going hungry in the world and I’m throwing out this food”. People who think that food waste is not on, based on this consideration or environmental considerations, are more likely to try and minimize their food waste.’ ■

Bulk discounts — like the Albert Heijn special offer weeks —create awareness and concern about waste. Consumers are more likely to freeze food or eat it sooner if they deliberately buy more than usual ⬩ Photo Shutterstock

▶ **A CLASS OF ITS OWN** a series on outstanding education

# Killing the zombie in the food crisis

What does a zombie have to do with food crises? In the course 'Food Crises: the Big Picture', this is an important question for understanding famines. Student editor Maurice Schoo was curious about this 'undead' that haunts Wageningen education and so he attended a class.

Text Maurice Schoo

'What do you think the reasons for famine are?' asks course coordinator Bram Jansen during the last lecture of the course. Using Mentimeter, students fill in their ideas about the causes on their smartphones. The answers appear on the smartboard, which displays a colourful word cloud with the words conflict, war, climate change and politics as the most prominent causes. 'This is quite different from the word cloud we made in the first lecture,' concludes Jansen. 'Back then you mentioned natural disasters, drought, overpopulation and war as the main causes.' Then comes the question: what are the solutions to famine? And this is when the expression 'killing the zombie' crops up via Mentimeter. It turns out to be an important subject on this course and it's about the question: is overpopulation the cause of famine?

