

Resource

JUNE 2023 VOLUME 17

The journalism platform for all at Wageningen University & Research

Demo against
Resource China
article

Hoping for change in
climate investments

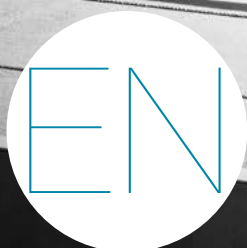
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persistent problem

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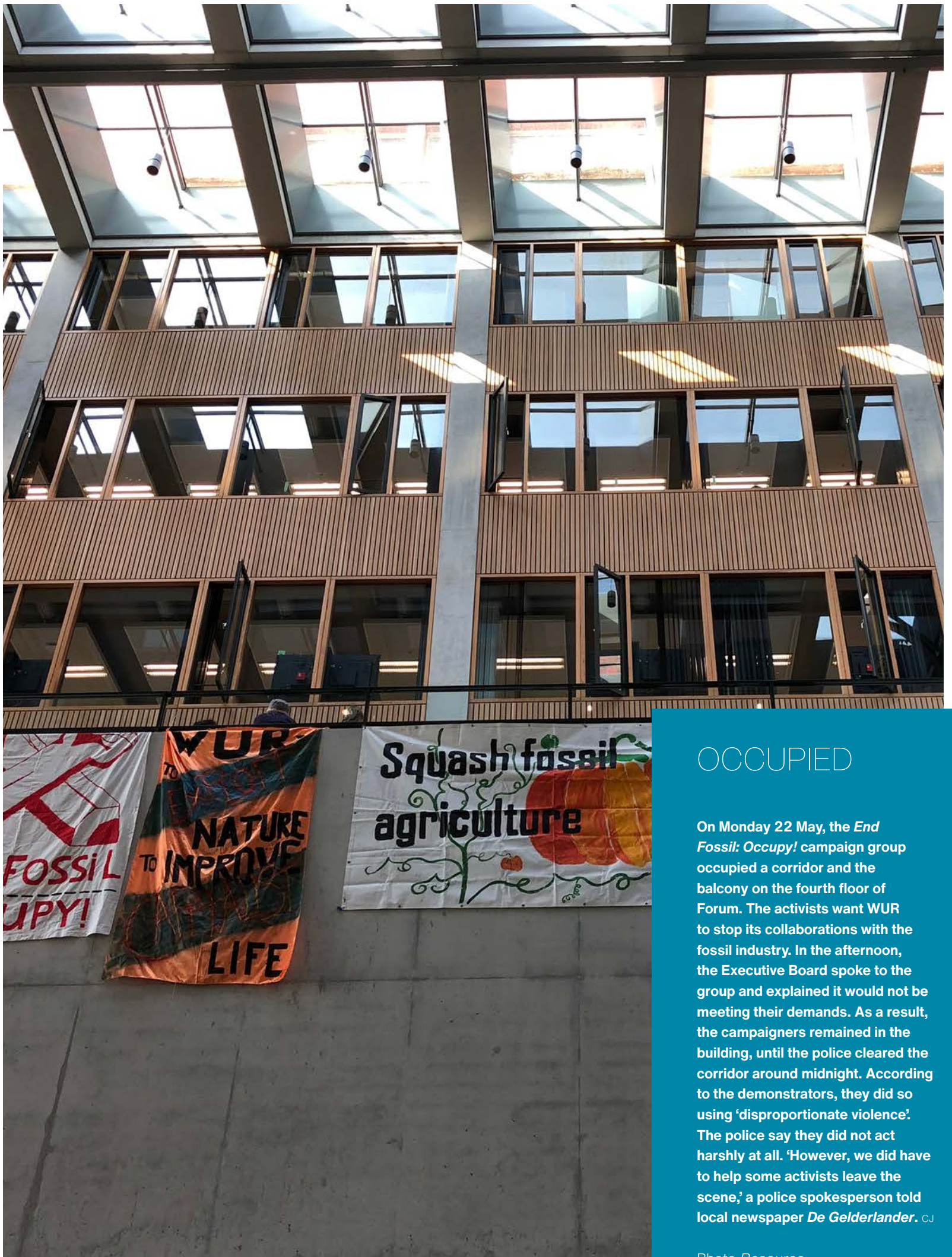


Talk with us

What started as criticisms within the organization some six months ago led to the publication of the article 'We need to talk about China', which in turn sparked an attack online on *Resource* and the article's author. Chinese PhD students started a petition (now with almost 700 signatures) demanding excuses from *Resource* and the withdrawal of the article, and they organized a demonstration. I am struggling with the emotions aroused by the article. I see and hear those emotions — that's a question of feelings. But of course we have also taken a critical look at our article. We recognize things could have been done differently, such as publishing the story in two parts (separating the underpayment and the research directors' concerns about collaboration with China). Different wording could or should have been used in places. And even though the article was about the system rather than individual Chinese PhD students, we could still have interviewed them. That in particular was the message when I talked to the Chinese PhD students protesting against *Resource*: 'Talk with us!' Since then, Chinese WUR people have approached us volunteering to be interviewed. Whenever we publish an article, anyone is allowed to hold us to account for the content. One thing I'd like to say, though. Comparing my colleague to Adolf Hitler, mentioning *Resource* in the same breath as Dutch right-wing politician Geert Wilders or suggesting our article reinforces ethnic profiling is a step too far. Anyone who thinks differently is welcome to visit the editorial office and calmly explain their viewpoint.

Willem André
Editor-in-chief





OCCUPIED

On Monday 22 May, the *End Fossil: Occupy!* campaign group occupied a corridor and the balcony on the fourth floor of Forum. The activists want WUR to stop its collaborations with the fossil industry. In the afternoon, the Executive Board spoke to the group and explained it would not be meeting their demands. As a result, the campaigners remained in the building, until the police cleared the corridor around midnight. According to the demonstrators, they did so using 'disproportionate violence'. The police say they did not act harshly at all. 'However, we did have to help some activists leave the scene,' a police spokesperson told local newspaper *De Gelderlander*. ^{CU}

Photo Resource

Demo against *Resource*: 'Talk with us!'

Over 50 protesters gathered at Forum last Wednesday to demonstrate against *Resource*. They handed out flyers and had banners with texts such as 'Apologize to us' and 'Stigma! Talk with us!'



Photo Resource

This was in response to the article 'We need to talk about China', which mentioned among other things the fact that Chinese PhD candidates on a grant get less than the Dutch minimum wage. The article also discussed the internal evaluation by the graduate school directors (interviewing some of those involved). The evaluation concludes that a broad debate is needed about the collaboration with China, covering such aspects as funding, the steep growth in the number of Chinese PhD students and access to data. This article prompted a petition that has been signed by nearly 700 people. The petition demands excuses from *Resource* and the withdrawal of the article. During

the demonstration — where a delegation of *Resource* editors met with the protesters — it became clear that the demonstrators were concerned by the wording of the article and the fact that no Chinese PhD students or their supervisors were interviewed, as well as the references in the evaluation (the subject of part of the article) to 'rumours' about control mechanisms. The demonstrators felt the article reinforces a deep-rooted racism within WUR.

Choices

DARE — an initiative aimed at eradicating racism and discrimination within

WUR — wants to organize a dialogue with the demonstrators, the interviewees in the article and *Resource*, among others. It is not yet clear whether that dialogue will actually happen. It seems the demonstrators will only engage in talks if the *Resource* editors first offer their excuses and withdraw the article. *Resource* has been approached by people who wish to discuss a follow-up article with the editorial board.

See the QR code for the editors' explanation of the article's journalistic basis.



Professor loses chair due to Saudi affiliation

WUR has deprived Professor Vincenzo Fogliano of his chair for two years with immediate effect because he obtained research funds by claiming links on paper with a Saudi university.

Fogliano, a highly cited researcher, was working full-time at Wageningen from 2018 to 2020 when he amended his 'primary affiliation'. He pretended King Saud University was his main employer to help it score higher in international rankings. In return, Fogliano's chair group received 146,000 euros. The money was used to fund a PhD candidate in food science. There are no indications the professor received money personally.

