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# RESOURCE <sup>[EN]</sup>

For everyone at Wageningen University & Research

no 19 – 18 June 2020 – 14th Volume

## Under construction

Five updates from campus | p.22



**INTERNATIONAL  
EDITION**

# Martjan + Jako water tank

WUR staff work with all kinds of equipment.

This time, meet Martjan Prins, (Facilities and Services), grounds manager with Donker Groen



## SERIOUS WATERING

The trees and plants on the Wageningen campus must be pleased to see him. The campus vegetation has been watered regularly since the end of March. And that's no luxury, since it's been a struggle for survival in the persistent drought. Prins uses a slurry tank as a watering can. The water comes from a WUR spring at Nergena. Using the tank enables Prins to be generous. 'I only stop when the ground starts getting muddy. The ground must be saturated. Otherwise, the plants get lazy and only put down shallow roots.'  RK, photo Sven Menschel

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**NEVER FINISHED**

Will the campus ever be finished? I have been working on campus, this square kilometre plot, for over 10 years and it has always been a building site. Now more massive buildings are on the point of completion. One virus-driven lockdown and your own campus has changed beyond recognition. So we have included a spread (pages 22-23) to update the home workers on developments. But the end is not in sight. Work will start on the Dialogue Centre after the summer, while preparations are underway for a new research building. Coronavirus or no coronavirus. The strip of land with Plus Ultra II is almost complete but there are ambitious plans for more commercial activity on the opposite side of Mansholtlaan. Then there is the campus ring road. Like life itself, the campus is never finished.

*Roelof Kleis, science editor*



>> [Tackling the nitrogen problem in five stages | p.14](#)

# POST-CORONAVIRUS POLICY ON HOME-WORKING

**Thanks to the coronavirus, working at home is currently the norm. But what is going to happen when the crisis is over? A new policy on home-working is in the making.**

Strange as it may sound, WUR does not actually have a policy on working from home, confirms Facilities and Services director Peter Booman. It is not forbidden to work at home and employees can strike their own deals with their managers about it, whether their reasons are to do with a long commute or something else. But there is no policy and that is going to change. 'Because of the coronavirus, working at home no longer feels strange. It has become more normal and the impact of that will go on after the crisis is over,' says Booman. 'We are not going to work at home permanently, because it has its disadvantages too. A lot of people find it tiring to work at

home systematically. And people miss the social interaction.' At the behest of the Executive Board, a working party led by Myrte Marechal (Human Resources) is drawing up the new policy. There are numerous issues to address, including the implications of working at home for collaboration, data security, IT facilities, the interaction with students, PhD researchers and clients, social cohesion, and for buildings and legal issues.

Legal issues are important. If people work at home voluntarily, labour law does not hold the employer responsible for the workplace. But if working at home is compulsory and systematic, that could change, says Booman. 'But I don't imagine there will be any question of it being compulsory in our organization.' According to Booman, working at home will not be stimulated to solve the space problem



PHOTO: SHUTTERSTOCK

on campus. But if more people do work at home, it will have implications for the workplace. The MyWURspace plan has therefore been shelved for the time being. This concept, launched just before the coronavirus outbreak started, is aimed at matching the kind of work you are doing and the place where you do it better. Overall, that should make

for a more effective use of space. The working group should have its recommendations ready in September, when a recalibration of MyWURspace is planned. The working group can make use of WUR-wide input based on a number of small-scale surveys of the feelings and views of WUR staff, the first of which took place last month. **RK**

## Petition: investigate racism within WUR

# BOARD WANTS DIALOGUE ON DISCRIMINATION

**A petition calling on WUR to investigate racism within the organization and the curriculum gained over 2000 signatures in no time.**

WUR President of the Executive Board Louise Fresco responded by announcing a dialogue on discrimination. Spokesperson Simon Vink: 'We wish to talk to employees and students from different groups within WUR about their experiences of exclusion and discrimination. Where and how do racism, exclusion and inappropriate behaviour occur within our organization? We will then look at what we can do based on that information. One thing should be absolutely clear: there is no room for discrimination within WUR.' Vink says the dialogue must be broad and organization-wide. 'So that it helps us de-

cide what steps we should take to stop racism being a taboo topic and to mitigate and prevent it.'

'Never state the obvious' While other organizations and companies responded to George Floyd's death by taking a stand in support of the Black Lives Matter movement, Wageningen remained silent. 'There is no room for exclusion in any shape or form within our international, multicultural community,' Vink says. 'Not based on ethnicity, religion, culture, gender or anything else. However, you should never state the obvious. We don't need to issue a statement saying WUR complies with the Dutch constitution.'

Vink stresses that WUR is already doing a lot of the right things, although this may not always be visible. 'We have counsellors, student advisors, integrity codes, codes of



PHOTO: SVEN MENSCHEL

conduct, diversity days, the One World Week and a committee for inappropriate behaviour. However, the issue at present is not the good things we are doing, but the fact that there are quite a few people who still feel discriminated against or excluded. "Serious discrimination", such as the abhorrent behaviour towards our Chinese students in the Bornsesteeg flats, is obvious,

but at the end of the day it's about creating a culture of inclusiveness. This is something the whole organization needs to work on and we need to be prepared to hold one another to account when necessary.'

**R LZ**

*There is an interview on page 26 with WUR student Jerry Gumbs, who started the petition.*

## THESE ARE WUR'S FOUR BEST COURSES

**On 9 June, rector magnificus Arthur Mol and dean of education Arnold Bregt handed out the Excellent Education Prizes. These are the winners.**

The course on 'Social-Scientific Analysis of Environmental Issues', taught by Mattijs Smits, deals with the differences between the social sciences and the natural sciences. It aims to make students aware of how social science theories can play a role in the analysis of environmental problems.

'Analysis and Design of Organic Farming Systems' is another winner. The course is coordinated by Walter Rossing, who teaches it together with 10 oth-

er lecturers. Students study the redesign of agricultural production systems from the perspective of food safety and the depletion of natural resources. According to one student, the highlight is the 10-day stay on a farm. 'The interaction with the farmers is fantastic for linking the class material to the "real world".'

### PLANTS ARE COOL

Birgits Boogaard's 'African Philosophy' course is the third winner. It deals with African perspectives on problems, solutions and innovations related to development issues. It also teaches students to critically examine their own background. One point for improve-

ment suggested by a student: make it mandatory rather than optional.

'Structure and Function of Plants' (coordinated by Leonie Bentsink) is the fourth winner. This course deals with the structure, development and physiology of plants at the cellular and tissue levels and for the plant as a whole. Lecturers Hannie van der Honing and Kris van 't Klooster give simple, enthusiastic explanations of complex topics. 'I hadn't realized plants could be so cool,' wrote one student. **R LZ**

*The courses were nominated on the basis of the course evaluations. The winners get 1000 euros to invest in teaching.*



▲ According to one student, the highlight of the prize-winning course 'Analysis and Design of Organic Farming Systems' is the 10-day stay on a farm.

## UNIVERSITY REGISTRATIONS ARE DOWN

WUR is expecting a small drop in the number of first-year Bachelor's students. The registration figures for Master's students are even more unreliable than usual because of the coronavirus crisis. The university's education department is expecting 50 to 75 fewer Bachelor's students in the coming academic year compared with this

year, a fall of three to five per cent. The forecast is for between 1475 and 1500 new Bachelor's students as at 1 October. A big fall is expected in the number of BSc students from abroad due to the pandemic, especially from non-EU countries.

The university is also reckoning on fewer registrations for Master's students, in particu-

lar from countries outside Europe. Each year about 8000 to 10,000 students from outside the EU register to study in Wageningen but most do not get a grant so are unable to come to Wageningen in practice. The big question this year is how much effect the coronavirus crisis will have on the intake of this group of students. **R AS**

## © COLUMN|VINCENT

### Bait boxes

Plus Ultra II was completed at the end of May. The newest building on campus, it boasts a BREEAM Excellent certificate. This means – I just looked it up – that it's amazingly sustainable. Only surpassed by buildings with a BREEAM Outstanding certificate. Apparently, the sustainability is partly expressed in the landscaping around the building. I took a look and if the number of cute facilities for wild animals counts as a measure of sustainability, I can see why Plus Ultra II scores so highly. There are so many nesting boxes that if I were a great tit, I'd get stressed about choosing where to live. There are insect hotels and they've even installed two concrete hedgehog houses.

### 'It is high time we accepted the rat as a species among others'

All this is a bit of a contrast with the presence of black plastic rat bait boxes labelled 'Caution! Do not touch! Rodenticide!' Such boxes are found all over the campus, incidentally. They were once developed to make it possible to put out rat poison without harming other animal species, but we know by now that they don't work perfectly. Small birds and mammals can still access the poison, and it reaches predators through the rats. Instead of poison, you could put a trap in the boxes, so I just hope that's what they have done. But it does amaze me that for sustainability reasons, we will go so far as to make houses for hedgehogs, yet we still see rats as vermin. If we really want a green campus, I reckon it's high time we accepted the rat as a species among others. **R**

**Vincent Oostvogels (24)** is exploring the delicate interface between nature management and food production through his two Master's programmes, Forest and Nature Conservation and Animal Sciences



## READERS' LETTERS

Do you have your own views on a topical issue at WUR? Send your contribution of 350 words max to [resource@wur.nl](mailto:resource@wur.nl), with 'Letter to the editor' in the subject line.

The 'Meanwhile in...' article in the last issue of *Resource* was all about Hong Kong. The article prompted a lot of comments from the Chinese community at WUR. WUR student Xin Li sent us this letter. He says: 'To achieve a peaceful and safe society, humanity has developed the society ruled by law.'

### DISCUSSION

Recently, the National People's Congress of China passed the decision to authorize a national security law for Hong Kong, which is a perfection of Article 23 of the Hong Kong Basic Law. In 1997, when the text of Article 23 of the Basic Law was formulated when Hong Kong was handed over by the British to China, the Central Government and the Hong Kong parties reached a

consensus for perfecting it afterwards. The current protests about this decision in Hong Kong have brought Hong Kong back to the public's attention and triggered intensive discussions worldwide.

### 'Freedom never is, never was and never will be a question of "doing whatever I want"'

#### PROPER COMMUNICATION

In the past year, some protesters have expressed their wishes in respectful and peaceful ways, while other protesters have expressed their will by attacking innocent citizens, disrupting the traffic and obstructing stores. These actions seriously interfere with Hong Kong's

citizens' daily life, and have negatively impacted the stability of Hong Kong. The protests have involved school-age children, have obstructed ambulances, have occupied the airport, et cetera. This has not been reported properly by the

Western media, and if the radical protesting continues, worse may occur. I wonder whether the radical protesters are perhaps aware of the possible consequences of their behaviour. They have demands and want their voices to be heard. However, only the proper forms of communication will deliver mutual un-

derstanding and respect.

#### RULED BY LAW

Freedom never is, never was and never will be a question of 'doing whatever I want'. Freedom must be constrained to a certain degree. Otherwise, thieves, scammers and rapists can also declare that they cannot be punished by using the excuse of 'freedom'. To achieve a peaceful and safe society, humanity has developed the society ruled by law. Thereby, I have strong faith in the national security legislation as an approach to ensure that criminals will be punished, to protect the well-being of the people of Hong Kong, and to bring back the peaceful and civilized Hong Kong.

