

WUR from within: straight, sharp, transparent

No 14

Resource

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From both sides
Ministry of Spatial
Planning?

Students
coach students

Dialogue Centre
needs new name

Large growers have
stronger position

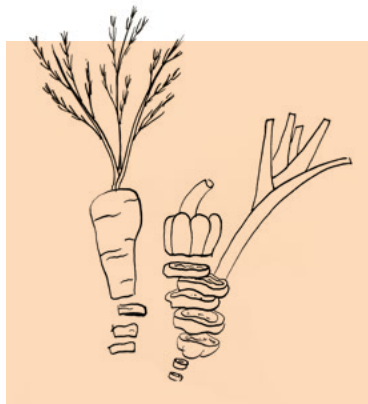
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FOREWORD

Teaching on campus?

'Should I click Send?' asks my colleague. We are about to send an email to over 6500 WUR employees. A tense moment. I nod. 'Ping!' and off it goes. As there seems no end in sight to the Covid measures, last week we asked our readers whether they would prefer *Resource* delivered to their home or sent digitally (students still get print copies delivered to their student houses). The response is immediate: the *Resource* mailbox pings for minutes on end. We look at one another with relief. So as of this issue, staff have a choice between the print version of *Resource* at home or a digital PDF for keeping up to date with the latest WUR developments and reading stories about colleagues and students.

In the last while, we have been working on an article about teaching on campus because it looked as if that day had finally come: as of 1 April, students would be allowed on campus one day a week. Unfortunately, now we know that higher education will remain in lockdown. But on-campus teaching *will* be possible one day. *Resource* has investigated what the options will be (page 12). Also in this issue: a dialogue about spatial planning (page 18), an interview with the Netherlands' leading Darwin expert (page 20) and tips on dealing with Covid dips (page 26). If you too want to receive *Resource* at home, send an email to resource@wur.nl or go to www.resource-online.nl and subscribe to our digital newsletter.

Willem Andree
Editor-in-chief





ONLINE OPEN DAY

It is Saturday 20 March. After weeks of preparation, students and supervisors are ready to tell schoolchildren all about studying at WUR — online, of course. The risks inherent in this approach soon become clear. The WUR Online Open Day platform, for schoolchildren interested in studying at Wageningen, is down. That means the schoolchildren can't access the degree programme presentations and digital campus tours that are being offered from various studios on campus (photo). By lunchtime the problems are largely resolved, and the afternoon programme goes according to plan. The server problems were particularly irritating as preliminary registrations of first-year Bachelor's student are disappointing (see page 4). The Communications department is now assessing the damage to prevent a repeat. The next Open Day (for Master's students) is on 8 April. AS

15 per cent fewer first-years

As at 15 March, 1049 schoolchildren had registered for a Bachelor's degree programme at Wageningen. That is 182 fewer than last year (down 15 per cent). WUR has seen the biggest drop of all Dutch universities, along with Eindhoven University of Technology.

Wageningen degree programmes that are doing badly this year are Nutrition & Health (39 per cent fewer first-years) and Biotechnology (a fall of 30 per cent). However, these programmes no longer have an enrolment limit so students can now register later for

these degrees.

The programme directors expect enrolment numbers to pick up. Other BSc programmes have seen big drops too: 31 per cent

'Climate and environment degrees face competition from Utrecht'

for Agrotechnology, 40 per cent for Management, Economics & Consumer Studies and 46 per cent for Communication & Life Sciences. Only Food Technology and Landscape Architecture are up slightly.

Own region

Is the decline worrying? 'We had fewer preliminary registrations last year too but we made up for that lost ground later,' says recruitment marketer Renske van Dijk. 'But now we are behind even that lower number from last year. We definitely need to catch up.'

Van Dijk does not have an explanation for the big drops. 'Our hypothesis is that young people's interests have shifted from technology to the climate and the environment. Our technological degrees are suffering as a result. Of course we have climate and environment degrees too, but there is a lot of competition, for example from Utrecht.' Van Dijk also thinks schoolchildren prefer a university in their own region in these Covid times. AS

AID 2021 will be 'Out of this World'

Just like last summer, this year's introduction programme for first-year students will be run twice.

'Starting at university marks a new stage in your life and is a new adventure,' says Teun Bastiaansen (21), deputy chair of the AID board. 'You are entering a new world, really. And that's where we got the theme Out of this World from. The theme reflects Wageningen's international atmosphere as well.'

