

WUR from within: straight, sharp, transparent

No 11

Resource

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The journalism platform for all at Wageningen University & Research

More resistance
to hot-desking

Cupid on campus
relationship code

Less English
in BSc programmes

Fossil collaboration
still allowed

Farm incomes fall
without state support

Years of plenty are over
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FOREWORD

Clarity

Administrators have a tendency to use vague language if something is about to happen. An intranet message about WUR's finances caught our eye. 'Common sense, careful financial choices' was the headline. That the big wage increases in the 2023 collective labour agreements — 9 per cent pay rise for WU and a bigger year-end bonus for WR — will have an impact comes as no surprise. Then there are the higher energy costs and general inflation. Plus last year's election result may have consequences for higher education. The years of plenty have come to an end and you need to prepare for the new situation, that's clear.

The intranet message states that the new times will have an 'impact' on 'the choices we make' and consideration needs to be given to 'what matters most'. That is pretty vague language. We looked into the topic and asked Rens Buchwaldt, the finance guy on the Executive Board, whether he could be more concrete (page 12).

Also vague, or perhaps just smart: the employee satisfaction survey. The result looks good for the employer WUR, with a satisfaction score of 7.9 for WU staff and 7.8 for WR staff. Unfortunately the survey only asked one question about satisfaction with the workplace ('my workplace encourages cooperation'), even though hot-desking is currently such a controversial topic. The concrete news on the subject is that like Environmental Sciences before them, staff at Plant Sciences (PSG) want hot-desking to be put on hold (see page 4). The petition PSG sent calling on the directors to return to the negotiating table cites the Dutch saying: 'Better to turn halfway than go completely astray'. Now that's clarity.

Willem Andrée
Editor-in-chief





STUDENT SQUATTERS IN EMPTY HOUSE

A group of WUR students are squatting in a rental house on Julianastraat. The squatters think it is ridiculous that the house, intended for social housing, has been unoccupied for more than three years during a housing crisis. The owner, Woningstichting, says the house is uninhabitable but the students say it isn't that bad. They don't intend to move out until the place gets renovated. Woningstichting has reported the matter to the police. Scan the QR code to read an interview with the squatters. LZ



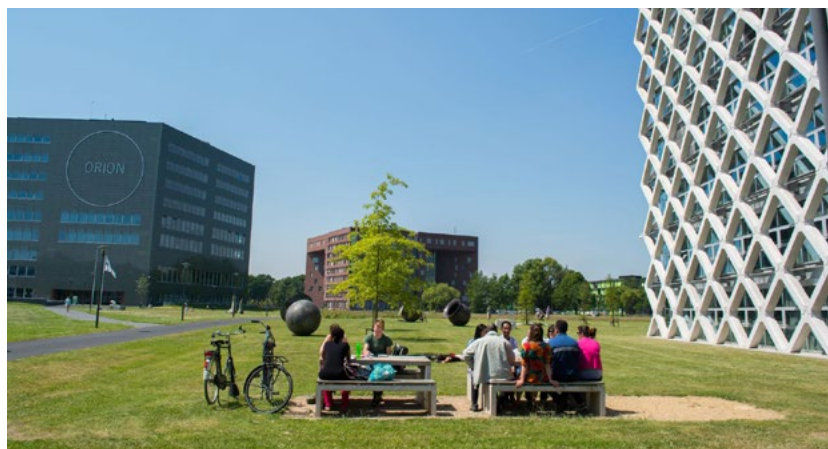


Photo Marte Hofsteenge

WU has happiest Dutch university staff

The most satisfied university employees in the Netherlands work at Wageningen University. That at any rate is the finding of the recently published Employee Monitor, which compares the scores of WU and WR with one another and with eight other (anonymized) universities.

The 2023 Employee Monitor was carried out by the research firm IVA Onderwijs, which conducts similar surveys at various other Dutch uni-

WUR employees like their colleagues and find their work sufficiently challenging

versities. That gives them interesting data for comparisons. However, there are only 'very limited possibilities' for comparing the results with historical data, according to the report, as the firm that carried out the previous surveys did not share its data. In addition, the questionnaire has changed.

Of the 7797 WUR employees who were sent an email about the monitor, 4769 completed the questionnaire. This response rate (61 per cent) is higher than in 2021 (55 per cent). The highest rates were at Wageningen Food Safety Research (70 per cent) and Concern Staff (69

per cent).

In terms of employee satisfaction, WU (7.9) and WR (7.8) head the group of universities. But that lead should be put into perspective: the lowest score is still 7.3.

WU and WR also score better than the other universities on 'clarity': the tasks are clear, authorizations are clear and there is clarity on the results expected of you. The aspect of 'challenges' gets an above-average score too: people at WUR find their work sufficiently challenging. They are also happier with their colleagues on average.

Inappropriate behaviour

However, WUR also scores high for inappropriate behaviour: one in five respondents say they have experienced this (almost twice as many as at some other universities). The report does not say whether that means transgressive behaviour is more common here or whether people at Wageningen are more alert to such behaviour.

The report also has nothing to say on the topic of hot-desking and losing your personal desk. *Resource* recently reported on this topic, a major source of frustration for many. See the intranet for more on the survey results. ME

Resistance to hot-desking at Plant Sciences too

Following in the footsteps of the Environmental Sciences Group (ESG) staff, employees at the Plant Sciences Group (PSG) have signed a petition protesting at the loss of the personal desk.

The 330 plus signatories say the intended switch to activity-based flexible workstations will be at the expense of employee welfare and the quality of research, education and other tasks.

The petition calls on the PSG directors to suspend the conversion of the offices with immediate effect, starting with Radix. According to the signatories, the directors first need to listen properly to the staff, take their concerns seriously and then revise the conversion plans accordingly. 'Don't dismiss our concerns and practical objections as misunderstandings; stop explaining the housing concept to us again and again. That comes across as disrespectful.

The petition signatories think the directors should explore other options for meeting the growing demand for workspace. It costs money to make the offices suitable for the hot-desking loathed by so many, and perhaps the budget could be spent more effectively, argue the employees. For example, on temporary solutions such as Radix Nova, the 'directors-hut offices' between Radix and Unifarm. ME

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String Theory

Courtesy of Marcel Vonk

Wednesday,
21 February
Café Loburg
19h45 Music: Radiant Wood
20h15 Science

Speakers
Dr. Marcel Vonk (UvA)
Dr. Jay Armas (UvA)

café | bar | live

www.sciencecafe.wageningen.nl

40

As we write (Tuesday, 13 February), 40 WUR academics have signed an open letter calling on the campus canteens to switch to an assortment that is completely plant-based. The letter refers to scientific research that shows the negative effects of livestock farming and the fishing industry on the climate. The action is part of the international Plant-Based Universities campaign. Nationally, at least 225 academics have signed the letter. ^{LZ}

Collaborating with fossil industry still possible

Collaborating with a fossil-fuel company such as Shell is still possible subject to certain conditions. WUR has adopted these recommendations made by the advisory committee that was set up last year. The committee drew up a decision framework setting out three conditions that must be met for collaboration with a fossil-fuel partner. For example, WUR itself must be responsible for the research objectives and the partner's financial influence on the project must not be too great. According to the Executive Board, some of the recommendations need further work. That includes the rule stating that a fossil-fuel partner must not fund more than 30 per cent of the project. Martijn Duineveld of Scientists4Future: 'If WUR truly wants to be independent, we should make sure the fossil industry has nothing to say on a project. Make zero the new 30!' The decision framework will come into effect on 1 June 2024. ^{ss}

See resource-online.nl

Universities want less English in Bachelor's programmes

All Dutch universities are acting in unison to control the internationalization of education. WUR too is helping to resolve the issue.

Last summer, the universities came together and agreed to come up with their own plan for controlling the intake of international students. The wish to do so was prompted by accommodation shortages, crowded lecture rooms and the excessive workload of university staff. The plan that has now been published says all major Bachelor's programmes will be offered in Dutch as well and some of the Bachelor's programmes in English will be turned into Dutch-language programmes. WUR rector Arthur Mol took the lead

together with Anton Pijpers, President of the Executive Board of Utrecht University. One aspect of the plan is to use 'tracks' to manage the international intake. Mol:

'We want a limit on student numbers in the English track'

a limit on the number of students on the English track, so universities no longer take on more students than they can cope with. By 19 March, all the universities will jointly specify how many Bachelor's programmes will get a new Dutch track. We have seven international BSc programmes at Wageningen. Next Mon-

'So you would have an English track and a Dutch track.

We also want

day, I will be talking to all the programme directors about which programmes could get such a track.'

Why is Wageningen getting involved?

After all, housing shortages and crowded lecture halls aren't an issue here. 'Internationalization is the subject of a public debate and we are tackling the problems jointly as a sector. You can't just say: there's no housing shortage in Wageningen so we're not going to do anything. But it is clear that the biggest changes will be in the social-science programmes, not the technical ones. Also, we have been an international university since our foundation. International students — and staff — remain welcome. And all Master's programmes will remain international.' wa



The US had a lot of natural disasters relatively speaking, such as the fire on Maui (August 2023) – with 100 fatalities, one of the deadliest fires in American history. The bias towards data from industrialized countries distorts the picture. • Photo Silent O / Shutterstock.com

Vision: 2023 record year for natural disasters

Reinsurance company AON reported recently that 2023 was a record year for natural disasters, with more incidents (>400) and more economic damage (380 billion dollars) than ever before. Mortality went up too. Does that set alarm bells ringing for Jeroen Warner, associate professor of Disaster Studies?

How reliable are the AON figures?

‘Figures from insurance companies often give a fair indication. A lot better, at least, than those of governments, who just hazard a guess and stand to benefit from either overestimating or underestimating the scale. But there’s a strong bias towards industrialized countries in insurance statistics.’

Does that prosperity bias play a role in the gloomy picture painted of 2023?