*Xin Li, WUR student*

## DO WE WANT PENSION FUNDS THAT INVEST IN OIL DRILLING?

**When Jarno Gieteling, a WUR researcher at Food Process Engineering, consulted the Dutch 'fair pension guide', he got a shock. So he launched a poll: do his colleagues want a pension fund that invests in oil drilling in the Arctic?**

The 'fair pension guide' is drawn up every year by several parties including Amnesty International and Friends of the Earth Netherlands, and investigates where pension funds invest their money. Gieteling was concerned by the fact that the General Civic Pension Fund (ABP), which all WUR employees automatically pay into, invests in gas and oil drilling in the Arctic region. 'In the light of the current climate crisis, I consider this a particularly bad idea. I don't want to pay into a pension fund that invests in this way, and I don't consider this fitting for an organization

such as WUR, which works to promote sustainability.'

#### NO CHOICE

Gieteling has raised this issue with the HR department in the past but was told he had no choice. WUR legal expert Marleen de Vries: 'Membership of ABP is part of the collective labour agreement of the Dutch universities, and all university staff pay into this fund. WUR employees do not have a choice.' According to De Vries, the ABP has an accountability council consisting of 48 members representing employees, employers and retirees, which advises the fund and evaluates its policy.

#### POLL

But Gieteling is not satisfied with that. He contacted the fund, which told him: 'ABP is aware that drilling for oil and gas in the

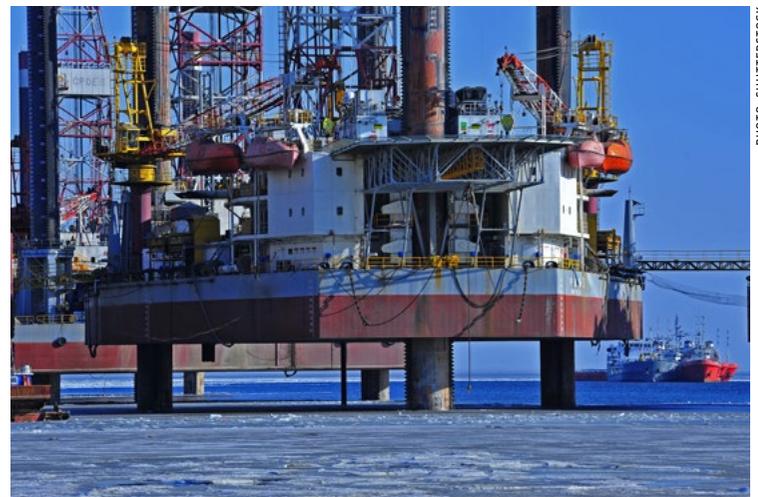


PHOTO: SHUTTERSTOCK

polar region entails certain risks' and that it has agreements with the companies working in the region 'about their strategies and measures to prevent environmental damage. These companies have provided proof that they comply with the regulations

that apply to this region.' Gieteling hopes that the fund will reconsider its policy if many employees prove to disagree with it. See too Point of View on page 18, in which *Resource* asked WUR staff for their opinion. **TL**

# LIVE Q&A ABOUT THE COVID-PROOF UNIVERSITY

On 8 June, *Resource* organized a Q&A session both 'live' and online about the Covid-proof university next academic year. Staff and students could put their questions to WUR board member Arthur Mol and education director Arnold Bregt.

About 60 students and members of staff joined the session. They could ask their questions on Twitter. *Resource* also invited students and staff members who had previously asked questions or commented on the coronavirus policy. Students were wondering whether they might be allowed to get together on campus again this month, after the end of period 6.

'We can imagine that students might have one or two interactive sessions with the teacher and give their presentations at the end of period 6 on campus,' responded Arnold Bregt, 'but do that in consultation with the teacher, because we don't want everyone coming back to campus this month.'

One international student, who started on a Master's degree at Wageningen in February, would like to get the same priority on campus as first-years, and to get to know the Wageningen education method better. Rector Arthur Mol thought that was a good idea. 'I think we should give this group priority for the teaching on cam-



pus too, because they haven't had the chance to get to know each other or our interactive face-to-face teaching approach.'

## PRACTICALS

Mol reiterated that 25 to 30 per cent of the teaching can be done on campus in the coming academic year. WUR has made the facilities for practicals Covid-proof this month, and is going to test how many students can be admitted to the practicals. 'Based on that experience, we are going to adjust the timetable and we'll get a better idea of which classes we can offer on campus.'

There was one question Mol and Bregt could not answer. Teacher

Ignas Heitkonig raised the point that invigilators suspected some cheating in the online exams. The cases still have to be assessed by the teachers and Examining Boards, but they have no experi-

## 'Students might give their presentations at the end of period 6 on campus'

ence in this area. What next?

Bregt: 'I don't know yet. Suspected cheating in online exams is a tricky issue. We are evaluating the

exams with the degree programmes, and will discuss dubious cases with the Examining Boards.'

## RESITS WILL HAPPEN

Students who failed exams can resit them in August after all. It was incorrectly reported in the English-language interview with Bregt and Mol in *Resource* magazine that the university would not offer resits in August. But Mol assures us that 'there will be resits as usual in August. Only they will be online resits this time.'

AS

See all the questions raised during the Q&A with Mol and Bregt on the *Resource* website [www.resource.wur.nl](http://www.resource.wur.nl)

## UPFIELD WANTS R&D CENTRE ON CAMPUS

Upfield, formerly Unilever's margarine division, wants to set up an R&D centre on Wageningen campus, it announced on 10 June. Upfield Group, the producer of such well-known margarine brands as Becel and Blue Band, wants to invest 50 million euros in an ultra-modern Upfield Food Science Centre. The company sees the campus as a 'world-class location' for food innovation. The plan is for the research centre to be built by the end of 2021.

Upfield was part of Unilever until two years ago, but when shareholders put pressure on Unilever boss Paul Polman to improve Unilever's shareholder value, he put the company's margarine division up for sale. After a bidding war, it was acquired by the investment company KKR for 6.8 billion euros. It kept the division intact under the new name Upfield. The new company wants to add quality and improve the profit margins of its margarine brands

Becel, Blue Band and Croma, currently seen as solid, relatively cheap basic products. Upfield also wants to find replacements for artificial ingredients such as artificial citric acid so that in future all ingredients will be plant-based and natural in origin. In addition, the company wants to replace its



PHOTO: SHUTTERSTOCK

plastic packaging with sustainable plastic and recycled materials. AS



# Plant coffee in a food forest

**Coffee bushes require shade, and all the more so in the face of global warming. This is why trees should be planted on coffee plantations, says Lucas de Carvalho Gomes. His conclusion confirms previous Wageningen research findings.**

Over half the coffee acreage in the Atlantic coastal zone of Brazil will no longer be suitable for coffee cultivation in 2050, De Carvalho Gomes concludes on the basis of model research. He assumes that the temperature in the region will rise by two degrees as a result of climate change. The Arabica coffee variety is particularly sensitive to such temperatures. Agroforestry, planting trees on coffee plantations, provides the coffee bushes with shade. Three quarters of the coffee farming in the Atlantic coastal area could then continue, concludes the Brazilian PhD candidate, who obtained his PhD in Wageningen last week.

This conclusion is not new. An international team of scientists, which includes Wageningen's Milena Holmgren Urba, presented a study on agroforestry in coffee cultivation in 2019. They recommended farmers plant fruit-bearing trees such as cocoa trees on coffee plantations, as these trees resist drought and higher temperatures.

While most coffee plantations in Brazil are monocultures, the international study which Holmgren Urba took part in focuses on Central America, where coffee is traditionally grown in agroforestry systems. However, even in these systems, the Arabica plant suffers from climate change, explains Holmgren, mainly because unstable weather leads to an increase in diseases. Coffee leaf rust disease, for example, is now affecting about 70 per cent of the coffee bushes in Central America.

## REPLACEMENT

The international study, in which the World Agroforestry Centre is involved, recommends an adjustment of the current agroforestry systems. One of their recommendations is to replace a proportion of the coffee bushes with cocoa trees. Other crops affected by climate change include mango, guava



PHOTO: SHUTTERSTOCK

## The soil temperature in food forests was six degrees lower than in monocultures

and avocado trees, all of which grow in these food forests. Replacing some of these trees with climate-proof fruit trees would help food forests to adapt to the climate. But this is not the first WUR study on the value of agroforestry in Latin-American coffee production. In 2012, Wageningen soil scientists Ron de Goede, Mirjam Pulleman and Lijbert Brussaard collaborated with Brazilian colleagues in research on the effect of agroforestry on coffee cultivation in the Atlantic rainforest in Brazil. They compared eight food forests with coffee bushes, mainly on small, family-owned farms, with four

monocultures where the coffee bushes were exposed to full sun. In this study, 230 different tree species were found in the food forests, almost all of them indigenous. The soil temperature in the food forests was an average of six degrees lower than in the monocultures. These researchers concluded that agroforestry serves both coffee production and biodiversity during climate change.

## TREE LINE

De Carvalho Gomes has now further honed this conclusion. He states that it is already too warm to grow coffee in the coastal area below an altitude of 600 metres, and that in 2050, coffee cultivation in monocultures will only be possible above 800 metres. A shift to higher ground would cause conflicts between coffee farmers and nature conservationists, as many nature reserves in the Brazilian coastal area are located above 800 metres. **AS**

# AI TEAMS BEAT TOMATO GROWERS AT SUSTAINABLE PRODUCTION

**AI teams that regulate the greenhouse remotely now produce more efficiently than traditional horticulturists. This was demonstrated during the second edition of the Autonomous Greenhouse Challenge.**

'All the AI teams performed better than the control horticulturists,' says Silke Hemming, a researcher at Wageningen Plant Research and co-organizer of the challenge. The winner, Team AuTomatoes, not only got the highest yield but did so using the least water and energy. Their Artificial Intelligence (AI) strategy was considered the best by the jury. Five AI teams have been cultivating cherry tomatoes in their own designated greenhouse compartment of WUR Greenhouse Horticulture in Bleijswijk over the last six months. They made their own management decisions remotely, using sensors and the technology available in the greenhouse. Greenhouse staff were available on location to tend to the crops and maintain the sensors and installations.

## COVID-19

The performance of artificial intelligence has improved dramatically since the first edition, the jury noted on 8 June. All the AI teams achieved high yields, and the flavour and quality of the tomatoes were excellent. The winning team stood out for its sparing and sustainable use of the available resources. Team AuTomatoes consists of researchers, engineers, con-

sultants and students at TU Delft, Van der Hoeven Horticultural Projects, KeyGene and Hogendoorn Growth Management.

Storing and analysing data was a big challenge for all the teams. They had to rely entirely on digital images, and, unlike the control horticulturists, were not able to take a stroll through the greenhouse. However, halfway through the challenge, the control group was no longer able to visit the greenhouse either, due to the Covid-19 measures. So they too were forced to base their decisions on data, video footage and phone conversations with the chief horticulturist from WUR.

## OBSTACLES

'This challenge has shown that you really can grow vegetables remotely,' Hemming says. 'In times of COVID-19, this opens up many possibilities. All decisions can be made autonomously from a distance.' But there are some obstacles for an autonomous greenhouse too. Objective data is needed on aspects of crop production. Lack of data is often a problem, and there is room for improvement in the interpretation of the data. 'And there is a need for further research into how humans and robots collaborate,' says Hemming. Only then will there truly be an autonomous greenhouse where the decisions are taken by the computer. Skilled workers are still needed in the greenhouse to maintain crops and technology. There is still a long way to go before their jobs are taken over by robots. **AS**



PHOTO: SILKE HEMMING

## VISION

### New varieties without plant patents?



**The European Patent Office decided last month that no more patents will be issued for 'essential biological processes' in plants. A good development, says Richard Visser, professor of Plant Breeding at Wageningen.**

'I think it's a good thing the European Patent Office is listening to public criticism of the patenting of plants. That criticism says that patents hold back the development of new crops because the company with the patent can prevent other companies from continuing to improve the plant. As a result, patents are thought primarily to benefit big companies. These criticisms are met by ending the patentability of "essential biological processes".'