What the AID (an introduction programme for first-years) is going to look like will largely depend on how the Covid situation develops, says Bastiaansen. 'What has been established is that there will be two AIDs again, as there were last summer. Beyond that, we have four different scenarios in mind.'

Scenarios

In the most cautious scenario, the AID is entirely online. The other scenarios involve blended forms,

says Bastiaansen. 'In the scenario with the fewest restrictions, large groups can get together, there is no curfew, students are allowed into society clubhouses and alcohol is served. In other scenarios, group sizes are smaller and there is still a curfew. We'll make the decision about which scenario it's going to be closer to the time.'

'We'll make the decision about which AID scenario it's going to be closer to the time'

There is one feature of earlier AID programmes that Bastiaansen very much hopes to bring back. 'If the municipal council lets us, we would really like to set up an AID campsite again. But whatever happens, and no matter what form the AID takes, we can't wait to welcome new students!' LZ



Teun Bastiaansen during the AID of 2020. His own photo

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Out of nowhere, the pan-European party VOLT has burst onto the Dutch electoral scene. In Wageningen the new party shot to fourth place after D66, GreenLeft and the VVD. VOLT got 8 per cent of the votes in Wageningen. Many of those votes were cast in the polling station in the Forum, where VOLT even came in third after D66 and GreenLeft ^{RK}

Unilever glows softly

The new Unilever logo on its building facade uses glow-in-the-dark technology. It is nothing special during daytime but after dark it glows softly. No electricity — just using phosphorescence. This is a world first, says Unilever researcher Leonard Flendrig, who developed it. The logo is made of a phosphorescent material on a thick sheet of Perspex. During the day it is dark blue with a pale green edge, and at night it emits a green glow. You need to get up close to see it because the effect at a distance is overpowered by all the light on campus at night. This sustainable form of illuminated advertising is responsive to the weather: it will glow more and for longer after a sunny day. ^{RK}

Call for green buildings

A million more homes? Fine, but make sure construction uses circular methods and is climate-proof and good for nature.

This is the response from a group of sustainable organizations to the Housing Action Agenda 2021. An extra chapter was written for the Agenda at the initiative of WUR Green Cities programme leader Marian Stuiver. The chapter, called the Green Accelerator, has now been presented to the building industry, which drew

up the Agenda. One million new homes need to be built over the next

decade. The building industry set out its ideas on this in the Agenda. The Agenda pays some attention to sustainable construction, but not nearly enough in Stuiver's opinion. 'I was

amazed when I read the document. There have been a lot of experiments in the past ten years with closed-cycle and nature-inclusive construction, but none of that is reflected in the document.'

Stuiver wrote her chapter with Tim Vredevelde of Het Oversticht. According to them, green construction should be based on the principles of nature inclusive, circular methods and climate proof. In other words, nature needs to be given room in residential districts, sustainable building materials should be used and construction should allow for drought, flooding and heat.

It is not yet clear whether the Green Accelerator will be added to the Housing Action Agenda 2021. Stuiver: 'They said in an initial response that they wanted to work with us. It would be nice if they added the chapter to the Agenda, but getting this implemented is much more important.' ^{RK}

'I was amazed when I read the document'



Photos Roelof Kleis

Name wanted

Construction of the Dialogue Centre, the new meeting centre on Mansholtlaan, is progressing fast. But 'Dialogue Centre' is just a working title and it is time for a new, permanent name. How about Inter-actus? Or Dialogon or Auditio? If you have a better idea, now is your chance. As of 12 March, WUR students and staff can make their own suggestions.

Following the successful competition for the third education building (now Aurora), a similar approach is being used for the 'new Aula'. The rules are basically the same: the name must sound classical, refer to the building's function and be short. And you have to explain why



Illustration BroekBakema Architecten

you think your suggestion is the best. WUR students and staff are allowed to submit names. To date, over 80 submissions have been received, says competition secretary Eddy Teenstra. 'It is not quite as busy as it was with Aurora but that was more of a student

thing. We are getting a steady stream of emails.' The deadline for submissions is Sunday 28 March at 18:00. If you want some inspiration, you can check out the special Dialogue Centre group page on the intranet. RK

Students drink less alcohol during lockdown

Communication and Innovation Master's student Kim Schomaker (27) made this discovery when she investigated alcohol consumption among Wageningen students in Covid times for her thesis.

