

WUR from within: straight, sharp, transparent

No 02

Resource

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The journalism platform for all at Wageningen University & Research

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is no more

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FOREWORD

Climate and coffee

Climate change was recognized as a serious global problem for the first time in 1979, at the First World Climate Conference in Geneva. At that time, WUR was still called the Agricultural College and men very much outnumbered women in the student population. Now WU has the highest proportion of women doing science degrees in the Netherlands (see the infographic on page 16 for the changes over time) and the tone during the opening of this academic year was more activist than ever (page 24). Online too, WUR people are increasingly vocal about their views on the climate crisis. They even turn up to the Extinction Rebellion demonstrations on the A12 motorway. Students protest on campus against investments in the fossil industry and question the need to travel by plane for excursions or study trips (page 12).

In short, times change. The one constant is that there always seems to be commotion about the coffee. As of last week, proper cups are stacked next to the coffee vending machines rather than disposable beakers. Good for the environment, not so good for hygiene. In places without a dishwasher, we have already spotted sinks full of dirty cups, plus irritated notes saying things like: 'House elves don't work here' and 'It's not much trouble and cheers me up, so don't just leave your dirty cup'. It doesn't look promising: if we can't even wash and put back our own coffee cups, how are we ever going to resolve the climate issue?

Willem Andréé
Editor-in-chief





HOPING FOR WATER CANNONS

Last Saturday, Extinction Rebellion organized another blockade of the A12 motorway. There was also another supporting demo next to the motorway. WUR students and staff were in evidence, both on and next to the motorway. The supporting demo featured performances by well-known Dutch artistes and talks by scientists. One of the WUR demonstrators on the motorway kept *Resource* up to date: 'I hope they decide to use the water cannons.'



Photo ANP / Jeffrey Groeneweg

More cash for scholarship PhDs

WUR will provide extra support for hundreds of scholarship PhD students whose monthly incomes are being eroded by the high inflation. The scheme will cost the university an estimated couple of million euros over the next few years.

Scholarship PhD candidates are not employed by the university; they depend on a grant they get from their country of origin. WUR has over 500 such PhD students, a fifth of the total PhD population. The grant must be more than the 'norm' set by the Dutch Immigration and Naturalization Service (IND), the minimum monthly amount it thinks the student needs to live off. If the grant is less, the IND won't issue a visa.

But because inflation is so high, many scholarship PhD students have been on grants that are under the IND norm for some time.

'We are expecting the tax authority to accept this'

Now the Executive Board is going to tackle the situation, says rector magnificus Arthur Mol. 'We've wanted to do this for a while but we couldn't get approval from the tax authority. As a

university, you're not allowed to just give extra money to scholarship students. The tax authority may see that as a salary, at which point various tax rules apply. We tried to get agreement on this, but without success. Which is to say, we don't know whether it's allowed or not.'

Nevertheless, WUR has decided to give the PhD students this financial support. It involves supplementing their grants up to the most recent IND norm, applicable as of 1 July, says Dean of Research Wouter Hendriks. The scheme will have retrospective effect back to that date. 'If you had a shortfall before then, that isn't covered. The supplement applies until the end of the PhD, with a maximum of four years.' Depending on the situation, the amount can be as much as several hundred euros a month.

In return for this gift, WUR requires the grant organization to make sure the PhD candidates' grants grow in line with inflation as of the next calendar year. Hendriks: 'Our aim is for no one to end up below the IND norm again.' Mol says the grant organizations will be informed of the new requirement this week. 'We'll see how they respond.'

PhD bonus

The scheme is expected to cost WUR between 2 and 2.5 million euros. Some of that money will come from the PhD bonus that chair groups get for the successful completion of a PhD project. Mol: 'Next year, as a one off, we won't increase the bonus in line with inflation. The rest of the money will come from our reserves.'



Hendriks says the measure was discussed at length with the graduate schools and the PhD candidates. The professors and scholarship PhD students have been informed by email. They will then need to apply to their own graduate school.

It is striking to see the Executive Board taking action without getting approval first from the tax authority. Mol calls it a 'calculated risk'. 'Eventually, we had to decide whether to wait for the tax authority or not. This is about topping up the grant to the IND minimum. The students are in a desperate situation. Inflation is unexpectedly high, and that is not the fault of the students or the grant organizations. We have to do something. We are expecting the tax authority to accept this.'

RK

1,953

People running the Jungfrau Marathon last Saturday had to climb 1,953 metres. A small group of scientists brought together by initiator and climate guru Tim van Hattum completed the course. In taking part, they wanted to draw attention to the melting glaciers. The race started in Interlaken and ended at the foot of the Eiger glacier. It took Van Hattum six hours. RK

Editorial Council on China article

The *Resource* Editorial Council has considered two formal complaints about the article 'We need to talk about China'. It was claimed the article was racist and PhD students were not asked for their views. The Council concluded there was no racism or discrimination and that a rebuttal was not a journalistic requirement in this specific case. The Editorial Council has now informed the complainants. 'Given the discussion', writes the Editorial Council chair, 'we think it is appropriate to share this information by publishing this announcement in *Resource*'. Read the Council's full response [here](#).



HousingDesk closed down

HousingDesk Wageningen is no more. This service for students, set up originally by the student union W.S.O., had long been run by people whose university days are over. It was becoming increasingly difficult to find new staff and keep the service up to date, explains Nico Claassens, associate professor of Microbiology and a member of the board and supervisory director of HousingDesk for some years.

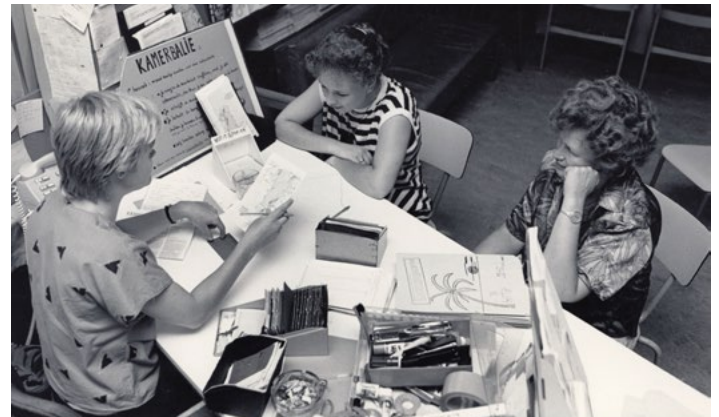
'When the W.S.O. student union was disbanded in 2012, we decided to continue with the HousingDesk as a foundation,' says Claassens. 'We felt it was important to offer a platform for students and people who take in lodgers or have a few rooms to let.'

'In recent years, our main task has been advising international students'

about scammers and published reliable adverts from landlords on our website. In addition, we helped the landlords draw up rental contracts.'

But it was becoming more and more difficult to recruit staff, while students hadn't been involved in the HousingDesk for a long time, so the board concluded continuing with the current setup was no longer viable, says Claassens. 'We called the municipality, the public library, Thuis, Idealis and the university to ask whether

In recent years, our main task has been advising international students and answering questions about housing benefit, Dutch-language contracts and so on. We also gave warnings



HousingDesk started out in Arion, a former WUR building. 'They had a card index box with all the rooms that were available' ♦ Photo from the late 1980s by Guy Ackermans

they wanted to take over our tasks. Unfortunately, no one did.' Finally, Claassens points to the Good Landlordship Act. 'It says the municipality is responsible for enforcement in the case of rental accommodation. So legally it's the municipality that needs to take action. I hope in particular they do something about the scamming as I'm quite worried about that. But the municipality should also do more to tackle the problem of landlords demanding excessively high rents.' The HousingDesk office has already been emptied. LZ

Universities more likely to offer permanent jobs

Lecturers at Dutch universities are more likely to get a permanent position than in the past. The shift from temporary to permanent is going more slowly at WUR, but Wageningen still has fewer temporary contracts than the average. These conclusions come from new figures from the association of Dutch universities UNL.

Nationwide, lecturers and assistant professors are now much more likely to have a permanent job. In 2022, 54 per cent of the lecturers (without a research task) had a temporary position (2021: 62 per cent), and 19 per cent of assistant professors (2021: 29 per cent). At WUR, the number of assistant professors on a temporary contract actually increased from 121 to 124. There was a small fall in the number of lecturers on a temporary contract, from 119 to 114.

Fewer temporary staff

Relatively speaking, Wageningen — or rather, WU as WR is not included in the UNL figures — has fewer lecturers on a temporary contract: 45 per cent compared with a national figure of 53 per cent. The same applies to postdocs: with 387 of the 411 postdocs on fixed-term contracts, the proportion at Wageningen (82 per cent) is less than the national average of 88 per cent. But a far higher proportion of assistant professors are on a temporary contract at WUR: 38 per cent compared with 20 per cent nationally.

Universities' widespread use of temporary contracts has been a bone of contention for years. After continued protests by lecturers and trade unions, universities promised to increase the share of permanent contracts, for example using recent government investments in sector plans and starter and incentive grants. 'The structural nature of these investments has finally created the necessary calm and scope for university staff,' concludes UNL, while also calling on politicians to continue the investments. [ME](#)

Great WUR Bake Off

Last Thursday, 18 amateur cooks from WUR took part in the Great WUR Bake Off. Food Quality & Design PhD candidate Lotte Pater thought up the event as a way of raising money for a PhD trip to Mexico. Visitors could buy a ticket for 5 euros (to taste three cakes) or 10 euros (to taste all the cakes), and they could score the creations. The amateur chefs had excelled themselves: the table was laden with creative concoctions from 'festive seaweed tart' to 'Victoria's ultra-amazing sticky toffee cake' and 'date cake'.