#### *What are essential biological processes?*

'They are processes and characteristics in a plant that already exist and that we discover and isolate. But there is more than one way of interpreting that. You could patent the first resistance gene against potato blight, because that hadn't been done before and was in that sense a new method. It was much harder or even impossible to patent later resistance genes. Our knowledge develops fast, so patents have been granted in the past for "new" biological process which we consider very normal nowadays.'

#### *What does that mean for plant variety rights?*

'The ruling restores the importance of plant variety rights in the plant breeding sector. Under these rights, other breeders have the right to use new varieties for further breeding. In the old days, it would take you at least 10 years to develop an improved variety, but nowadays – with ever better and faster techniques such as CRISPR-Cas – you can do it in a couple of years.'

#### *So how can plant breeders recoup their investments?*

'We need to develop new regulations for that. Breeders of maize have already agreed among themselves: we won't use a competitor's new variety for further cross-breeding for the first three years. People respect each other's advantage gained from their development efforts. That increases their chances of recouping their development costs on the market. Another option is for companies to pool their patents in a licensing platform. If a competitor wants to use your patent to continue developing a variety, an arbitration committee sets a market-oriented fair price that then applies to everyone who wants to use that patent.' **AS**

# STUDYING POOP FOR GOLDEN DOG FOOD

**PhD student Evelien Bos (24) is working with dogs and their owners on a new protocol that pet food companies can use to develop their products. The dog contributes poop, which the owner collects for two weeks and stores in the freezer.**

In her PhD project, Bos wants to establish a common protocol with which dog food producers can analyse the quality of their products, making use of the experiences of dog owners and their pets. This has never been done before. Pet food companies usually test the quality of their products on lab animals. They judge how palatable the food is by the amount the animals eat, and its digestibility by how many nutrients they absorb. Now, Bos wants to test the palatability and digestibility of the product in the dog's home environment. This is important since every dog is different, and so are its living conditions, which can cause more variation in the results of quality control than occurs in a research facility. Bos: 'I've got one foot in fundamental science, and one in applied science. I like being able to work with pet owners and their animals alongside the lab research.' Bos has now started the first of six planned studies, in which she focuses on digestibility. To determine this, she needs to analyse the poop.

## FROZEN PIZZA

All the participants in Bos's trial receive a two-week supply of plastic bags in which to collect the faeces, and a diary in which to record their observations. She also offers participants a mini freezer, as not everyone fancies storing the poop samples next to their frozen pizzas. For the two weeks of the trial, participants can

give their pets only the food Bos provides, and are asked to make notes in the diary. In return for the free food, she wants to know how much of it the dog eats and how often it poops. And she wants to know about the faeces in gory detail, so she can identify possible digestion problems. Bos picks up the samples after two weeks.

## LAB WORK

And then the lab work begins. A pet's poop reveals a lot about its health. The nutritional value of the food depends on its digestibility. 'All the nutrients we find in the poop were not absorbed by the dog,' says Bos. 'So if the food is well digested, leaving few nutrients in the poop, that digestibility is a good marker for the quality of the food.'

With her PhD project, Bos wants to determine the time period and the number of participating dogs needed for reliable, animal-friendly quality control that leads to healthy and tasty food. She has worked with 50 dog owners so far and she is looking for at least 10 more. After this, Bos would like to investigate the quality of cat food. **KH**

*Are you interested in taking part in this study? If so, go to <http://www.betterpetworld.com>*

**Not everyone fancies storing dog poop next to their frozen pizza**



## RECTORS: GENERATION OF STUDENTS AT RISK

The rectors of Dutch universities fear that students may not be able to develop to their full potential if teaching hours remain limited. In an editorial, they advocate for more provision for students.

'Character development is the basis of university education, and we fear that an entire generation of students will be lost if the cru-

cial face-to-face contact is not restored soon', write the rectors of 15 universities on the news and opinion website ScienceGuide. For the time being, universities and colleges can only offer courses that start and end between 11 am and 3 pm, or after 8 pm. This is to avoid students travelling during rush hour. Classes may also begin before 3 pm

and end after 8 pm.

The options will be expanded from 1 August, but the rectors fear this will still be insufficient. 'With a view to the future, we need to offer the next generation of students space, both literally and metaphorically. They too deserve a place of their own, even now.' **HOP**

## PROPOSITION

## Positive discrimination does not stop inequality



PhD candidates are expected to submit a set of propositions with their thesis. In this feature, they explain their most thought-provoking proposition. This time, it's the turn of Sanne van den Berg of the Environmental Sciences group, who got her PhD on 12 June for her research on the sensitivity of various aquatic species to chemical compounds in surface water.

**Discrimination is a complex problem that you can't solve by giving certain groups preferential treatment, says PhD candidate Sanne van den Berg. So her proposition says: 'Positive discrimination is still discrimination.'**

'Discrimination is a very complex problem and the right approach is complicated. Of course we should explore all possible routes and I realize that positive discrimination is an attempt to get things headed in the right direction. Take Eindhoven University of Technology, for example, which only appointed women to academic

positions for a period. That worked well but as a woman I don't think I would want to be appointed on that basis. You would always be wondering why you got the job. And others may begrudge you the position,

**'You would always be wondering why you got the job'**

thinking you only got it because of the positive discrimination. It doesn't solve the problem of inequality; that requires a change in people's mindset first. I can un-

derstand you might want to give people a helping hand, but it doesn't resolve the underlying social problems in the long term. 'At present discrimination is getting a lot of attention because of the Black Lives Matter protests. I think that is a good thing. But I also find it difficult to talk about this. It is a sensitive subject and who am I to say something about it? But I still find it important to discuss this. Fortunately, I have never personally experienced discrimination, at least not consciously. But if there was positive discrimination, you probably wouldn't hear about it either.' **TL**

## SUNSCREENS DAMAGE CORAL

**Sunscreens containing oxybenzone reduce the vitality of coral reefs, shows research at WUR.**

Oxybenzone functions as a UV filter in sunscreens, blocking UV light and thus protecting the skin. But the substance is also strongly suspected of harming coral. So these creams are banned on the beaches of tropical islands such as Aruba and Bonaire. Wageningen Marine Research put the theory to the test and exposed coral to oxybenzone over a long period.

A long period means a couple of weeks. A long time for toxicity research, says ecologist Diana Slijkerman. 'When substances are tested, it is often a matter of a day or a few days. This test took a total of six weeks.' That has a lot to do with coral's vulnerability. It is not easy to do laboratory tests with coral.

Slijkerman and her colleagues studied two of the most common coral species, *Acropora tenuis*

and *Stylophora pistilata*. The corals came from Burgers' Zoo in Arnhem. Some of them were exposed to oxybenzone, some were subjected to artificial climate change by heating the water, and some underwent both treatments at the same time.

Both species of coral reacted to oxybenzone. But the effects were subtle and varied per species. The temperature effect (climate change) proved much stronger than the effect of oxybenzone. All the *Acropora* gave up the ghost at a higher temperature (32°C) and died a few days earlier when subjected to oxybenzone. All the *Stylophora* survived both attacks, though they were left with some battle scars.

## USE ALTERNATIVE CREAMS

The effects were observable even at lower concentrations. There is a big drop, for instance, in the photosynthesis of zooxanthellae, single-cell symbionts that provide coral with oxygen. This sup-

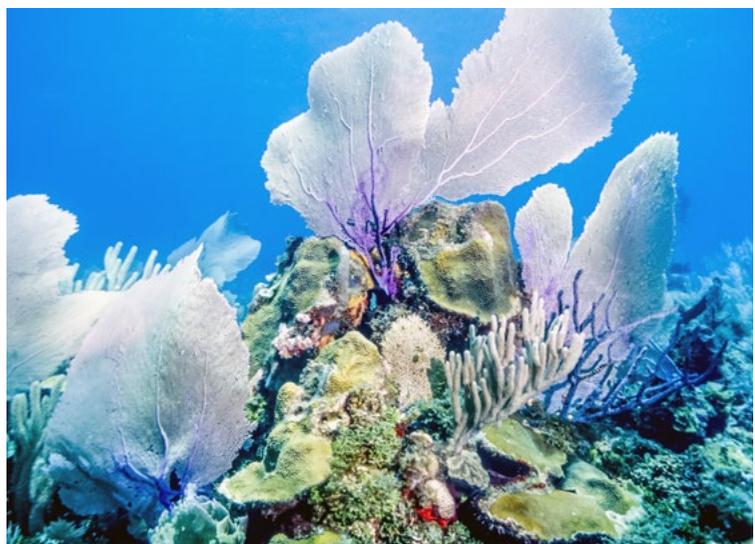


PHOTO: SHUTTERSTOCK

presses the coral's metabolism, which seems to have an impact on its growth, although this has not been proven statistically. A change was also seen in the composition of the bacterial population that supports a range of processes. The experiment showed that oxybenzone does not kill coral out-

right. 'But it constitutes yet another negative effect on the health of coral,' says Slijkerman. She therefore recommends that tourists use creams that do not contain oxybenzone, even though the effects on coral of many of the alternative substances in sunscreens are unknown. **RK**

**‘We are dealing with drought better now than in 2018’**



# Drought

## is a distribution issue

The Netherlands is such a watery country and yet it is suffering from drought. What is to be done? It is a question of capturing more water and distributing it better, says professor of Water Resource Management Petra Hellegers.

text Roelof Kleis photo Guy Ackermans

**T**he summer hasn't even really got started yet, and the grass is already yellow and the ground hard and dry. The government is trying to manage the water scarcity in the short term with quick fixes such as a hose-pipe ban. But a systematically different management approach is called for, says professor of Water Resource Management Petra Hellegers.

### What are we doing wrong?

'The water system is overly geared to coping with excess water and not enough to coping with water shortages. Current water management policy is based on an average year. But that average is no longer appropriate. Rainfall is extremely low, and this is the third dry year in a row. The extremes are becoming the norm, and we have not responded to that enough.'

### Are we exhausting our water system?

'No. Water is not scarce in the Netherlands. There are temporary shortages due to lack of precipitation. But we haven't had a systematic lowering of the groundwater table in the last 20 years. This is not the Middle East.'

### Where are the weak spots in the management system?

'Water runs off too fast. We need to capture more water and keep it in the system. It is easier to adapt then. We are already doing it, and we are dealing with drought better now than in 2018. Sluice gates in the major rivers are being

closed. The water level in ditches is being raised by installing extra sluice gates and closing culverts. People are investing in drainage based on water levels.'

### So it's easy to solve the drought problem?

'I'm not saying it's easy. There is considerable damage to agriculture and nature, especially in areas that water cannot be channelled to. And there are major interests at stake. Better management means all stakeholders being able to weigh things up wisely, and that is quite complex. Water distribution is what is called a "wicked problem". But you can take steps.'

### Nature conservationists say that the farmers are exhausting the water supply through excessive irrigation. We export our valuable water in the form of agricultural products, too. Do they have a point?

'The biggest consumers of water in the Netherlands are not the farmers but industry and the drinking water companies. But farmers do use water just when nature needs it most. They use the most water to irrigate maize and grasslands. We do indeed export high-value crops, and with them, water. But the Netherlands is a net importer of water.'