'There was a survey during the first lockdown that looked at student welfare in Wageningen. In it, 43 per cent of students said they never drank more than six glasses of alcohol in one session before the pandemic. That percentage is now 75.5 per cent, so fewer students are drinking excessive amounts.'

Schomaker's research question was: to what extent has the pandemic changed the drinking behaviour of WUR students? She interviewed 20 students, focusing on the period just before the pandemic and just after the first lockdown started. She based her study on a motivational model of alcohol use.

'That model assumes that four possible motives determine whether or not someone decides to drink alcohol. These are: enhancement — drinking because it's nice to be drunk; social — drinking in

'The motivation for drinking has shifted towards coping, which borders on problem drinking'

order to enjoy a social event such as a party; conformity — drinking so as to fit in with the group; and coping — drinking to make personal worries and problems go away.'

Different motives

Before the Covid outbreak, students often got drunk at parties; they drank to



have fun, to bond with fellow students and to fit in. After the Covid outbreak, over half the interviewed students started drinking far less. And the students who still drank did so for different reasons. 'They would say for example, the coronavirus is weird and scary so you have to do something to deal with it. The motivation has shifted more towards coping, which borders on problem drinking.' Though it should be noted that the students who still drank did so mainly with friends or flatmates. LZ

WUR joins Safe Seaweed Coalition

Seaweed, a kind of superfood with lots of protein, amino acids and vitamins, is hip. In the new Safe Seaweed Coalition, WUR and its international partners will discuss knowledge and research on the growing production of seaweed.

The Safe Seaweed Coalition was launched on 17 March by the charity Lloyd's Register Foundation and the UN Global Compact, among others. WUR researcher Sander van den Burg is on the advisory board and has been coordinating the project Safe Seaweed by Design since January. That project develops protocols for the production of seaweed that ensure it is safe to eat, does not harm the surrounding nature and is safe for the workers on seaweed farms. 'Seaweed is an up-and-coming industry in Europe,' says Van den Burg, 'but it is already grown on a large scale in China.

'Seaweed is grown on a large scale in China. We are using that know-how'

We are using that know-how in our project, which has researchers from Wageningen, the UK, Norway and China.'

Safe Seaweed by Design

focuses on human consumption, not on the use of seaweed in animal feed, for example as seaweed extract; this reduces methane emissions from cows but recent Wageningen research suggests it could harm cow's health.

'We want to know how we can make seaweed safer for consumers. For instance, we are examining whether the seaweed absorbs heavy metals from the seawater and whether we can influence that uptake.' AS

Does a happy animal taste nicer?

Can you taste whether pigs or chickens had a good life? Hans Spoolder, a researcher at the Animal Sciences Group, and his colleagues are going to try to answer this question.

'People who eat organic products say they taste better,' says Spoolder. 'But is that really the case? And if so, why is that?' Spoolder and his colleagues

'Animals that graze on grass can eat herbs, for instance, and you can taste those in the meat'

will be studying whether meat from pigs and broiler chickens from extensive livestock farms tastes better than meat from intensive farms. Among other things, the researchers will look at the influence of breeds: different breeds are kept on extensive farms than on intensive farms. Another aspect is the amount of space the animals have to move around. Spoolder: 'Animals that are more mobile may have different muscle tone and better circulation. It might be possible to taste that difference. It has not been studied yet.'

The researchers will also look at the animals' diet. 'Livestock that grazes in a grass field eat a much more varied diet than animals that are fed entirely on feed concentrate. They can eat herbs, for instance, and you can taste those in the meat.' Lastly, the effects of barn or pen enrichment will be considered. 'Animals that play move more, are less stressed and more resistant to infection. That can affect the meat too.'

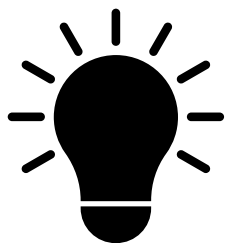
Detecting fraud

Taste panels will be sampling the meat, and its chemical and physical characteristics will be analysed in the lab. If it turns out that the meat of extensively farmed animals tastes better, there could be scope for a better business model for producers of upmarket meat that scores high on animal welfare.

Because organic meat is more expensive, the risk of fraud is never far away. Spoolder wants to make use of the analysis techniques to detect fraud. 'We will do a comprehensive chemical and physical analysis of the meat. Using that data we can see things like whether an animal has been in a grass field, and what it has eaten. You can even see whether a pig comes from Spain or Italy.' TL

Photo Shutterstock





A Little Wiser

Are there fewer vitamins in pre-cut vegetables?