The cakes were also assessed by a jury consisting of Guido Camps, Human Nutrition researcher and a former finalist in the Great Dutch Bake Off, and Elisa Tsai-Meu-Chong, a former pastry shop



Photo Lotte Pater

employee. The favourite with both the general public and the jury was Senna's Summer Surprise, by Senna Janssen. Her cake was based on the Porn Star Martini cocktail. 'I like cakes that are inspired by cocktails,' says Janssen. 'This cake contains a lot of different things, which is my style.' The prize consists of a personalized rolling pin and a month's access to a 3D chocolate printer. [18](#)



Foto Guy Ackermans

Royal visit

King Willem-Alexander and Queen Máxima paid a visit to the Gelderse Vallei region on Thursday, 31 August. They finished the day at student society SSR-W. 'The King and Queen were keen to talk to some students,' explains SSR-W chair Sigrid Verkerk. 'The organization was looking for a real student place in Wageningen town centre. We also have a lovely garden that is nicely secluded, which is useful because you don't want everyone being able to get in.'

The King and Queen spoke to eight students each about two different subjects. Verkerk (wearing purple in the photo) was one of the four students who spoke with Willem-Alexander about nutrition and health. 'The King is easy to talk to,' she says. The programme ran to a strict timetable but after mayor Floor Vermeulen's closing words, a small deviation was permitted. Verkerk: 'I had agreed with the mayor that after his closing speech, I would ask the King and Queen to sign an SSR-W society tie. Which they did! We're going to frame it.' [LZ](#)



A fungus trap catches airborne spores on an adhesive strip • Photo Bo Briggeman

Collecting fungi

An estimated 200 people a year die from an infection of the fungus *Aspergillus fumigatus* in the Netherlands. The threat is increasing because the fungus has built up some resistance to azoles, the compound most commonly used to treat fungi. Now WUR researchers have started the citizen science project Schimmelradar ('fungal radar') to map that resistance.

Aspergillus fumigatus is found in the air everywhere, says Eveline Snelders. 'We breathe this fungus in every day. That's not a problem for healthy people, but people

'Resistance has spread from agriculture. This study aims to map that spread'

with a weaker immune system do run a risk if they breathe in the fungus. The most deadly form of infection is invasive aspergillosis, fungal

growth in the lungs, which can spread to other parts of the body.'

Azoles inhibit the fungus. But now the fungus has found a way round it. The first resistant variant was found in 2007, and it spread rapidly around the world. Snelders got her doctorate in Nijmegen in 2012 for research on the mechanism underlying that resistance. Further research in the years that followed identified the reason for the resistance: widespread use of azoles in agriculture.

'*Aspergillus fumigatus* thrives in warm,

steaming piles of compost made up of farm waste,' explains Snelders. 'That compost contains traces of the azoles used in farming. The fungi are essentially selected for resistance in the compost piles. The resistance then spreads from agriculture to other places. This study aims to map that spread.'

Fungus trap

To do this, she is calling on the general public. Ordinary citizens can help by setting a fungus trap. It contains adhesive strips that catch passing airborne spores. Members of the public are being asked to hang up a trap outdoors near their home for four weeks, and then send in the adhesive strips. 'We will cultivate the colonies further and investigate whether they are resistant.'

You can't see the fungal spores on the strip. 'You can only see the colonies after we've cultivated them,' explains Snelders. 'But they really are there. We did extensive tests and one strip will definitely have 100 to 150 colonies of this fungus. We use

a highly selective medium for cultivation to make sure we don't get a load of other bacteria and fungi growing as well.'

In addition to mapping the spread of resistance across the Netherlands, Snelders also wants to get a picture of the various mutations. 'We find resistance in 4 per cent of fungi in the air, in 10 to 20 per cent among hospital patients and in almost 100 per cent in some hotspots. But is that the case everywhere? And can we identify the sources of this resistance? That is what we want to know.'

Snelders and her PhD students Bo Briggeman and Hylke Kortenbosch of the Genetics chair group will be allocating some 300 traps to people spread across the country. The application process kicked off last weekend. Selected participants will get a message around 22 September, after which the packages will be shipped to them. Measurements can start in October. Participation is free of charge. RK

More info: schimmelradar.wordpress.com

[Live&Learn]

A botched experiment, a rejected paper: such things are soon labelled as failures in academia. As for talking about them – not the done thing! But that is just what WUR scientists do in this column. Because failure has its uses. This time, we hear from Lysanne Snijders, Assistant professor of Behavioural Ecology.

Text and illustration Stijn Schreven

‘Quite a while ago I submitted a proposal for research on nature conservation and behaviour to a renowned institute in Berlin. It seemed a perfect match since my partner was already living there. I knew my boss from when I was working on my PhD and we got on well then. But as soon as I was under his leadership, everything changed.

Within a week I realized that the atmosphere at the research institute was totally different to what I was used to. Distrust ruled, and in my line manager that expressed itself as micro-management. Independent research went out of the window and my supervisor monitored everything, even my emails to research contacts. There was no Wi-Fi in the building, I wasn’t trusted to supervise students, and emails were brusque. I didn’t feel respected. It was a shock to find myself in such a toxic atmosphere. Luckily there was a positive side to it: because my peers and I were in the same boat, we quickly became good friends.

I learned the hard way that you should not only find out about the research a prospective employer does, but also talk to current staff there about the atmosphere in the workplace. They could have given me some insight into that. Of course it is not easy to be

‘My supervisor monitored everything, even my emails to research contacts’

picky in advance because jobs in science don’t grow on trees. What is more, as a researcher you are in a vulnerable position because you are dependent on a recommendation or even a qualification.

Now I’m a supervisor myself, I make a point of keeping in touch with how my researchers and students experience their working conditions. I make sure they feel safe and give them scope to slow the pace if they need to. I don’t want them to wonder how they are going to get through their day, like I did in Berlin.’



ERC starting grant for Madelon Lohbeck

Madelon Lohbeck, an assistant professor in the Forest Ecology & Forest Management chair group, has received a starting grant of 1.5 million euros from the European Research Council for her project REACT: *Regreening Africa with natural regeneration.*

The project is all about farmer-managed natural regeneration (FMNR). ‘It’s really what farmers have been doing for centuries: seeing what trees pop up spontaneously on their land, deciding whether to keep them, then managing them,’ explains Lohbeck. ‘They steer the natural ecological succession and combine that with grazing or growing crops. It’s a form of agroforestry.’ Natural succession is cheaper than planting trees, it requires less work and there is less loss of saplings. Even so, it is not always the best option. The key questions in Lohbeck’s research are: which species regenerate naturally, under what ecological and social circumstances, and what are the results? By which she means not just results in terms of soil quality and biodiversity but also in the sense of valuable products for local people, such as wood for use as cooking fuel, or fodder for their animals.

Kenya

In Kenya, Lohbeck will set up various plots on actively managed farmland where she and her research team will monitor tree growth for five years. She will compare those plots with the natural regeneration on plots that are no longer being managed, according to the classic view of succession. ‘That comparison will show me how farmers can steer succession. What choices do they make? And what does that mean for the restoration of specific functions in the short term and long term?’ To evaluate the potential of natural regeneration on a greater scale, Lohbeck will combine the study in Kenya with datasets from other locations in sub-Saharan Africa. ME

'FOR ME, WAGENINGEN IS AN AMAZING OPTION'

With the arrival of Ronald Pierik, the Molecular Biology chair group has a new chair holder. After 20 years at Utrecht, Pierik is exchanging Utrecht University for Wageningen. *Resource* spoke with him on his first day at work.

You grew up in Heelsum yet chose to study biology in Nijmegen. Why not Wageningen?

'Like many young people I didn't really know what I wanted to study. I enrolled in a chemistry course, but eventually chose biology. I didn't choose Wageningen because I wanted to go more into the medical molecular side. Secretly it was also because Wageningen was so close: I wanted to expand my horizons. I also did my PhD in Nijmegen.'

What was your PhD thesis about?

'About the competition between plants and how they sense each other. I continued on that track as a postdoc in Utrecht. I was able to slowly build my own Photobiology group and I became chair holder of Plant Environment Signalling.'

And now Wageningen?

'I should make it clear I was perfectly happy in Utrecht. But this job vacancy made me think. Do I want to be working in Utrecht for another 20 years? The occasional change is good, but you also don't want to end up in a lesser place. For me, Wageningen is an amazing option. What you have here in terms of plant biology is unique in the Netherlands.'

A new photosynthesis institute is being set up. Did that affect your choice?

'Photobiology is not the same as photosynthesis. Photobiology is about how light is perceived by plants and used by them to adapt to the environment. But photobiology does have lots of common ground with photosynthesis. I hope to develop that common ground. It's strange,



Leaves of two *Arabidopsis thaliana* plants sense each other via light and surface touch. Each plant raises its leaves to avoid being overshadowed by the other plant • Photo Ronald Pierik

of course, that you have two different research fields for plants, both of which are about light, but they barely work together. I would like to bridge that gap. That's why I've been working for a while

'What you have here in terms of plant biology is unique in the Netherlands'

with researchers from WUR, VU University Amsterdam and Michigan State University in the Dutch Research Council photosynthesis consortium.'

Will photobiology become a new branch in Molecular Biology?

'That's right. Some people from my Utrecht group are coming with me temporarily plus staff member Andrés Romanowski, who studies circadian (day-night, ed.) rhythms in plants and how the rhythms adapt to the light. The research in the chair group is very diverse, from nitrogen fixation to plant-fungi collaboration and from embryo development to the relationship between harvest yields and the branching of

grains. The main connecting theme is interest in the molecular networks that drive plant development, with an emphasis on interactions with the environment.'

Will new courses be added?