An internal investigation revealed at least six highly cited Wageningen scientists were approached by Saudi universities. Fogliano was the only one to accept the offer. He was apparently warned about such transactions back in 2018. He has now been officially reprimanded, with the threat of dismissal in the event of a further offence. He will lose the chair for two years, but he keeps his professorship. 'Fogliano has acted incorrectly, harming the scientific integrity of Wageningen University & Research,' said rector Arthur Mol. The professor himself did not wish to comment when approached by *Resource*. HOP/DV

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Last week, a pair of swans on the Orion pond had eight cygnets (baby swans). That is a lot, but it's not a new record. There was a brood of eight cygnets in 2019 too, that time on the Forum pond. Unfortunately, they all ended up inside a pike. RK

Resource open hours

Drop in on *Resource* during our open hours! What do you think *Resource* should be writing about? Do you have tips, queries or comments? From now on, we will be available on the ground floor in Forum every second Tuesday morning from 10:30 to 12:30. You will recognize us by the orange *Resource* banner. There will always be a couple of editors on hand to listen to you and discuss things. Online editor Coretta and freelance journalist Stijn kicked off last week. The next sessions will be on 6 June, 20 June and 4 July.

Scabies still around

Our columnist Sjoukje Osinga wrote last September about her three sons at uni and their scabies problems. What is the current status of the epidemic, with the tiny creatures that get into your skin and cause intense itching?

The infectious disease, in which mites burrow into your skin and lay eggs there, is becoming increasingly common across the Netherlands. The mites can be transmitted from one person to another through skin contact or via contaminated materials. The mites flourish in student houses, where young people often live in close proximity and share facilities.

'Some students feel filthy'

At the height of the epidemic, the Student Medical Centre was seeing about ten Wageningen students with scabies a day, but numbers have now fallen to five or six a day, says Suzanne van Dinther, a GP at the centre. 'We still

don't have it under control.'

The protocol for treating scabies has recently been changed. 'Previously we would treat each patient twice and give their flatmates a single preventive treatment, but now everyone gets two courses of treatment,' explains Van Dinther. 'We have also switched to prescribing pills rather than cream, as we know people are more likely to stick to this treatment.' The effects of the new treatment protocol cannot yet be seen in the figures.



Photo Shutterstock

Obsession

As of November 2022, the cost of the scabies pills is covered by the basic health insurance. Van Dinther: 'That makes it easier to treat everyone in the student house properly. I get the impression students are indeed making sure the whole house gets two preventive courses of treatments because they're terrified they won't get rid of the disease otherwise. It has become a kind of obsession for some students. They don't dare go anywhere, will only sit on wooden chairs and feel filthy.' DV

Marathon recital of IPCC report in Atlas

From Monday 22 May to Friday 26 May, concerned staff and students read the sixth IPCC report out loud.

'...points to an implementation gap compared with the NDCs of 4–7 GtCO₂-eq in 2030 (Table 2.2); without a strengthening of policies, emissions are projected to rise, leading to a median global warming...'

This was the kind of technical language to be heard coming from various speakers in the Atlas Atrium. The group Scientists 4 Future (S4F) organized the reading marathon to draw attention to the university's role in 'combatting the alarming trends in climate change'.

The idea for the action came from lecturer and S4F Wageningen member Ignas Heitkönig. 'We must continue to publicize one of the most important reports produced in recent decades. What we hope to achieve is that the Executive Board breaks ties with the fossil industry, or at any rate doesn't initiate new ones.'

The readers were not just renowned scientists but also PhD candidates, students and other staff members. 'We're in this together,' says Heitkönig. ^{FL}

Read more on resource-online.nl



Photo Resource

Walk of Fame stone for TOTY Boogaard

Birgit Boogaard, who was voted national teacher of the year (TOTY) at the end of April, is to have a paving stone with her name on it in the Walk of Fame at Impulse. This was announced by education dean Arnold Bregt at the closing mini-lecture Boogaard gave at the Education Design Festival for Wageningen teachers. Bregt presented her with a pebble he picked up on the campus, as a stand-in for the real stone. It will take some time before that is in place, since all the Walk of Fame stones are being modified - they are too slippery when wet. Boogaard was 'totally surprised and very honoured'. ^{ME}



Let's play instead

The Student Council election did not go ahead this year. The Student Council has 12 seats and as there were only 12 candidates, no election was needed. But there was still a bit of an election atmosphere in the week of 22 May: the three Student Council parties mounted the Forum stage and toured the campus publicizing topics relevant to students and the need for students to have a say in these matters. S&I asked for ideas on how to improve the campus and make the education fairer, CSF members played games and VeSte members rode around campus on their PR bike. The hope is that this will encourage enough candidates next year for an election. ^{LZ} Photo Resource

5x fewer people at risk from climate if we live up to 'Paris'

If global warming continues at its current rate, around two billion people will be living in dangerously hot zones by the end of this century. If we manage to limit warming to no more than 1.5°C, the target of the Paris Agreement, that number will be five times lower.

These figures come from a new analysis by Professor Marten Scheffer (Aquatic Ecology and Water Quality Management) and his team of international researchers, and were published in *Nature Sustainability* last week.

Temperatures of 29°C or higher are associated with negative trends including higher mortality, reduced crop yields,

more conflicts and an increased spread of infectious diseases. Three years ago, Scheffer and his team calculated the proportion of the world's population at risk of living with Saharan temperatures due to climate change. *Nature Sustainability* published details of the follow-up to that much talked-about study last week.

Currently, about one per cent of the world's population inhabit such dangerously hot zones, roughly 60 million peo-

If temperatures rise by 2.7°C, two billion people will live with dangerous heat by the end of this century

ple. This study shows that this number will increase by 140 million people with every 0.1°C of additional warming above current levels. If the Earth continues on its current course towards a rise in temperature of about 2.7°C, around two billion people will be living in dangerously hot zones by the end of this century. If warming is limited to no more than 1.5°C, the Paris Agreement target, that number could be reduced by a factor of five.

Hotspots

Two hotspots around the world illustrate what the impact could be. For India, 2.7°C of warming means 600 million people living in dangerously hot places, compared to 90 million at 1.5°C of warming. For Nigeria, a 2.7°C increase in temperature means more than 300 million people subject to excessive heat. At 1.5°C, that would be 40 million. Scheffer sums it up: 'Bold climate policies have massive potential to reduce the human costs and injustices of climate change. Our findings ought to inspire a turnaround in the thinking about global climate investments.' ME



Photo Sudarshan Jha/Shutterstock

Probiotics for piglets

Isabela Fernandes de Oliveira studied new ways of reducing the use of antibiotics on farms. She looked at the microorganisms found naturally in animals and discovered bacteria that could offer protection as probiotics. She received her doctorate for this research on 17 May.

The bacterium *Streptococcus suis* is a big problem in pig farming. About three to five per cent of pigs get meningitis or septicaemia as a result. Infection by *Streptococcus suis* is one of the main reasons why antibiotics are used in the pork industry. The bacterium is also starting to develop resistance, which is a threat to public health.

Fernandes de Oliveira studied the microorganisms in the tonsils of pigs to look for possible probiotics and natural antimicrobial substances that could inhibit or prevent the growth of streptococci. She isolated, cultured and identified the microorganisms that are found naturally in pigs' tonsils. 'This microbiome turned

out to be a rich source of natural bioactive products produced by bacteria,' she says.

Yakult bottles

The PhD candidate tested the effect of various species of bacteria in a small-scale 'farm experiment' in a secure laboratory.

Yakult-style bottles are not yet available for pigs but Fernandes de

The microbiome in pigs' tonsils turned out to be a rich source of natural bioactive products

products use several different methods in combination to inhibit the bacteria. That is why I think my results can be used to control the bacteria in a more sustainable manner.' RL

Oliveira does see a future for probiotics for pigs that farmers can add to the feed, water or milk. 'The bacteria may also develop resistance to these products eventually, but unlike antibiotics, the natural

[Live & Learn]

A failed experiment, a rejected paper: such things are soon labelled failures in academia. As for talking about it – not done! But that is just what WUR scientists do in this column. Because failure has its uses. This time we hear from the newly arrived professor of Food Technology Kasper Hettinga.

Text Nicole van 't Wout Hofland • Illustration Stijn Schreven

'After my Master's degree, I did something not many food technologists do: a PhD. After two years of research, I had nothing. No data, no publications and, above all, no faith left in the project. In retrospect, I was blinkered: I didn't look beyond my own field and I had blind faith in my professor's hypothesis. My PhD research involved working with a device that would "smell" milk and assess its quality and safety. The idea was that dairy factories could use the technology to inspect their milk before pumping it into large silos. That was the

research plan of the professor who appointed me. But it turned

out the technology didn't work. After two years, I was convinced that the research wasn't going to lead anywhere. I was extremely down for months.