Supermarket fridges are full of bags and tubs of pre-cut fruit and vegetables. Very convenient, but do the vitamins get lost?

'In fruit like apples, a lot of vitamins are in the skin,' says Eelke Westra, programme manager for Postharvest Quality at Wageningen Food & Biobased Research. 'And it's true that some vitamins get lost in peeling and cutting.' This is because cutting destroys the cell structure. Vitamins are part of the plant's immune system; they are antioxidants that defend cells when they get damaged, for instance. When you cut up vegetables, you damage the cells and then the vitamins are put to work and get used up.

Fruit and vegetables are often in packaging with low oxygen levels. That does not have a direct impact on the vitamins, says Westra. 'Its main function is to ensure that cells live longer and it lengthens the product's shelf life. Some vitamins need oxygen, but these are usually locked into the cells, where they are protected.'

What about when you cook them? 'Cooking breaks down the cell wall, which makes vegetables more edible and digestible. Cooking actually makes vitamins such as vitamin E more available in some vegetables, whereas it

breaks down others, such as vitamin C. If you cook vegetables too long, the vitamins from the cells leach into the cooking liquid, and when you then strain the vegetables you lose 20 to 50 per cent of the vitamins.'

You can limit that loss by keeping cooking times short and using the liquid, perhaps for soup or a sauce. Or by steaming, blanching or microwaving vegetables.

Freezing doesn't affect vitamins. But some kinds of fruit and vegetable turn to slush when you defrost them. That's because the ice crystals that form as the food freezes destroy the cells. TL

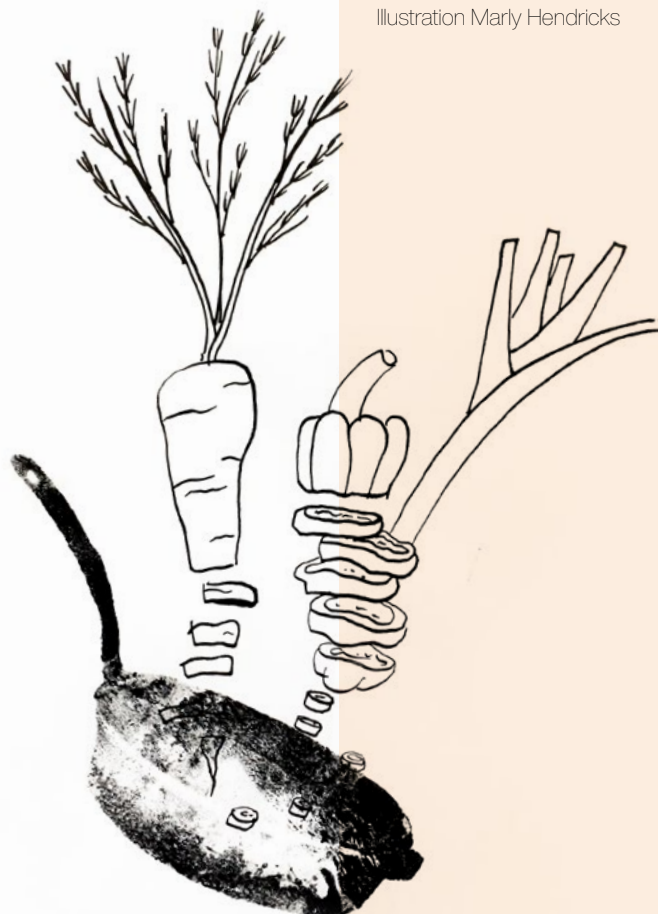
'Cooking actually makes vitamin E more available in some vegetables'

Eelke Westra,
Programme Manager
Postharvest Quality

Every day we are bombarded with masses of sometimes contradictory information on pressing issues. In this feature, a WUR scientist gives you something to hold on to. What are the facts of the matter?

Every question makes you a little wiser. Do you dare to ask yours? Email us at redactie@resource.nl

Illustration Marly Hendricks





Large horticultural farms have stronger position

Large horticultural farms often earn more than small ones, not because their costs per kilo of produce are lower, as is often assumed, but because they get higher sales prices. This finding comes from PhD research by Evert Los.