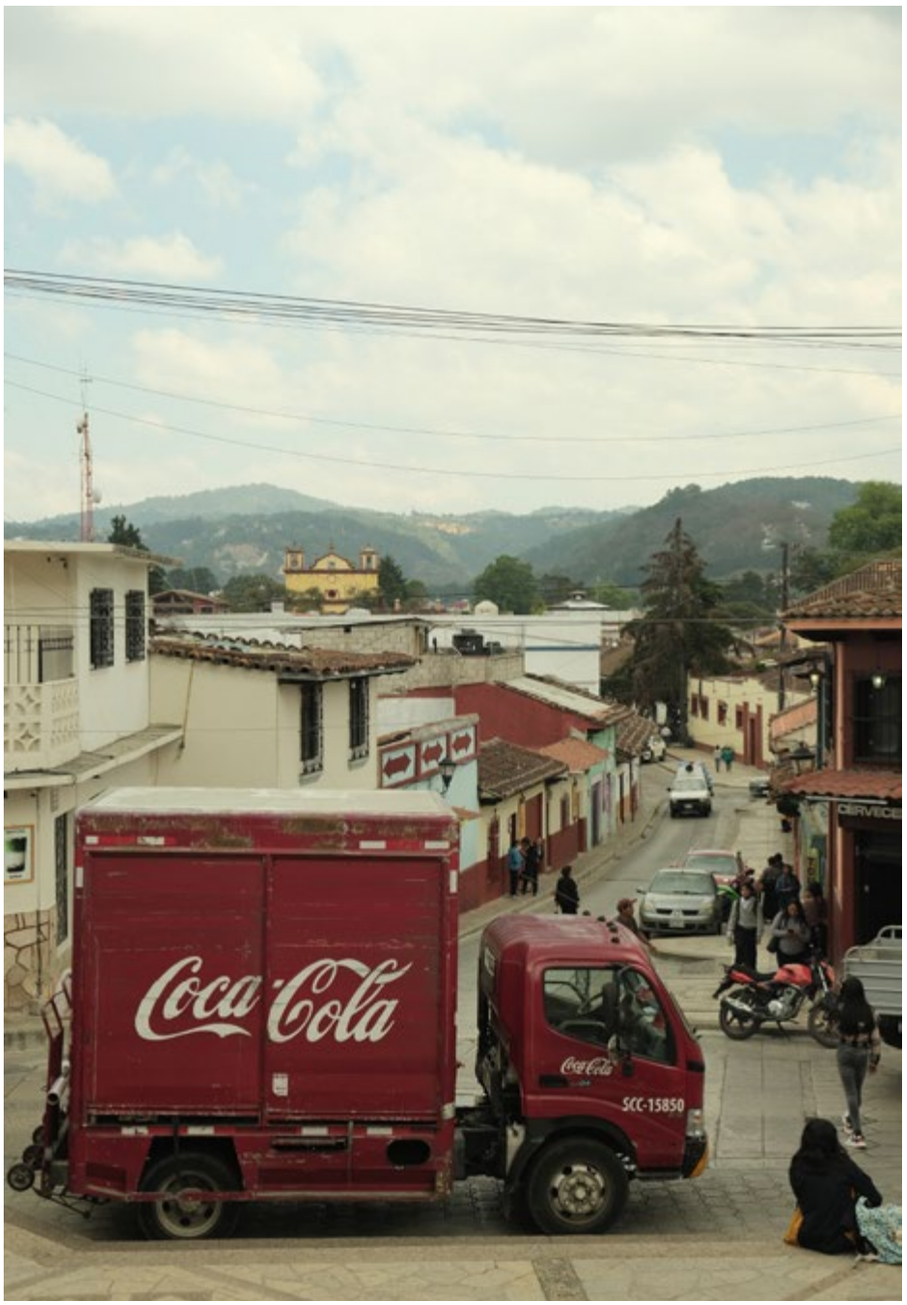
## Malthus's zombie

The idea that overpopulation will eventually lead to famine comes from the British demographer Thomas Malthus. He used a simple model to show that populations grow faster than food production, which eventually leads to a food crisis. 'Malthus's idea has been repeatedly refuted,' says Jansen, 'and yet it keeps on rearing its head again, like an indestructible zombie in a film. So the misunderstanding is called Malthus's Zombie, a term coined by researcher Alex de Waal.' This was an eye-opener for the Canadian exchange student Anina Molinar: 'In a food crisis, people often point to overpopulation or low food production. But I now see that access to food is the biggest problem.' Teacher Sumit Vij explains this in his lecture: 'The Indian economist Amartya Sen showed that hunger is a political problem that stems from social inequality. In many cases, there is enough food but it is not fairly distributed.' The course focuses mainly on these political aspects. Jansen: 'The political issue can sometimes be mismanagement, as a result of which food doesn't reach the people who need it. But sometimes hunger gets used strategically, in conflict situations, for example.'

## Blog

As part of the course, the students have to write a blog about food security. 'When we first started this course, we got the students to write a policy proposal aimed at improving food security,' says Jansen. 'But then we saw the feature *Food Business* in the *Volkskrant* newspaper, in which

**'Hunger is a political problem caused by social inequality'**




A Coca Cola-truck in San Cristobal de las Casas ◆ Photo Austin Curtis / Unsplash

answers are sought to the question of how to feed the world population in 2050. We decided to pick up that theme and turn it into an assignment.' That proved a good decision: the best blogs were published in the *Volkskrant*. 'In a blog, students can express the ideas and feelings about this subject that they have developed over the past few weeks,' says Vij. 'Because it is also important to learn how to back up your opinion.' Jansen: 'And it's even nicer if your blog is then published in *Resource* (see page 28, ed.).'

All the students' blogs are about famine, but they approach it from different angles. 'I write about the sanctions imposed on Niger by ECOWAS, an alliance of West African countries,' says student Molinar. 'After the recent coup, that country faced numerous sanctions that had an impact on food security.' Judith Su is focusing more on agriculture. 'I want to show that food aid and industrial farming are not the solution to food security in the long term.' Su is doing the Master's in Resilient Farming and Food Systems, and is critical of the current system: 'Industrial agriculture makes farmers extremely dependent on fossil fuels, multinationals and a small number of crops. I think we should focus more on organic farming because that is more appropriate in the long term.'

## Societal solutions

The course attracts students from different disciplines. 'We get a lot of students who don't have a social sciences background,' says Jansen. 'It's quite a change for some of them, but it's good to see that there is broad interest in the course.' Vij: 'We want to refute the idea that famines come about because of low food production, and that realization is particularly important for a university like WUR, where technical solutions dominate. In many cases, there are also socio-political causes of hunger, and they call for societal solutions.' For Su, this was a major plus. 'The course shows that food-related problems are very complex, and it exposes nuances that generally don't get addressed on the technical courses.' ■

Students on the course 'Food Crises: the Big Picture' were given the assignment to write a blog on food security. An abridged version of one of the blogs can be read on the next page (page 28). **'Holy Coca-Cola: quenching thirst or fuelling obesity?',** written by Daphne Leenders, is about the role of Coca-Cola in the Mexican water crisis and the 'obesity epidemic'.