Everything changed when someone on my supervisory committee suggested using the equipment to measure the health of the cows, rather than the quality of their milk. That meant leaving the milk for a while to give bacteria a chance to grow – a luxury the dairy industry does not have. But it enabled me to measure odour substances in milk that had gone off, and find out which cows had mastitis, for example. I abandoned my original hypothesis and research plan and completed my PhD research in a year and a half.

Nowadays, I always bear in mind that a hypothesis could be wrong and I devise experiments to disprove hypotheses. That is also part of science. I see it happen with my Master's and PhD students too: if their results don't match their expectations, they assume the experiment went wrong. I teach them to be open to new perspectives and possibilities, even if it means you have to deviate from your original plan.'

'These days I devise experiments to disprove hypotheses'



Sheep tick (*Ixodus ricinus*). • Photo Hans Smid

Encephalitis and meningitis via ticks

Ticks can cause not only Lyme disease but also meningitis and encephalitis. That is possible if the tick is infected with the tick-borne encephalitis virus. On 17 May, Julian Bakker received a PhD for his research on ticks and this virus in the Laboratory of Entomology. 'This is tricky research.'

'Far fewer ticks are infected with the tick-borne encephalitis virus, but it only takes 15 minutes for the virus to be transmitted after a bite compared with 24 hours in the case of the Lyme bacterium *Borrelia*,' says Bakker. The research was difficult. 'We have breeding lines in our lab for mosquito studies but not for ticks. Ticks live for four years and need different hosts for the larva, nymph and adult stages of the life cycle.' Strict safety precautions also apply for the virus. 'I always had to wear a special suit and I wasn't allowed to just open a tube.'

Artificial skin

Bakker caught ticks in the woods of the Salland ridge and around Wageningen. They were fed cows' blood via an artificial skin. That blood contained the virus to make sure the ticks became infected. Bakker saw differences between the tick populations and viral strains in the proportion of infected ticks. 'Some of the microorganisms in a tick affect what the tick does. For example, infection with the *Borrelia* bacterium makes the tick more active, so it finds a host more quickly. Other microorganisms cause it to suck more blood and grow bigger. I also found some ticks were smaller than normal, probably due to yet other microorganisms.' Bakker caught wild wood mice and infected them with the tick-borne encephalitis virus. 'Lab mice can't cope with the infection.' He discovered the wood mice had virus particles in their blood for up to three weeks after being infected, rather than just two to four days. 'That means horizontal contamination — from tick to tick via a mouse — is more likely than we thought.' ^{RL}

Here's how to make the best instant asparagus soup

Roughly 30 per cent of the asparagus that is harvested is rejected for sale because the spears are too thick, too thin, too long or too short. Consumers want uniform asparagus on their plates. The discarded asparagus is used to make soup powder. Eirini Pegiou (in collaboration with Joanne Siccama and colleagues) has developed a method to make superior-tasting powder. She recently received a PhD for her research.



Photo Shutterstock

Pegiou is Greek. Asparagus is eaten in her home country, but not the way it is here, she says. 'In Holland and Germany, it is usual to boil asparagus and eat it with ham, a boiled egg and a sauce. In Greece, it is mainly used in salads or as a side dish. And we usually eat green asparagus, not the white ones.' It takes an in-depth knowledge of the flavour palette of asparagus to create a superior soup. So in her research, Pegiou analysed the chemical composition of the flavour of asparagus and what happens to those flavour compounds when they are subjected to different kinds of processing. This of course begs the question: What does asparagus taste like?

Orchestra

'Like asparagus,' Pegiou jokes. 'One of my opponents at the PhD defence ceremony made a nice comparison. Flavour is like an orchestra and each flavour compound is an instrument in that orchestra. In the right balance, they combine to form the taste of asparagus.' That asparagus orchestra is made up of at least 35 different chemical compounds. According to Pegiou, the most impor-

tant two compounds are 2-methoxy-3-isopropyl pyrazine and dimethyl sulphide. 'If they are not present, it doesn't taste like asparagus, as tests with a taste panel have shown. But you do need all the others as well to get 100 per cent asparagus flavour.'

Maltodextrin forms a protective layer around the droplet, which shields the flavours from the heat

The usual way to make soup powder is to dry the asparagus in an oven for a long time. But when you do this, you lose a lot of the flavour compounds. To prevent that, Pegiou and coworkers used spray drying, which involves first separating the juice containing the flavours from the asparagus fibres. The concentrated juice is then mixed with maltodextrin and sprayed over hot air

Soup factory

As it is sprayed, the water evaporates, leaving soup powder behind. Adding

maltodextrin (a polysaccharide) is essential. Pegiou: 'It forms a protective layer around the droplet, which shields the flavours from the heat. The result is a powder which retains its flavours much better than it does when dried in the usual way.'

Pegiou is hopeful that the industry will embrace this process. 'There is more to be done to optimize the recipe, but that is sure to happen. We have presented a nice "showcase" with promising results. Not only does this process produce a better flavour, it also upcycles a waste stream.'

Spray-drying is not a technique for cooking asparagus at home. But Pegiou has a few tips for that too. 'Prevent the flavours from leaching out by using as little water as possible and keeping the lid on the pan. And add a little salt on the plate. With a bit of salt, the flavours are released better.' ¹ ² ³ ⁴ ⁵ ⁶ ⁷ ⁸ ⁹ ¹⁰ ¹¹ ¹² ¹³ ¹⁴ ¹⁵ ¹⁶ ¹⁷ ¹⁸ ¹⁹ ²⁰ ²¹ ²² ²³ ²⁴ ²⁵ ²⁶ ²⁷ ²⁸ ²⁹ ³⁰ ³¹ ³² ³³ ³⁴ ³⁵ ³⁶ ³⁷ ³⁸ ³⁹ ⁴⁰ ⁴¹ ⁴² ⁴³ ⁴⁴ ⁴⁵ ⁴⁶ ⁴⁷ ⁴⁸ ⁴⁹ ⁵⁰ ⁵¹ ⁵² ⁵³ ⁵⁴ ⁵⁵ ⁵⁶ ⁵⁷ ⁵⁸ ⁵⁹ ⁶⁰ ⁶¹ ⁶² ⁶³ ⁶⁴ ⁶⁵ ⁶⁶ ⁶⁷ ⁶⁸ ⁶⁹ ⁷⁰ ⁷¹ ⁷² ⁷³ ⁷⁴ ⁷⁵ ⁷⁶ ⁷⁷ ⁷⁸ ⁷⁹ ⁸⁰ ⁸¹ ⁸² ⁸³ ⁸⁴ ⁸⁵ ⁸⁶ ⁸⁷ ⁸⁸ ⁸⁹ ⁹⁰ ⁹¹ ⁹² ⁹³ ⁹⁴ ⁹⁵ ⁹⁶ ⁹⁷ ⁹⁸ ⁹⁹ ¹⁰⁰

THE PROPOSITION

PhD candidates explain the most thought-provoking proposition in their thesis. This time it's Ben Auxier, who obtained a PhD in Plant Sciences on 14 April.



'The requirement for PhD propositions outside of science is fundamentally elitist of the candidate and the university.'

'I think it is reasonable to ask PhD candidates to come up with propositions related to their thesis and their area of study, but the requirement to have two propositions on societally related issues confuses me.

Why is it that only PhD candidates have the privilege to present their thoughts in the thesis, while MSc or BSc students are not given the same opportunity? Is it due to the fallacious assumption that PhD candidates are inherently smarter, so their opinions carry more weight?

It might be true that the training we received during our PhD studies enables us to provide more insightful thoughts within a specific scientific domain than a non-expert. But we

have not taken any additional courses on analysing or debating the broader societal issues than students holding other degrees. When asked for societally related propositions, we are no more capable than anyone else.

It's great that the university allows us the opportunity to express our thoughts on a broader level in our thesis, but this shouldn't be a mandatory requirement. I've seen some colleagues submit propositions on topics that they are not well-versed in and cannot even convince themselves of. They write the propositions solely to meet the requirement. Actually, my original proposition – "This requirement is embarrassing" – got rejected.' ^{NF}

Vacancy

From September 2023: three student seats vacant on the Board of Education

The Board of Education is the legal board of all accredited study programmes at WUR and consists of 4 professors and 4 students. The activities of the BoE take up about one day a week. This includes a meeting every two weeks on Wednesdays between 9:00 and 12:30.

Interested?

Send your CV and motivation letter, in English, before 12th of June 2023, to boardofeducation.secretary@wur.nl. The interviews with candidates will take place in the week of 19 June.