### Water is dirt cheap in the Netherlands. Could pricing be used to change the distribution?

'Pricing can help to prevent waste, but is less suited to controlling demand. The water bill is just one small part of a household budget. Hardly anyone knows the price of a cubic metre of water. It is more important for us to realize the value of our water.'

### Is a water footprint a good way of making producers aware of that value of water?

'That kind of footprint indicates how much water goes into making a product, but doesn't tell you much about how sustainably it is used. People are trying to make that distinction, but it is difficult. What is more, I don't think you should lay the responsibility for that at the consumer's door.'

### You just mentioned the value of water. What do you mean by that?

'As an economist, I see scarcity as a question of distribution. For a fair distribution, it is important to know what functions water has, where and for whom, and what its importance is to society. The value placed on these things is political and should be made explicit, so that transparent, well-thought-out choices can be made.'

### Water falls out of the sky. Isn't it free?

'Yes, that's what makes it so tricky. And what's more, the value of water fluctuates: it is not the same in summer as in winter. So assigning value is not a matter of a simple calculation. It is a process, in which we make choices collectively. Which functions do we prioritize? Which crops do we irrigate? Which crops do we grow, and where?'

### That relates it to spatial planning.

'And it is a spatial planning issue. The Netherlands is a small country, and a lot of different functions are found on that postage stamp. So can you serve all those different functions when water is scarce? Should you combine harvesting drinking water with irrigation in the same area? That is not a happy marriage if there is consistently less rain. We shall have to make choices. Our water management system will have to be recalibrated now that extremes are becoming normal. Otherwise you get stuck in a pattern of ad hoc policy and irrigation bans.' 

◀ Petra Hellegers on the already parched grass on campus.

# Tackling the nitrogen

The Dutch cabinet lacks the ambition needed to deal with the country's nitrogen problem, said the Remkes commission early this month. Just as WUR published a roadmap for reducing the nitrogen load around nature areas.

text Albert Sikkema illustration Yvonne Kroese

The Remkes Commission's final report has sparked renewed political debate about nitrogen emissions in the Netherlands. At the press conference of 8 June, Remkes criticized the current cabinet's policy, which aims at a 26 per cent reduction in nitrogen by 2030. The advisory commission does not think that is ambitious enough and proposes a goal of 50 per cent less nitrogen by 2030. Such a reduction is feasible if the proposals coming from the agricultural sector are implemented in the next few years, claims Remkes. He also says there are too few legal safeguards and too much room for manoeuvre in the cabinet's plans for them to achieve their goals for nature.

The left-wing opposition and nature organizations applauded Remkes' firm language, while the agriculture sector was disappointed. The report will play a role when the Lower House debates Minister Schouten's proposed nitrogen policy later this year.

In the meantime, the cabinet and the Remkes Commission are agreed on the urgency of solving the nitrogen problem. 'We've got to make the transition to low-emissions agriculture,' says Remkes. 'That calls for measures that target areas specifically. It is up to the provinces to come up with the specifics.' An extensive monitoring network around nature areas is proposed, to clarify which livestock farms are causing the most damage and should therefore either be closed down or adapted to use low-emissions farming methods.

#### SPATIAL APPROACH

Two days before Remkes presented his report, WUR's Nitrogen Taskforce published a five-stage roadmap to set this process in motion. The timing was surely no coincidence? 'Not entirely,' says Tia Hermans, chair of the Taskforce. 'It was known well in advance when Remkes would present his recommendations. We took advantage of that momen-

tum.' The staged plan, intended for the provincial governments, describes how agriculture and nature can move together towards reducing nitrogen deposition and improving the quality of nature areas. 'It is a spatial planning approach, in which we introduce both national and local measures in a conversation specific to an area,' says Hermans.

The plan sets out five stages in the process. The first stage is identifying the nature areas that suffer from excessive nitrogen and the reduction in nitrogen deposition needed in each area. The

'The roadmap shows how government can have the most impact within the available budget'



# problem in five stages

second stage involves calculating the effects of generic agricultural measures planned by the ministry of Agriculture, Nature and Food Quality on the nitrogen deposition in a given nature area. For example, how do low-emission barns and feed-related measures contribute to lower nitrogen depositions? The third stage is an assessment of the quality of the nature in the area and the potential impact of nature restoration measures. WUR takes a broader perspective on this than just looking at nitrogen deposited from the air. Hermans: 'Nature is also affected by dryness, fertilizers, acidification and fragmentation of the landscape.'

## FROM LOCAL TO NATIONAL

The analyses provide results at the area level, so provinces can talk to farmers' organizations, nature organizations and water boards about additional local measures to take to achieve the nature-related goals. So the fourth stage targets area-specific measures for farming and nature. An example would be livestock farmers whose farms are close to nature areas. If these local measures prove not to benefit the nature areas sufficiently, the process continues into the fifth stage, asking: what additional national measures are called for?

'This plan is based on policy considerations,' explains Hermans. At the fourth stage, you could consider buying up livestock farms around nature areas, or you could install low-emissions measures on those farms. Another option, if you want to clear up the blanket of nitrogen covering

the Netherlands, would be to close down polluting farms at stage 2. 'The roadmap shows how government can have the most impact within the available budget.'

Hermans describes the plan as a method for getting a clear picture of the nitrogen problem in an area, and for finding solutions together with stakeholders. 'It is important for nature managers and farmers to get to grips with the task at hand regarding nitrogen.' She is not afraid that farmers' protests will queer the pitch. 'A lot of farmers set great store by nature and really want to find options for low-emission farming. Their biggest need is to see signs of hope on the horizon.'

## DRASTIC

The Remkes Commission gave them that hope on the horizon: halving nitrogen emissions by 2030. That is an ambitious goal, which is fine, says Jan Dijkstra, livestock feed expert and a member of the Wageningen Taskforce. But he doubts whether Remkes's ambitions are feasible. 'Halving emissions is theoretically possible, but it does require drastic measures, like adapted barns. And that is a very costly business.' The same goes for the commission's recommendation to ban slurry. 'For many farmers, that requires a completely new barn design. That is a tall order if you have just invested in a new low-emission barn.' Dijkstra sees it as a positive point that Remkes emphasizes goals rather than means. 'That give farmers scope for their professional know-how, and for customized approaches.' 

## COLLABORATING IN THE TASKFORCE

Finding solutions together takes time. This is reflected in the experience of WUR's Nitrogen Taskforce, which brought Wageningen animal scientists, ecologists, agrotechnologists, economists and spatial planners together to create a roadmap for tackling the nitrogen problem. This kind of collaboration was new to most of the participants, and livestock and nature researchers held in-depth discussions for the first time. Jan Dijkstra, who describes himself as a 'dyed-in-the-wool animal feeds man' at WUR, thoroughly enjoyed learning about the ecological aspects of ammonia. 'One of the things I learned from the ecologists was that nature restoration is not just about nitrogen, but that a high water table in some nature areas can be even more important for achieving nature-related objectives. That's something livestock farmers in those sorts of areas need to know, so they understand which measures they should take to contribute to nature restoration.'

In turn, ecologist Nina Smits learned when the livestock farmers produce ammonia, and which techniques and management approaches she could use to influence those emissions. 'During the discussion, animal scientists explained which measures farmers could use to reduce their emissions of x tons of nitrogen, and then they looked at me and asked: what does that mean for nature? And I had to disappoint them. I can't say what lower emissions will mean for the nitrogen deposition in a particular nature area, because to do that you need more information about the local situation.' Both Dijkstra and Smits say the nitrogen problem is highly complex and is made up of lots of smaller problems. Chair Tia Hermans: 'For the first time, we have really thought through what one aspect of the problem means for another aspect of it. That is what makes this a genuinely joint Wageningen plan.' Apart from the people mentioned in this article, others who took part in the taskforce are: Karin Groenestein, Nico Ogink, Jan Huijsmans, Gerard Velthof, Raymond Jongschaap, Peter Geerdink, Sandra Munniks, Roel Jongeneel and Marc Ravesloot.

## BLM IN WAGENINGEN

Over 1000 people joined a protest against racism organized in Wageningen last Sunday by Black Lives Matter Wageningen. That was more than double the expected number. From marked spots on the grass, they listened to the stories of several Wageningen people about discrimination and exclusion. 'I would like to explain to you what 40 years of racism does to you, but actually I can't even really grasp it myself. The horrifying death of George Floyd has shaken up something in me. I can't take it anymore. It's got to stop. Change is going to come!' The park was a sea of people, sometimes eerily silent, and sometimes bursting into loud applause at hopeful words. See page 26 for an interview with initiator Jerry Gumbs.

© CJ, photo Sven Menschel





# No say in pension premium investments

## Is that a problem?

WUR researcher Jarno Gieteling was shocked to discover that ‘his’ pension fund ABP invests in oil drilling in the Arctic. He started a poll asking colleagues how they felt about having no influence on the portfolios in which their pension fund invests. *Resource* too has been getting people’s opinions.

*text* Coretta Jongeling and Nicole van ‘t Wout Hofland *illustration* Henk van Ruitenbeek

### Marta Eggers



**WUR Student Challenges project coordinator**

I want to invest my money well. That is why I deliberately chose a bank that focuses on sustainability. I also want to be able to determine what my pension money is invested in, but unfortunately we don’t have that choice at WUR. **Pensions are about the future and a sustainable pension fund fits with that. But I don’t think ABP is sustainable.** I used to be the coordinator of Green Office Wageningen, which works on improving sustainability at WUR. We tried to raise this issue with the university back then too, but to no avail. Of course the pension system is complex but I thought it was a shame that WUR was not prepared to discuss the issue.

### Menno Pijnenburg



**PhD candidate in Molecular Biology**

Given that WUR focuses on sustainability and the environment, I would have expected the university to have made a greener choice of pension fund. If I had a clear overview of all the pension funds and was allowed to make a personal choice, I would definitely choose a more environmentally aware option. **On the other hand, it makes life easier if WUR has a fixed pension fund and I don’t have to choose.** The fact that I don’t have to investigate the matter saves me time and energy.

### Tom Theeuwen



**PhD candidate at the Laboratory of Genetics**

I think it’s wrong that we don’t have a say in the portfolios ABP invests in, whether it’s about oil drilling or other investments. I realize I’m not an economist, like most other people at WUR, so we can’t get involved in the financial side of the pension fund and its investments. **Even so, we should have a say on where our money goes.** Perhaps you get better returns on investments in oil drilling but if WUR wants to present itself as a pioneer in the field of sustainability, we should be prepared to accept lower returns.

## Arjen Schots



**Associate professor of Nematology**

The WUR pension fund should not invest in oil drilling in the Arctic. Investing in sustainable projects gets you higher returns in the long run. We saw that during the financial crisis: Triodos Bank with its sustainable investments was one of the few to do well out of the crisis. **Anyway, there is more to investing money than the financial aspect; personal convictions are just as important.** That is why we employees should have more of a say in ABP's investments.