‘That is perfectly possible. In 2023, quite a lot of disasters – forest fires, tornadoes – that cost billions in claims happened in the US, where a lot of property is well-insured. That’s bad luck for insurers but it doesn’t tell you much about how “bad” the disaster is. In humanitarian terms, a disaster elsewhere, which doesn’t even get into the papers, can be much worse.’

Why has mortality gone up again?

‘The trend has always been: more disasters, more damage, but fewer victims – thanks to better early warning systems. This sudden increase in the number of deaths caused by natural disasters could be a one-off exception. About 50,000 people died in the earthquake in Turkey and Syria in February 2023, which is more than half the total number of deaths reported by AON.’

The AON report claims that businesses are ill-prepared for disasters. Is that what you see?

‘Many companies are opportunistic: what does it cost to be well-prepared? And what are the costs if things go really wrong at some point – and how much risk of that is there? They often

take the risk. Governments also tend to take an overly rosy view of the risks. Look at the Netherlands: people still seriously consider building on the floodplains because, well, there’s a housing shortage. If you frame it like that, no wonder the risk of natural disasters increases.’ ME

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The Marketing & Consumer Behavior Group organizes a unique course that will introduce students to commodity futures and options markets. Students will develop an understanding of the markets and how they work, gain knowledge about the theory behind futures and options markets, identify their economic functions, and develop an analytical capability to evaluate their economic usefulness. This course is taught by Philippe Debie and Prof. dr ir. Joost M.E. Pennings (Marketing & Consumer Behavior Group, Wageningen University). There are only 40 seats available. If you are interested in taking this course (3 Credits) please register in Osiris or contact Ellen Vossen, e-mail: Ellen.Vossen@wur.nl, tel. 0317-483385. Lecturers are on Fridays in period 5 (one lecture is on Thursday), one day a week, please check schedule in TimeEdit for time and location. Prerequisites: None.

ALTRUISM IN BACTERIA

A sister system to the better-known, Nobel prize-winning CRISPR-Cas9 system is displaying even more impressive capacities: the CRISPR-Cas type 3 system can actually cut RNA, which suggests promising opportunities for diagnostics. At the beginning of February, microbiologist Raymond Staals published an article about it in *Science*.

The Cas9 system came to fame as a useful molecular tool for cutting and pasting DNA with great precision. Researchers discovered the system in bacteria in 2012. The benefit to bacteria lies in the way the system helps them resist viruses because it recognizes the viruses and shreds them.

The sister system, a CRISPR-Cas type 3 system, does the same trick with RNA, the mobile copy of DNA. 'Cutting the RNA is actually a rather illogical strategy on the cell's part,' says Staals, 'because a virus keep on making new RNA from the DNA.' Staals and his colleagues discovered that bacteria produce many signalling molecules simultaneously, activating a particular protein group with a common characteristic: they destroy critical biomolecules such as DNA, RNA and proteins in the invading virus, but also in the bacterium itself. 'The bacterium commits suicide,' Staals explains.

The bacterium prevents itself from becoming a virus factory for further proliferation

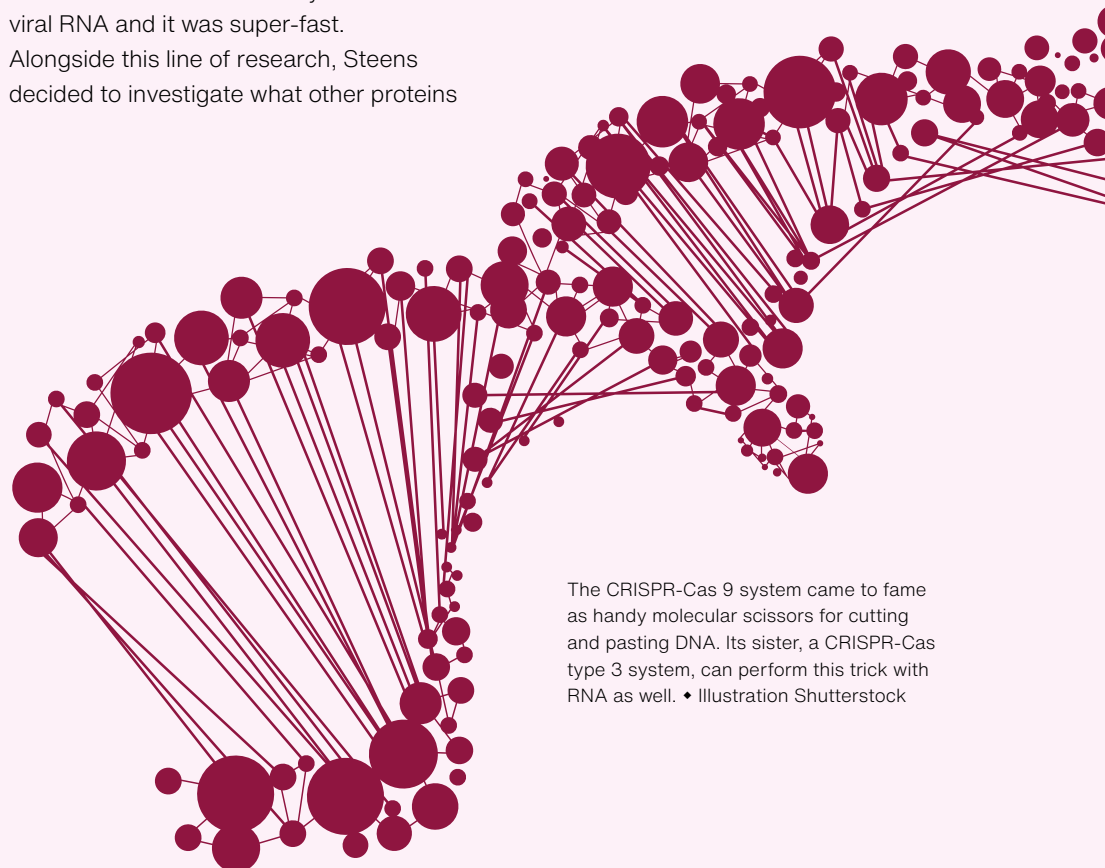
This discovery brought a significant insight. It appears that researchers have in fact misunderstood CRISPR-Cas all these years. 'It does not kill the virus, it kills the

bacterium itself. In this way, the bacterium prevents itself from becoming a virus factory for further proliferation. It's a kind of altruism on the part of the bacteria cells.' To date, CRISPR-Cas9 appears to be the exception to this general rule, as type 9 doesn't trigger a suicide mechanism.

Specific and sensitive

PhD candidate Jurre Steens, the lead author of the study, discovered that this system can also be used in diagnostics. The system gives off a signal after identifying a specific piece of virus RNA. The researchers tested it on Covid-19 and the results were unprecedentedly positive: the COVID RNA fragment is recognized more accurately than in other diagnostic tests. It is sensitive even at extremely low levels of viral RNA and it was super-fast. Alongside this line of research, Steens decided to investigate what other proteins

may be activated with the bacteria's own molecules from the CRISPR-Cas type 3 system. Something extraordinary occurred in one of these proteins. He added the signalling molecule to a test tube with the protein, which changed into a milky fluid within seconds. 'We didn't expect that.' A chain reaction produced a large protein complex, which, in turn, activated a different protein that cut up a lot of molecules in the cell. 'We jokingly called it "Destroyer of Worlds" in the lab. But don't worry, the cell has a smart feedback system to halt these destroyers in time.' And this system bears a striking resemblance to apoptosis, a cellular process that plays an instrumental role in clearing up cancer cells. 'Who knows how it might contribute to that,' Staals concludes. TANJA SPEEK



The CRISPR-Cas 9 system came to fame as handy molecular scissors for cutting and pasting DNA. Its sister, a CRISPR-Cas type 3 system, can perform this trick with RNA as well. ♦ Illustration Shutterstock

A botched experiment, a rejected paper: such things are soon labelled as failures in academia. As for talking about them – not done! But that is just what WUR scientist do in this column. Because failure has its uses. This time, we hear from John van der Oost, professor of Microbiology. Text Nicole van 't Wout Hofland • Illustration Stijn Schreven

'Scientific research starts with an idea and the search for funding to test the idea. About eight years ago, I had an idea for a CRISPR-Cas project. I submitted an application for the ERC Advanced Grant, but it was rejected. As with other rejections, I felt miserable for a few days. I gave myself time to get over that unpleasant feeling, took a deep breath and looked at my proposal again with fresh eyes. Then I could see that it had been a rushed job. But I still believed in my plan.

A year later, I holed up at home for three weeks and started over. How could I improve on the proposal? A big project consists of components that fit together logically. That wasn't the case in my original proposal: the components did not form a coherent whole. This time I linked them up better. I explained the strategy more clearly and I worked out what we should do if particular steps panned out in unexpected ways. I also streamlined the whole thing better and took the time for illustrations. After

spending four weeks rewriting it, I submitted my revised proposal and this time my idea was rewarded with the grant. That experience was a valuable lesson. It sounds obvious, but if

'For a rejected applicant, it's important not to blame the committee'

you take enough time for a proposal, you'll do justice to it. It makes it possible for the idea to ripen and for you to brainstorm with your colleagues. Of course, grant applications will always be challenging and being rejected can be very frustrating. For a rejected applicant, it's important not to just blame the adjudicating committee by thinking: they didn't understand it. That's exactly when you need to shoulder the responsibility for formulating the proposal more clearly and logically and – if possible – show some preliminary results.'



Sweet e-cigarettes as tasty as sweet food

PhD candidate Ina Hellmich studies what flavours do to our perception of nicotine products and whether that can be compared to how taste works in food. She recently published some new results. 'There are no e-cigarettes with cheese flavour, yet we enjoy the taste of cheese.'