More info:
wur.eu/boardofeducation

Your responsibilities / opportunities

- To represent students from Wageningen University & Research in the board that decides upon the content and quality of accredited study programmes and advises the Executive Board on various educational issues.
- To deal with a variety of topics, such as new study programmes, quality of courses and teachers, new education policies and education innovation.
- To take an in-depth look at the management of your university;
- To enrich your curriculum vitae with education management experience.

Your qualities

You have a passion for education and

ideas to develop and innovate WUR education. You are proactive and you have a critical attitude. Preferably, you have prior experience on a (programme) committee, a board or similar.

You study in the domain of

- **Life Sciences** (BAS, BBI, BPW, MAM, MAS, MBI, MOA, MPB, MPS);
- **Food & Nutrition** (BAT, BBT, BFT, BML, BVG, MBE, MBF, MBS, MBT, MFQ, MFS, MFT, MML, MNH, MWT) or
- **Social Sciences** (BBC, BCL, BEB, BGM, BIN, MCH, MDR, MID, MME).

The appointment is for at least one year, with the possibility of two re-appointments. An adequate financial compensation is available.

Same old, same old: ChatGPT

When I had my first proper statistics lesson in secondary school, we had to manually calculate the Z-score to determine whether something deviated within a normal distribution. We had a special p-value booklet full of endless tables in which to look up the correct p-value based on your Z-score. That value tells you whether a sample outcome is statistically significant. With the advent of graphic calculators, the fear was that if

‘One thing that won’t change is that we are training people to think scientifically’

understand what they were doing.

When I was a student and software came on the market that automatically saved references and turned them into a correct bibliography, the fear was that students would no longer learn to process literature properly.

When I became a vet and diagnostic software came on the market, the older veterinarians were afraid the new generation wouldn’t learn the art of clinical reasoning as well.

Now that I am a teacher myself, and I hear people around me express concern about

pupils and students just got the p-value from their calculator without looking it up manually, they wouldn’t



Guido Camps

students using ChatGPT, those old examples spring to mind. Innovation and technology will always ensure that students get a different education than their teachers did. And rightly so! Artificial intelligence will change our lives in many ways, and that is happening fast now, but in the end, it is also just a bunch of tools that we must learn to deal with.

One thing that won’t change, after all, is that we are training people to be able to think scientifically and weigh things up based on argumentation. From now on, students will probably no longer be required to produce text from scratch, but will learn to edit a first draft generated by a large language model (LLM). What’s wrong with that? I don’t miss my p-value book anymore when I run an analysis in Python either.

I reckon every generation thinks it is living in the most interesting times ever, in which developments are going far too fast. But I’m hoping for even more innovation and smart students who can deal with those developments. By the way, this column has been written the old-fashioned way, starting with a blank page... for now anyway.

Guido Camps (39) is a vet and a researcher at Human Nutrition and OnePlanet. He also enjoys baking, beekeeping and unusual animals.

Student editor Lieke tests disability access

ACROSS THE CAMPUS ON WHEELS

How accessible is WUR for people with disabilities? Together with Master's student Soe Mattijssen, who has been in a wheelchair since she was 12 due to a rare skin disease, student editor Lieke Muijsert set out to answer that question. And it was quite hard work.

Text Lieke Muijsert • Photos Guy Ackermans

I'm going on an outing with Soe today. She has brought an extra wheelchair along so I can experience the campus like she does. We start at Orion. Soe can park her car close to the entrance in a disabled parking space. Ideal, she thinks, except for having to wait for crossing cyclists who have priority. 'I have sometimes waited there for half an hour.' In most of the uni's lecture rooms, wheelchair spaces are either right at the back or right at the front. Soe prefers to sit high up at the back, so she doesn't have to look up at the screen. 'And also because some lecturers think the person at the front can answer all the questions.' In two

of the large lecture theatres in Orion, there is a platform at the back for wheelchair users, but Soe prefers not to sit there: 'An extra special place, in case you don't feel different enough yet.' There are nicer spots for wheelchair users in the lecture rooms in Forum and Aurora: in the back row, there are even tables that a wheelchair fits under. 'There I feel more like I belong with the rest.' But Soe still prefers to switch to a regular chair - and fortunately she can do this herself - because her wheelchair has an especially low backrest.

The toilets in Orion are tricky for wheelchair users: they all have a threshold. I try to enter a cubicle: first cross the threshold, then turn, then go back over it with your front wheels to reach the handle and pull the door shut, quickly backing over the threshold again before it does. 'That's why the threshold is not so convenient,' says Soe dryly. In the toilet on the ground floor, the sink is almost in the doorway. 'That's when you notice that it was not designed by a wheelchair user.' Fortunately, there are no thresholds in the disabled toilets in Aurora, Forum, Radix and Omnia.

Forum

We leave Orion through the revolving door. It turns out to be too small for a wheelchair if someone has to come out of it first. So at busy times, the receptionist lets Soe in through the emergency exit. There is a button on the revolving door to give you more time to enter. 'But personally I get very irritated if I have to go through it at a snail's pace,' says Soe.

We go to the Forum via the bridge. It is full of anti-slip bumps and they slow us down. Soe says she sometimes goes a longer way round to avoid them. 'You feel those bumps on your front wheels particularly and when I have

'When I have sore feet, I just can't bear those vibrations'

'In the morning, the Forum lift is every wheelchair user's idea of hell'

sore feet, I just can't bear those vibrations.'

The revolving doors at Forum are very doable, even for me. It's a pity the disabled button is positioned to the left of the door, where everyone comes out. Soe shows me where the disabled toilet is on the ground floor. To get there, she has to go all the way down the corridor where the deans have their offices.

In the morning, the lift in the Forum is every wheelchair user's idea of hell: everyone rushes towards it. Soe:

'There've been a few times when I was the only one left downstairs. And I only needed to go to the second floor.' The lift doors open and it was only because Soe was so quick to hold the door open for me that I made it in time.

Aurora and Impulse

We continue on our tour and ride towards Aurora, once again over a bumpy bridge. But we see that the left lane isn't bumpy. That makes for a much smoother ride. Beyond the bridge is a slope that probably feels like an insignificant mound to pedestrians, but from my wheelchair it looks like Mount Everest.

We take another look at Impulse en route. There is sloped seating in 'Speakers Corner' where debates and

performances take place. To get in, people with disabilities have to take a small lift up, then the regular lift down and then go up a carefully positioned ramp onto the stage. It all looks very nice, but I'm not sure it's very convenient. 'Well, it's doable,' says Soe gently, and I realize how much patience you need when you have a disability, and how asking for help makes you assertive.

On the way to Aurora, I start to feel my arms quite badly and blisters are appearing on my palms. Soe offers to push me, but I want the whole experience.

At Aurora, we have to drive up a gravel path to the entrance. Soe often lifts her front wheels up for this to reduce the resistance. I don't have the nerve for that trick. Inside is a smooth floor and that's a lot easier. We discover that the coffee machines and waste bins in Aurora are



Lieke (left) and Soe on their way to Aurora.

very high, making it almost impossible to scan your card for coffee or fill your water bottle, for instance. Soe stays positive: 'It's not very convenient, but again, it's doable.' We go back out and Soe asks me if I'm still okay. Yes, I'm fine. I make it to Atlas, where a long incline awaits us. Fortunately, Soe's wheelchair has a motor and I can hang on and be towed. Atlas's revolving door is so big that we can enter side by side, but first we have to get over the rubber mat in front of it. Once inside, we take the lift down to somewhere we can get out without having to go down the ramp.

Omnia and Leeuwenborch

Before we inspect Leeuwenborch, we pop into Omnia. Soe quickly spots the signs for the disabled parking area, with the entrance with a lift hidden in a dark corner next to it. We ring the bell and are soon picked up by a friendly staff member. He is happy to show us all the rooms in Omnia and operates the lifts for us. Then we get a special tour behind the scenes and we're even allowed a peek into the storeroom. In the auditorium, there are special places for wheelchairs and ramps can be placed in front of the stage so you can easily ride on to it. That looks good. Only the standing tables

are not so good for socializing for Soe and me in our wheelchairs.