'I can't say anything about that on my first day, but I hope to add material about photobiology, for example. A lot of changes are being made to the content of various degree programmes, so this could be the right moment.' RK



PhD theses **in a nutshell**

Dangerously sweet

Sugary soft drinks are often linked to the development of diabetes. But research by María Gorety Jacobo Cejudo, from Mexico, did not confirm this. She found no link with diabetes in a study of over 6,000 healthy Dutch adults. On the other hand, people who have had a heart attack do need to be careful what they eat. Sweet yoghurt products form a risk, whereas consumption of unsweetened yoghurt reduces the risk of death from a heart attack by 14 per cent. The overall drink consumption pattern was assessed using the newly developed Beverage Quality Index. The result was clear: a healthier drink consumption pattern reduces the risk of death from heart failure by 11 per cent.

Beverages Matter María Gorety Jacobo Cejudo ◀ Supervisor Marianne Geleijnse Hohlbein

Illegal wood

Detecting illegally felled wood is not easy. Laura Boeschoten investigated whether the chemical composition of the wood can be used to make a kind of fingerprint. Using mass spectrometry, she determined the amounts of 60 elements from the periodic table. Could this help trace the origins of tropical wood species such as Azobé, Tali and Red Meranti? The results are variable and the accuracy is not great. The same applies to detection using isotopes or based on genetic analysis. However, in combination the three methods offer some hope of useful applications in the future.

Chemical methods for Timber Trading Laura Boeschoten ◀ Supervisor Pieter Zuidema

Godwit

The black-tailed godwit does well when agriculture is extensive rather than intensive. Not because there is more food for the bird but because the nests are less likely to be disturbed or robbed by predators. That is the conclusion reached by Miguel Silva-Monteiro from Portugal. He investigated the state of the godwit in the Netherlands, France, Poland, Estonia and Finland. The more secluded spots in the landscape, the better. One striking finding: the more frequent and longer the breaks taken by the birds during brooding, the less likely the nest is to be robbed. The break as survival strategy.

A cross-continental analysis of the habitat requirements for stable Black-tailed Godwit populations in Europe Miguel Silva-Monteiro ◀ Supervisor David Kleijn

THE PROPOSITION

PhD candidates explain their most thought-provoking proposition. This time it's Francesco Pancaldi, who received his PhD on 12 June for his thesis on plant cell walls, from evolutionary genomics to novel breeding tools.



'Social media are anti-social platforms'

'I am passionate about politics and I'm a member of a political party in Italy. I've seen how social media can increase polarization in political beliefs, which shows that social media aren't always "social" in a positive way.

Social media can have a big influence on a person's way of thinking, leading to isolation or a decline in self-esteem due to the negative emotions cultivated by social media. In addition, social media can also encourage anti-social behaviour, as a person's identity and mindset can be shaped by what they see online. This can ultimately lead to the clustering of social groups with extreme beliefs, and to the radicalization of such groups since

interaction is promoted within rather than between groups by social media algorithms. This can lead to polarization and even harmful behaviour in society.

I acknowledge the enormous benefits brought by social media, but we can't ignore the fact that there are users who treat it with blind enthusiasm. How can we prevent social media from becoming anti-social? I think self-reflection is required and we should always remind ourselves of the balance between the positive impacts of social media and the potential risks.' NF

Eating 'meat'

Whether you're a newly arrived student or a seasoned campus resident, you can't fail to notice that WUR is an ardent proponent of the 'protein transition' from the consumption of animal proteins to more plant-based proteins. My own opinion on the value, necessity and implication of this transition aside, I am highly amused by two consequences of the rise of meat substitutes in particular.

One of these consequences has to do with another hot issue in nutritional science: whether Ultra Processed Foods (UPF) are dangerous.

What do you call the factory product that's got to look like meat? Is plant-based dairy still dairy?

That question has led to a movement of people who promote the consumption of unprocessed products. I think if you made a Venn diagram of pro-protein transition people and pro-unprocessed products people, the two would largely overlap. But meat substitutes stick in the throats of this group like a – hopefully plant-based – bone, because unlike meat, most meat substitutes consist of a whole list of manufactured ingredients and definitely belong to the category of Ultra Processed Foods. So should you advise people to eat unpro-

cessed, single-ingredient products like beef or a highly processed but plant-based vegan schnitzel? It's a hellish dilemma. And then there's this: what do you call the factory product with endless ingredients that's got to look like meat, which has fallen out of favour? Is plant-based dairy still dairy? Is vegan mince still mince? There's another nice dilemma beneath the good intentions, because why would you want the substitute to go by the same name as the product that so disgusts you? The nomenclature is a stumbling block for many, including many vegetarians. So France recently petitioned the European Court to rule that no meat names could be given to fake meat. If that goes through, Albert Heijn's vegan schnitzel will have to be called 'mix of hydrated soya and wheat protein with cornflour, vinegar, methyl cellulose, potato fibre, salt, onion powder and garlic powder, coated with maize, sugar, salt and barley malt extract and deep-fried in sunflower and rapeseed oil'.

Let's hope there's a student starting this year in Consumer Sciences or Nutrition and Health who's going to solve these devilish dilemmas.

Good luck, first-years!



Guido Camps

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

Flying students

'THE BUS OR TRAIN SHOULD BE THE DEFAULT MODE'

Taking the plane on an excursion or field trip should no longer be a matter of course. On an excursion to Lithuania, students protested against the policy on flying. Student editors **Felix Landsman** and **Maurice Schoo** asked around the different disciplines to gauge opinions on WUR's travel policy.

With students from 113 countries and research projects all around the world, WUR is an international player. So many of the degree programmes run excursions on which students can get an idea of what it's like to work abroad. And flying is a key means of transport on such excursions. Bachelor's students of Environmental Sciences (BES) who take the International Study Visit course, for example, go for a week's work experience and can choose between France, Latvia and Lithuania. They fly to Latvia and Lithuania, or go by bus to France. For some years, students on the MSc in Development and Rural Innovation (MDR) have been going to the Spanish island of Majorca for a week for the compulsory course Cutting Edge Issues in Development and Rural Innovation. There are no clear-cut rules. The WUR policy only states: 'Traveling – especially flying – is environmentally damaging due to greenhouse gas emissions.' *Resource* paid a visit to these degree programmes to ask 'isn't it time this changed?'

Hypocritical

At BES there were three students who disagreed with the flying policy. Inger-Marie Smid, Sofia Setten and Stefano Bisello were supposed to fly to Lithuania but

undertook a 28-hour Flixbus trip instead. They slept in a hostel in Warsaw en route. 'We study Environmental Sciences and then we fly? That's like being a vegan butcher,' says Stefano from Italy. 'It's just hypocritical.' Sofia from France thinks it's strange that 'we don't practise the things we learn on our Bachelor's ourselves.' She thinks it is bad that WUR does nothing about this. 'We've really got to change the way we travel,' she says. Stefano thinks a trip like this has a negative effect on students' later mindset. 'You think that BES students learn about policy and technologies in order to save the environment, but when there's a chance to actually do something, they don't do anything. What do you expect they'll do in the future, then?'

Personal choice

On the Master's in Development and Rural Innovation, an alternative to flying to Majorca is offered. At the start of the course, students can indicate whether they want to fly or travel some other way. If they take the latter option, the students do most of the organ-



'We study Environmental Sciences and then we fly? That's like being a vegan butcher', says one of the students. ♦ Illustration Valerie Geelen

izing themselves. Belgian MDR student Douwe de Vestele: 'We wanted a say about our journey because it was going to take us about three days. In the end we were given a budget within which we could choose our means of transport ourselves.'

The choice fell on travelling by Flixbus to Paris via Utrecht, and on to Barcelona by train. 'We slept in a hostel in Barcelona and then took the early morning ferry to Palma, Majorca,' says Douwe. The climate was not the only reason for travelling this way. 'I thought it would be nice to make the alternative journey – a fun adventure,' says Indonesian student Kevin Aditya Prathama. 'Tiring as the alternative option was, I wouldn't have wanted to miss it,' says Hilde Nijland. She too is on the MDR and took the alternative transport on the outward journey but flew back. 'I would recommend the alternative, though.' There proved to be plenty of interest in the alternative. 10 out of the 22 students chose not to fly.

Yutaro Minohara from Japan did opt to fly. 'Personally,

'THE PLANE GOES EVEN IF
WE'RE NOT ON IT SO THE
EMISSIONS DON'T CHANGE'


I didn't really consider the alternative. The excursion itself was very tough and the extra travel might have been too much. Anyway, the plane goes even if we're not on it so the emissions don't change.'

Sacrifice

At BES there was less support for the sustainable transport alternative taken by three students. Not that they were resistant to the idea, according to Inger. 'We messaged the WhatsApp group to say we wanted to go by bus and some people were interested. But the course coordinator sent an email to us all saying that if you arrived late, you probably wouldn't pass the course. That put a lot of people off.' And did they arrive late? 'No, a day early in fact.'

According to Stefano, some of the other students reacted 'a bit defensively'. Inger got the same feeling:





‘probably because they thought we were taking the moral high ground.’ Some were also very convinced that flying was efficient. Inger: ‘They thought we were being a bit ridiculous, sacrificing two weekends of our lives to make a point.’

The teacher who led the excursion to Lithuania was not available for comment for work reasons. Karen Fortuin, education coordinator of the chair group that teaches that course, and BES programme director Marjo Lexmond, took a positive view of the three students’ initiative ‘We teach our students to think critically so I think it’s good that they are critical of a trip like this. Students certainly ought to question whether it’s really necessary,’ says Lexmond.

Highlight

After giving it much thought, for the time being the programme is sticking to the decision to take the plane. Fortuin: ‘The course aims to give the students experience of an international learning environment, and it’s an important moment for the degree programme. You must look beyond the Netherlands, Germany and Belgium if you really want an international programme.’

Lexmond agrees with this: ‘Most BES students are Dutch, so for them the Netherlands is home territory. The combination of going abroad and working with local people is important to us.’ According to Fortuin and Lexmond, most students are positive about the excursions too. ‘For many of them, it’s the highlight of their degree,’ says Fortuin.