Tobacco producers are always finding new ways of getting people to use their products. Researchers then show the harmful effect of the new product and the government introduces rules targeting it. PhD candidate Ina Hellmich (Sensory Science & Eating Behaviour and the National Institute for Public Health): 'By taking this approach, we are constantly on the back foot.' Hellmich and her colleagues exposed test subjects to images of food products and e-cigarettes with a sweet or savoury taste. They did this by putting

'We saw no difference between smokers and non-smokers in how tasty they found the e-cigarettes'

the participants in an fMRI scanner and showing them pictures of vapes or food while giving them sweet or savoury odours via a tube to the nose. Then they asked the participants for example how tasty they thought a savoury e-cigarette looked like and whether they would want to consume it. In the analysis of the results, the researchers distinguished between smokers and non-smokers.

Not transferrable

'The most shocking result I felt was that we didn't find any difference between smokers and non-smokers in how tasty they thought the e-cigarettes were. Non-smokers wanted them just as much as smokers.' Another result was that all the participants thought the sweet e-cigarettes seemed as tasty as sweet food. 'Humans are biologically programmed to like sweet things. But no one wanted savoury e-cigarettes, even though both groups did like the taste of savoury food. This shows that we can't transfer what we know about the sensory perception of food to the sensory perception of vaping.' DV

GRANT ALLOWS EXPANSION OF RAVEN STUDY

Lysanne Snijders, a researcher in the Behavioural Ecology group (Animal Sciences), has received a Dobberke grant that will let her pay for five extra transmitters for her research on ravens, a species of bird that almost disappeared from the Netherlands at one point.

Snijders studies the feeding strategies of ravens on the Veluwe. In her research, she collaborates closely with ARK Nature, the Dutch Raven Working Group and Sovon Dutch Centre for Field Ornithology. These organizations have been fitting young ravens with GPS transmitters since 2021. Initially, the aim was to see whether ravens benefit from the return of the wolf to the Netherlands, as a supplier of carrion. However, the transmitters have provided a lot more interesting information.

For example, it turns out the birds don't only feed on carcasses, they also use food sources of human origin, such as rubbish bins outside fast-food restaurants or waste dumps — even on the Veluwe where natural sources of food are available in abundance. That abundance is partly because of the carrion left by wolf packs on the Veluwe and partly because wild animals that have been killed on the roads regularly get left to decompose, says Snijders.

Neophobia

The preference for human food sources in an environment with a relative abundance of natural food sources is particularly surprising because ravens are neophobes: they fear new things. Snijders: 'That is interesting, to discover this behaviour in a naturally timid bird. It seems they have learned it doesn't have to be unsafe. But how? Through interaction with the environment? By imitating other ravens?'

To answer such questions, she needs a larger sample size. At present, 21 ravens



Specialized volunteers attach transmitters to young ravens on the Veluwe • Photo Marielle van Uiterd

on the Veluwe have transmitters, eight of which are still working. That includes two that have been providing data since

'We want to understand how to make the human-dominated living environment more suitable for animals'

2021. The grant will now let Snijders add another five to the total. The lightweight transmitters will be fitted during the coming breeding season. Specialized volunteers from the Dutch Raven Working Group will attach them via a harness to raven chicks that are not yet able to fly. That way, they learn how to move with the harness on from a young age. It will take a while before the transmitters provide useful insights, explains Snijders. 'Ravens are reared as part of a family and only start behaving as individuals after about six months.'

Snijders is clear on the usefulness of the study: 'You don't fit birds with transmit-

ters for the hell of it. It is fundamentally interesting to figure out how social processes work in relation to finding food. In terms of applied research, it is relevant to understand how we can make our human-dominated living environment more suitable for these birds and other animals.' ME

Dobberke grants: four awards

In addition to Snijders, three other Wageningen scientists got a Dobberke grant:

- Davide Bottacini: Can a conspicuous predator camouflage through background matching?
- Chris Tyson: Coping strategies: understanding how individuals respond to uncertainty.
- Evy Gobbens: Unravelling the diet of multiple shorebird species in a threatened ecosystem using DNA-Metabarcoding.

PhD theses **in a nutshell**

Vaccines 2.0

Creating vaccines using baculoviruses is a tried and tested approach. The problem is that there are then a lot of baculoviruses in the vaccine obtained. They are considered harmless but you never know. Linda van Oosten developed a way of making a purer vaccine by making the system temperature-sensitive. A temperature-sensitive gene ensures that above 34°C, the vaccine is manufactured without any more virus. As proof of principle, she used the new 'platform' to make vaccines against foot-and-mouth disease, West Nile fever and hand-foot-and-mouth disease. Serious doctoral research! ^{RK}

Innovations in virus-like particle vaccine production with the baculovirus expression system. Linda van Oosten ◀ Supervisors Monique van Oers and Gorben Pijlman

Strips and pests

Strip cultivation can boost biodiversity and reduce the damage caused by pest insects. Luuk Croijmans studied the extent of these effects in different farming systems based on strip and pixel cultivation. There are effects but they are not very big. In strip cultivation, for instance, the number of ground beetles goes up by 15 per cent and it increases the effectiveness of parasitic wasps. But a lot depends on which crops you plant together, and which wasps you use for biological pest control. All the plants give off different odour signals, making it harder for wasps to find their way to their desired destination. ^{RK}

Companion Aligned. Luuk Croijmans ◀ Supervisors Erik Poelman and Marcel Dicke

Connected waters

Surface water contains too many fertilizer substances. These nutrients go unutilized and end up in the ocean. A pity. Measures to change this often target specific lakes and ditches. Dianneke van Wijk takes a different approach. She developed models that describe how you can retain fertilizer substances in networks of connected waters. An improved ecosystem upstream has an impact on the situation downstream. But she didn't leave it at the theory: she also developed a game in which water managers learn to put theory into practice in a 'real' lake. ^{RK}

Towards smart nutrient retention networks to improve water quality. Dianneke van Wijk ◀ Supervisors Carolien Kroeze and Wolf Mooij

THE PROPOSITION

PhD students explain their most provocative statement. This time it's Maria Rodriguez Barillas, who received her PhD on 19 December. Her thesis was about understanding farmer-system dynamics in the transition towards sustainable coffee production in Costa Rica.



'Climate-smart agriculture as a scientific field is a typical example of neocolonial science'

In my PhD research, I've noticed that climate-smart agriculture as a scientific field is mainly influenced by actors from the Global North. That gives them disproportionate influence over the direction and priorities of the field. The voices of local farmers are often overlooked, even though they have generations of practical experience on their own land. Consider the coffee sector as an example: valuable resources such as indigenous knowledge or traditional good agricultural practices are taken out of the local context and used without equitable cooperation or recognition. Despite its potential profitability, this approach risks disrupting the plantation systems that local farmers have relied on for generations. Are local farmers consulted in this

decision-making process, and are the new technologies truly aligned with their needs?

New ideas and technologies are being tested without considering the willingness or understanding of these farmers. Why is some knowledge more "relevant" than other knowledge? Some perspectives, methods or solutions that align with the interests of certain dominant groups are prioritized to the detriment of the needs and knowledge of local communities. Is this a kind of neocolonial science?

I think we should always consider the voice of local people when dealing with any scientific idea, research project or the introduction of commercial products. It is not only the voice of scientists that counts.' ^{NF}

Everyone a professor?

At the start of this year, the first PhD student that I have co-supervised graduated. Not only was I delighted that he had done fantastically well, but it was also a special experience to witness a PhD ceremony from that perspective. Of course, I once defended my own dissertation, and I have been an opponent at another defence, but now for the first time I got to look on proudly. I enjoyed all the academic frills too: the

'If there's one thing that didn't bother me for a moment, it was that I wasn't allowed to wear a gown'

and the formal reading aloud of the result. We don't have a lot of nice traditions in the Netherlands, but our PhD defences are terrific. I've been told that by our foreign visitors as well. If there is one thing that didn't bother me for a moment while I enjoyed it all, it was that I didn't wear an academic gown, and wasn't allowed to do so. But according to the Young Academy, this is a highly undesirable custom. In their manifesto, Everyone a Professor! the young

gowns with their different designs for different institutions, the beadle with the rattling rod,

academics argue for a change of policy so that 'all assistant, associate and full professors are allowed to wear a gown, use the title Professor [...] and bestow a doctoral degree on their own supervisees.' Utrecht University has already established this policy and at Groningen there's a petition going round the staff to achieve the same change. I hope WUR won't follow their example. The arguments for these changes are explained at length in the document but the message it leaves me with is: it's not fair, assistant and associate professors do a lot of work and deserve a prominent place in the proceedings. It's true about the work, of course, but I still felt the whole piece has a very whinging tone. Everyone in the room who is from the academic world knows perfectly well how hard the co-supervisors have worked, and everyone from outside academia couldn't care less about it. To me, whinging about not getting enough attention at a ceremony that is not about you ill befits the dignified status I associate with wearing an academic gown. Because a PhD ceremony is about one person, and that's the person getting the PhD.



Guido Camps

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

Dutch universities face rising costs and falling revenue

'THE BUDGET IS TIGHTER'

Dutch universities all face a financial squeeze in the coming year. WUR too will have a budget deficit: in 2023 the university had numerous extra costs, mainly staffing costs. And this year those costs are set to go up again. And yet, 'we don't have to rush into making all sorts of cutbacks,' says the Executive Board. Text Marieke Rotman and Willem Andrée

'W'e are going to have to be extra careful about our financial decisions in the coming period.' An announcement to this effect appeared on the intranet on 31 January, after the university's budget for 2024 was published. According to the budget, there won't be enough money this year. The announcement reported that all the rising costs will also 'have an impact on the decisions we make'.

New labour agreement

Last year a new collective labour agreement (CAO) was drawn up for the Dutch universities, enshrining a pay rise of 9 per cent. A similar rise was negotiated for Wageningen Research. Those rising wage costs are now one of the factors putting pressure on the budget.