We go to Leeuwenborch by car. The disabled parking spaces are right by the door, but they also serve as loading and unloading bays and the delivery vans sometimes park in front of the ramp to the entrance, so you can't get a run-up. And you definitely need one. Soe suggests I give it a go and she asks our photographer to walk behind me in case I don't make it. I take a long run-up and get about half a metre up the ramp. Luckily, the photographer can push me the rest of the way. It's too steep even for Soe's little motor. If she wants to avoid this dreadful slope, she has to go down a path into the bike shed and take the lift from there. The lift is 'snug' and we can just about squeeze in side by side. We go back out through the main entrance and via the ramp with ridges. We just about make it. Turns out Leeuwenborch isn't great for wheelchair users. Our tour of the campus is over. I'm dead tired when Soe drops me off at the bike racks. Despite the obstacles we encountered, Soe says: 'It won't ever be plain sailing and really fun. But as long as there are facilities, that's something. WUR gets a high score as far as I'm concerned, an 8.5.' ■

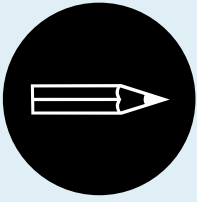
'It's not very convenient, but it is all doable'



Soe gives WUR an 8.5 for wheelchair accessibility: 'There are shortcomings, of course. The biggest one is the gravel paths. But there are also many strong points, such as the helpfulness of the staff. The university tries very hard to help people with disabilities and a lot is made possible.'

Grades:

Toilets: 7
Lecture theatres: 8
People (assistance): 9
Bridges: 4
Lifts: 8
Revolving doors (most of them): 9
Gravel paths: 5



'Wageningen, cherish your activists'

'Spontaneous protests prohibited', we read in *Resource*. Several sweet, creative protests, such as pop-up gardens and a blindfold around the head of a statue on campus, were cleared before students and staff could take notice.'

'No action is allowed on campus without consultation, for reasons that have to do with 'safety'. And for that reason, a cute little pop-up park (which students spent weeks on) is immediately sawn in half? What is the danger of a blindfold around the Sower (a statue made of stone!)? What actually compromises safety is intensive use of cars and our addiction to fossil fuels.

As a society, we are obsessed with productivity. Most people are far too busy with their daily concerns to think critically about our future. That is precisely where our role as a university lies, as a breeding ground for new and different ideas. Instead of vandalizing the students' creations, we should consider the point they are trying to make. With all that students in Wageningen read and learn about climate change, the environment and decolonization, it is surprising that the students' actions are so loving and poetic, harnessing the power of imagination to prove a point. Suppressing protests is something we usually associate with authoritarian regimes with a certain fear of their own people. But this does not seem to be the case here. Our hypothesis is the opposite. It is not the students who instil fear but the mirror they hold up to us. After all, many of us working in Wageningen know very well that we must do everything we can to make the transition to a much more sustainable society. We also know that universities



The statue of Ceres in the Atlas lobby got a blindfold in mid-May. The sheets of paper say 'This is a climate emergency' and 'Why study if WUR doesn't listen to the educated?'. ♦ Photo *Resource*

with their knowledge and free thinkers can help accelerate these kinds of change processes, or should even lead them.

'It is not the students who instil fear but the mirror they hold up to us'

the two-faced Janus head of the university: the organization in which we seek change toward a better future is also very good at legitimizing and perpetuating the status quo. Protest is a communication tool that questions what we take for granted. This is something the university should welcome, rather than punish.

When we look in the mirror that the students hold up to us, however, we also see

That is why Scientists 4 Future say emphatically: *WUR, stay with the trouble and look in the mirror a little more often.'*

Anne-Juul Welsink, Martijn Duineveld, Ignas Heitkönig, Susanne van Donk, Anatol Helfenstein, Chloé Tavernier, Geert Aarts, Joke Luttik, Chrysanthi Pachoulide, Daniela Requena Suarez, Benedikt Haug.



Papaver Rhoeas.

IV
293



Tulipa sylvestris 37

HISTORIC PLANT ILLUSTRATIONS

A facsimile publication of *Flora Batava* went on sale in bookshops this week. WUR Library's Special Collections department put on an exhibition about this historic work. The library owns about a thousand of the original prints for this book, the first Dutch illustrated work on flora. Various Wageningen researchers collaborated on the new publication. The plants shown here are the woodland tulip and the field poppy. ^{RK}

‘Not perfect, but workable’

PROSPECTS FOR DUTCH AGRICULTURE

The ongoing negotiations on an agriculture agreement have yet to lead to the formulation of a shared vision on the future of Dutch agriculture. But the Wageningen scientists Wim de Vries, Martin van Ittersum, Roel Jongeneel and Gerard Ros Wageningen do have ideas about the future of the sector.



Text Marieke Enter

Irritated by the way nitrogen and ammonia seem to be the only subject of discussion in the agricultural sector, and a very negative discussion at that, professor of Plant Production Systems Martin van Ittersum picked up the phone late summer 2022. Wasn't it high time for an integrated take on agriculture, paying attention to all the environmental issues in the sector? And offering prospects for the future instead of all the gloom and doom about everything that is going wrong now? At the other end of the line, Wim de Vries (professor of Integral

Nitrogen Impact Analysis) agreed wholeheartedly. He and his colleague Gerard Ros (a researcher in Nutrient Management) were already working on several articles taking a similar line. De Vries: 'If you take a broader view of the future of agriculture, the ammonia issue is rather relative. The Netherlands can go all out to reduce ammonia now, but if reducing methane emissions turns out to be more complicated than we thought, we'll be in an even tighter spot in the long run.'

Van Ittersum's phone call resulted in the decision to write a joint article for the provincial councils, whose task it is to coordinate the nitrogen reduction. They invited agricultural economist Roel Jongeneel to join them, as this issue calls for a lot of economic expertise as well. They met after work on Friday afternoons. Even though there was no formal assignment, they felt this document had to be produced. The cookies Van Ittersum invariably brought along made up for a lot - as did the way

the four of them worked together. 'It was very stimulating to think about this issue together,' says Van Ittersum. 'I learned a lot from it,' agrees De Vries. They published their vision paper in mid-April, shortly after De Vries and professors Jan Willem Erisman (Leiden) and Chris Backes (Utrecht) published their essay on the ministry's question as to whether there is an alternative to the critical deposition value (CDV), which is the nitrogen norm currently in use. The order of publication was coincidental, says De Vries. 'The four of us were already steaming ahead with our piece when I came across the CDV essay,

‘THIS PAPER HELPS
TO GET THINGS
MOVING’



The Wageningse Eng with the vineyards of Wagenings Wijngoed in the foreground. • Photo DroneWageningen

increasing the urgency of publishing. You can see that essay as a kind of prelude to our piece; it gives an idea of the direction of our thinking and even refers to our plan. It worked like a big stick to make us get a move on.’

But that was not the only reason to speed up, Ros explains. ‘The provinces must submit their plans for the National Rural Area Programme on 1 July. We noticed that they are desperate for solutions for the nitrogen and ammonia problems, and have little time left for the other agricultural issues such as water quality, climate and soil quality. Our document also wants to give the provinces something to aim for: we say an integral approach to agriculture is possible, and here’s how to do it.’

The farmer’s point of view

The crux of the Wageningen plan is the idea of calculating the national

environmental challenges for agriculture in terms of specific targets per farm. In the case of ammonia and greenhouse gases such as nitrous oxide and methane, the targets depend on the number of hectares or animals on the farm. In the case of nitrate, soil type and the risk of leaching are additional factors. The plan provides for a system of emissions rights that decrease annually. The advantage of this approach is that each farmer gets their own critical performance indicators in areas they have an influence over, rather than being judged on values that individuals have little control

over, such as nitrogen precipitation in natural areas. The critical performance indicators also give farmers the leeway they need to decide for themselves how to work towards those targets. Buying emission rights from retiring farmers is

‘AN INTEGRATED APPROACH TO AGRICULTURE IS POSSIBLE, AND HERE’S HOW TO DO IT’



among the options, for instance. Van Ittersum sums it up: 'It doesn't matter how farmers get there, as long as they do get there'.

That does not mean the four researchers want to give farmers free rein entirely, De Vries adds. 'Besides target requirements such as those indicators, it is perfectly possible to keep a number of regulations about farming methods. The regulations banning manure-spreading in the autumn, for example. From the point of view of emission and leaching targets, that is a very sensible regulation, and one we should certainly keep.' Ros adds: 'But current policy is increasingly adopting the farmers' point of view. We correct that by saying "please don't continue on that track". Because it's going a bit too far in the Netherlands at the moment.'