Los analysed the economic and business data of around 250 Dutch vegetable farmers with a loan from the Rabobank. He looked at farmers who grew cucumbers, tomatoes and peppers. 'There are big differences between farms,' says Los. 'But large farms generally have a stronger position in the market. They can't negotiate higher prices with supermarkets but they can offer year-round supplies, which gets them a better price.' But larger farms don't always do better than small ones, says Los. Some large farms have high capital costs, for example because they have taken out loans with high interest rates and spend a lot on labour. Small farms can do well too depending on the type of vegetables grown.

Tomatoes

Cucumber growers usually have relatively small farms of three to four hectares. That is because cucumber plants grow fast, which makes them difficult to manage and also requires a lot of labour at peak times. Vine tomatoes, however, are easier to grow and cultivation is more industrialized, so tomato farms tend to be over 10 hectares. While cucumbers and peppers are essentially standardized products, there is more variation in the cultivars and flavour of tomatoes. That product variation is reflected in a greater variation in sales prices for tomato growers, says Los. AS



Sterile squirrel could restore biodiversity

The grey squirrel, native to North America, is in danger of wiping out the red squirrel in the UK. This invasive species is currently being tackled by means of hunting, poison and traps – to no avail. But the grey squirrel could successfully be beaten back using a gene drive.

This claim is made by PhD student Nicky Faber in Scientific Reports. In a gene drive a wildlife manager releases grey squirrels into the wild that have been genetically modified to produce infertile offspring. 'Grey squirrels are more aggressive than red squirrels, they survive the winter better and they carry a virus

that is fatal to red squirrels,' says Faber. A successful gene drive,

'Current pest control methods with poison and traps are inhumane and cause a painful death'

in which you might release several hundred genetically modified squirrels into the wild, entails two important steps. Extra DNA is introduced

into the squirrels' female reproductive gene, which switches it off. According to classic genetics, the offspring then have a 50 per cent chance of inheriting this blocked gene. So a second adjustment – CRISPR-Cas scissors – ensures that the blocking gene gets into both copies of the chromosome, so that 100 per cent of the offspring get the blocked gene.

Inhumane

Is it safe and ethical to introduce this kind of gene drive? In the interests of safety, Faber built a brake on the gene drive into her model. That makes it possible to switch off the CRISPR-Cas scissors so that the blocking gene regains a 50 per cent chance of being passed on. 'Anyway,' says Faber, 'pest control methods in current use, with poison and traps, are inhuman and cause a painful death. If you use the gene drive, the animals become sterile so that we get the invasive species under control effectively and maintain biodiversity. Of course, we must test whether this really can be done in real life.' AS

Sleeping with the light on



Koen Hiemstra with one of the nesting boxes that he lit with bike lights to see if that put birds off. Photo Guy Ackermans

Can birds sleep with the light on? Yes they can, is the cautious conclusion of an experiment on campus.

The experiment was carried out by Koen Hiemstra during the winter months for his research on the roosting behaviour of birds. Anyone on campus in that period might have seen him on his daily rounds (except at weekends and during holidays), checking the nesting boxes spread around the campus. It took him three and a half hours to check all 99 boxes to see whether they were inhabited.

Birds use nesting boxes for more than just nesting. They are also nice places

for an overnight stay. And an overnight stay involves pooping, so the birds leave their visiting cards behind. And that is what Hiemstra, a Master's student of Forest and Nature Conservation, kept careful track of, armed with a beer crate to stand on, pen and paper and a putty knife to scrape off the poop.

Bike light

The research question behind all this is about light pollution. Do birds find artificial light so disturbing that they avoid such places at night? To literally shed light on this question, Hiemstra lit some of the nesting boxes by hanging little bicycle lights inside them. He assumed the birds would stay away because light disturbs sleep. But that was not the case.

Of the 18 nesting boxes used regularly overnight, nine were fitted with a light. Birds continued to use four of the nine lit boxes. 'That is not hard evidence, because the numbers are too small for that, but it is striking,' says Hiemstra. He reckons that whether or not the

birds stay depends on their character. 'The bolder birds stay, the shyer birds leave.'