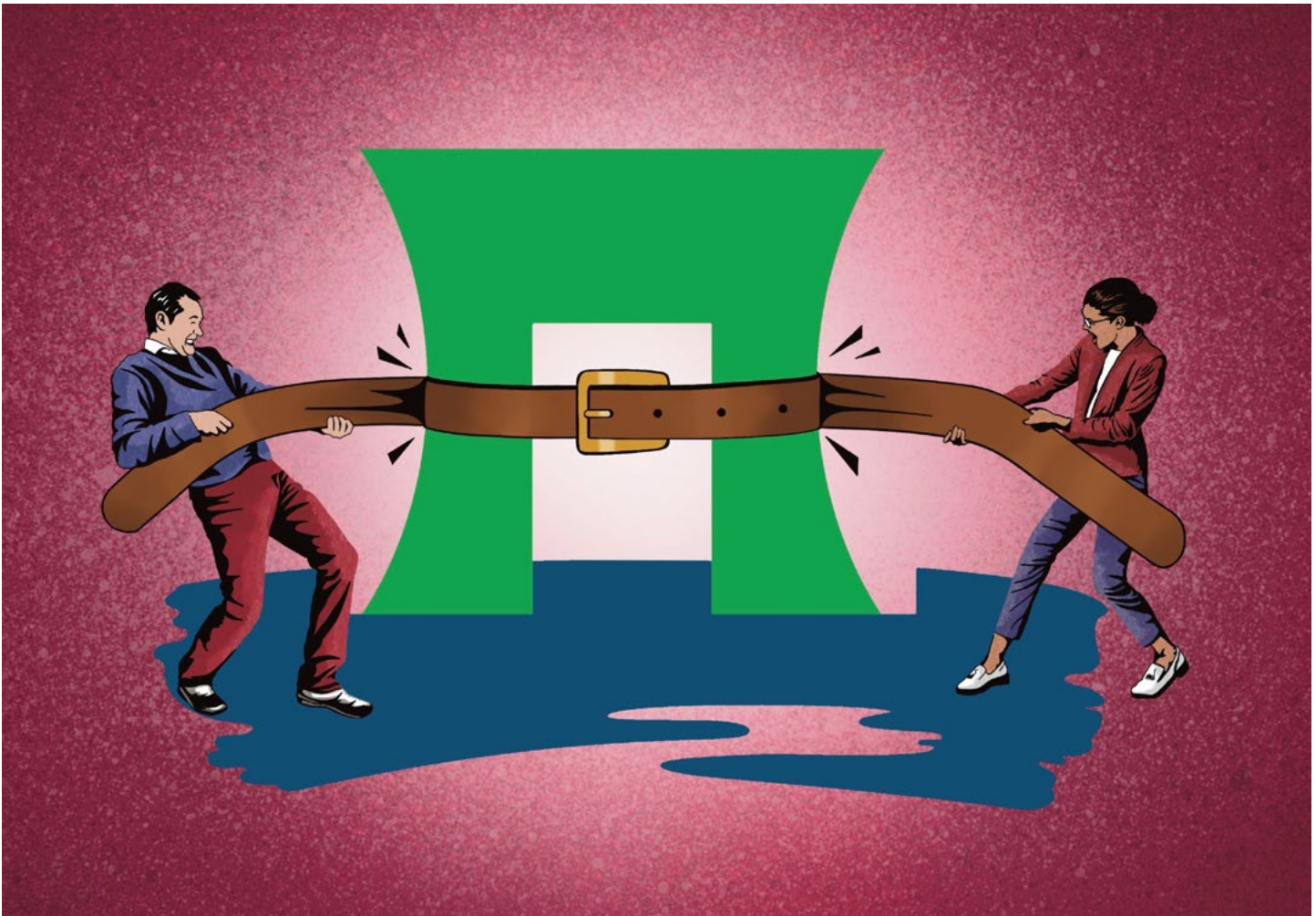
This is happening in other universities as well. In fact, it's so bad that several unions including FNV wrote a joint letter of protest to the universities, flagging up the fact that several universities mentioned 'worrying financial situations' as a result of the rising wage costs. WUR was not one of them, though. 'The ink on the CAO agreement was hardly dry when some employers announced that they were not going to cope with it financially,' says Sander Wesdorp, a manager at FNV Education & Research. 'Even though they were at the negotiating table themselves and voted for the pay rise, among other things. We didn't think that was very

classy of them. particularly considering the universities are being compensated for the rising wage costs by the ministry of Education, Culture and Science.' Although precisely how much that compensation amounts to is shrouded in secrecy, he adds.

Deficit of millions

Meanwhile, several universities have more far-reaching financial troubles, says Wesdorp. 'Falling student numbers, higher energy bills, more expensive accommodation: no one is swimming in money.' For example, Leiden University expects

'WAGE COSTS WENT UP A LOT LAST YEAR AND WE CAN'T RESPOND TO THAT QUICKLY ENOUGH'



Rens Buchwaldt: 'The budget is tighter than it's been in recent years. I expect that this time the predicted deficit really will happen.' • Illustration Valerie Geelen

to fall short by 'a few million' euros next year. At Erasmus University the figure is around 20 million, at Nijmegen 24 million and at Eindhoven they're talking about 30 million. According to the multi-annual budget at the University of Groningen, there'll even be a shortfall of over 70 million in 2024.

Wesdorp fears that this financial pressure will mean that contracts won't be renewed, fewer vacancies will be announced and the work pressure will increase. 'And the excessive work pressure at universities has been a cause for concern for us for a long time.'

Gap

The problems at WUR are not as big. According to the recently published university budget, the deficit in 2024 comes to 6.5 million euros, whereas in the past

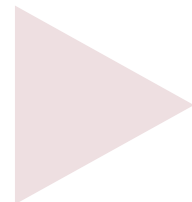
few years there has consistently been a positive result of between 10 and 20 million euros. Reading on, you can see that the difference comes largely from staffing costs, which are expected to go up by about 33 million euros. The explanation given for this is that there has been a staffing increase of 200 FTEs, coming on top of the higher salaries resulting from the new CAO agreements.

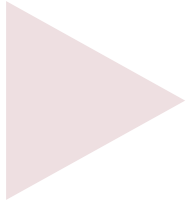
Are the rising staffing costs already noticeably affecting WUR's activities? They are at Corporate Communication & Marketing (CC&M), says operations coordinator Erik Vleeming. 'For 2024,

there is a gap in the budget: wage costs went up a lot last year and we can't respond to that quickly enough. That's why there's a deficit. At CC&M, the department has to absorb that itself.' But, he adds, 'it doesn't seem as though it will cause major long-term continuity problems.'

'More uncertainty'

Rens Buchwald, the Executive Board member responsible for finances, confirms that the good times are over. 'We have had several very good years. So much money came in that we weren't





'A FINANCIAL DECISION NOT TO DO SOMETHING THIS YEAR DOESN'T NECESSARILY CONSTITUTE A CUTBACK'

able to spend it all on projects because we wouldn't have been able to get all the work done. But we could use it to appoint people to do the work. Now there are uncertain times ahead. The growth of the past few years is coming to an end and of course the future looks uncertain politically, especially regarding international students.' There has been some sensible forward planning in the past few years, though, says Buchwald. 'That's why we don't have to rush into all sorts of cutbacks.' He confirms that the ministry of Education, Culture and Science is going to help cover the wage costs. 'Broadly speaking, that 9 per cent will be compensated.'

So how should we read the intranet bulletin which talks about budget deficits that 'will have an impact on the decisions we make' and will bring 'uncertainty' with them. Buchwald: 'The budget is tighter than it's been in recent years. Even when there was a shortfall in some areas, we could implement pretty much everything we wanted to.'

The budgets of recent years show that there were other times when a deficit was expected, but that the result at the end of the year was still between 10 and 20 million euros in the black. Buchwald: 'That was different last year, and it will be different again this year; I expect that this time the predicted deficit really will happen.'

Heated discussions

This has already led to some heated discussions, he says. Where there used to be more leeway, spending this year must not exceed the budget. And that can impact events like the WeDay or the

Dies Natalis. On the other hand, Buchwald stressed, the higher costs won't have immediate consequences for staff numbers or vacancies. 'We don't have to cut back.' And what is meant by making decisions about 'where the priorities lie'? 'Well, they are always education, research, and the impact they have.' It does mean that the chair groups are also going to scrutinize their budgets. 'If it is harder for one department to get a study financed, or less money comes in from the ministry, then they will have to take a really good look at whether everything can go ahead this year. The responsibility for budgeting is shared by the whole organization. But a financial decision not to do something this year doesn't necessarily constitute a cutback.'

What is Buchwald's take on the FNV union's concerns about staff and pressure? 'The staff-student ratio has improved enormously here in recent years.' According to the budget, the number of FTEs went up by 40 per cent in the past five years, and the intention is to keep it at that level. The WUR Council, which has to approve the budget every year, declines to comment on the impact of the coming budget deficit. In March, the FNV and other unions start on the next round of negotiations on the CAO that comes into effect in 2025. ■



Cupid on campus: relationship code



A crush on a colleague? Crazy about a student? You wouldn't be the first, as many a WUR couple can testify. What is new as of last September is that campus couples now have to keep to the Relationships at Work code. What does that code say and does it also apply to 'situationships', affairs and other secret liaisons? We asked HR project manager Joyce van der Velden.

Text Marieke Enter • Illustration Marly Hendricks

Surely relationships are a private matter?

'First of all, WUR is not opposed to relationships between co-workers. It's wonderful if two people fall for one another. But a relationship is never just a matter for the two of you; many other people are affected too. Relationships at work can raise questions about integrity. Are the two lovebirds pulling strings for one another, do they respect the confidentiality of information given to one of them, is there a conflict of interest or misuse of power? The same applies if the couple break up. That is why the code states you should report it if a private relationship overlaps with a professional relationship.'