## Blair van Pelt



**Lecturer in Farming Systems Ecology**

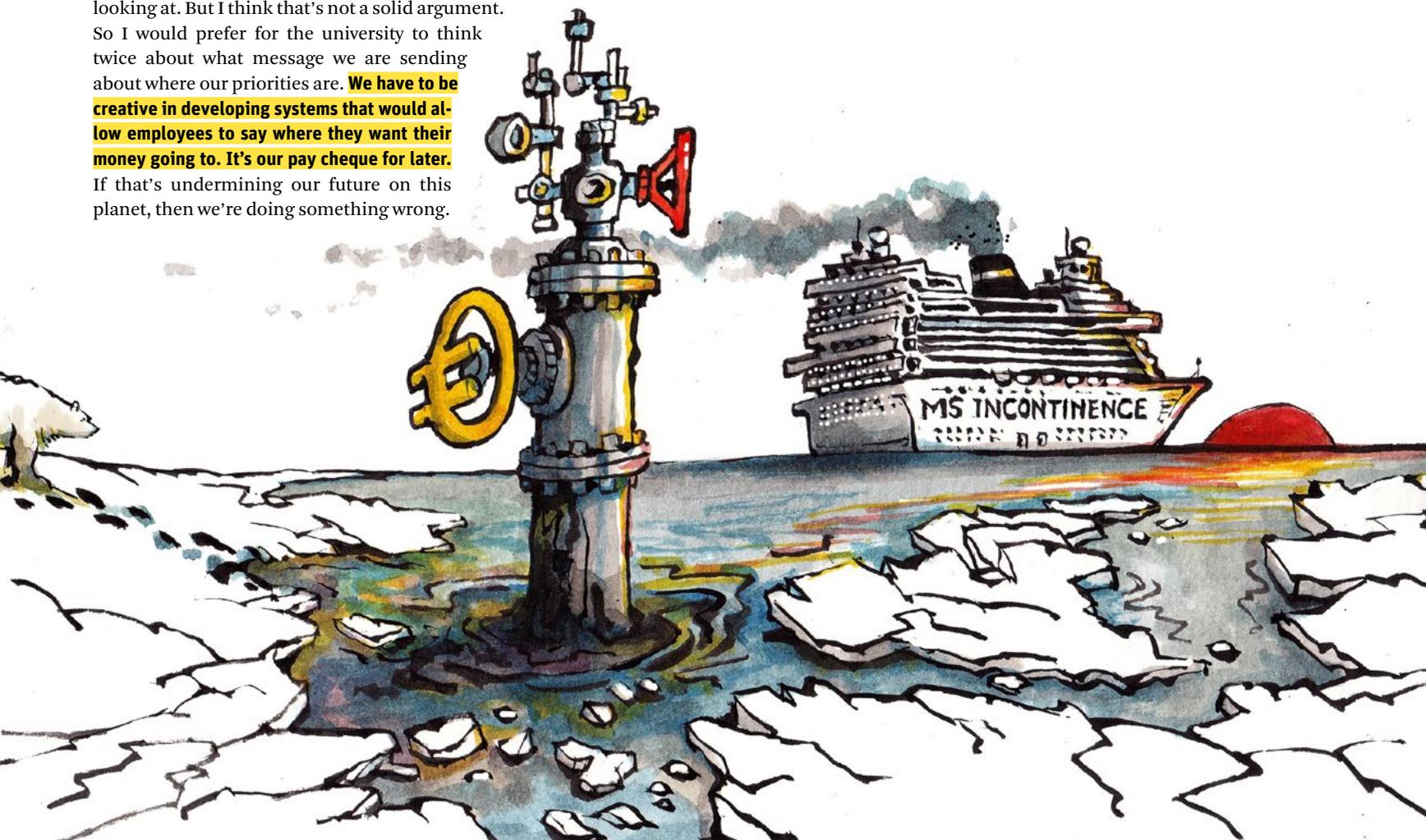
I think it's unacceptable to be a beacon of innovation and sustainability and at the same time put our pension money into things that contradict our own future. That doesn't make sense to me. Although I wouldn't feel comfortable if the university was investing all of our money in things that were financially risky either. As far as I understand, the justification for investing in this portfolio is that fossil fuel investments are seen as stable. Of course it depends on what time frame you're looking at. But I think that's not a solid argument. So I would prefer for the university to think twice about what message we are sending about where our priorities are. **We have to be creative in developing systems that would allow employees to say where they want their money going to. It's our pay cheque for later.** If that's undermining our future on this planet, then we're doing something wrong.

## Rolien Willmes



**Lecturer in Strategic Communication**

My first reaction was no, I don't want oil drilling. But I always try to look at something from multiple perspectives. The pension fund is collaborating with Shell and I understood that they are doing this precisely because they think it is important to be able to influence the sustainability policy of such a huge company. Pension funds are major investors, which means they have influence. The question is what result you get ultimately. **Being able to choose your own pension fund sounds attractive but I wonder what the consequences would be.** These funds are able to pay our pensions because they are so big. If you get a free choice, you lose out in terms of security and may undermine the entire pension system. I don't think we can really know what the funds are doing; when the time comes to choose, they will highlight the good things and sweep the less attractive investments under the carpet. I think proper supervision and a clear framework are more important than the right to choose. ④



# ‘Nutrition plays a key role in recovery’

The coronavirus is causing a lot more people than usual to be admitted to intensive care units. Some of the survivors will suffer after-effects for the rest of their lives. Special professor Arthur van Zanten wants to know why some patients make a full recovery and others don't. And how nutrition and exercise contribute to recovery.

text Tessa Louwerens photo Ernst-Jan Brouwer

**A**s of 1 June, Van Zanten was appointed professor by special appointment in the Nutritional Biology chair group, part of Human Nutrition and Health. His chair is financed by the Gelderse Vallei hospital in Ede, where he works as an intensive care physician. WUR has been collaborating with this hospital for years in the area of nutrition and health (see inset).

Van Zanten and his group are researching the role of nutrition and exercise in recovery from metabolic stress in, for example, Covid-19 patients after treatment in an intensive care unit (ICU). Metabolic stress results from a serious disease or an operation: inflammatory reactions disturb the metabolic processes in the body, such as muscle formation and fat storage. 'A stay in an ICU is comparable to top sport,' says Van Zanten. 'The body is at war and a patient can lose kilos of muscle mass per day during an ICU stay.'

## SURVIVAL

According to Van Zanten, a lot of research has already been done on the acute phase of an ICU

stay, leading to a big improvement in the prognosis for patients in the first few days after admission. 'Half of them used to survive, and now 80 per cent survive.' But survival is only part of the story. Often people are never the same

## ‘After an ICU stay, some patients can no longer go to work or live at home’

again, and Van Zanten has noticed that the number of ICU 'victims' is rising. 'It is a heavy onslaught on the body, causing health problems that go on for years, such as exhaustion, post-traumatic stress, muscular weakness, concentration problems or depression.' In the course of his career, Van Zanten has

treated thousands of ICU patients and has seen the impact their ICU stay has on them and their families. 'Sometimes patients can no longer go to work or live at home. They survive, but their quality of life deteriorates badly.'

## LIFE AFTER THE ICU

Van Zanten is eager to find out how these people's quality of life can be improved after their ICU stay. 'There is more and more evidence that nutrition plays a key role in recovery, both in the acute phase in the ICU and during the rehabilitation phase in a rehab centre or nursing home, or at home.' Van Zanten thinks nutrition and exercise are important at every stage, while different approaches are appropriate at different stages. 'In the first few days after admission to an ICU, you mustn't overfeed the patient because the body is already working hard to release energy. So you run the risk of overnutrition. You see the same problem in people who have been starved: if you give them too much food too soon, there is even a risk of death.' After the first few days, it is important for





▲ 'We must keep a good eye on people for at least a year after an ICU stay,' says Van Zanten.

patients to get enough protein and exercise. Their protein needs increase during the recovery period, explains Van Zanten. 'You have to build muscle, and just like sportspeople, you do that by eating proteins and by exercising.' That is very difficult for patients, says Van Zanten. 'After an ICU stay, many of them have difficulty swallowing and lose their appetites. Some patients also suffer from depression. It is hard to motivate them to eat and exercise enough, but I think there is a lot of scope there for improving the outcome. We must keep a good eye on people for at least a year after an ICU stay, according to individual needs. We should monitor a patient's energy metabolism so that we can determine precisely what this person needs.'

#### COVID-19 PATIENTS

The Covid-19 outbreak makes Van Zanten's research programme especially relevant. He is currently studying more than 50 Covid-19 patients treated in his hospital. 'We look at their body composition – the amount of muscle and fat tissue, for example. From previous research,

we know that patients who have to be admitted to the ICU are often overweight. But paradoxically, the survival rate is better among overweight patients, probably because they have greater muscle mass.' It is not yet clear whether this obesity paradox applies to Covid-19 patients as well. In the past few months, Van Zanten hasn't had much time for the research because he has been busy working in the ICU. A lot of work at the university is at a standstill too. 'We are going to carry on with it now, and we hope to present the first results in a month's time.'

#### NUTRITION IS KEY

Van Zanten particularly wants to understand why some people make a full recovery and others don't. He looks at the factors at play in this, and how nutrition and exercise can help. 'If we can figure that out, we can make better treatment plans.'

The fact that nutrition is a relatively new subject in the medical world makes this study extra interesting for Van Zanten. 'For a long time, this was largely the domain of nutrition

researchers and dieticians, but I am seeing a growing interest in it, and nutrition has now become a key element in IC treatment.' He travels around the world to share his expertise, and comes across some interesting cultural differences. 'In China they work a lot with herbal medicine, and it is usual to give patients green tea through tube feeding.' 

#### NUTRITION IN HEALTHCARE ALLIANCE

The research programme has been made possible by the Nutrition in Healthcare Alliance in which the Gelderse Vallei hospital and WUR have been collaborating since 2007, joined later by Rijnstate hospital in Arnhem. The alliance's goal is to bring together scientists, health practitioners, government and industry.



# Under construct

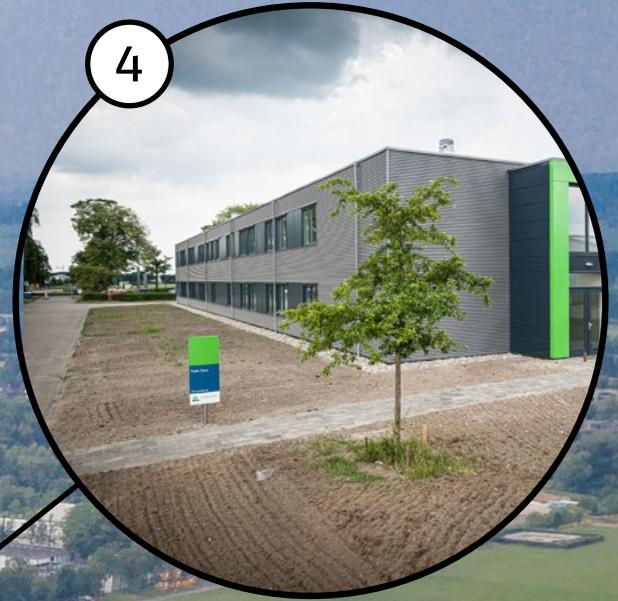
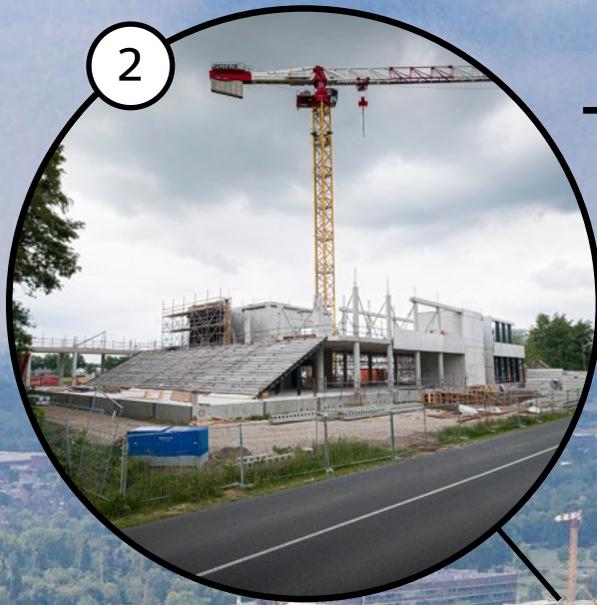
Builders can't work at home, so work on the new buildings on campus went on quietly over the lockdown months. For those who have been working at home, here is an update. Four buildings are nearing completion, while work on a fifth has just begun.