Getting moving

Because no farmer is eager for more rules and paperwork, Ros, De Vries, Van Ittersum and Jongeneel have given a lot of thought to the feasibility and workability of their plan. Wherever possible, they make use of the management tools that farmers already work with. For soil and water quality, these include the Open Soil Index, the Farm Water Indicator and the Farm Soil and Water Plan. The Cycle Indicator provides guidance on calculating current emissions and leaching. And the proposed approach to emission rights for ammonia and greenhouse gases borrows heavily from the phosphate rights system. It may not be the perfect

'CURRENT POLICY IS INCREASINGLY ADOPTING THE FARMERS' POINT OF VIEW. WE CORRECT THAT'

solution but it is workable. 'And the urgency is so great that we can't start by spending years identifying the best instrument,' Ros adds. 'We've been talking about the nitrogen crisis for four years and far too little is happening. This can help get things moving.'

Business model

The four researchers are confident that the approach they propose will make the Dutch agriculture sector go into action. But they acknowledge that the transformation will not be easy. 'It's bound to hurt somewhere. And what it hurts most, of course, is the business model,' says De Vries. Currently, 90 per cent of a farm's turnover comes from agricultural products. To maintain the vitality of agriculture, a farm's business model will have to be strengthened through several channels, the plan states. It does not rule out a need to compensate farmers with funding from some kind of 'landscape tax'.

De Vries on that tax: 'The government has reserved 25 billion euros for the transition period. We say: look beyond that phase too. That 25 billion may not be enough to put farmers on a sound business footing in the longer term. In that case, introducing a landscape tax might help. Incidentally we didn't let the question of whether Brussels would allow all this cramp our style.' Ros adds: 'But it is not a totally unrealistic idea; according to Roel (Jongeneel, ed.) there are enough pointers to justify the assumption that something of the sort is possible.'

Partners in the supply chain should also be expected to contribute financially to the agricultural transition, states the plan - just as the earlier Remkes report did. But exactly what form that contribution should take is not spelled out, admits Van Ittersum. 'That kind of thing should be part of the agriculture agreement'. De Vries: 'There are a few aspects of our plan that still need to be worked out in more detail. The minister asked about those kinds of practical details after he'd read the plan, too. But it isn't intended to be that kind of document. It is not up to us to draw up the finer details of the policy; we point in a certain direction.'

A future *with* agriculture

Ros: 'Everyone is always making all kinds of demands of agriculture. But not everyone is aware that if all those demands were met, there wouldn't be much agriculture left in the Netherlands. This plan emphasizes that we see a future for agriculture in the Netherlands, and how: offering the agricultural sector a realistic vision of the future requires instruments, legislation and specific goals.' Van Ittersum: 'I can well imagine that the plan will inspire other Wageningen scientists to join us in thinking this through. They are welcome; this is a starting point. But with an important message: agriculture in the Netherlands does have future prospects.' ■

'We want to win'

The European Universities Football Championship finally kicks off in Tirana, Albania, on 25 June. Wageningen University will be taking part in the men's and women's competitions for the first time. Captains Judith Alkema (women) and Rijk Dersjant (men) are looking forward to it.

'Behind you,' shouts someone on De Bongerd's main football pitch, where the women's team is practising. 'We train every Wednesday,' says Alkema, one of the captains of the women's team. 'Most of the players don't know one another that well, but we are really growing as a team. We have recently been practising seven-a-side football because that is what we will be playing in Albania. I was surprised by that because the men will be playing the normal 11-a-side and that is what we women are all used to. Different rules apply in seven-a-side football and so we need different tactics. On the plus side, this variant is a lot faster and more dynamic.'

'Of course we women don't want to play on a second-rate pitch'

The final for the men's competition is in a stadium that can seat 20,000, says Alkema. 'It's not clear whether the women's final will be there too, because apparently the pitch isn't suitable for the seven-a-side game. The organization is working on it so we assume that is where we will be playing. Of course we women don't want to play on a second-rate pitch.'

Men

The preparations for the men's championship have taken a bit longer to get going, says Dersjant. 'The standard is pretty high at these European Championships so we had to find a team of lads who can play really well. We now have a group of 17 top-class footballers.'

The first training session for the men's team was on 22 May. 'All the lads play for clubs so it wasn't possible to get them together for a practice before then,' explains Dersjant. 'The players already had two training sessions



Photo Guy Ackermans

and one match a week with their club team. Now the season has basically ended, so we are able to start the European Championship training.'

Friendlies

In addition to training sessions, both teams will be playing friendlies and competing in the Great Dutch Universities Championship (GNSK), to be held in Wageningen at the start of June. 'You need to get into a match rhythm,' says Alkema. 'Then you learn how all the players run, how you can take over someone else's position and what everyone's strong points are.' What would make the championship a success? Dersjant: 'We need to be realistic, keep the field compact and play to our strengths, namely the counter. And try to get as far as possible.' Alkema: 'It's difficult to predict the standard of the other women's teams. But for us as a team it's not just about taking part: we want to win.' LZ

The footballers will be travelling to Albania by bus, saving 13 tons of CO₂ emissions compared to flying. To cover the costs of registration, equipment and travel, they have set up a GoFundMe, are trying to find sponsors and are organizing activities such as a lottery. See the online version of this article for the relevant links.



‘THE BSA MUST BE LOWERED!’



The so-called ‘binding study advice’ (BSA) varies a lot between the Dutch universities. Wageningen students have to score 36 out of 60 credits to proceed to the second year; in Rotterdam, they have to get all 60. To reduce stress and the pressure on students, Education minister Dijkgraaf wants to lower the BSA to 30 credits. He also wants to introduce a binding advice of 30 credits in the second year. So what are our thoughts on this?

Text Luuk Zegers and Ilja Bouwknecht • Illustration Ilja Bouwknecht



Joram van Velzen

president of the National Student Union (LSVb)

‘Student welfare is in pretty bad shape and the pressure to perform is one of the reasons for that. So we think it would be a positive thing to lower the BSA nationwide. That isn’t a cure-all that will solve all the problems in one go, but it is a step in the right direction. LSVb is against the BSA on principle – we think it should be abolished. There are plenty of other ways of making students feel enough pressure to study. Even with the return of the basic grant, for example, taking a long time over your degree still means that you build up a big student debt. If the BSA is abolished, you need something else instead. Universities and colleges should provide students with much better supervision. It is often inadequate at present. That could include advice about next steps, but it shouldn’t be binding. Leave that decision to students themselves.’



Maartje van den Bosch

Student Council

‘I get it that the minister wants to do something about the BSA nationwide. There are universities where you have to pass everything in the first year to be allowed to continue into the second year. That has a negative impact on student welfare. In Wageningen, you have to pass 60 per cent of the points, which is a good motivator. The difference between 36 and 30 credits is not very big, so we don’t see much problem with that part of Dijkgraaf’s plan. But the idea of adding another BSA in the second year does worry us. If you have to drop out of your degree programme at the end of the second year because you don’t have enough credits, it will have a much bigger impact than if it happens in your first year.’

‘30 IS A BIT ON THE LOW SIDE’



Inge Sijpbeer

education office in the study association Sylvatica (Forest and Nature Management)

'If you don't meet the BSA requirements, it could be a sign that you are not in the right place. I wonder whether lowering the BSA will make students give less priority to their studies, especially now that student social life is flourishing again. Perhaps it will make students take longer over their degrees. First- and second-year courses could then become oversubscribed, especially if there's a BSA at the end of the second year too.

For WUR students, the difference between 30 and 36 credits is just one course. I haven't heard anything about it from the study advisers yet, perhaps partly because, compared with other universities, it won't have a big impact on us.'



Arnold Bregt

Dean of Education

'The minister is aware that students feel under too much pressure and wants to lower the BSA to reduce the pressure. Wageningen students experience stress too, but not because of our BSA. We give new students the chance to adjust and to skip a course, but they do have to score at least 60 per cent of the credits. In that respect, our BSA is nicely in line with what the minister has in mind.

I don't know if an additional BSA in the second year is in the students' interests. You might get 30 credits in your first year by the skin of your teeth, and then fail in the second year. Then you'll have muddled along for two years by the time you have to drop out. It's annoying for teachers to have students on an advanced course who lack the knowledge they need because they failed the introductory course. But it is also better for the students themselves to get clarity quickly on whether you are in the right place.'



Ellah van Bommel

first-year Environmental Sciences student

'I really think 60 credits, like in Rotterdam, is over the top – that's very stressful. On the other hand, 30 is a bit low. I understand that the pressure needs reducing, but you can expect a university to maintain a certain standard. And a BSA of 36 to 45 credits is a good motivator. Some people don't get much done if they're left to their own devices, so something like this works for them. And an additional BSA in the second year is a good idea for them too.