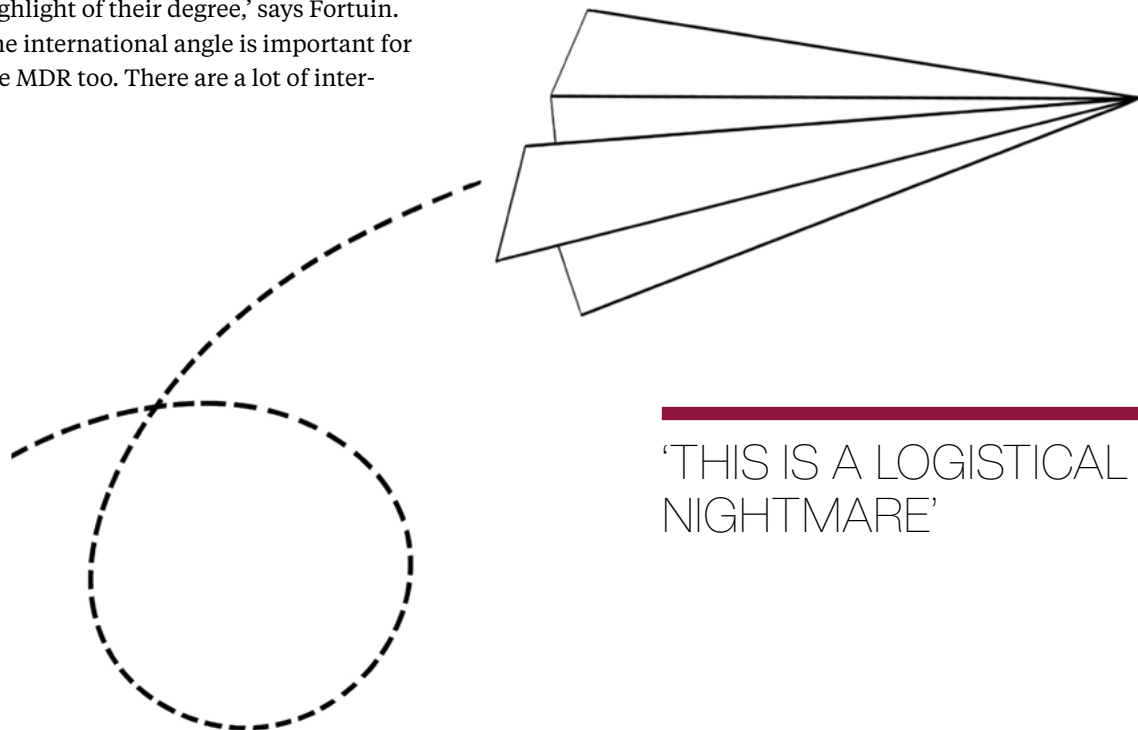
The international angle is important for the MDR too. There are a lot of inter-

national students on this Master’s programme, which focuses mainly on the countries of the Global South. These are not just down the road. ‘So many MDR students go abroad for their thesis work. Majorca is a kind of try-out, with a different language and culture and different customs,’ says course coordinator Eva Meijer. ‘The importance of the Majorca excursion is to put theory into practice there. Field work in the social sciences is something you really have to experience. It’s not just about conducting interviews and observations; your own impressions count too.’ A great many themes related to the degree affect the island: climate change, tourism, agriculture and rural depopulation. ‘That makes it a relevant place,’ she says.

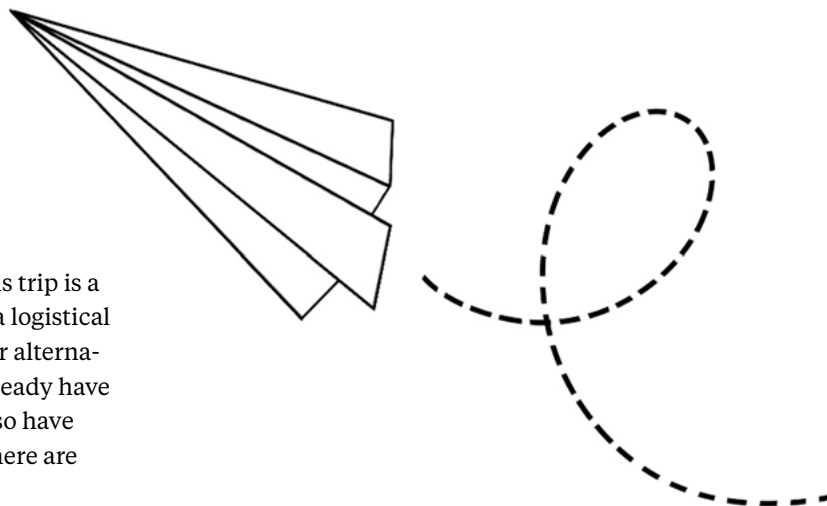
Never again?

To Meijer, it is important that an alternative to flying is available. ‘But it does mean extra work for me. For the university, flying is still the easiest way to travel.’ That is partly because the arrangements are made by an external travel agent, which doesn’t offer many other options. And for Majorca there’s an added problem: ‘The boat to the island isn’t included in the contract. Plus, you can book flights far in advance, but that’s harder with trains and buses.’

Organizing the trip is a big issue for the Bachelor’s course too. In one period students sometimes go to three different destinations, and what is more, the trip is hemmed in by another course, which means there is not much travel time available. Another question is to what extent students’ individual wishes can be met at



‘THIS IS A LOGISTICAL NIGHTMARE’



the expense of the teachers' workload.

Programme director Lexmond: 'Organizing this trip is a long process that starts in February. So this is a logistical nightmare.' The planning leaves little scope for alternatives such as that of the three students. 'We already have three destinations to choose from, so do we also have to offer different travel options within that? There are limits to what's possible.'

Is a flying ban an option? That would certainly raise new questions, says Lexmond. 'We stick to WUR's overall travel policy. We don't promote flying, but rigidly banning something – it doesn't work that way either. The decision to fly to countries like Lithuania and Latvia really wasn't taken lightly. If we're never allowed to fly on account of the degree programme, does that mean we don't want international students anymore? They fly in too!'

Less strict

So for now air travel will continue for BES students. It turns out to be quite difficult to change that. There are plans to take steps in that direction, though: 'We are overhauling the BES and that includes attention to this issue. There is a preference for not needing to fly,' says Lexmond.

And for the MDR, a discussion has got going as to whether Majorca is a sustainable venue for the excursion. Student Douwe is clear on this point: 'Personally, I think Majorca is a bit over the top. I get that the excursion goes abroad so you get out of your comfort zone, but that could also be a destination that's easier to reach by train or bus.' Hilde adds: 'I thought it was very contradictory to go to the island, especially given that our programme is very critical of tourism there.' But Kevin is a bit less strict about that: 'A different destination would probably be just as enriching. But the island is a nice place to go to and I think it's a highlight of the programme for everyone.' Yutaro confirms that: 'The week brought the students closer together and it makes the issues a lot clearer than they are when you study them on campus. But of course, that would be possible at another destination too.'

A different destination

This remains a thorny issue for coordinator Meijer: 'If necessary, we'll pick a different destination, but I don't know what's the answer to this yet. It would be very time-consuming to set up the course around a new excursion venue. Where do you find new contacts, for instance? Where are we going to stay? We have worked

intensively with our contacts in Majorca, and then we'd say goodbye to them. On the other hand, we have been to other destinations in the past.'

'For now I do think there should always be a sustainable alternative,' says Meijer. And student Kevin agrees: 'There should be an alternative from the start, and it should be supported by WUR. It shouldn't be something students have to come up with themselves.' But for Douwe, that's still too non-committal: 'If it was up to me, the alternative would be the norm, meaning that a trip is overland if, say, that's possible within a certain timeframe. Of course you can always make exceptions for people for whom it's difficult to travel that way. But if WUR wants to be the most sustainable university in the world, they should do this too.'

More critical

With the help of a Student Council member, the BES trio is trying to change the travel policy through the Student Charter. 'At the moment there is nothing binding about the travel policy,' sighs Sofia, 'but hopefully we can improve that.' If it's up to these three, flights will only be taken if the destination cannot be reached overland. The bus or train should be the default option. 'WUR should be more critical of why a trip has to be undertaken in the first place,' thinks Sofia. ■

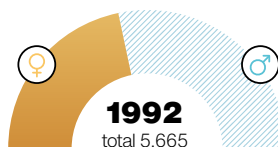
'WE'VE REALLY GOT TO
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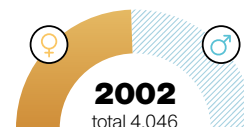
M/F/X?

The university gets data on students from Studielink, the platform where students enrol with a university. Studielink uses the government's Key Register of Persons, which only allows the options 'male' and 'female', not 'non-binary'.

57% of the enrolled students were male



51% of the enrolled students were male



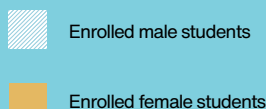
1875

Male students outnumber female students

WOMEN RULE AT WAGENINGEN

Following the news item 'WU has most women doing science degrees' in *Resource #1*, we have investigated the ratio of men to women among Wageningen students. It turns out women have been in the majority for years.