## 1 PLUS ULTRA II

After the commercial success of Plus Ultra I, there had to be a second, whose occupants will include Starthub, FabLab and One Planet. The building is finished and the first 'residents' will move in after the summer break.

## 2 AURORA

The third education building, after the Forum and Orion, built to solve the teaching space problem on campus. You can already make out the contours of the large lecture theatre. The building should be ready for use in August 2021.



ion

PHOTO OVERVIEW: SVEN MENSCHEL  
INSERTS: GUY ACKERMANS

**3 NPEC**

The Netherlands Plant Eco-phenotyping Centre is a joint development by Wageningen and Utrecht for research on the influence of the environment on the growth and appearance of plants. There is a modern greenhouse to go with the centre. Both will be ready this summer.

**4 NOVA**

Nova is Radix's newest offshoot, to provide another urgently needed 150 workspaces for plant researchers. The building will be ready this summer.

**5 SERRE RED**

The new greenhouse was specially developed for transgenic research on plants. The building, which meets strict safety requirements, will be ready this summer. **RK**

# The best!

Half an hour after the official ceremony and he can still hardly believe it. But it is true. Arie Nieuwenhuizen is WUR's best teacher.

text Roelof Kleis photo Guy Ackermans

**C**ould he give the operations director of Animal Sciences (ASG) a guided tour of the human lab at Zodiac? Okay. But the receptionist had just said she would send the visitor along. 'Visitor? I thought that was odd. Surely the director knew his way around?' He was completely taken aback when, a bit later, he was handed the trophy that goes with the title of Teacher of the Year.

'I thought it was great that I was in the last five. And I didn't give it all that much thought after that. Nor did I know the prize would be handed out today,' he says in explanation of his surprise. 'I was in the top five in 2015, too. Then Noëlle Aarts won.' It feels very strange to be the best. 'And I'm not convinced I'm the best. There are so many good teachers here. That's why WUR is so high in the rankings.'

**'I want to teach from a sense of wonder. That's how you learn the most'**

**Why do you think you have won the prize?**

'I love teaching, and I am passionate about my subject, physiology. Students appreciate that. I never just reel off a story. I always try to get everybody on board and I try to make it accessible. And that is not too difficult with physiology. It is always easy to give examples of situations that everyone is familiar with.'

**People who know you say that it all looks slightly chaotic, but it always turns out all right.**

'Chaotic? Hmm. Maybe there's some truth in that. I always try to keep things very infor-

mal. But that's a bit of an act, you know. As a teacher, you are an actor as well. You are always thinking about how to achieve what you want to achieve. I prepare my classes well and I give a lot of thought to my storyline, but I let the presentation depend very much on the moment. The interaction with the students is very important. I never prepare scripts.'

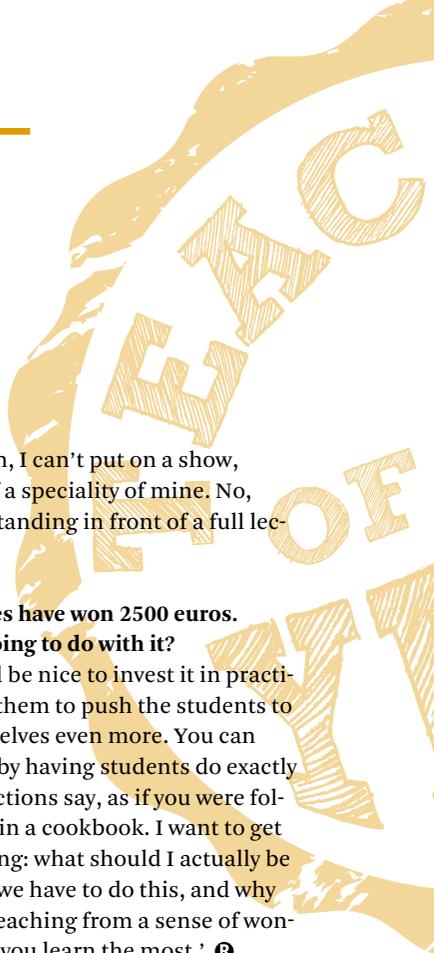
**Can you do your thing online too?**

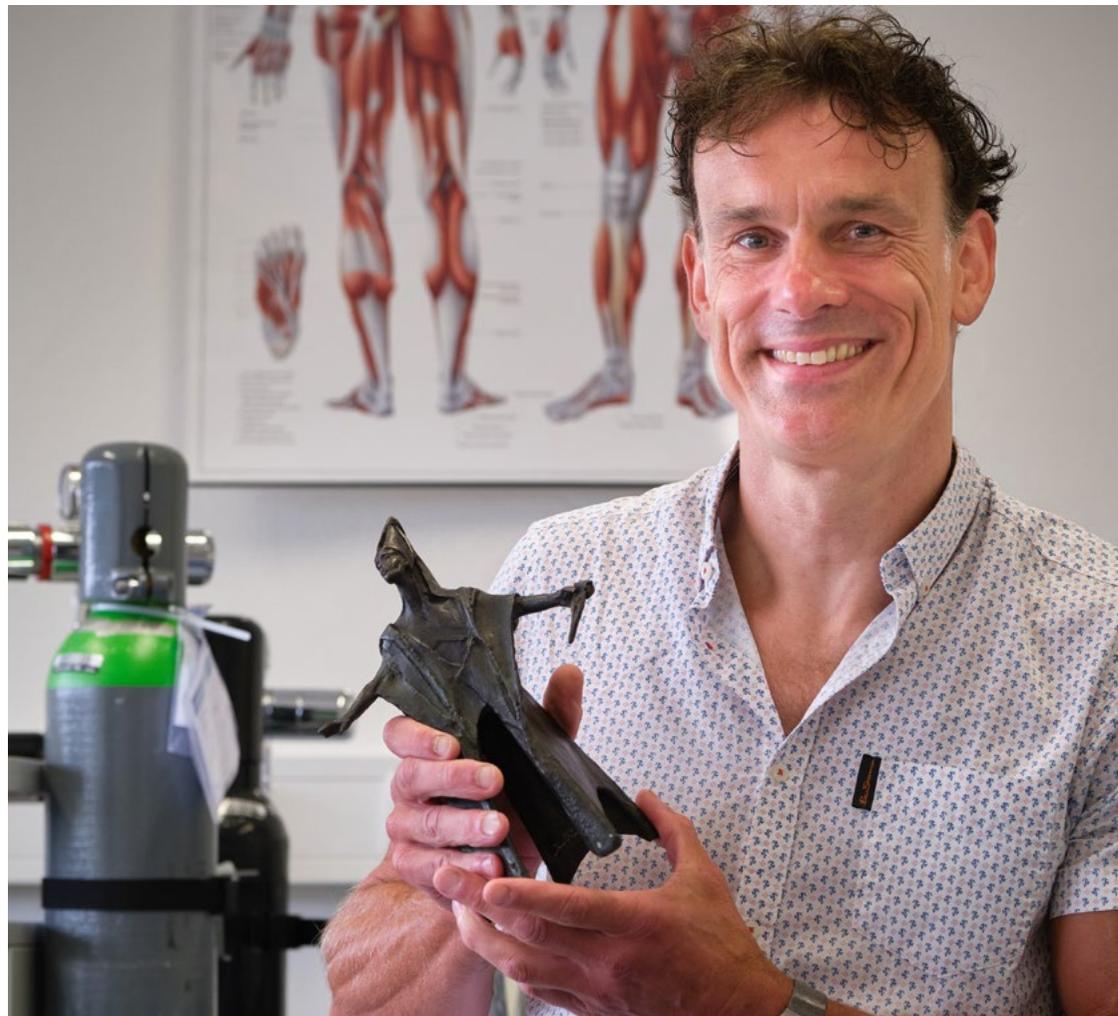
'I give live classes through the virtual classroom. A maximum of 150 students can log in to a session like that. I can't see the students, but they can see me. And we can chat. That goes quite well, but I do miss the interaction. I like telling stories. Online you don't see what's going on in the audience. Are you getting across, do they get it? Because there

is no interaction, I can't put on a show, which is a bit of a speciality of mine. No, nothing beats standing in front of a full lecture theatre.'

**All the nominees have won 2500 euros.**

**What are you going to do with it?**

'I think it would be nice to invest it in practicals. To design them to push the students to think for themselves even more. You can give a practical by having students do exactly what the instructions say, as if you were following a recipe in a cookbook. I want to get students thinking: what should I actually be doing? Why do we have to do this, and why in this order? Teaching from a sense of wonder. That's how you learn the most.' 



# The 2020 shortlist

Along with the winner Arie Nieuwenhuizen, these four teachers were shortlisted for the Teacher of the Year award:



**Hannie van der Honing**  
teacher of Cell Biology

‘Tijs and I were both in the top five this year. There is a spirit of enthusiasm among the teachers in our Cell Biology chair group. If you have a new idea, you share it with the group and tackle it together. The secret is in the teamwork. We pull together.

‘I deliberately choose to teach practicals as well as giving the big lectures. The groups are smaller for practicals, so I know a lot of students’ names. And if I see that a student isn’t happy, I ask about it so I can see what could be improved. I think students can tell that I make an effort on their behalf.

‘Tijs and I are going to use the money for an excursion for students who are missing out on one now because of the coronavirus.’



**Tijs Ketelaar**  
assistant professor of Cell Biology

‘I think I get on with my job, but I don’t feel any better than anyone else, so I was very surprised by the nomination. I really have an easy job: talking about reproduction for six weeks. That always has an appeal. It is about plants, but even so.

‘Both Hannie and I were trained by Andre van Lammeren, who was once Teacher of the Year and was nominated very often. We are working with a very enthusiastic team. If you want to get a message across, you need some enthusiasm. It is important that you like the subject you teach.

‘I make an effort not to focus only on the teaching, but also to mingle with students and to be approachable. Trying to engage with them on things that work for them.’



**Ute Sass-Klaassen**  
associate professor of Forest Ecology and Forest Management

‘Forest and nature management and climate change are very topical themes. It’s very important to me to put across my knowledge effectively, and that motivates the students to find out more about it.

‘I think students appreciate the fact that I want to see the person behind the student. If you know why they chose their degree subject, you can make use of that. The material really comes home to them if they think: “this subject is relevant to me and the choices I make.” That is fundamental to my way of teaching.

‘I shall use the prize money to take students on an excursion to Germany or Belgium to look at forest management and good use of timber there. We do it every year and it is always a great success: not just education, but also great fun.’



**Henry van den Brand**  
associate professor of Adaptive Physiology

‘It is a great honour when students vote you on to the longlist and the jury shortlists you. I already won the prize once in 2018. That still feels like an amazing thing. It is a tremendous token of appreciation of what you’ve done and what you are doing.

‘I think the personal attention I give students is appreciated. I try to create a safe environment in which everyone dares to ask their questions. I do it by taking every question seriously. And if I don’t have an answer, I admit that, go and look it up, and come back to it later. I don’t feel as though I’m doing anything extraordinary. I listen to and respect my students.’ **LZ**

## IN OTHER NEWS

### COOCHY COO

Babies as young as six months know when their behaviour is being imitated, shows research by Lund University in Sweden. Infants laugh longer and more often when they are mimicked, even if the imitator is a total stranger doing research on them. Imitation reinforces bonding. So there you go: scientific support for the silly behaviour of adults cooing into a cradle.