# Holy Coca-Cola

## Quenching thirst or fuelling obesity?

**Daphne Leenders**
Master's student of
Resilient Farming and
Food Systems

In Mexico's poorest state, Chiapas, lies the magical Maya village of San Juan Chamula, where a remarkable spiritual ritual steals the show. The star of the show is Coca-Cola, which the indigenous Tzotzil population believes has the power to heal the sick.
'Coca-colonization' has positioned Mexico as one of the world's top consumers of sugary drinks. And the company has 70 per cent of the Mexican soft drinks market in its hands. But the success story stops here. Mexico is facing its worst water crisis in three decades, with nearly half of its people lacking access to safe drinking water due to climate change, poor infrastructure and the exploitation of Mexican land by large multinationals.

### Cheaper than water

While the country is experiencing one of its severest droughts, that has not stopped companies such as Coca-Cola and Heineken from extracting billions of litres of groundwater from public reservoirs and private wells in the region.
Coca-Cola's promise to 'give back every drop of water that goes into a bottle' is clearly impossible to keep, given that it takes 70 litres of water to produce one bottle of Coca-Cola.
Not surprisingly, the company is increasingly being criticized and boycotted for straining water resources and thereby worsening Mexico's water crisis. In San Cristobal de las Casas, neighbourhoods currently have running water just a few times a week and many households are forced to buy extra water from tanker trucks. Yet, on the edge of this town there is a Coca-Cola bottling plant, selling soft drinks at little more than the price of bottled water.

'In some Mexican states Coca-Cola is cheaper than water'

This bizarre dynamic - prioritizing market freedom over essential public services like clean water - underscores the far-reaching impact of laissez-faire economic policies and neo-capitalism.

### Mexico's soft drink addiction

Besides, because in some Mexican states Coca-Cola is cheaper than water, the company has another alarming effect on Mexico's food security. Sugary drinks have become deeply ingrained in Mexican culture and are contributing to the rising incidence of diet-related diseases, such as obesity and diabetes. With an increase in obesity of 42 per cent between 2000 and 2018, Mexico is now suffering from an 'obesity epidemic'. Within the states where Coca-Cola products are cheaper than water, obesity is a symptom of poverty rather than the result of individual choices.

### Coca-Cola policy

But Coca-Cola's influence extends beyond cultural and economic domains, as the soft drink company has now also entered the political sphere. There is growing evidence that Coca-Cola strategically frames the debate on diet- and nutrition-related issues by shifting the blame for the rising incidence of obesity and diet-related diseases away from its products onto physical activity and individual choice.
Mexican policymakers have tried to reverse the trends of obesity and diabetes. However, these policies focus almost exclusively on using consumer incentive approaches, overlooking the overarching structural issues maintained by market-driven ideologies. To address the complex global issues of climate change and obesity, a shared sense of social responsibility is expected from all of us. Coca-Cola has regrettably failed to recognize and uphold theirs.

*Scan the QR code for the full blog*

# LOOK!

**You see the most fabulous looking people and the coolest outfits around the Wageningen campus. In this feature we put someone in the spotlight. This time it's Welmoed Elzinga (24), Bachelor's student of Landscape Architecture**

'I always dress in a mix of historical and punk clothing. These two styles overlap a bit with me. Around seven years ago I decided not to buy new clothes anymore. My style has become a bit weirder since then. I like wearing special-occasion clothes, so in my case a party dress, on a normal day. So many people have super cute clothing in their closet that they only wear once a year – such a shame! I don't believe in the idea that fast fashion doesn't last long: a lot of the things I wear were once made as fast fashion. I do think about what I'm doing and I don't buy anything that's new. At the moment I'm buying out the entire closet of a girl in Spain, through Vinted. I discuss it a lot with her; sometimes I even have to set up a savings plan for my purchases, ha ha. Vinted can really be an obsession for me and to save money I have to delete the app from my phone every now and then. But it does allow me to make nice contacts.
Landscape Architecture is a creative study – I'm drawing every day – but you don't really see that in the clothing people wear here. Some people think that what I wear isn't practical, that it gets dirty quickly. That's not true at all, as long as you're not wearing a dress that reaches the floor. I get outside just as much as others and I manage just fine in these clothes. Skinny jeans are probably less practical.' IB

**You encounter all the flavours of the world in our WUR community. Animal Sciences PhD student Mohak Gujare (27) shares Pav Bhaji, one of his favourite Indian dishes, with us.**

Flavours of WUR

# Pav Bhaji

'This dish, a gravy paste served with bread, was originally invented to feed hungry factory workers because it's easy and filling. With time, its popularity increased and nowadays it is popular street food. It reminds me of my home town: the feeling of eating this with your hands at the seaside in Mumbai is unexplainable. It's really Indian because of the spiciness. In the Netherlands, the Pav Bhaji masala can only be found in ethnic food shops.'