The binding study advice in Wageningen is not stressful for me. I am highly motivated to get good grades. But if we had to get 60 credits here to get through to the second year, that would stress me out. But I'm not at all stressed about 36 credits.'

Energy on the farm

Agriculture and horticulture are expecting a lot from the energy transition — and vice versa. WUR researchers agree there are plenty of opportunities. But there are also the inevitable pitfalls. Text Marieke Enter

Organic dairy farm De Roodheuvel in the Achterhoek region recently had reason to celebrate. After a nerve-racking preparation phase — did the electricity grid have enough capacity? — it was able to start using the 258 solar panels on the barn roof. The panels are an initiative of De Groene Draad, a local residents' energy cooperative that also owns the solar panels.

A few kilometres away, poultry farmer Hoftijzer has two small wind turbines for its barns. But the turbines, which cost some 40,000 euros each, have not operated for months. The province revoked the permit that the municipality had issued. Local residents had objected to the nature assessment that accompanied the permit application and the provincial authority says they had a point. There is still no sign of a solution.

Farmers as energy producers

These two real-life examples are illustrative of 'the energy transition in the farmyard', the subject of a recent edition of WUR Live, an online discussion programme by WUR and the ministry of Agriculture on topical policy issues.

Ministry policy officer Tim Lohmann explained that the ministry of Agriculture sees a lot of opportunities for farmers in the energy transition. Not so much from leasing their land for solar farms — however lucrative that may be — but through smart combinations of farming with the production of sustainable energy, whether electricity, green gas or hydrogen.

There is certainly plenty of demand for that energy, explained Lohmann. The government expects electricity consumption to increase by a factor of five over the next three decades, from about 120 TWh (terawatt hours) now to around 500 TWh in 2050.

Rural areas

But are farmers really the energy producers of the future, as this event claimed? Rural areas certainly have an important role to play in the national energy supply, said Jeroen Sluijsmans. He is the programme developer for the Wageningen Solar Research Programme and he was involved in the 'energy in the farmyard' quick scan that WUR carried out for the ministry at the start

of the year. Rural areas are already net producers of energy, meaning agriculture generates more than it consumes. Of the 35 TWh the energy regions need to generate energy sustainably on land by 2030, as agreed in the Climate Agreement, 66 per cent is supposed to come from rural areas, said Sluijsmans.

As he explained, many farmers are keen to seize this opportunity and supplement their farm income by generating sustainable energy. 'We see increasing numbers of farmers getting involved in energy production, not just for their own farm but to supply other people too.' That is clear too from the figures. According to Statistics Netherlands, in 2020 about 3500 farmers were generating energy for consumption by others, three times as many as in 2016. That number is still growing, as the example of De

Agro-energy events in Lelystad and Bleiswijk

On 6 June, WUR's ACRRES is organizing the Countryside Energy Day. The location is Broekemahoeve farm in Lelystad. The announcement promises 'a sustainable journey through the energy provision of the future'. One day later, on 7 June, WUR is organizing the EnergiekEvent 2023 in Bleiswijk, all about energy in greenhouse horticulture. To register for these events, go to accres.nl and wur.nl respectively. The abovementioned editions of WUR Live can be viewed via the intranet group of the same name.



On poultry farmer Hoftijzer's land in the Achterhoek region, two small wind turbines have stood unused for months because the provincial authority revoked the permit after objections from local residents. • Photo Resource

Roodhevel shows. And given that there are 50,000 farms in the Netherlands, there are many more potential producers.

Agricultural initiatives

Sluijsmans discussed various promising rural energy initiatives. For example, there are initiatives with solar panels in arable farming, semi-permeable panels are being used in the cultivation of soft fruits and there are pilots with vertical panels and systems that track the sun on grassland. He also mentioned the two hundred farmers who set up the Zeewolde wind farm with 83 turbines last summer in a collective with local residents. This is currently the Netherlands' largest wind power project on land; it is able to generate 320 megawatts, enough to supply 300,000 households with electricity. Another success story is an initiative in livestock farming in which fresh manure fermentation, which provides biogas, is combined with the production of fertilizer substitutes. That is done by

extracting minerals from the digestate, the residual product from the manure fermentation.

Obstacles

It became clear in the discussion that many farmers still find the energy market difficult to get into. For example, farmers sometimes lack the knowledge and expertise required to make the right choices. There are also the familiar obstacles that farmers and others regularly encounter: a lack of capacity in the electricity grid, complex and lengthy permit procedures and obstructive regulations. The regulations are a

'An increasing numbers of farmers are getting involved in energy production'

particular problem for the small-scale production of hydrogen. On paper that looks promising, and WUR is already researching this with TNO in Lelystad, but there are legal issues for instance, making it tricky in practice.

Both Sluijsmans and Lohmann agreed that if the Netherlands wants farmers to play a bigger role as energy producers, that role needs to be acknowledged in government policy — for example the National Programme for Rural Areas or the energy policy. Lohmann said work has started on this. There will soon be a national information document for permit granting organizations. That will be too late for poultry farm Hoftijzer, but hopefully it will spare future energy farmers similar headaches. ■

Insect screens in Zambia:

Less malaria, more income

Simple insect screens in windows and doors save families in Zambia not only from disease but also from loss of income, shows research by PhD student Brian Chisanga and his colleagues. Dilemma: 'It does increase inequality, though, because the poorest people's homes are unsuitable for the measure.'

Text Rianne Lindhout

Development economist Brian Chisanga had to give it some thought when his PhD supervisor Erwin Bulte asked him to get involved in this project. Having focussed mainly on agricultural markets and policy till then, he wondered whether he should really join entomologists and parasitologists in researching mosquitoes and malaria? Looking back now, he has no regrets. 'I was the only economist in the group and that was odd at times. But we learned a lot from each other. How entomologists measure mosquito density, for example. And the other

'If you are sick or have to look after a sick child, it costs the family money'

researchers' networks in the healthcare sector came in handy. Conversely, during the baseline survey I remember struggling to explain certain economic concepts, such as "willingness to pay" for mosquito nets through a bidding mechanism. Eventually, everyone understood it and thought it was very interesting.'

Malaria hotspot

The team randomly selected 800 houses with families in 89 villages in the Zambian malaria hotspot Nyimba. They then installed screens in the windows and doors of half those houses. That cost about 85 dollars, and the question was whether that investment would be cost-effective. Malaria is common in eastern Zambia. Every year, about 40 per cent of adults get malaria and are too sick to work for

several days. Children generally get sicker and under-fives often die of the disease.

Interventions are already under way, but more is needed, Chisanga explains. 'The government is handing out free bed nets sprayed with insecticide. People also spray the walls with an agent that kills mosquitoes that land on them. That works for a few months, but those substances are bad for the environment and the mosquitoes become resistant to them. Our intervention is environmentally friendly and is intended to complement the other measures.'

Peak during harvest

Most of the inhabitants of Nyimba work in agriculture. Chisanga: 'The peak of the malaria season falls right in the period when harvesting and weeding must be done. If you can't work for a few days just then because you are sick or you have to look after a sick child, it costs the family money.' The researchers estimate that screening windows and

doors saves an average of 4.6 days per family when adults cannot work due to malaria. Children benefit less from the measure. 'In summer, the screens raised the temperature indoors and the children were probably outside more as a result.'

The screens cost an average of 84 dollars per house and generated a 55-dollar increase in household income due to the extra days worked. 'We assume the screens will last four years, so they are well worth the investment.' But unfortunately, it is not as simple as that. 'These people are too poor to make this purchase. All their money goes on food and school fees, and the interest on the loan is too high.'

Free screens?

Informal conversations revealed that people were very pleased with their screens. 'They were very enthusiastic,

and they thought they looked nice too. If we had had enough funds, we would have given them to everyone in the research area after the end of the study.' But actually, something else needs to happen first, adds Chisanga. 'Striking as the economic advantages are, we have to realize that screens increase inequality too. You have to start by improving the poorest people's houses because they are unsuitable for installing mosquito nets. And these are precisely the people who are the most exposed to the harmful effects of malaria.'

The economist hopes his research will help keep the debate on eradicating malaria alive and that funds will be raised to implement the plans. 'I hope this research will provide more than just knowledge. That it also has social impact.' ■

Solid progress

Development economist Erwin Bulte, Brian Chisanga's supervisor, does a lot of research into the effectiveness of interventions in developing countries. He looks for example at whether drought insurance for livestock farmers in Kenya helps reduce local conflicts. In nearly all cases, NGOs, governments or local businesses are involved in the research.