Infographic Pixels&inkt



1901 Miss E. Berkhout enrolls as the first female student. She obtains her degree in Dutch Agriculture in 1904.

1917 Ten female students at Wageningen start the Wageningen Female Students Society (WVSV).

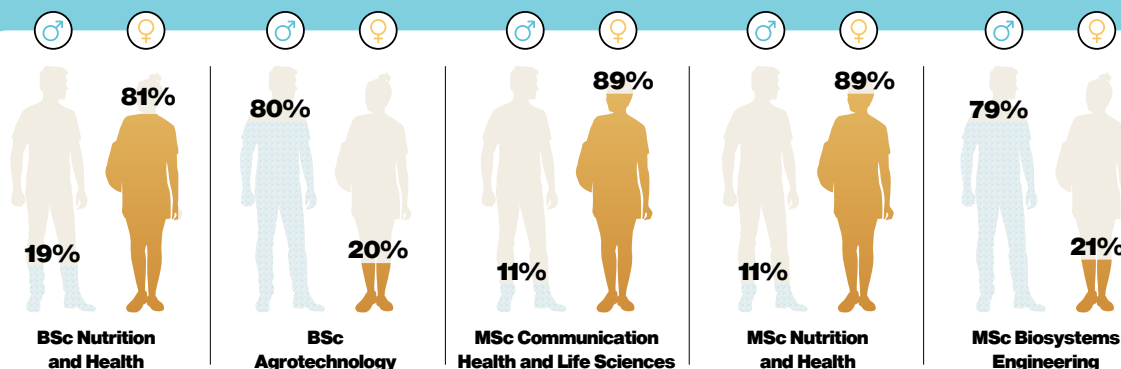
1942 During the war, the State Agricultural College welcomes its 100th female student. The 200th female student enrolls ten years later.

1876 The **Wageningen State Agricultural School** is founded.

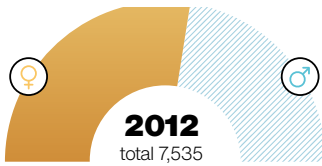
1918 The State Agricultural School becomes the **State Agricultural College**.

FEMALE/MALE-DOMINATED STUDIES

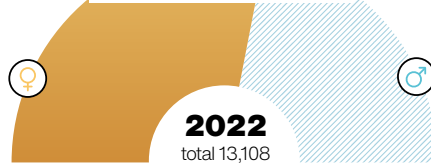
In eight degree programmes, women make up at least 75 per cent of the students. Men account for 75 per cent or more in two degree programmes.



55% of the enrolled students were female



56% of the enrolled students were female



7,375

of the 13,108 students enrolled in 2022 were female.

1997

Women outnumber men in the intake of new students for the first time.

2001 At 51%, women outnumber men among degree recipients for the first time, with 385 female graduates versus 371 male graduates.

2022 Of the 13,108 students, 7,375 are women (56.3 per cent) and 5,733 men (43.7 per cent). Women are even more dominant in the intake: 1,653 of the 2,814 new students are female (58.7 per cent) and 1,161 are male (41.3 per cent).

1956 After Mien Visser is appointed as Wageningen's first female professor, the number of women studying in Wageningen increases fast.

1970 WVSF and Wageningen Students Corps merge to become W.S.V. Ceres.

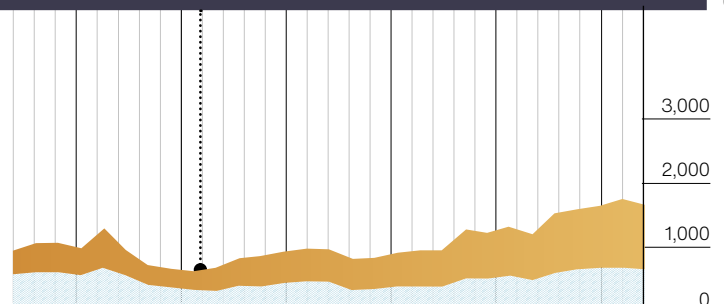
2004 For the first time, more women than men are enrolled as students: 2,233 women versus 2,226 men.

1986 The Agricultural College becomes the **Agricultural University**.

1998 The Agricultural University becomes **Wageningen University**.

GRADUATION

In 1992, 38 per cent of the degrees went to women. Women outnumbered men for the first time in 2001, when they made up 51 per cent of the new graduates. 2016 was the first year in which the proportion of women hit 60 per cent, a figure that was also seen in 2019 and 2020.



Scientists at Wageningen's weekly market

It was kind of a wild idea: wouldn't it be fun for a group of researchers to visit the market and talk to local residents? To tell them what WUR is doing at the moment and ask them if they have any questions. In other words, to bridge the gap between the town and the university.

The idea was put to the test Wednesday last week, to mark the start of the academic year. Around 30 WUR researchers manned standing-height tables next to stalls on a sun-drenched day at the market.

Associate professor Sonja de Vries and PhD candidate Roseanne Minderhoud, for example, were stationed next to the poultry stall. Both study proteins — De Vries in the context of animal feed and Minderhoud for human nutrition. They let local Wageningen residents guess how much an average person needs to eat per day in peanuts, chickpeas, chicken, cheese or white fish to get enough lysine, an amino acid that the human body is unable to make.

Casper Quist, a lecturer in Biosystematics (Plant Sciences), could be found next to the flower stall. He thought it was a good idea for WUR to strengthen ties with the townspeople. He is working on this too, for example with ultra-local biodiversity tours in which people from the neighbourhood and a WUR expert explore which species can be found in a random Wageningen front garden. That



Explaining protein at the market. Sonja de Vries on the left, Roseanne Minderhoud in the centre • Photo Resource

idea got an enthusiastic reception at the market.

Real people

A little further along, behavioural scientist Ana Coiciu was finding out what 'the average Wageningen' thinks of an app that gives personal dietary advice. The chats she had with people visiting the market were an eye-opener and gave her new insights for her PhD research, she says. 'You hear what people really think here. It's quite different to the setting of a research panel.'

Jasper Scholl, a Consumption & Healthy Lifestyle, had a similar experience. Armed with a dish of Dutch waffles and headphones for an audio test, he gauged the willingness of local seniors to use a mindfulness app that would help them change their eating habits (by chewing

more attentively) and thereby improve their cognitive health. The waffles helped ensure him a steady stream of customers. 'This is the perfect opportunity for me not to base everything on the literature. I've already spoken to more seniors in the couple of hours here at the market than in the whole previous six months of my PhD,' he concludes with a laugh.

Bridging the gap

What about the locals themselves? 'How lovely the university is doing this!' say one couple. 'I'd like to see it happen more often,' replies a Renkum resident whose son studies at WUR. And: 'I didn't really know what to ask the scientist, but once we got talking it was very nice,' says an older lady.

WUR president Sjoukje Heimovaara and Wageningen's mayor Floor Vermeulen were both strolling between the WUR tables, with plenty of market visitors coming up to them for a chat. The president and mayor were both enthusiastic. 'We have long wanted to bridge the gap between the town and the campus,' says Vermeulen. 'I think today has been very successful in that regard.' ME

'YOU HEAR WHAT
PEOPLE REALLY
THINK HERE'

WHO WILL SUCCEED ARTHUR MOL?

Now the rector magnificus vacancy has officially been published, the speculation can start. Who might become Arthur Mol's successor? In other words, whose names are being mentioned? *Resource* lines up five candidates who could be considered eligible based on the profile. In random order. Text Roelof Kleis



Marcel Zwietering

professor and Food Microbiology chair holder

Studied Biotechnology at Wageningen and obtained a PhD with distinction here in 1993. Professor since 2003, after a spell with Danone in France. Has a seat in numerous national and international bodies, often as chair. Circumspect, loves meetings and has a large network. Member of the Academic Board. Won the International Association for Food Protection Educator Award in 2019.



Carolien Kroeze

professor and Environmental Systems Analysis chair holder

Studied Biology in Groningen. Obtained her PhD in 1993 at the University of Amsterdam. Has been at WUR since 1995 (after a few years at the National Institute for Public Health and the Environment). Is director of graduate school WIMEK (Environment and Climate Research). Her chair group will merge with Water Systems and Global Change on 1 January — a perfect moment for a new job. Has good connections with China, where she

is guest professor at the Chinese Academy of Sciences. Is a member of the Recognition & Rewards Committee. Is also guest professor at the Open University of the Netherlands.



Wouter Hendriks

professor and Animal Nutrition chair holder

Studied Animal Nutrition in Wageningen and obtained his PhD for a study on the amino acid requirements for cats at Massey University in New Zealand in 1996. He continued his career there. Came back in 2005 and became professor and chair holder. Since 2008, has also been professor of Animal Nutrition in Utrecht. Hendriks is the current Dean of Research, which gives him a broad view of the research at WUR.



Edith Feskens

professor and Human Nutrition & Health chair holder

Studied Nutrition in Wageningen and obtained her PhD in Leiden in 1991. Then did research on diabetes and obesity at

the National Institute for Public Health and the Environment. Has been at Wageningen since 2005, where she became professor in 2008 and chair holder in 2015. Holds numerous national and international board positions. Is chair of the Nutricia Research Foundation.



Alfons Oude Lansink

professor and Business Economics chair holder

It doesn't get more Wageningen than this. Studied Agrarian Economics at WUR and obtained his doctorate in 1997. Was researcher and lecturer in Agrarian Economics & the Environment. Switched to Business Economics in 1999. Has been professor since 2003. Has been director of social sciences graduate school WASS since 2014. Is guest professor at Wroclaw University and a member of the Recognition & Rewards Committee.

The new rector must be, or have been recently, a professor in Wageningen, an authority in their field and have extensive administrative experience. Candidates must have submitted their application by 18 September at the latest.

Microbiologist Thijs Ettema:

'WE ARE ARCHAEA!'

In his lab, Thijs Ettema is fitting the puzzle pieces of the 'tree of life' together. His research on archaea proves that the classic division of life into three domains can now be discarded once and for all. Photography Eric Scholten



Text Roelof Kleis

Needless to say, it is an advanced lab, this construction on the fourth floor of Helix. But it looks like a transparent tent. And that is indeed what microbiologist Thijs Ettema calls it: an oxygen-free tent. In this anaerobic environment, he breeds archaea, the micro-organisms that made our existence possible. 'In fact, we are archaea,' says Ettema. 'I like to tease my students like that. We humans often consider ourselves to be the pinnacle of evolution. But don't forget where we came from. We shouldn't make ourselves more important than we are. Taxonomically, we are just a minor branch of archaea. A little twig on the tree of life.'