**Ingredients (for 6-8 people):**

- 10-12 potatoes
- 5-6 tomatoes
- 3 large onions
- 1 green paprika
- 300-350g peas
- 3cm ginger
- 1 large lemon
- 200g butter
- Spices:
  - 1 tbs turmeric
  - 1.5 tbs chilli powder
  - 2 tbs Pav Bhaji masala
  - A pinch of salt
- 16 bread buns
- Fresh coriander

**Equipment:**

- Big, high-sided pan
- Shallow pan
- Hand mixer

**Preparation:**

**Bhaji (sauce)**

1. Boil peeled potatoes for 15-20 min.
2. In a pan, add 2 tbs butter and grated ginger. Add chopped boiled potatoes, chopped tomatoes, chopped paprika and peas. Add 1 cup of water with a pinch of salt and simmer for 10 min. with the lid on top.
3. Turn off the heat and blend with the hand mixer. Turn on the heat and add 2-3 tbs of butter, the turmeric, chilli powder, Pav Bhaji masala and 1 chopped onion and mix well. Add 1.5 cups of water and simmer for 5-10 min. To finish, squeeze lemon juice over the mix and add salt to taste. Sprinkle fresh coriander on top. Done!

**Pav (bread)**

Put pan on the stove, slice the bread buns in two, add butter and fry them on both sides.

**Mohak Gujare (27)**
PhD student at Animal Sciences from India

# THE SIDE JOB

**You've got to make ends meet somehow. We can all borrow from Uncle DUO, but there are also students who earn money from unusual side jobs, like Mirthe Gijsbers (24), Nutrition and Health Bachelor's student. Mirthe enjoys more trust from the public than a voting computer: she works as an electoral committee member during elections.** Text Steven Snijders

## Mirthe helps count

**Who:** Mirthe Gijsbers
**What:** Electoral committee member
**Why?** You get outside your own bubble
**Hourly wage:** about €12 (volunteer allowance)

'In every election, you need people who support and monitor the voting process at the polling station. Since I started living in Wageningen, I've been doing this work each election. Previously I helped at the polling stations in the Forum and café Onder de Linden. You work from seven in the morning until about one at night. Around nine in the evening the polling stations close and you help count the votes. Before you can do this work, you need to take an e-learning module about the rules of the voting process. There are always three polling station members working at the same time who each have their own task. The first person checks the voting pass and the passport. The second person checks the name isn't on a blacklist. This list includes people who have passed away, for example. The third person checks whether the voters put the ballot paper into the box correctly.'

**'I enjoy it up to about five in the afternoon, but counting gets really boring after a while'**

'I always thought that this work was only for older people. But I learned from a housemate that young people also do it. Anyone older than 18 can sign up for it. I really enjoy it up to about five in the afternoon. Last year, my colleagues were two older men. I chatted with them at great length, whereas in my daily life I wouldn't get into a conversation with them so easily. But counting gets boring after a while. We first sort the ballots by party and then by person. When everything is sorted, we count the number of votes in pairs. The whole process is transparent: any citizen can come and watch during the counting. Two citizens did come once, but after 15 minutes they got bored and left. I'll probably stop doing this work when I get a fulltime job. But maybe I'll come back when I retire!'


'Since moving to Wageningen, I have been doing this work each election.' ◆ Photo Guy Ackermans

Do you have an unusual side job or know someone else who does? Send an email to steven.snijders@wur.nl

# Colophon


*Resource* is the independent medium for students and staff at Wageningen University & Research. *Resource* reports and interprets the news and gives the context. New articles are posted daily on resource-online.nl. The magazine is published every fortnight on Thursday.