So do the results ever lead to real changes? Bulte: 'In Sierra Leone, it turned out that forest protection works better if you pay local communities for it. This study led to the whole system of payments being adjusted, and it laid the foundation for a project run by REDD+, a UN programme for combatting climate change.' He also studied 'business and gender training' offered to women by an NGO in Vietnam. 'Surprisingly, the training led to an increase in domestic violence because some men felt excluded and thought their wives were becoming too independent. Since then, the organization has invited men to the training too, and involves them in the process.'



PhD student and development economist Brian Chisanga (left) interviews residents of Nyimba. ♦ Personal photo



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 Jessie van Doesburg (26), a Master's student of Molecular Life Sciences. She has been cleaning at the Slingeland regional hospital in Doetinchem for nearly 10 years now. Text Steven Snijders

Jessie scrubs the wards

Who: Jessie van Doesburg (26)

What: cleaning in a hospital in Doetinchem

Why? Switch off and get cleaning

Hourly wage: €14.08 (gross)

'I started this cleaning job when I was at secondary school. I was born in this hospital, and my mum and my sister work here too. So it's always been part of my life, basically. I clean all the different spaces a hospital has, from offices and corridors to operating theatres. Whatever can come out of a human

'Whatever can come out of a human body, you'll encounter at some point'

body, you'll encounter at some point. Sometimes patients don't make it to the toilet and there are faeces on the floor. That can happen on the gastrointestinal and liver ward particularly. In the MRI and CT scan department, there is blood occasionally. You really have to hold your nose sometimes. It is varied work because of the different kinds of wards and I like the fact that I don't have to think about it too much.'

'Each ward has its own procedures. On the isolation ward, I first go through a changing room and get wrapped in protective clothing from top to toe. After doing the cleaning, I go out through the same room and all the protective clothing is discarded. In the Covid period,

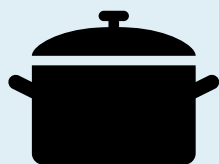
that ward was completely full. In another ward, where the chemo patients are, the faeces are radioactive. So I clean everything twice there, to be on the safe side. Afterwards, the cleaning wipes go into a separate bag with a special washing programme. Of course, people die in the hospital, and I can be told: 'Someone has just died in room three, you'll have to wait before cleaning there.' Members of my family have died here too. Because our cleaning corner is next to the mortuary, I sometimes see the dead bodies being brought in. The dead no longer feel pain, but I find it upsetting to see weeping relatives. Fortunately, it doesn't happen often. I often work at weekends and there are other girls of my age working then too, so it's always very sociable.'



Photo Guy Ackermans

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

You come across all the flavours of the world in the WUR community. Adinda Kirana (25), a Master's student of Food Technology from Indonesia, who specializes in Gastronomy Science, shares one of her favourite Indonesian snacks.



Flavours of WUR

Risoles Mayo



Adinda Kirana, an MSc student of Food Technology from Indonesia

'I would like to share one of my favourite snacks from my home country, Indonesia. You can eat this savoury snack at any time of the day. Back home, you can buy four of them for about a euro. They are not an expensive snack, but they make my tummy happy!'

- 1 Mix all the pastry ingredients except the oil, and whisk in a bowl.
- 2 Place a small pan with a little oil on a low to medium heat.
- 3 For the pastry, fry the batter in 7 thin sheets, and set them aside.
- 4 For the sauce, mix the mayonnaise with the condensed milk, mustard, sambal and pepper.
- 5 Layer the meat, boiled egg, leek,

cheese and sauce in the middle of each rissole sheet.

- 6 Roll the pastry up and seal it with a drop of water.
- 7 Coat the rissoles with egg and breadcrumbs.
- 8 Fry the rissoles until golden brown, then drain off the excess oil.
- 9 Best served with some raw Thai chili peppers.

Tip: You can buy readymade sheets of spring roll pastry at an Asian store if you don't want to make your own.

10-euro lunch voucher

Share your recipe with *Resource* and get an **Aurora voucher worth 10 euros**.
resource@wur.nl

Ingredients (for 7 rissoles):

For the sauce

- 15 tbsp mayonnaise
- 3 tbsp honey or sweetened condensed milk
- 1.5 tbsp mustard
- 2 tbsp sambal
- 1/4 teaspoon pepper

For the filling

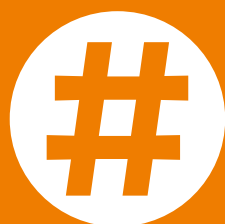
- 7 slices of beef, bacon or ham
- 45g grated cheddar cheese
- 2 hard-boiled eggs, chopped into 6 pieces
- 1 roughly chopped small leek

For the pastry

- 125g flour
- 1 tbsp cornflour
- 130 ml water
- 200 ml milk
- 1/2 teaspoon salt
- 2 tbsp oil
- 1 raw egg

To coat

- egg and breadcrumbs



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The last mile is the shortest



Ilja Bouwknecht

As a student, you are endlessly told that the last mile is the longest. It turns out to be true too. And I personally think that it is truer still when writing your thesis. Incidentally, I found the second-to-last mile to be longest of all: I had a major dip in motivation before the final peak in effort. All my zest for life was gone.

As it happened, this dip coincided with the Liberation Festival week, and I decided to

My plan to lift myself out of the motivation dip had worked

celebrate liberation as literally as possible this year. I hoped some human contact would give me

the boost I needed to complete those final analyses and finish that damn literature review.

At the festival the bass boomed so loudly that my chest vibrated. My earplugs couldn't take it. It felt like one of those disco nights for deaf people, with physical vibrations instead of sound. We were packed together like sardines as we danced. When the sun finally broke

through, a cloud of evaporating sweat immediately formed, mixed with a heavy smell of smoke. We poured wine from a secret bottle, and watched it slosh out of the cups as we bumped into the elbows of all the people dancing around us.

For a moment there, it was great. But then my conscience kicked in: What are you doing? Why are you so drunk? Weren't you supposed to finish your thesis this weekend? Etc.

I made my way to the edge of the park to get some air. My plan to lift myself out of the motivation dip had worked. And it was only Friday! I still had an entire weekend to use that motivation high. Wet with hangover sweat, but still, it worked. I pressed 'Send' and delivered my preliminary version, including new analyses and that damned literature review.

The real final mile will come later, once I get back the comments on my work. But with this burden off my shoulders, it will feel light.

Ilja Bouwknecht is 24, a Bachelor's student in Forest and Nature Management and an active member of study association WSBV Sylvatica. She sometimes conducts research on bats at night.

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FREE BEER FOR UNLUCKY GENERATION

After lowering the bar for staying on after the first year and making it easier to cancel student debt, Education minister Dijkgraaf plans to go even further in compensating the ‘unlucky generation’ of students.

Leaving home, living on your own, getting used to university life and studying — it’s not easy being a student. The current generation had to cope with the Covid pandemic on top of that. ‘Research shows students’ mental wellbeing is under pressure,’ says Dijkgraaf. ‘Fortunately I have been able to free up enough funding in our ministry to help this group in innovative ways.’

One of the new measures concerns the activities students missed out on during the pandemic. Dijkgraaf: ‘All the pubs were closed so students had fewer opportunities for a night out on the town, which is an important part of student life — essential in developing social skills,

for example. To compensate, the Dutch government will fund a daily Happy Hour to encourage students to go to the pub more often.’

Another negative effect of the pandemic is the spread of scabies. The scabies mite is thriving in student houses

in particular. ‘We heard scabies cream rubbing parties are being held all over the country,’ says Dijkgraaf. ‘We are keen to encourage this trend. That is why students will get a free crate of beer with every tube of scabies cream.’

The minister has other ideas as well for helping out students. ‘We are drafting a bill that will force all student accommodation providers to install a bath in every student house. A survey showed students get very stressed and a hot bath has been shown to effectively relieve stress.’ All students will also get a new bike, although they will have to pick it up in person in The Hague. And if the bike breaks? ‘My civil servants will come and repair it for you,’ promises Dijkgraaf. The details of these plans still need to be worked out.

The minister rejects criticisms that his policy is too soft and is encouraging students to evade responsibility and pass the buck. ‘Once the basic grant gets reintroduced and students see the monthly amount appear in their bank accounts, you can be sure they won’t be passing the buck, euro or any other currency.’

‘Students will get a free crate of beer with every tube of scabies cream’