Even if you never do any work with your lover?

'If you fall for a colleague who you don't have anything to do with at work and never will, that's fine and I wish you luck — you don't have to report that relationship. But if there is any overlap between your professional connections and your love life — or family connections (see inset, ed.), your boss or HR consultant should be informed.'

Scope

The Relationships at Work code applies to both romantic relationships and first- and second-degree relatives. It deals with relationships between employees, relationships between an employee and a student, or relationships between an employee and an external person who works at or for WUR, such as a supplier or temporary hire. It does not apply to close friendships, although the code does say people should be 'alert to situations that form an integrity risk'. The code can be downloaded at bit.ly/relacodewur

Are these reports recorded anywhere and how long is that information kept?

'No. The report is not recorded in your personnel file or in any other administrative system. The only exception is if there are consequences, for example when someone can't be assessed by their boss because they are in a relationship together, or they are assigned a new job for this reason. Official confirmation is needed of these agreements.'

What if it's in the early stages or you don't want others to know for some other reason?

'The code is clear on this: every love affair, even if it's in the early stages or adulterous, must be reported to the line manager or HR. The code says such reports will be handled "discretely and with respect for privacy". No relationship will be made public if you don't want that.'

What about relationships between teachers and students? Is WUR OK with that as long as they don't have anything to do with one another in education or research?

'No, actually. WUR is not keen on relationships between teachers and students. It isn't forbidden, but we expect our staff in particular to be extremely cautious in that regard. That is mainly due to moral and ethical considerations. And it must always be reported because there is always a power imbalance.' ■





NIPPING AT CAKE CINNAMON BREAD

In WUR's winter AID, new international students get to know Wageningen town centre. They wander around the town in groups carrying out tasks and recording them in photos for the 'Crazy 66', a competition in which the AID group that completes the most tasks with the best performance wins a prize. This photo shows the traditional Dutch game of nipping at cake, but in a Frisian variant with cinnamon bread instead. Participants are blindfolded and then have to find the cinnamon bread and take a bite out of it. LZ

Photo Guy Ackermans

Stronger under tension

Can a rope become stronger when you pull on it? No, of course not, you would think at first. But PhD candidate Martijn van Galen proved the opposite in a world first.



Text Roelof Kleis

Admittedly, this particular rope doesn't exist yet, but it's just a question of time. Physical chemist Martijn van Galen has proved beyond doubt that it is possible. He describes how in his doctoral thesis *Catching Up!*, for which he got his PhD last week. It is the first time a linkage has been designed by a human that becomes stronger under tension. The title of his thesis refers to our competition with nature. Nature uses plenty

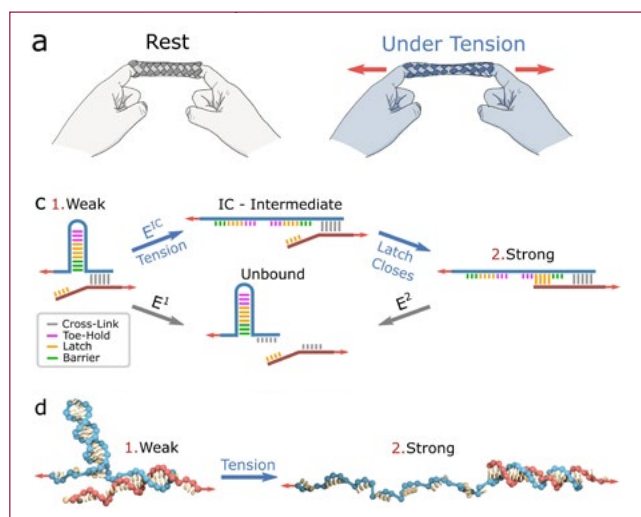
of linkages that become stronger under tension. They are called catch bonds. Catch bonds were first shown to exist in 2003. 'Initially, that was in the rolling movement of white blood cells that accumulate in places with inflammation,' says Van Galen. 'White blood cells in the bloodstream become attached loosely to a specific receptor protein on endothelial cells. That protein is created locally where there is an inflammation. The blood flow in the bloodstream pushes against the white blood cells. This leads to a tensile force exerted on the receptor proteins, and the linkage

then becomes stronger because these receptor proteins have catch bonds. So the tensile force makes the loose connection change into a much stronger bond. The result is that the rolling blood cells are stopped, and stay in the vicinity of the inflammation.'

The receptor protein deforms when you pull on it, exposing a binding site hidden in the centre of the protein that the white blood cell can also attach to. 'Catch bonds are frequently found in nature in processes involving mechanical forces, where the stability of tissues is at stake,' explains Van Galen. 'An example is proteins that pull DNA strands apart during cell division.' In his thesis, he lists various of these biological processes. 'Such bonds probably play a role in many more processes, but it's not easy to demonstrate that. You need complex measurement methods.'

Synthetic replica

Catch bonds may be pretty commonplace in nature, but humans have never been able to make one. Van Galen's supervisor Joris Sprakel had been toying with the idea of how to do this for a while. He found an ally in Van Galen. 'I had got a grant from the VLAG graduate school to synthetically replicate allostery in proteins — changing form and function. Catch bonds are also a kind of allostery. How can you design a kind of switch that breaks under the



Catch bond with two pieces of single-stranded DNA(d). Under tension, the 'hair grip' opens up like a zip, and the inner part of the zip becomes available to enable a bond with a section of DNA on the other piece that is a perfect fit. • Illustration Martijn van Galen

influence of a mechanical force and as a result forms a stronger bond? That is essentially what a catch bond does.' The catch bond designed by Van Galen consists not of proteins but of two pieces of single-stranded DNA (see the illustration). One of the two pieces is partly folded like a hair grip. In normal conditions, the two pieces of DNA become loosely attached. That changes under tension. 'The hair grip opens up like a zip, and the inner part of the zip becomes available to enable a bond with a section of DNA on the other piece that is a perfect fit.'

In practice it's not as simple as presented here. Van Galen: 'There are various modules in the catch bond that all need to respond differently to the forces. Some have to be more sensitive to the tensile force than others, otherwise it won't

work. We have tested dozens of different designs. It involved a lot of trial and error. The system also has to be reversible.'

Open zip

It is basically an interplay between thermodynamic and mechanical stability, explains Van Galen. 'In the strong state, the bond is mechanically strong but thermodynamically weak. The opposite applies in the weak state. It doesn't take much effort to zip open the hair grip but it takes a lot of force to break the catch bond. But the hair grip is better from an energetic perspective. That is why our catch bond works.'

To show he had genuinely designed a

catch bond, Van Galen returned to the rolling white blood cells. He created artificial 'blood cells' made of little polystyrene balls (1.5 micrometres in size) attached to one of the two strands of DNA. The balls were sent down a glass liquid cell (the 'bloodstream'), the wall of which was covered with the second DNA strand. The proof was clear. As the force increased, the particles rolled more slowly. 'The catch bond slows down the rolling speed because the bond becomes stronger. As the force is increased, they stand still for an increasing proportion of the time. That is the most important proof.'

Van Galen calls this a breakthrough. 'This is the first time a catch bond has been made synthetically. Of course, more needs to be done to be able to apply this and incorporate it into materials. But that would be so cool. Stabilization when force is applied, coded into the material itself!' However much fun this would be, he won't be doing it himself. He is taking his career in another direction that enthuses him: the computer simulation of molecular systems. ■

'We tested dozens of different designs. It involved a lot of trial and error.'



With synthetic 'catch bonds', a rope could become stronger when subject to a tensile force • Photo Unsplash / Jakob Owens

FAREWELL TO AN OPTIMIST

In nine years, he has seen a lot of change in the world and in WUR, and his optimism is now tinged with more realism. *Rector magnificus* Arthur Mol is stepping down from the Executive Board.



Text Willem Andrée

There is not a cloud in the sky and a bitter wind is blowing. During a walk around the campus with his collar turned up, Arthur Mol looks back on his nine years on the Executive Board at WUR, at the helm of research and education. He has seen a transformation in the world, both on and beyond the campus. And Covid had quite a lot to do with it. 'The virus changed a lot of things. Digitalization in education, for instance. That was one of the spearhead ambitions when I started. We thought the lockdowns would give that a boost, but both students and staff expressed dissatisfaction with purely digital distance learning. It obviously has its limitations, so classes on campus are and will remain the basis of our education. In the ongoing discussions about the strategic plan, we still see digitalization as important, but we don't want any educational programmes that are entirely digital. Realizing that was a moment of recalibration, a turning point.'

There is something else that Mol thinks has changed: Wageningen has lost its monopolist position. Other universities have taken up Wageningen themes: 'Sustainability, food, climate: these are the themes of the future. That wasn't the case yet nine years ago. There weren't any ambitious European plans like the Green Deal or Farm to Fork. As a result of these developments, other universities have started addressing these themes. Nothing worrying about that, to me. It's just that you've got to keep on proving that you're the best, and we're still managing that. But I do think it's suboptimal when all universities work on the same things: it's better to have specialized institu-

tions. You mustn't water down knowledge and infrastructure. But nor must we turn into a technical uni like Eindhoven. This discussion is now going on in the ministry, which also favours specialist institutions. Although the steering in that direction could be improved, I think.'