Deciphering these origins is what Ettema is working on: the quest to find the

origin of the eukaryotic cell – the source of all complex life forms on Earth. In an article in *Nature* in June this year, he and his team reconstruct the micro-organism that was the last common ancestor of the eukaryotes, which are organisms made up of complex cells with a nucleus. This puts another piece of the puzzle of humans' ancestry in place. But we've got a long way to go, says Ettema. 'There really is still a big gap to fill between that last common ancestor, an archaeon, an organism without a cell nucleus, and the eukaryotic cell with its nucleus and its specialized cell compartments. It's a big step from an archaeon to a complex cell.'

Extremophilic

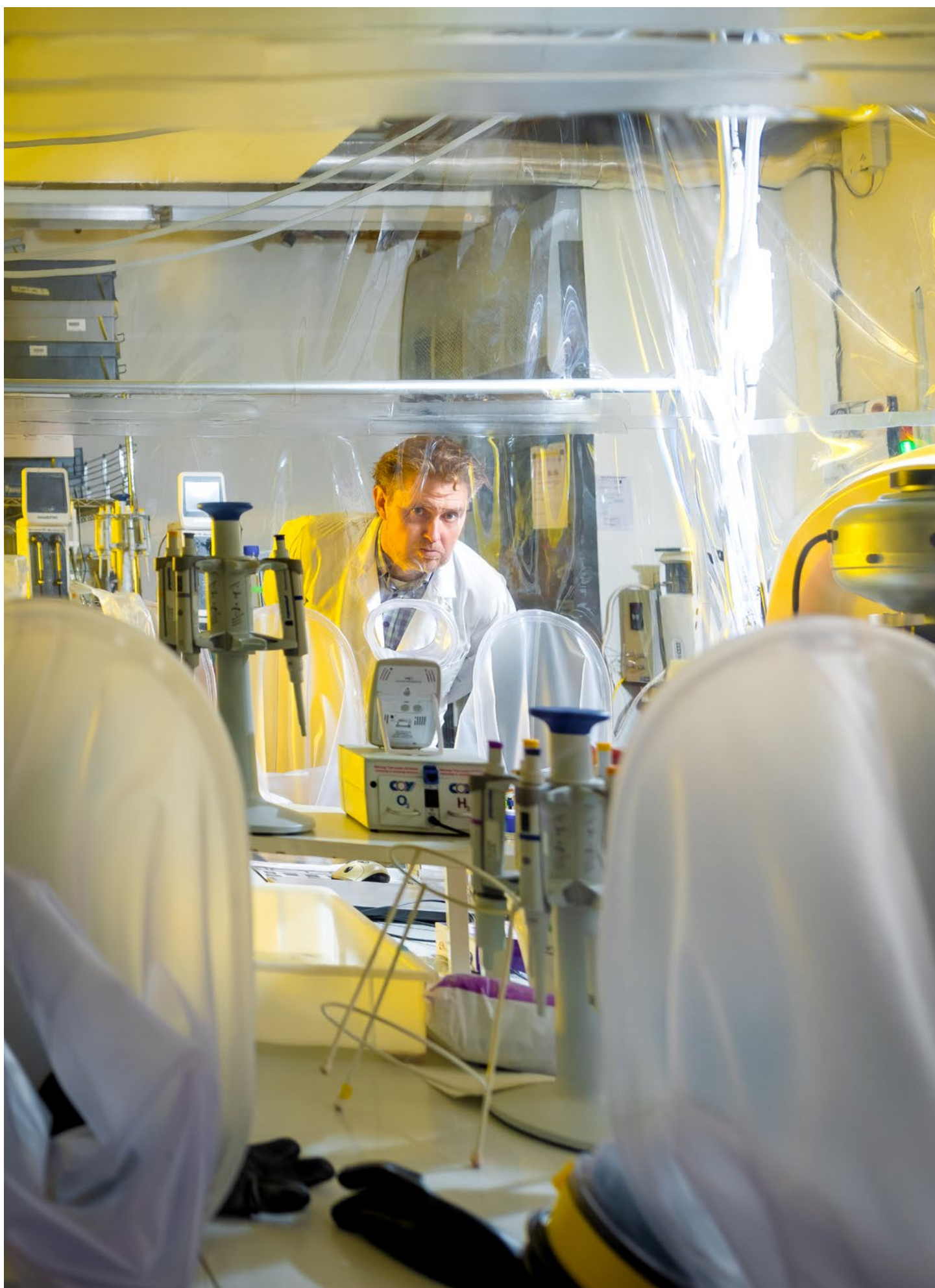
Ettema has been professor and chair of Microbiology since 2019. So he has returned to his alma mater, as he studied biology here in the 1990s and got his PhD with John van der Oost in 2005 on a study of archaea before setting up his own research group in this field at Uppsala University in Sweden. His interest in this group of organisms began on the introductory Microbiology course taught back then by Ad van Egeraat. 'A new world opened up for me. Especially when I heard about extremophilic micro-organisms and archaea. I had never heard of those before. A new domain of life. How come I didn't know anything about them? Initially, those organisms were mostly found in

extreme conditions like undersea volcanoes and hot springs. That seemed very exciting to me and I wanted to research it for my first graduation thesis. And that's how it all started.'

Under the radar

Archaea were discovered in the 1970s by evolutionary biologist Carl Woese. Archaea are structurally and biochemically different to bacteria, but you can't tell them apart under a microscope. Each organism is present on Earth in roughly the same numbers, according to Ettema. That archaea have nevertheless remained under the radar for so long is explained by the fact that they are mainly found in inaccessible habitats such as deep-sea sediments. Ettema: 'In the first genetic analyses, they

'IF YOU SPOT
SOMETHING THAT
NOBODY IN THE
WORLD KNOWS
ABOUT, THAT'S AS
GOOD AS IT GETS'





were found in those environments. But with current sequencing techniques, we are finding them everywhere. Even here on campus.'

A small proportion of all the micro-organisms in the pond at Atlas are Asgard archaea, the group of archaea that Ettema focusses on. He gave them their name, which comes from Norse mythology: Asgard is the home of the gods. All the groups of archaea within the Asgard supergroup have names taken from Norse mythology.

That started in 2015 with the identification of the subgroup of Loki archaea, by means of genetic analysis of deep-sea sediment from Loki's Castle, a hot spring in the sea between Greenland and Norway. Based on the genetic material brought to the surface, Ettema reconstructed the first genome of a Loki

archaeon, a subgroup of the Asgard archaea. Ettema: 'The genome turned out to contain many genes that had previously only been seen in eukaryotes. We also proved that Loki archaea are close to eukaryotes in the tree of life.' That meant they must have a common ancestor somewhere. 'That was a real eureka moment. This organism told us something about the origin of the first eukaryotic cell.'

Sensation

The paper in *Nature* caused a sensation in the scientific world. The classic tripartite division of life on Earth (archaea,

bacteria and eukaryotes) could be discarded once and for all. We eukaryotes turned out to be a subset of the archaea. So there are not three but two main groups or domains: archaea and bacteria. Scientists had been questioning the theory of three domains for some time, says Ettema. 'But our article was the final nail in the coffin. The old hands in the field were not best pleased. Which prompted an editor at *Nature* to say: "If you have woken up the dinosaurs, you have done a good thing".'

Ettema has identified many more archaea in recent years. Which is to say, his team reconstructed their genomes. But that doesn't tell you much about what an organism of this kind looks like. Ettema: 'We can identify them, map their genes, and even make predictions about their physiology and metabolism on that basis. But we don't know what they look like. To find that out, you have to grow them in a lab.' Wageningen's superior facilities for doing that

'IT IS EXTREMELY
DIFFICULT TO
CULTURE ARCHAEA'



'TAXONOMICALLY, WE ARE JUST A MINOR BRANCH OF THE ARCHAEA'

'I'M JUST A BIOLOGIST WHO WANTS TO UNDERSTAND HOW LIFE WORKS'

was one of the reasons behind Ettema's decision to return in 2019.

Strange tentacles

As it happens, Ettema was too late to be the first to grow an archaeon in the lab. A Japanese group succeeded three years ago. After 12 years of hard work, suddenly there was the first 'photo' of a Loki. It was sensational, says Ettema. 'It looks like no other known organism. Quite small, only half a micron in size. Say, half an *E. coli* bacterium, with strange tentacles on the outside. No one knows what these are for yet. Last December, a second Loki was grown in Vienna. But we still don't know what any of the other Asgard groups look like. We are working hard on that in our lab, as are others around the world.'

It is extremely difficult to culture archaea. Not only does it have to be done anaerobically, there is no manual for it either. What conditions should you provide for your archaea, for example? Ettema: 'You can make predictions about that based on the genes in their genome. For example, we are also working on archaea that produce methane from carbon dioxide and hydrogen. So you have to give them those. But we hardly know anything about most of these organisms. Another variable is the temperature at which they grow best. But the trickiest part is that they grow extremely slowly, taking several weeks to double their numbers. By comparison, an *E. coli* bacterium divides every

20 minutes. We are trying to grow them using an arsenal of techniques, but it's still a bit of a shot in the dark. You really need luck on your side.'

Things are looking good. Inside the tent, a few archaea have started growing, although Ettema has yet to get the group most closely related to eukaryotes to grow. But he is convinced that this will come into view in the foreseeable future. And he hopes that the current results will themselves add a new chapter to the annals of biology. 'The interesting thing about the group that does grow is that it has a number of eukaryotic genes that are absent in most other Asgard groups,' says Ettema. But he is cautious. 'It is still too tenuous and it's too early for bold claims. But I do think we should abandon the idea that intracellular complexity is exclusive to eukaryotes. It seems that even before their time, there were signs of intracellular complexity.'