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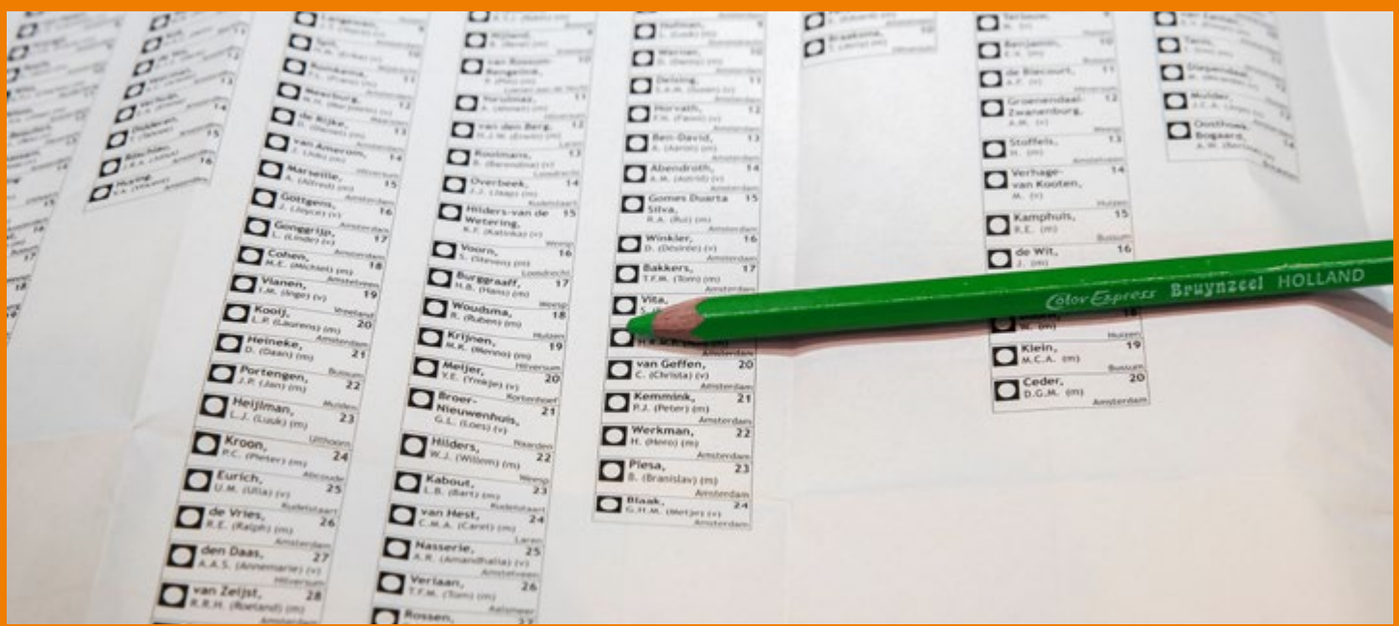


Photo Dutchmen Photography / Shutterstock.com

# VOTING WITH A GREEN PENCIL

In the coming elections, the polling station on campus will offer the option of voting with a green pencil. An experiment.

Elections are the ultimate moment for showing your true colours. This idea inspired the WUR Executive Board to engage in a unique experiment: voting with a green pencil. This is intended as a form of what is known as nudging, to lure the voter towards a greener vote.

'Nudging really means a little shove in the right direction,' says sociologist Floor de Bouche. 'We're doing a lot of research on it in our chair group, with the aim of getting consumers to make healthier food choices. But you can use nudging in a lot of contexts. Actually it's very odd that no one has thought of using it in elections before.'

To be perfectly honest, the idea didn't come from De Bouche herself. 'My youngest son came up with it. He gets to vote now for the first time and he wondered why a red pencil is always used. He would rather use a green pencil: green is his favourite colour. That got me thinking and one thing led to another.'

The Executive Board is wild about the experiment. 'As the greenest university in the Netherlands, of course we want our staff and students to be the greenest voters,' says President Houkje Sjeimovaara. 'A little push in the right direction can't do any harm, as we see it. We should show our true colours as an institution. That fits the zeitgeist perfectly.'

**'As the greenest university in the Netherlands, of course we want our staff and students to be the greenest voters'**

De Bouche is not worried about the ethical side of nudging. 'Those pencils have always been a leftie red and no one has made a fuss about that. We're raring to go. We just need the go-ahead from the Electoral Council.'