Rules and regulations

His nine years as rector have been characterized by discussions about growth, financial concerns, internationalization, diversity, new research centres, work pressure and all the rules and regulations. Reducing the latter was one of his first goals when he became rector in March 2015. That should be doable, he thought. He was wrong. Now he says he was too naïve about it. 'It was easier said than done. I still think the administrative workload needs to be reduced, but the majority of the checklists and box-ticking comes from the outside world: we're dealing with an 'audit society' in the Netherlands. The ministry, our clients, the

'RULES AND AUDITING REQUIREMENTS COME AT YOU FROM ALL DIRECTIONS, IT'S ENDLESS'



'I do think I've introduced an open style and have always been approachable: for our chair groups, research teams, staff and students. Anything could be talked about.' ♦ Photo Duncan de Fey

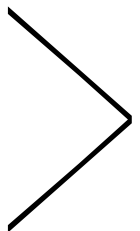
education sector: rules and auditing requirements come at you from all directions, it's endless. Take what's happening now with the tightening of the rules on professors reporting their side earnings. It's logical, but it only adds to the feeling that we need fewer burdensome rules.' Can nothing be done about all those rules? 'We should at least get smarter about the rules that we are in control of ourselves. Things like claiming travel expenses – we've made that easier: a small victory. But our efforts to simplify the Performance and Development (R&O) evaluation process weren't always successful, and we need to take that further. So I was naïve about that. Reducing the pressure from rules and regulations is not as easy as I thought.' Mol has done his bit towards an open management culture. But realistically, there are limits to that too. 'Mainly because you can't be open all the time. When there are several parties around the table – perhaps the municipality and the provincial council for a discussion about the ring road – you can't always put everything on the table from the start. But I do think I've introduced an open style and have always been approachable: for our chair groups, research teams, staff and students. Anything could be talked about. When we had to make a decision, we first entered into discussion with all the stakeholders. Only after that did the board take a decision. A nice example was the new timetable a couple of years ago – we

'WE DON'T MAKE THINGS EASY FOR OUR JUNIOR ACADEMICS: IT'S HARD WORK AND THE QUALITY CRITERIA ARE STRICT'

didn't push that through. Or the recent scrapping of multiple resits during an academic year. That was a typically Wageningen phenomenon. Nice for students, but it caused a lot of stress for teachers. Students, staff and the Executive Board worked it out together, and now there is just one resit per course.'

Change course gradually

Mol emphasizes that he always involves everyone in decisions. 'I don't want to put anyone on the spot.' That's because of an unpleasant surprise he once experienced himself in the late 1990s in Wageningen. 'I was an Environmental Policy researcher at WUR and during a cutbacks operation, the board announced to a roomful of people which departments were going to be closed down. That generated a lot of negativity, not just in those departments but throughout the organization. I resolved to myself: when you're steering, take it slowly and get people on board with the changes. And that's what I've done. Change course gradually.' He took the same approach to the tenure track system,



which has been the subject of much debate during his term of office. To its critics, the career path for academic talent relied too much on quantitative assessment criteria such as high publication scores. Mol had to look for a better system for recognizing and rewarding the qualities of academics. ‘We don’t make things easy for our junior academics: it’s hard work and the quality criteria are strict. I sometimes hear stories about what is said outside the institution: ‘Don’t start out at Wageningen, it takes ages there before you’re a professor.’ Then again, we are a top global player, so I think it’s okay to set the bar high. But we have made the path more flexible and diverse in recent years. In Wageningen we’re no longer only interested in the number of publications and research grants you score, but also in advances made in education, research and societal impact.’

Finances

On a bench outside Aurora, the conversation turns to a ‘tricky dossier’. A dossier that he did get the hang of, he

thinks: the finances. ‘In my early days, student numbers rose fast and the finances lagged behind. I had to start focussing on the transition from the agriculture ministry to the education ministry, sector plans, the funding that came out of the Van Rijn commission, and starter and stimulus grants. Some of our research funding went to education to keep it afloat. It was tight, there was a lot of pressure on the financing, and that can only be solved if you get more money. But our institution is embedded in a system in which the pie has to be shared with other universities. If one university gets more, it’s at the expense of another one. That’s why we went to the ministry together to lobby for a bigger pie, and we succeeded in that. We also clubbed together with the three technical universities to form 4TU, and attracted more financing that way. The university’s transition to the ministry of Education, Culture and Science also brought an improvement to the financial situation. When I started, the budget for the university was just over 300 million euros, now it’s half a billion. For Research too, by dint of lots of lobbying we’ve got additional funding for what is called Knowledge Base Research and for facilities, although there’s still room for improvement. All in all, I paid a lot of attention to finances. With hindsight, that’s logical, but it wasn’t the first thing on my mind when I went from being a professor to being the rector.’

Students

And students? Has Mol seen changes in nine years in office? ‘They’ve become gloomier. They care a lot about the world, which isn’t doing very well. That has an impact: some find it hard to get motivated, and wonder whether there’s any point in studying. I have also seen more radicalization, like the activist groups that speak out in the fossil fuel debate. On the other hand, students are increasingly hard on themselves. They are ambitious and find it difficult to keep things in perspective. For example, during the introduction days I used to say, “Go for it, do as much as you can, lap it all up and try to excel.” I don’t say that anymore. “Do as much as you can,” I say now. “Enjoy your time at university and be aware of what you can and can’t do, and what you want and don’t want”.’ ■

Arthur Mol (64) is not ready to leave Wageningen yet. He is going back to being a fulltime personal professor. ‘And I’m starting with a temporary role as acting chairholder for two merged groups, one of them that of my successor Caroline Kroeze.’ Kroeze will take over from Mol during the *Dies Natalis* – the university’s Founders Day – on 8 March.



‘But I do think it’s suboptimal when all universities work on the same things. You mustn’t water down knowledge and infrastructure.’ ♦ Photo Duncan de Fey

FALL IN FARM INCOMES WITHOUT STATE SUPPORT

The transition to sustainable agriculture is only possible with state support — otherwise many Dutch farmers will go under. That is the main conclusion from a recent study by Wageningen Economic Research. Does the report show the protesting farmers are right after all?

A feedback group was established for the study that included various agricultural parties. Surely they must have said: 'We told you so' when they were shown the report?

Researcher Roel Jongeneel: 'It wasn't that bad. The discussions in the feedback group were fairly objective. We mostly talked about the facts relating to agro-nomic matters, and their input was very valuable. But I did get comments from external people along the lines of "See, the agricultural transition has much more of an impact than was claimed!" The report does indeed show that. It now documents this conclusion, which is supported by experts in academia and the field.'

The figures are quite astounding. For some farms, the loss of income could be up to 200 per cent.

'That's right, although that number has taken on a life of its own. The calculations predict a loss of income of 200 per cent for one specific type of farm. Of course that's not realistic in practice, as the farmer will sell up long before it gets that bad. But the essential message is clear: it will be an impossible task for many farms without solid supportive policies.'

Despite the many packages of measures and grants?

'There is a lack of clarity on what the government plans to do with the packages of measures in the longer term. And the funds available for grants are often not enough. On the other hand, farmers do want to change, as the recent example of the eco regulation showed. A smart



Photo Unsplash Markus Spiske

approach to policy will allow better targeting of the environment and biodiversity, to more effect, than is currently the case.'

Dutch central bank president Klaas Knot recently suggested (in a different context) that the Netherlands should stop economic activities that operate below the actual cost price, such as distribution centres and greenhouse horticulture. Does that also apply to agriculture if state support is crucial for the transition?

'No. This study shows agriculture has various options in how to achieve major

reductions in emissions, after which the sector can be competitive and run at a profit. But the farms must be able to make that switch. It is very difficult to make the transition phase viable.'

The study was commissioned by the minister of Agriculture, Nature and Food Quality. Has he responded, will there be a follow-up and what happens next?

'Of course it's tricky now we have a caretaker government and negotiations for the new coalition are not going well. I hope there will be some kind of follow-up to this report; the results certainly suggest that is needed. But there is nothing concrete yet.' ME

LOVE IN WAGENINGEN

Cupid is a regular visitor to the Wageningen campus, and there are lots of couples who met as students. Some of their children choose to go to Wageningen University too. 'A friend of mine lives in the same student house where my father lived. There is still a photo of him on the wall.'

Text Femke van den Dries and Lieke Muijsert

The Visscher family

'There are still photos of my dad as a student on the wall'

Annemiek and Niclas Visscher met in 1992 through their student society K.S.V. Franciscus: they were both on committees that did most of their work in the summer. 'That meant we did a lot together. We fell in love on a weekend boat trip.' Niclas was a first-year student of Facility Management at the Diederik Stuurman University of Applied Sciences, and Annemiek was a third-year student of Nutrition and Health. After graduating, they moved to Utrecht. 'Even back then, that was a popular move after Wageningen.' But their links with their university town are still strong. 'A lot of friends from those days still live here, and their children are roughly the same age as ours. We often used to play a children's version of

student games with the kids: beer-drinking contests became ranja [an orange squash brand, ed.] contests, and we held a ranja sing-along.' How they met was not exceptional. 'There are several couples who met at Wageningen in our village, Bilthoven. It's always a nice background to have in common.'

Their two children, Ties (20) and Neeltje (18) were brought up on stories of Wageningen, and both (see photo) are studying there now. Ties is doing Molecular Life Sciences and Neeltje Biology. They both belong to the same student society as their parents did. Neeltje: 'I wasn't selected in the lottery for a degree course in Utrecht and I had to choose between Wageningen and Leiden. Once I had visited my brother and sampled the atmosphere at Wageningen, I was sold.' Being a student made her see her parents in a new way. 'I realize now that a lot of their

friends – people we grew up knowing too – are from their university days. And that certain features of our childhood, like the ranja sing-along, came from here.' Neeltje occasionally comes across traces of her parents in Wageningen. 'A friend of mine lives in the student house where my dad lived. There are still photos of him on the wall.' For Neeltje, all that adds to the fun of starting out on student life. 'You do realize that the friendships you form here can last your whole life.' FD



The Van Can family

'If it was still on after the internship abroad, it would be serious'

'Wow, what a nice guy,' thought Margot when she saw Erik in the square outside Hoevestein in the spring of 1988. Margot was there for the freshers weekend for her degree in Food Technology, and Eric was helping organize it as a member of the activities committee of the Nicolas Appert study association. They met again later at a party thrown by the association. Eric and Margot had their first date in November 1989, in the week that the Berlin Wall fell. They went to see a film in the Heerenstraat Theater (then the Molenstraat Theater) and went on to have a drink in De Vlaamsche Reus café, which was then located opposite

the cinema. Margot: 'If you sat in the window there you could see exactly who was going to the cinema with who, and you could spot new couples. And now we were among them.' Margot and Eric were fond of the Arboretum: 'We had many a romantic evening there.'