Hundreds of newspapers

At the time, the publication on the Loki archaea brought the entire world media hot on his heels. The news made it into hundreds of newspapers worldwide. 'At some point I had the BBC and National Geographic on the phone at the same time,' says Ettema. And yet when he got involved in this niche research field, many scientists declared him crazy. 'Someone even told me at a conference that it was scientific suicide. Research in the field was at a standstill and tempers sometimes ran high during scientific disagreements at conferences. But I did it.' And with undeniable success, although that is not his primary motivation. 'Ultimately, I'm just a biologist who wants to understand how life works. What drives me is the prospect of contributing to that

with a small piece of the puzzle. And of course it's also great if you make waves and find something that leads to amazing new insights. But if you are the first to spot something that nobody in the world knows about at that point – that's as good as it gets.'

Long haul

Research like Ettema's is fundamental and therefore hard to get funded. That worries him. 'This is long-haul research. Nowadays, research has to deliver results quickly and it is often required to have immediate applications. When you apply for a grant, you must already provide a timeframe for when you'll get results. But that's not how fundamental research works. It's crazy, really, that we spend billions on searching for life on planets we will never visit, while we don't even understand how life originated on Earth. There are only about 300 scientists worldwide in the field of archaea research. Covering an entire domain of life!' ■

Microbiology

Ettema now leads the chair group as Willem de Vos's successor. He brought his line of research with him, and it is now the fourth branch of research in the group, alongside bacterial genetics (John van der Oost), microbial physiology (Diana Sousa) and molecular ecology (Hauke Smidt). To make sure he has time for his own research as chair holder, he has appointed an operations manager for administrative tasks. 'That is still rather new in Wageningen. But if you want to do serious research as chair holder of a large group like Microbiology, it's the only option. Otherwise you get bogged down in paperwork.'

A remarkably activist academic year opening

A new note was struck at this year's Opening of the Academic Year (OAY) in Omnia. And not just from the demonstrating students outside. There was a distinct change of tune inside during the official programme too, *Resource* noticed. Text Marieke Enter & Willem Andrée

The balustrade of Omnia is festooned with brightly coloured banners. From a speaker comes a reggae-like chant of *'Shell must fall, Shell must fall, climate crimes around the world, oh Shell must fall'*. These students are demanding that WUR takes action on three fronts: breaking the links with the fossil industry, decolonializing education, and democratizing university governance. The demonstrators hand out bright red flyers. Most OAY attendees are happy to take one. Nice reading material while they queue at the entrance, because it's quite a wait. No one gets into Omnia without presenting a QR admission code and having the contents of their bag checked. Meanwhile, activist 'June' is at the microphone tackling this year's OAY theme: 'Shaping sustainable futures'. 'But whose future does WUR care about, actually? That of the big multinationals? Or that of industrial agriculture? Is it a future with the same old White men that

populate the portrait gallery here? No! We want a world that revolves around needs, not profit. That's why we are occupying and resisting.' WUR isn't obstructing the (informally announced) protest. Only when the demonstrators replace the WUR flags in front of the building with their own protest flags do the security guards move fast to nip that in the bud. The activists think their response is a bit over the top. But okay, if that's as bad as it gets... 'During the Forum occupation, it was all a lot more heavy-handed and hostile than this,' one of them says. The atmosphere now is positively sunny. With litres of homemade iced tea and a hug bowl of salad to share, the students are turning it into a kind of picnic. In the words of the song coming out of the speaker, *'A good day to fight the system'*.

'DOGMA HAS NO PLACE IN SCIENCE'

Action now

By now the programme is about to start in the full Omnia auditorium, and it holds surprises in both tone and content. Anyone who hasn't been following developments at WUR over the past year or two would certainly be baffled. WUR president Sjoukje Heimovaara opens with the observation that humanity must act now, before we pass the 'tipping point of no return'. It

is Wageningen's task to combat climate change and the loss of biodiversity, she declares. Greenhouse gas emissions and land and water use come under WUR's research domain. She refers to the protesting students outside. 'They are worried, they are making themselves heard. And here, inside, three speakers will make themselves heard as well. Because the solutions exist for preventing further damage.'

The soon-to-be-outgoing professor of Plant Protection Systems Ken Giller emphasizes that science must not fall into the hands of populists. 'We must steer clear of simple but false dichotomies: it's not a matter of good and bad. Dogma has no place in science, which thrives on differences of opinion. In the competitive scientific world we see that scientists tend to jump on bandwagons: they go with the flow and accept financing for research questions that are incorrectly framed. We must maintain a safe and open environment in which everyone is listened to and intense dialogue is possible. Scientists should communicate simply without being simplistic. The world is complex but we can involve wider society in complex issues better than anyone.'

Protest

Assistant professor of Agricultural and Environmental History Ingrid de Zwart goes into the history of famines. 'Food shortages are not caused by population growth, nor by natural disasters or economic crises. Famine is not inevitable: it is caused by people. Deliberately, or by not preventing it – as in the Soviet Union in the early 1930s or the Dutch famine winter of 1944-45.' De Zwart asserts that humanity has the technical means to feed the growing world population, although the challenge is to do so without harming the climate. 'But technical solutions are not enough by themselves; we need the government as well. The so-called threat of global hunger must never be misused in public and political debates to delay sorely needed sustainable transitions. I believe that we in Wageningen must take on an active role – as scientists, as students, as teachers and as citizens of the world. By debunking myths and calling for change.'

Associate professor of Public Administration and Policy Jeroen Candel, who had a chat with the protesting students beforehand – 'These are students I admire, they care' – issues a call to arms too. 'Join a political



Student demonstrators hung up banners from the rails at Omnia during the opening of the academic year, to protest against WUR's links with Shell among other things.

♦ Photo Resource

party, protest and make yourself heard – it works! We really are at a crossroads. It's partly thanks to the big climate demonstrations that the European Commission presented an ambitious Green Deal for making Europe climate-neutral. Extinction Rebellion challenged the subsidies for the fossil industry. Food and agriculture have never been as high on the agenda as they are now. Only by showing that we care will politicians get involved and set to work on a sustainable future. But always stay open to new perspectives.'

New tune

During the reception after the formalities, where the traditional Dutch meat croquettes are eagerly consumed, Heimovaara gives a modest response to *Resource's* comment that Wageningen has changed its tune since she took office. 'These speakers were doing their work and held these opinions before I came on the scene.' But who makes the final decision on who gets to speak here? A brief pause, a glance towards the middle distance, and then: 'Yes, that's me ultimately.' ■

The latest building materials come from the farm

The construction industry can reduce its climate footprint substantially by switching to biobased materials made from fibrous crops such as elephant grass. WUR has developed several such materials. Now it is time to bring farmers and construction firms together. Text René Didde ♦ Illustration Rhonald Blommestijn

‘Elephant grass is a terrific crop with lots of applications,’ says horticulturalist Joost Sterke from Haaren, Noord-Brabant. He has been growing this spectacular giant grass – which grows up to four metres in height – for seven years now. ‘*Miscanthus* is suitable as a substitute for peat in potting soil, and I sprinkle it in shredded form over my pots of seedlings. It stops weeds and moss from forming.’ Sterke notes a rising interest in this fast-growing crop among both horticulturalists and crop farmers on low-lying farms. ‘Elephant grass copes well with wet conditions.’ And there is interest in the construction industry because of the grass’s strong insulating qualities. WUR too sees elephant grass as a source of construction material. Richard Gosselink of Wageningen Food & Biobased Research (WFBR) has developed a rock-hard composite material for sheets shaped like the corrugated iron sheets that were used in the past for roofing barns. This ‘binderless board’ is formed

by compression under high pressure and temperatures without the addition of synthetic glue, and provides a substitute for MDF board.

Farmers and builders

The government programme Building Balance, which WUR is involved in, aims at accelerating the use of biobased materials in construction. To that end, independent consultant Jan Willem van de Groep is trying to bring farmers and construction companies together. He’s convinced they have a lot to gain from each other. ‘Arable and livestock farmers get a supplementary business model with new crops.’ Van de Groep has calculated that a *miscanthus* farmer can make up to 3000 euros or more per hectare. And the construction sector can reduce its negative impact on the climate. The manufacture of stone wool and glass wool, for example, currently consumes a lot of energy and emits a lot of CO₂ and nitrogen. Growing elephant grass is easy and means CO₂ is captured in the building material.

The Building Balance programme aims to expand to 13 regions, each with 1000 hectares of new fibre production, some from elephant grass and some from other crops such as hemp or flax. The idea is that there will be 50,000 hectares by 2030. If production reaches 180,000 hectares, the sector could replace mineral fibres with biofibres entirely. ‘That is about 10 per cent of Dutch farmland, so it would contribute to a 5.5 Mton reduction in CO₂ emissions in building construction and agriculture,’ Van de Groep says.

Japanese knotweed

Gosselink’s colleague Arjen van Kampen displays other biobased building materials developed in Wageningen, such as insulation material made of hemp and 3D-printed material made of fibres from Japanese knotweed mixed with biobased plastic. Researchers in Wageningen – and there are now around 150 of them – have been working on biobased materials for 30 years.

The research group previously developed 'bio-asphalt', in which the petroleum product bitumen was replaced with lignin, the woody substance from which plants derive their strength. 'In 30 pilot projects, half of the fossil bitumen has been replaced by lignin,' says Gosselink. In the coming year, he expects to construct a trial section of road surface in which all the bitumen is replaced with biobased components.

Wageningen research is also edging closer to creating roofing material based on lignin. Lignin also has the potential to replace the adhesive material phenol formaldehyde in products like chipboard or cladding panels known by the brand name Trespa.

And those are not the only golden opportunities for a more sustainable construction sector. Take for example the invention in WFBR's lab of a way of reactivating old cement. Cement is the main component of concrete, which accounts for seven per cent of global CO₂ emissions. The addition of certain biopolymers made from waste from the food industry causes old cement to form new compounds. 'And then the cement sticks again, having been reactivated, as it were,' says Gosselink. 'We hope to make a paving slab as a demonstration product in 2024.' WFBR is collaborating on this with AMS Institute, TNO and the private sector.