### PAIN SWITCH

Researchers at Duke University in the US have found a pain switch in the amygdala in the brains of mice. The amygdala is involved in negative emotions. The switch suppresses pain centres in other parts of the brain, so this discovery opens up new possibilities for pain management. The next task is to find ways of manipulating the switch with drugs. As long as we are enough like mice, that is.

### PINK (1)

The pinker the lesser flamingo, the more aggressive its behaviour, shows a study by the University of Exeter (UK). The colour, which comes from carotene in the food, reflects the animal's health and fitness levels. A deep pink flamingo can afford to spend time on displaying aggressive, dominant behaviour. Which is exactly what is required to find a partner. The pinker the flamingo, the more sex it gets.

### PINK (2)

Don't the paler flamingos ever get a look-in then?  
Oh yes. Mating and looking after the brood takes time and energy, so the dominant behaviour soon disappears along with the beautiful pink tint of the feathers.

And then the paler specimens get to colour up and strike lucky. Food, colour, sex, the eternal golden triangle. @ RK



# Loud call for investigation into racism within WUR 'There is always room for improvement where racism and discrimination are concerned'

**A petition calling on WUR to look into racism at the university has been signed over 2000 times in just one and a half weeks.**

'The university of Wageningen should put out a statement about #BlackLivesMatter and racism. What would be even better than a statement is incorporating it (even more) in the institution and its practices.' Environmental Sciences student Jerry Gumbs (28) posted this appeal on Saturday 6 June in the Wageningen Student Plaza Facebook Group. Then he and some others started a petition (now with over 2000 signatures) and organized a Black Lives Matter protest, attended by over 1000 people. The university Executive Board has now announced a dialogue (see page 4).

**Why did you post that appeal on the Student Plaza?**

'Throughout the world, I saw companies and organizations taking a stand. I thought to myself: I love Wageningen, I love the university and I want my university to take a stand too. I'm not saying WUR is doing badly; I think it is already doing a lot of the right things. But that doesn't mean there is no room for improvement. It is never a bad idea to say, "We oppose racism, and this is what we are doing to combat it."'

**What was the response?**

'There was a lot of support. Not just in the comments section, but also from people who sent messages and emails, including



PHOTO: SVEN MENSCHER

▲ Jerry Gumbs at the #BLM protest in Wageningen last Sunday.

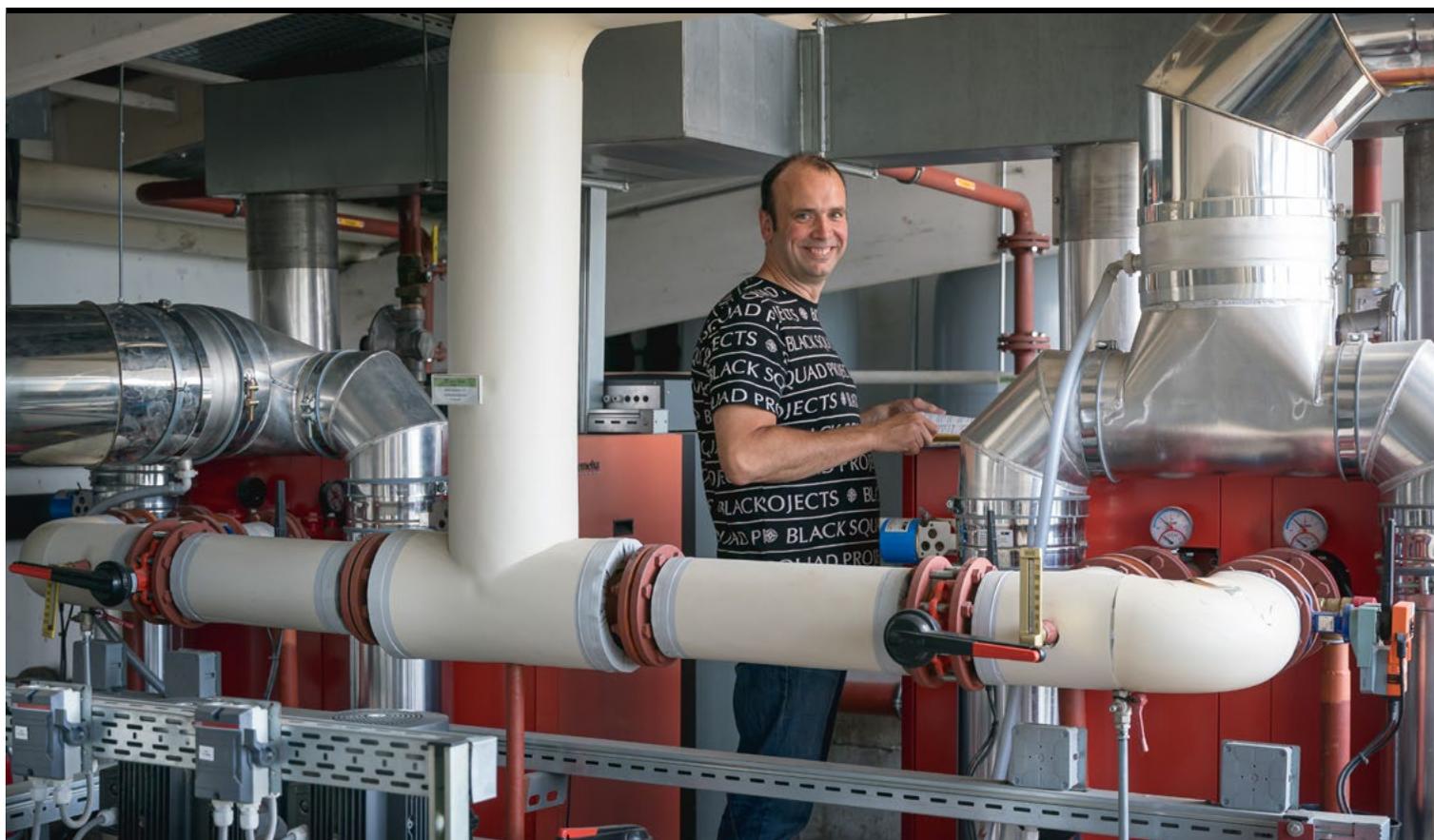
people within the university itself. The Diversity & Inclusion project manager invited me to join other students to talk about how the university could support students in this respect. And we soon came up with the idea of launching a petition. Of course, there are always those who don't get it, and there are trolls even on Student Plaza. But in general the response was positive.'

**What does the petition say?**

'Simply put, the petition calls on WUR to acknowledge systemic racism and to address it actively by investigating what role racism

plays within the university, both in the curriculum and in the organization. That investigation can then help change and refine policy where needed. There is always room for improvement where racism and discrimination are concerned.' @ LZ

**For a longer version of this interview go to [www.resource.wur.nl](http://www.resource.wur.nl)**



# Key people

They are indispensable for keeping the campus going and keeping it pleasant: cleaners, caretakers, caterers, gardeners, receptionists – the list of key people is long. This time, we meet Hans van der Lienden (47), the technical building manager for Carus, the Bongerd and Zodiac.

text Milou van der Horst photo Guy Ackermans

‘To me, the nicest thing about my job is the diversity and the complexity, especially the labs and the animal sheds at Carus. So for instance, I have to pay more attention to process gases and “medical gases”, and that involves different technology again, such as different pipes. We have to have air purification systems in all the buildings, but it has to be different in Carus to other office buildings. The rules and regulations around labs and sheds are different too, and that gives me a chance to expand my knowledge of the job.

‘But technically speaking, the buildings are 80 per cent the same, because they all have things like smoke alarms and a lift. As a technical building manager, I make sure anything that gets broken is fixed safely and promptly by the

right company. I also keep an eye out that the maintenance gets done.

‘I consult lots of people every day. If we have to adapt a building, we have to consider the right things. WUR has a sustainability policy, for instance, which means not every solution is feasible. And clients also have their wishes and requirements that we must bear in mind. Together we have to come up with a solution that will keep everybody happy. I enjoy going through that process.

**‘I think it’s great that a new cooler was in place within 24 hours’**

‘Recently, a refrigerator at Carus was so broken that it had to be replaced. It was used for storing animal feeds, which means animal experiments go on there too. But I don’t go into that. For me, someone has a problem, and it’s got to be solved. I think it’s great that we managed to get a new one within 24 hours. It doesn’t mat-

ter that I was working on it until 12:30 at night: you just want to help each other so the core business can run smoothly. We’re getting new requests now, with Covid-19, such as for automatic taps and doors, and plexiglass screens and protective glass. All that is new, but it doesn’t make much difference whether I have to order a chair or a sheet of plexiglass.

‘Because of the coronavirus, we also have to follow new guidelines for ventilation. One of them is that nearly twice as much air must be refreshed in an hour than usual. As a result, I take a lot of air measurements because I want to check whether my assumptions are correct. The guidelines are clear, but how to apply them can be less so, so that is still keeping me busy. ‘You need a broad knowledge of the job for this work. I have managed that, as I’ve had a new job every seven years. From technician to hotel building manager. Although I’ve only been working here for two and a half years, I think I will stay at WUR for the rest of my career: there is enough diversity here for the job to stay challenging. And I feel at home here. Everyone involves me in everything and they come to me with their questions. Even if I don’t always know the answer, they trust me to know where they can find it.’ 

YOU

**(BACK)  
ON CAMPUS**

**Bea Rocchi (25), a student of Applied Food Safety, has been working on her thesis from home for several months. Now she has returned to campus to start her lab component in the Toxicology department. 'This week has passed quite quickly, but in a good way.'**

Because of Covid-19, Bea had to change her thesis plans and start with a long literature study at home. 'I wasn't very successful at first, and spent a bit too much of my time finding distractions, whether that was watching Netflix or simply going for a walk.' So she's really happy she's able to go to the lab again to perform some experiments. 'I go to campus two or three times a week for a few hours. You have to reserve the lab you're going to use, because only a limited number of people are allowed at a time.'

One of the forms Bea's procrastination took during her time at home was watching Dutch children's TV. It has been helping her learn the language. Grinning: 'That made me feel a bit less guilty about not writing.' Bea is Italian and has wanted to learn Dutch since she first got accepted for Wageningen. 'I knew I would stay

**'My Dutch is still very basic but I've just subscribed to a course'**

here for at least three years and so I really wanted to communicate and understand the culture well.' But university life got too busy for her, and she postponed taking language classes until now. 'My Dutch is still very basic but I've just subscribed to an actual



course and I'm improving rapidly.'

Bea spent last weekend in Limburg with her boyfriend's family. 'I think I was very talkative. I even told them, if I talk too much please tell me,' she laughs. Her experience with a Dutch family has been mostly positive. 'It was somewhat weird that they put the salad on their plates together with the pasta.' Bea's plan is to stay in the Netherlands after finishing her study. 'My second choice is Germany, but definitely not Italy.' Going back to Italy would mean she would have to build up her life again. 'Plus, I have already lived in that country for more than 20 years.' **IC**

**DIARY OF A  
CARETAKER**

Eugene van Meteren works for Idealis as a caretaker. He writes about his experiences for *Resource*. You can read all his columns on [resource-online.nl](http://resource-online.nl).