When one of them went abroad for six months for an internship, they saw it as the ultimate test of the relationship. 'If it was still on after that, it would be serious.' And it was.

Eric and Margot left Wageningen and had a son and two daughters. When their daughter Marleen went to Wageningen University, they were enthusiastic. 'We hadn't been back to Wageningen for a long time and it felt like a homecoming when we walked around the

town after dropping Marleen off for her introduction week,' says Margot. Marleen's boyfriend is at Wageningen too, and both his parents went there as well. It turned out they are even in the same Nicolas Appert yearbook as Marleen's parents. Margot: 'We've passed it on.' Who knows, maybe there will be a sequel to this story in 20 years' time... LM



The Stobbelaar family

'We went on long skating tours. Somewhere along the way we fell in love'

Ariëtte and Derk Stobbelaar met in 1989 in Droevendaal. Ariëtte, who was a Biology student, moved into the flat where Derk was living. They hadn't known each other long when he left for Zambia to do an internship that was part of his degree in Environmental Health. They were not a couple at that point. 'He did write regularly and then everyone in the house sat around the table trying to decipher his handwriting,' says Ariëtte. When Derk got back, there was a spark: 'It was winter and we set off in an old Citroen 2CV without heating to go on long skating tours. Distances of 30, 60 or even more kilometres. Somewhere along the way we fell in love.'

They stayed on in Wageningen after graduating. 'Wageningen is a wonderful place to live, but there weren't many jobs in those days, so you went to live wherever you found a job.' For both of them, that was at the university.

They had four children. The eldest, Eltjo (26) is currently finishing off his Wageningen Master's in International Land and Water Management. He didn't choose Wageningen when he first left school. 'I moved to Groningen to do International Relations, but it wasn't me, and nor was the atmosphere there.' So he came back to Wageningen and started the Bachelor's in Forest and Nature Management: 'I think I get my love of nature from my parents.' After living with his parents for

a short while, he moved into a student house a five-minute bike ride away. 'But in a month's time I'm moving to Utrecht. I fancy getting to know another city. But I'm really looking for a second Wageningen. The surroundings and the atmosphere here are perfect.' FD



Pesticide use must be cut, but how?

The European Commission recently scrapped the proposal to halve pesticide use by 2030. But the wish to drastically reduce pesticide use remains. Scientists from various disciplines have come up with solutions, from the 'convertible roof' to strip cultivation or organic substances. But in practice, it's complicated. Text Arno van 't Hoog

Every year more than nine million kilos of pesticides are sold in the Netherlands. The vast majority of these are fungicides and herbicides, of which 700 thousand kilos are glyphosate.

Farmers invest in these products to get good harvests and maintain the quality of their crops. But pesticides leave traces in food, in the soil and in surface water, which poses risks for biodiversity and for farmers and horticulturalists.

The highest number and concentrations of pesticide residues are found in indoor dust samples, as was shown by a recent study by professor of Soil Degradation and Land Management Violette Geissen. She coordinates the European SPRINT project that is studying the ecological and medical risks related to pesticide use. According to Geissen, the assessment of pesticides by the European assessment agency EFSA does not take into account transport by wind erosion from the field into the immediate vicinity or the presence of residues in household dust. Geissen: 'There are only norms for residues of pesticides in drinking water, and there are

none for air, soil and household dust. We must assess the exposure and its health effects. For example, how much can a pregnant woman inhale in the form of household dust before getting into difficulties?'

Nor is any testing done on the toxicological effect of mixtures of pesticides. 'We are now doing experiments with the gut microbiome and lung and gut cells, which we expose to pesticide mixtures found in household dust. And we look at effects of mixtures in the soil, on the reproduction of earthworms, for example.' Geissen believes that research on cells and animal testing could eventually deliver new toxicological norms.

Routine spraying

The use of glyphosate and neonicotinoids in particular has been under fire for years, and although the European Commission has withdrawn the plan to halve pesticide use by 2030, research continues into alternatives and ways of reducing the use of these substances. On paper, a lot of progress can be booked through smart innovation. This was shown by Johan Bremmer, senior Plant Health researcher at Wageningen Economic Research, in the 2021 report *The Future of Crop Protection in Europe*. You can use more resistant varieties and mechanical weed control, or software that helps you apply the right amount of a pesticide at the right moment. 'This enables you to stop routinely spraying by the calendar, as was usual in the past.'

Some time ago, one of his colleagues looked into the variation in pesticide use between farms, says Bremmer. 'If the farmers and horticulturalists who use the most started performing as well as those using the least, you might quite easily be able to achieve the 50 per cent reduction the EU wants. You might think: the rest must

'There have been lots of developments but they don't find their way into farming practice'



Farmers protested against agricultural measures outside the European Parliament in Brussels in February. A few days later, the European Commission withdrew the proposal to halve the use of pesticides by 2030. ♦ Photo ANP/Jonas Roosens

just make a bit more effort. But it's not as simple as that, because it has a lot to do with experience, entrepreneurial skills, risk assessment, and weighing up costs and clients' requirements.'

How farmers think

Bremmer coordinates the EU's Horizon Europe project SUPPORT, which does research on why agricultural practices lag behind when it comes to using environmentally friendly innovations. 'There have been quite a lot of developments but they don't find their way into farming practice. Why is that? That is a crucial question that we'd like to answer so we can advise on how to stimulate the transition to using less pesticide.' The SUPPORT project studies the farming of eight different crops in 10 European countries, focussing primarily on the human dimension. 'The underlying discipline is behavioural economics. We look at the role of the family, for instance. Or the influence of advisors, purchasers and consumers. How much scope does the bank allow for investing or taking risks? So we want to get much more of an idea of how farmers think. What influences their decisions?'

'Polarization has made a nuanced discussion almost impossible'

At the same time, there is plenty of scope for innovation. This is happening through initiatives like the green crop-protection project *Kennisimpuls Groene Gewasbescherming*, says Bert Lotz, Applied Ecology team leader at Wageningen Plant Research. Dutch apple orchards, for example, are suffering from about 20 species of fungus that cause rot. So apple farmers spray their crops with fungicide about 25 times in the growing season. Moisture plays a key role: wet weather makes most fungal spores germinate. Lotz: 'If you can keep the apple tree and the fruit dry, you have a simple strategy for breaking the life cycle of fruit rot fungi.'

Convertible roof

A solution that was developed by WUR researchers at the experimental site for fruit research in Randwijk is a mechanical screen that closes before it rains. 'The convertible roof works well but there is one fungus, powdery mildew, that goes on growing in dry conditions. You can target that specifically by spraying infected





branches very precisely, using much less fungicide. To manage without any fungicides at all, you need apple varieties that are resistant to mildew.’

Another farming system has been developed for lilies. Lily bulbs are currently propagated out of doors and are regularly sprayed against aphids, because aphids can transmit plant viruses, and viruses are an obstacle for export of the bulbs. In the new system, lilies are first propagated virus-free by means of tissue culture, after which they spend their first growing season in the greenhouse, shielded from aphids. Lotz: ‘That gives you bulbs that are theoretically free of plant viruses. After that you only need one more season of outdoor cultivation. And that makes a big dent in the amount of insecticide used.’

Don't rule out

There are various options for reducing the use of pesticides, but it is becoming increasingly difficult to have a substantive discussion on the subject, notes Pieter de Wolf, who does research on field crops at Wageningen Plant Research. ‘Polarization has made a nuanced discussion on the usefulness and necessity of pesticides almost impossible. Glyphosate has come to stand for big agribusiness, and all that is toxic, chemical and unnatural. You are either for or against pesticides. If, based on my expertise, I don't want to rule out any use of glyphosate whatsoever, I get accused of aligning myself with the producer, Bayer. When all I'm doing is using my expertise to provide an estimate of the possible consequences of a ban.’ De Wolf does not think a ban would be a sensible move at present. ‘It will work against you because farmers will just use other chemical substances, many of which are less effective and riskier for humans and the environment. And the non-chemical alterna-

tives have their disadvantages as well. You can fight weeds with mechanical or thermic methods. But then you badly disturb the soil and use a lot of energy. If you don't want any more chemicals at all, you won't stay on track with your climate targets, for instance.’

Disappointments

De Wolf is a project leader at the Farm of the Future in Lelystad, where new farming systems are tested. These include the use of robots and artificial intelligence for identifying weeds and spraying them with herbicide one by one. But the technology doesn't seem to be sufficiently reliable. ‘A farmer soon finds that he has to keep a constant eye on a robot, and feels he'd be better off just driving a tractor himself. So the equipment gets dumped in a corner of the barn. Disappointments put paid to any enthusiasm for such innovations.’ The key to this technological development lies in smart software, thinks De Wolf. ‘A computer algorithm sees a plant as a different species in each phase of its growth, so it needs thorough training: this is a weed, and that's a crop. You have to fill the database with photos annotated by humans, and that is extremely labour-intensive. This kind of agricultural technology really needs to be stimulated with a research agenda and targeted financing.’

Another cropping system that is being tested on the Farm of the Future is strip farming, in which crops such as potatoes, wheat, onions and carrots are grown in alternating strips on the same plot. De Wolf: ‘First impressions are that strip farming promotes biodiversity because there is always a crop in the field that provides shelter and food for insects and birds. There is also more opportunity for the natural enemies of pests, and it prevents some plant diseases from spreading as well. But one of the downsides is that we provide year-round food and shelter for mice this way. The Colorado beetle flourishes as well, because it survives the winter in the soil. So you find some problems become easier to manage, while others actually get bigger. The lesson so far is: you can manage with fewer chemicals, but you can't do without them entirely.’ ■

‘You can manage with fewer chemicals, but you can't do without them entirely’



You see the most fabulous looking people and the coolest outfits on the Wageningen campus. We shine the spotlight on them here. This time, Margaréta Banas (25), a Master's student of Resilient Farming and Food Systems.