Year-round supply

But application of the innovations is still relatively limited. Van de Groep feels the government should create more stim-

ulating conditions through legislation and incentive programmes. And farmers need to be capable of supplying biobased building materials all year round, and guarantee certain technical specifications and a consistent quality.

Even more important are good business models for farmers. For instance, their biofibre yield might compensate for a reduction in the number of cows they keep, says Van Kampen. 'The ecosystem services provided by these crops should be taken into account as well. Such as the positive impact on soil and water quality, increased biodiversity and CO₂ sequestration in building materials.'

Edwin Hamoen, manager of the Nature Based Materials research programme on which Gosselink and Van Kampen

are also working, adds: 'As a society and therefore also as Wageningen researchers, we need to take a much more integral view of issues such as the energy transition, a more circular economy and the problems in agriculture. The positive impact of using biobased materials should be factored into the price for a fair comparison with conventional materials.' One problem Hamoen sees is that, as in agriculture, it is not easy to get the construction sector to leave the beaten track and break new ground. 'The construction world won't change tack until all the materials have proven themselves twice over. And often rightly so, as quality and safety must come first. But this chicken-and-egg situation can be resolved faster if the government sets requirements for the use of biobased materials during the tendering process.' ■



'We hope to make a paving slab as a demonstration product in 2024'

Good story about pipe smoking

Last Sunday saw the Dutch Pipe Smoking Championship, with a respectable delegation from Wageningen.

The gentlemen of the Toebacksuyghers debating club, part of student society SSR-W, are enthusiastic pipe smokers. Friday 8 September was the final training session in the living room of the house shared by the Toebacksuyghers. The room has been converted into a traditional Dutch pub complete with ancient leather armchairs. How did the lads get into pipe smoking? 'That's a good story,' says Spatial Planning student Martijn Smakman. 'We started smoking pipes to help us get the debate going. When the room is thick with smoke, you can only judge someone by what they say, not what they look like. We also smoke pipes to keep the pipe-smoking culture alive.'

What actually happens at these championships? Biology student David Jacobs: 'You get three grams of tobacco (which they measure out more carefully than Pablo Escobar ever did) and one minute to light the pipe. The trick is to keep the pipe going as long as possible. So don't smoke too slowly and let it go out, or too fast and use up the tobacco. In the meantime, you can chill out and shoot the breeze.' The winner is the person who keeps their pipe going for longest. 'A good smoker can manage over an hour,' says Jacobs. The Wageningen contingent did well at the championship in Oirschot. Smakman: 'One of our members got first place with an impressive time of one hour and three minutes for just three grams of tobacco. This is our contribution to the preservation of our intangible cultural heritage!' FL



The pipe smokers of debating club De Toebacksuyghers (motto: 'Keep the pipe warm!'). From the left: David Jacobs, Bart van Burgsteden, Jesse van Dijk and Martijn Smakman. ♦ Photo Guy Ackermans

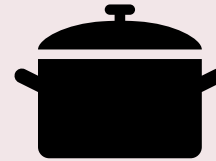


You see the most fabulous-looking people and the coolest outfits around the Wageningen campus. In this feature, we shine the spotlight on one of them every two weeks. This time, **Bram Birza**, a Master's student of Biology.



'My outfit for the day starts with the shirt. Then I pick the rest to go with that. It's got to match – trousers, waistcoat, jacket, earrings. I don't find it easy to describe my style. I think it's a combination of academia vibes mixed with some more alternative and colourful things. I get quite a lot of positive comments on campus. I used to dislike it if people gave me funny looks, but since I dyed my hair, that happens such a lot that I've got used to it. I don't care what people think of my look as long as I like it myself. My shirts generally come from good fashion shops. Most of my other clothes come from second-hand shops. I inherited a lot of shirts from my uncle after he passed away. I wear them a lot; they are exactly my style. My watch was my uncle's too. It is an analogue watch with only one hand, which always confuses people. On special occasions and at parties I always wear makeup, but on weekdays it often depends how much time I've got in the morning. I'm discovering more and more about what I like: wearing unique outfits helps me to accept myself and get to know myself better.'

You encounter all the flavours of the world in our WUR community. Clara Schusters (28), MSc student of Resilient Farming & Food Systems from Germany, shares her go-to vegan brownie recipe.



Flavours of WUR

Courgette brownies

'When I became vegan six years ago, this was one of the first recipes I tried. I was a bit sceptical as nobody wants brownies to taste like courgette. But when I tried it, I was blown away by the taste. The courgette adds moisture to the brownies, creating a great texture. I love the fact that there's so much hidden veg in these brownies. It's also a fast and fool-proof recipe: you can't go wrong. Finally, I love people's reaction when you tell them courgette is one of the main ingredients. They can't believe it.'

Ingredients :

- 300g courgette
- 250g flour
- 2 packs of vanilla sugar
- 170g sugar
- 50g cocoa powder
- 1 tsp baking powder
- 125ml vegetable oil
- Pinch of salt

- 1 Preheat the oven to 180 degrees (fan oven).
- 2 Grate the courgette using the coarse side of a box grater.
- 3 Mix all the other ingredients well and add the grated courgette.
- 4 Put baking paper in a baking pan and spread the brownie mix. Bake in the oven for 20-25 minutes. The brownies should be firm on the outside but still a bit soft inside as they harden when cooling.
- 5 Take the brownie mix out of the oven and let it cool for at least 90 minutes to set.
- 6 Enjoy!



Clara Schusters

MSc student of Resilient Farming and Food Systems from Germany

Which dish reminds you of home? Share it with *Resource* so we can all enjoy it! resource@wur.nl



THE SIDE JOB

It's not just students who have side gigs; WUR employees do it too. When he's not teaching Water Quality, Jeroen de Klein (64) can be found in his carpentry workshop. He spends two to three days a week making furniture.

Text Steven Snijders

'I have been teaching at WUR since 1995. Alongside that, my partner and I have been running our furniture workshop *Het Verschil* (The Difference) since 1999. My girlfriend went to art school and mostly does the designing and painting. After graduating, I

'Making furniture is technically and creatively challenging, in a totally different way from my job'

worked in interior design for a year. But I felt I was not doing enough with my seven years of studying Environmental Health. After all, society had invested in me. So, after working for a water board and a consultancy firm, I ended up at WUR, where I got my PhD during my first few years of teaching. But I was always interested and felt the need to work with my hands. Making furniture is technically and creatively challenging, in a totally different way from my job. Every piece of furniture I make is unique. I have made measuring equipment for research purposes too, like a floating measuring chamber for greenhouse gases from rivers. Our

chair group's coffee room has furniture I made too. It started as a cost-covering hobby but now we earn a bit from it. The first thing I ask potential customers is: 'Have you already been to Ikea?' Because I can't even buy my wood for Ikea's retail prices. But if they want something special, they've come to the right place. And everything has to be right, details are very important. We make proposals for the design and materials. I have a preference for sleek designs with a wood component. It can take several months before it's finished. I see our low hourly rate as compensation for the longer delivery time. When I get photos of their furniture from satisfied customers, it gives me that feeling of "Woohoo! We've done it again!" A product that makes someone happy and that they use daily. I hope to go on doing this into my 80s.

Jeroen makes furniture

Who: Jeroen de Klein (64)

What: Making furniture

Why? Making furniture is technically and creatively challenging

Earnings: About 300 euros a month, working two to three days a week



Jeroen de Klein ♦ Photo Guy Ackermans

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

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WUR from within: straight, sharp, transparent



LUNCH SESSION

about students and high energycosts



Discuss with Idealis and Wageningen Municipality how we can
work together to reduce energycosts among students

SEPTEMBER 20TH
12.30 - 13.30h

B115 IMPULSE BUILDING

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Colophon

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Contact Questions and comments for the editors:
resource@wur.nl | www.resource-online.nl

Editorial staff Willem Andrée (editor-in-chief), Helene Seevinck (managing editor), Roelof Kleis (editor), Luuk Zegers (editor), Marieke Enter (editor), Coretta Jongeling (online coordinator), Dominique Vrouwenfelder (editor), Thea Kuijpers (secretariat).

Translations Clare McGregor, Meira van der Spa, Clare Wilkinson

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The *Eucommia ulmoides*, which was planted by King Willem-Alexander five years ago • Photo Resource



RUBBER TREE IS PINING

The royal rubber tree, which grows in the grass next to Atlas, is at death's door. Tree professor John Neighbour suspects it's lonely.

The tree, a *Eucommia ulmoides*, was planted five years ago by the Dutch king Willem-Alexander. It is part of a worldwide network of UniversiTREES, which symbolizes 'Wageningen's bond with its alumni and other relations around the world', according to the sign next to the rubber tree.

The species originated in China, explains Neighbour, and now the tree is putting down roots in Dutch soil.

'The King and Queen's working visit two weeks ago was a missed opportunity'

liness. This is an increasing problem for international trees on campus, one that has unfortunately received too little attention to date.'

The *Eucommia* was chosen at the time for its climate-proof qualities, allowing it to thrive in the fluctuating hydrological conditions of the land surrounding At-

'So it's basically an exotic plant, and it stands there on its own. That means a big risk of lone-

las. Then there was the fact that WUR has an extensive Chinese community, which it was thought would make the tree feel at home on campus.

But the result has been rather disappointing. The tree's decline has not escaped the notice of the Executive Board either. Not surprising really given that their offices in Atlas look out on the royal tree. As a solution to the problem, departing rector magnificus Arthur Mol is considering further internationalization of the tree population on campus and more money for maintenance. When asked to comment, Professor Neighbour applauds Mol's plan but also points to the need for sufficient love and attention. 'The King and Queen's working visit to our region two weeks ago was a missed opportunity in that regard. Even a brief stop at the rubber tree would have done a world of good. A pity.'