**'Some students are terribly lonely'**

**Idealis caretaker Eugene van Meteren sometimes has to check why a student has dropped off the radar. It has happened that he is too late, but this time, he shows up at just the right time.**

Students are widely believed to stay up all night with their housemates and be actively involved in numerous committees and clubs. That might be true of many students, but there are also some who are not having such a great time at all. The coronavirus measures can have an impact on students' state of mind too, I think. If you can't go out, you can start feeling terribly lonely. One Friday afternoon I got a call from a student dean. 'Good afternoon, Eugene,' she said, 'I want to ask you to do something.' She sounded worried. 'Could you drop in on a student who lives at the Dijkgraaf? We haven't heard from her for a while and we're quite worried about her.'

I hung up and an uneasy feeling came over me. It has happened in the past that a student who dropped off the radar had committed suicide. If we are concerned about a situation like this, we are supposed to go to the student's room with

someone else to find out what's up. My colleague and I set off for the Dijkgraaf. We were both nervous about what we would find. When we reached the room, I knocked. No answer. I knocked again, still no answer. I broke out in a cold sweat. I glanced at my colleague

**'I knocked again, no answer. I broke into a cold sweat'**

and got out the key to open the door. At that very moment I heard a noise from inside the room. The door opened to reveal a small Indonesian girl in her pyjamas, who obviously had a cold. Sleepily, she asked why we were there. I explained, and she understood our concern. She thanked us. 'Nice to know I haven't been forgotten. I will get in touch with my dean soon to report on how I'm doing.' My colleague and I are glad we dropped by and had a chat. It was a way of giving the student the attention she needed, and that felt good. **IC**



# AID 2020: Socially distanced Introduction Days

**The General Introduction Days (AID) will be split in two. This and other measures are aimed at enabling AID participants to keep one and a half metres apart.**

This year the AID will be run not once but twice, from 13 through 16 August and from 18 through 21 August. This is just one of the many adjustments made by the AID board to ensure the introduction can still take place despite Covid-19, says chair Jessie Beirnaert. 'By spreading the total number of participants over two times four days, you create more space.' 'Moreover, we have designed the programme so that there are always three different activities scheduled simultaneously,' Beirnaert continues. 'So only a third of the group will be present at any given location. The groups rotate so that everyone can attend all sessions, while the AID then conforms to the guidelines laid down by the

National Institute for Public Health and the Environment (RIVM).'

## NO CANTUS

Some traditional AID activities are difficult to split up and have been scheduled online. 'An online interactive pub quiz will replace the Crossing Borders activity.' Other activities, such as the traditional cantus (beer and song event), are cancelled for this year. 'A socially distanced cantus with beer involved – we would have loved it, but it really is impossible.'

The evening programme will be different too. 'There will be no parties at the student society clubhouses in the evenings. The societies must devise new ways to introduce themselves to the new students. In consultation with the societies, we are checking what possibilities there are. Will first-year students be able to visit the location to see for themselves what student life at the society is like?'



PHOTO: MARTIE HOFSTEENGE

▲ This is not how the AID will look this summer.

## CAN-DO THINKING

As a result of these measures, no more than three hundred AID participants will be on campus at any one time, Beirnaert says. 'They will be spread out over the Forum, Orion and Leeuwenborch. Other groups will have a sports day or bicycle tour at the same time. This will allow us to stick to the social distancing requirements as best we can.'

The AID board wants to focus on possibilities, Beirnaert emphasizes. 'We focus on what we can do: first-year students will still have the opportunity to get to know new people, their programme, the city and all that Wageningen has to offer. For anything that can't be done face to face, we shall offer the best possible alternative.' **© LZ**

## MEANWHILE IN... THE USA

# 'The success of the BLM movement is no excuse to become complacent'

**The death of George Floyd at the hands of a white police officer on 25 May this year sparked a renewed discussion about police brutality, Black Lives Matter and (institutional) racism. In response, protests erupted, not only in the United States, but all over the world.**

'I first became aware of the Black Lives Matter (BLM) movement after the murder of Eric Garner in 2014, but I didn't become fully aware of the African American reality until I studied under Dr Steven Millner at San Jose State University in California. Then I began to see the United States in its true colours. I think the BLM movement, along with my education in the States and Wageningen, taught me that we ought to do things with the people we are doing it for, as opposed to doing it for them.'



Shou De Zhang (25), an MSc Tourism, Society and Environment student, reflects on the current situation in his home country.

I am fortunate enough to be surrounded by friends who acknowledge that being born with a white skin comes with its privileges. That is different



PHOTO: SHUTTERSTOCK

from my family though. They grew up away from these discussions of race. Moving to the United States meant they became entangled in these topics while they received most of their information from media sources in Chinese. Before I began the discussion with them on the racial issues in America, they were genuinely afraid of the BLM movement because of what they had previously read on WeChat.

The system of white privilege has been operating since the founding of America. The BLM movement is the result of hundreds of years of civil rights movement and I think it will definitely make a change. However, the success of it is not the final chapter of the civil rights movement. This is a moment to celebrate, but it is not an excuse to become complacent.' **© EM**

# No rose garden

**My PhD is an intense period with many ups and downs which sometimes push me to my limits. But at the end of the day it is a great experience and it gives me the chance to grow on so many levels that go beyond scientific skills.**

I knew doing a PhD would be tough, but there were many challenges I did not foresee when I started. I was prepared for the hard work but not for how little reward I would get for my efforts. I have to deal with failure, solve problems and constantly shift my schedule because of unforeseen obstacles. To do this, I need to make decisions on the spot but I will only see whether my attempts worked after continuing my exper-

iments for weeks. But despite all my efforts, many things go wrong, and results are rare.

## STRONGER

This can put me under a lot of pressure at times, as what counts most as a scientist are the results I produce. But 'what doesn't kill you

**'Thanks to my peers I learned that failure is a normal part of science'**

makes you stronger' and that is absolutely true for my PhD experience. Luckily, I work in a great research group with good role mod-

els, and WUR puts a lot of effort into employee well-being too. There are many opportunities for me to learn about stress management and self-development. This has made me more confident and resilient in the face of the many challenges at work. But I benefit from these lessons in my private life as well.

## GREAT COLLEAGUES

In my lab, I am surrounded by great people who I can always talk to, either to blow off steam or get some advice on dealing with the pressure. When I first experienced failure in my experiments, I thought these reflected my skills. But thanks to my peers I learned that failure is a normal part of science. Furthermore, I have

## BLOG



Katrin Heidemeyer is a PhD student at the Biochemistry Laboratory, where she unravels the mysteries surrounding the plant hormone auxin.

learned to communicate better and to work together with people of many different nationalities. Everyone is eager to help their colleagues when they need it, but we also come together to celebrate our victories. These experiences bring us closer together and some of my colleagues have become good friends. I have got so much out of the PhD experience and look forward to sharing more stories soon. 📌

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In memoriam

**Jacqueline Bloemhof**



We were very sad to hear that Prof. Jacqueline Bloemhof passed away on 5 June 2020. Jacqueline had to take early

retirement in September 2019 from her position as professor holding the chair in Operations Research & Logistics (ORL) because of illness. After her PhD at Wageningen, Jacqueline worked at Erasmus University Rotterdam. She returned to Wageningen, joining the ORL chair group, in 2009. She became a professor holding a personal chair in 2014 and the chair holder in 2016. She achieved national and international recognition for her contributions in the field of sustainable logistics. She has been a driving force

behind the Closed-Loop Supply Chain network and the European working group on sustainable supply chains from the very start. She garnered a reputation nationally with her membership of the Green Brain and her role of Principal Investigator at the AMS Institute. She liked to link up with other scientific disciplines in teaching and research. In Wageningen, she helped set up the new Master's in Biobased Sciences and she was an enthusiastic contributor to online education programmes. She meant a lot to the students who took her courses. As a manager, Jacqueline was someone who never gave up, stood by her staff and was not afraid to take decisions. The group was important to her. Jacqueline was a supervisor who trusted in the qualities of the people she worked with. She was

someone you could talk to not just about work but also about the wider world and life in general. Jacqueline meant a lot to the group. Even after we had formally taken leave of her, she continued to make valuable contributions whenever possible. Jacqueline was an inspirational, highly motivated colleague, a hard worker, ambitious, who had a positive attitude and always took good care of her students and PhD candidates. We have lost a fine colleague and good friend. We offer her family our sincerest condolences.

*On behalf of her colleagues in the Operations Research and Logistics group and the directors of the Social Sciences department.*

Announcement

**Student Council 2020/2021 - election result**

On 2 June 2020, the results of the SC election were determined and announced. The 12 seats will be divided as follows: CSF 1 seat, S&I 4 seats and VeSte 7 seats. The following candidates have been elected as members of the Student Council 2020/2021: Ruth Amoako-Adusei for CSF; Lan Rajlic, Chenyue Li, Tamkin Haider and Ardha Vashti for S&I; Wieb Devilee, Jette Breedijk, Irene van der Boom, Marieke van Von-

deren, Sam Hoogaars, Renee Rooijackers and Judith Kikkert for VeSte.

Agenda

**Wednesday 24 June, 20:00–21:00 Livestreamed debate: Wageningen after the coronavirus – will it be empty? The impact on Wageningen as a university town (only in Dutch)**

The coronavirus pandemic is having a huge impact globally. What effects are we seeing on our town? The university will continue with some online teaching until February 2021;

what effect will this have on student numbers? Watch and join in the livestreamed debate. The debate speakers will be Arnold Bregt (WUR dean), Sammy Xie (Student Alliance Wageningen), Wouter de Ronde (Ceres), Bart van As (Idealis), Anne Janssen (Housing councillor) and Casper Bijl (café Loburg). Tutku Yuksel and Eric Wijnacker will be the chairs. 'Debate Wednesday' is organizing a series of three debates about the impact of the virus on Wageningen. More information (in Dutch) at [WWW.BBLTHK.NL/WOENSDAGDEBATDAG](http://WWW.BBLTHK.NL/WOENSDAGDEBATDAG).

Colophon

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# >>TYPICAL DUTCH



ILLUSTRATION: HENK VAN RUITENBEEK

## A thousand ways to say goodbye

When I moved to the Netherlands, I was eager to learn the language well. To start with of course, I couldn't speak it fluently and found it hard to use the right expression at the right time.

I made a point of trying out all my new Dutch words while playing badminton. That way I was learning the language and the sport at the same time, and I hoped to make a committed impression with my newly acquired Dutch. All went well until the time came to take leave of each other after the match. Saying goodbye to my fellow players was always a challenge. Which word for 'goodbye' was the best one to use? I did my best, but in vain.

I thought I had understood correctly that the standard words for 'goodbye' were 'dag' or 'doei'. But to my astonishment, I heard a different word every time I said goodbye to anyone. If I said 'dag', they said 'doeg'. If I said 'doei', they said 'tot ziens' or something else again. Was my 'doei' or 'dag' inappropriate? Should I have said 'ajuus' or 'houdoe'? What was the right way to say goodbye? Eventually, I'd had enough and I plucked up the courage to ask my teammate Jan. I thought his answer was really interesting. He said, 'Well, we don't want to say the same thing in reply, we want to stand out and be special. Saying the same thing back would be boring, and we're not boring.'

I have now adopted this great approach and I have a range of variations on 'doei', 'dag', 'tot ziens', 'de groeten' and 'tot zo' at the ready when it's time to say goodbye. My repertoire of goodbyes has grown tremendously. © Jutta Wirth, a postdoc in Animal Behaviour, from Germany

**'Was my 'doei' or 'dag' inappropriate? Should I have said 'ajuus' or 'houdoe'?**

Do you have a nice anecdote about your experience of going Dutch? Send it in! Describe an encounter with Dutch culture in detail and comment on it briefly. 300 words max. Send it to [resource@wur.nl](mailto:resource@wur.nl) and earn 25 euros and Dutch candy.