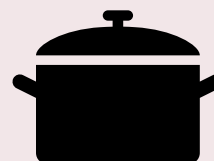
Photo Iija Bouwknecht

'How nice that you've noticed my clothes: not many people realize how long it takes to make them. The details on this blouse took me hours. I started making my own clothes when I was about 13. At first, I was primarily interested in 'goth' fashion, which has a lot of common with Victorian and Edwardian styles. I come from Slovakia and I've inherited traditional costumes from my grandmother, which I only wear on special occasions. But I have been influenced by that style, which is a bit like the Victorian and Edwardian styles. Puffed sleeves, a narrow waist, wide skirts. If I wake up thinking, 'Today I want to have a great day', I put on a long skirt.

I made this blouse and waistcoat myself, but I bought the skirt second-hand. I wear all my clothes until they're completely worn out. I've even got clothes I've had since I was a teenager. I think it's important to mend clothes and I'm doing a lot of visible mending at the moment – which is mending clothes in a visible and decorative way. Over the years I've come to like natural materials more, and I use them when I make clothes myself. I don't want to spend money on fast fashion. By making my own clothes, I'm self-sufficient in that area. And I like being able to put my creativity into it and develop my own style. You can't find clothes like these in the shops.'

IB

All the flavours of the world can be found in our WUR community. Biotechnology Master's student Chitra Kizhakhe Mundiyyat shares a recipe for a childhood favourite from southern India.



Flavours of WUR

Beetroot *Pachadi* (curd)

'When I moved to Wageningen, it was a challenge to find the ingredients necessary to recreate the flavours of my childhood. This beetroot *pachadi* with rice brings back a taste of familiarity without extensive preparation. The temperatures in my hometown can be quite high. Curd helps the body stay cool, so it features in many of our dishes. This is my go-to comfort food, recreating a touch of home, despite being so many miles away.'

Ingredients (side dish for 2 people):

- 1 cup of rice
- 1 small beetroot
- 1 cup of plain yoghurt
- 1 tbs. oil (vegetable/ sesame/olive/coconut)
- 1 tsp. mustard seeds
- 1 tsp. urad dal (black lentils)
- 1-2 dried red chillies (to taste)
- 5-6 curry leaves
- A pinch of asafoetida
- Salt
- Fresh coriander leaves for garnish

- 1 Cook the rice and let it cool.
- 2 Peel and grate the beetroot, or grind it into a fine paste if preferred. Adjust the quantity of the beetroot according to your flavour and colour preference.
- 3 For the curd mixture, whisk the yogurt in a bowl until smooth. Add the grated/ ground beetroot and mix well. Add salt to taste.
- 4 Add the cooled rice to the beetroot curd mixture and mix well.
- 5 In a small pan, heat 3-4 tbsp of oil. Add the mustard seeds, urad dal, dried red chillies, curry leaves and a pinch of asafoetida. Fry until the lentils turn golden brown (this process is called tempering in Indian cooking). Pour the tempering immediately over the rice and curd mixture. Mix everything well.
- 6 Taste for salt and add more if needed. Finally, garnish with fresh coriander leaves.
- 7 Serve immediately or refrigerate if you prefer to eat it chilled.



Chitra Kizhakhe Mundiyyat
Biotechnology Master's student

Limelight



Not much culture in Wageningen? Not true! If you keep an eye out, you will notice people all around you are making music, giving poetry readings, taking photographs or designing clothes. In this feature *Resource* puts WUR's creatives in the limelight.

Text Ilja Bouwknegt • Photo Herman Stöver

**Thurs
22-02-2024**

Grote Kerk Wageningen and market
17:30 to midnight

Tickets (for the dinner)

Pay what you can: 10, 15 or 20 euros

Available via Instagram:

@meltingpot_wageningen

'Melting Pot is a participatory show'

Myrthe van Dok (Biology Master's student, 22) and Jes Kallen (former International Land and Water Management student, 22) of Popcultuur Wageningen and Popupop are among the organizers of the Melting Pot cultural festival that is taking place on 22 February.

They usually only put on music but they wanted something bigger for the anniversary of Popcultuur Wageningen (an organization that promotes pop music). 'Various ideas were suggested for celebrating our tenth anniversary. In addition to music, a friend had the idea of organizing a dinner,' says Kallen. They soon came up with the theme of a melting pot. The

event will start in the Grote Kerk with a communal dinner.

Melting Pot brings everything together: music, art, dance and a communal meal. 'Our aim is to create a melting pot of people who wouldn't normally talk to one another,' says Van Dok. 'For the dinner, we will be assigning people to seats randomly so they meet new people — not just students but also "ordinary" residents and people from the local asylum centre.' Some of the costs will be covered by the sale of tickets for the dinner. 'It can

be hard to get students to go to cultural events if you charge admission,' says Kallen. 'That is why students can choose themselves which of the three ticket prices they pay for the food.' The programme after the dinner is free, and there are also cultural activities outside the church. For example, there is a dance workshop, and music in the cafes The Doctor and Bij Roos. 'Perhaps you could go along with the people you just met,' says Van Dok. 'Bringing people together and letting them experience things together was our aim from the start,' says Kallen. 'It will be one big participatory show.'

Melting Pot could use some more volunteers. If you are interested, send a message to @meltingpot_wageningen via Instagram.



On 22 February, the Grote Kerk in Wageningen will serve as a dining hall and concert stage.



TIPS

SAT 17 February

De Ontzetting student orchestra concert

Grote Kerk in Wageningen

20:15 | Tickets 10 or 7.50 euros

SAT 9 March

0317 Winter Rave Festival

Junushoff, Plantsoen 3, Wageningen

14:00 to midnight | Tickets 15 euros

WEEKLY UPDATES ON STUDENT LIFE AND WORKING AT WUR?

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Resource

WUR from within: straight, sharp, transparent



IN MEMORIAM

GABE VENEMA

On Monday 29 January, we received the very sad news that our much appreciated and beloved colleague Gabe Venema has passed away at the age of 62.

Gabe had been ill for a long time and sadly had run out of treatment options. After an intensive period full of treatments, faced with much hope and courage on Gabe's part, and many deep lows, Gabe passed away peacefully in the presence of his family.

Gabe worked for over 35 years in various roles and positions at Wageningen Economic Research (and its predecessors), most recently within the Performance & Impact Agrosectors (PIA) expertise group. We remember him as a warm-hearted colleague with an interest in his peers, and committed and communicative. He was a fine sparring partner for many of us.

*Jack van der Vorst, Lisa van Bommel,
Olaf Hietbrink, Bert van der Scheer*

PAULUS HOEKSMA

Paul started his career in 1979 as a researcher at RAAD, the national agricultural wastewater service. Shortly afterwards, RAAD merged to become part of the new Manure and Emissions department within IMAG, the institute for mechanization, labour and buildings, which is now Wageningen Livestock Research.

The constant theme in his 40-year career was tackling the Netherlands' manure issues. He was involved in the development of sampling techniques and equipment for manure disposal regulations that are still being used today. Paul made significant contributions in the research on mineral concentrates and pathogens and medicines in manure. He was always accurate

and ethical in his work and he was good at setting things out clearly in writing. He was also a fine colleague with broad interests.

In his free time he was an enthusiastic cyclist and painter, he regularly went to concerts and festivals, and he enjoyed adventurous holidays. Paul reached his 40th anniversary at work on 23 July 2019, and he retired in November 2021. Soon after retiring, Paul was diagnosed with ALS. He passed away on 24 November. We wish to offer our condolences to Lia and his loved ones.

*Colleagues past and present at Wageningen
Livestock Research*

Colophon

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

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Photo Resource



VACANT PREMISES ON PLAZA UNDER THREAT

It's a familiar sight at the Campus Plaza, and has been for a few years. The premises have been vacant ever since the previous tenant (student café MLGB, My Life's Getting Better) went under due to Covid. Not intentionally, of course, but we have got used to the sight. The empty space is like some kind of monument to the dark days of Covid-19.

But maybe not for much longer, now that a group of students has demanded that Idealis buys up the premises and creates student accommodation there. The location is very popular, says student Kees (full name known to the editors). 'Close to lecture rooms, the Bongerd and Het Ambacht snack bar. What more could you want? It's a crying shame that this space is going unused.'

To lend weight to their demands, the students intend to dust down a tried and trusted weapon: squatting. 'I had never heard of it myself,' Kees admits. 'My dad suggested it. At first, I thought he was talking about his fitness routine. But in his day, it was quite normal to take over someone else's property without permission, says my dad. The end justifies the means.'

The owner of the property, Skymark Property Management, is not best pleased at the prospect of squatters. In fact, the company is considering getting students in as property guardians – anti-squatters in Dutch. 'That's mean,' says Kees. 'That's Big Capital pitting us against

**'Big Capital is
pitting us against
each other'**

each other. Of course we can send in anti-anti-squatters, but that would really escalate things.' Kees would prefer to see Idealis take action.

Not least so that there'll be good Wi-Fi in the building. 'Squatting is all very well of course, but you must have good Wi-Fi. Four hours a day on social media paid out of my own subscription? Duh! Dad says you could just meet at the pub instead. But do you know what that costs? He had a generous student grant in his day, but it doesn't work that way anymore.'

Idealis director Bert van Os says he understands the students' demands. 'That empty premises is like a rotten tooth on the square. But you can't just convert it into rooms because it's currently designated for use as a catering outlet.' When asked if a pub for the nearby flats would be an idea, he slams the phone down. Beep beep beep...