Mild winter

The fact that there are only signs of use in one in five nesting boxes is explained by the winter, says Hiemstra. 'It was relatively mild so the birds had less need of somewhere to roost for the night.' The birds in question are most probably great tits. 'The nesting boxes were designed for great tits, with openings of 32 millimetres.' And he twice found a dead bird in the boxes. The illuminated nesting boxes attracted puzzled glances. And not just glances: six lights were stolen during the experiment. Hiemstra's research was supervised by Anouschka Hof, who teaches in the Wildlife Ecology and Conservation chair group. Before his Master's in Wageningen, Hiemstra did Applied Biology at the HAS University of Applied Sciences in Den Bosch. FK

'The bolder birds stay, the shyer birds leave'

The Rottumerplaat whale



Vincent Oostvogels

You've got to find something to do during a lockdown like this. For a while now, I've been following the monthly updates about the whale corpse at Rottumerplaat. It's surprisingly interesting and, I must admit, even slightly addictive.

Rottumerplaat appeals to the imagination – for me at least. This little Wadden island may well be the most inaccessible part of the Netherlands – uninhabited and not open to the public. At the end of November, a fisher spotted a beached northern minke whale there. Whale corpses are usually destroyed, but this one was left alone, and

'It took some time before scavengers began to take an interest in the whale'

Wageningen Marine Research has been monitoring the decom-

position of the corpse and its effect on the surrounding nature. The researchers are using wildlife cameras to see which scavengers descend upon the corpse, and once a month they sail to the island to take measurements. Then they report their findings on the internet a few days later (search term, Dutch only: 'Pilot Walviskadaver'). You can see from the reports that it took some time before scavengers began to take an interest in the whale. Most of the

first photos from the wildlife cameras only show passing rabbits, but from mid-December magpies, crows, two kinds of gull and a buzzard appear on the scene. When the researchers visited in January, they reported a 'nauseating smell', but that had diminished in February. By that time flies had appeared on the corpse, which was quite discoloured and had shrunk, although it was still largely intact. So it will be some time before the whole decomposition process is complete.

In scientific communication and outreach, there's a lot of talk about how to sell your story. But the monthly updates about this whale corpse are appealing precisely for the absence of frills. It's just a list of dry observations and a set of photos of a dune with a dead whale on it: Rottumerplaat in the mist, Rottumerplaat in the snow, Rottumerplaat at low tide, Rottumerplaat at high tide, Rottumerplaat by night, Rottumerplaat by day, and oh look – here comes a magpie. It is so nice to catch up just once a month on the state of play on that windy, deserted island. Particularly at a time when the coronavirus restrictions are keeping us at home most of the time. The March report is still to come. I'm already looking forward to it.

Vincent Oostvogels (25) is in the first year of his PhD research project on biodiversity restoration in the dairy farming sector. He dreams of having a few cows of his own one day.

Once education returns to campus

It looked briefly as if that day had finally come: there was a chance students would be allowed on campus for teaching one day a week from 1 April. Unfortunately that proved too optimistic and we now know higher education will remain in lockdown. But on-campus education will return one day. *Resource* investigated what that would look like, based on the easing of the restrictions that was recently announced — and then cancelled.



Text Luuk Zegers

The ‘possible easing’ that was announced for higher education from the end of March has been put on ice. The coronavirus figures are too worrying so universities must stay in lockdown, the caretaker government has decided. But even if the easing had gone ahead, many teachers would probably have finished period 5 online, says Dean of Education Arnold Bregt. ‘If it had been possible to ease the restrictions, we would have been in the middle of period 5. Those courses have already been completely adapted for teaching online. I think some teachers would have finished the period online. But there are teachers who say: if we are allowed, we’ll go back on campus with the students who want that. The main thing is that it’s up to the teacher. The teacher decides, in consultation with the timetable makers, what the best approach is under the circumstances.’

‘Wet’ and ‘dry’ classes

So what will the campus look like when restrictions are eventually eased? Gijs Elkhuisen (Forest & Nature Conservation programme director), a member of WUR’s Covid education taskforce: ‘Together with teachers, programme directors, timetable-makers and other staff involved in education, we are figuring out

the best way to plan WUR education in the light of the constantly changing coronavirus restrictions.’

‘If and when restrictions are eased, we will roughly be back to the situation we had before the lockdown,’ says Elkhuisen. ‘Since it started on 15 December, we have only been allowed to run the “wet” classes – the practicals in the lab – on campus. If restrictions are eased, “dry” class time such as lectures, tutorials and group work will be allowed on campus again. Given our campus capacity in Covid times, that will mean we can teach about 40 per cent of the “dry” classes on campus. With the “wet” class time we are at roughly 30 per cent now. Incidentally, students will not have the right to one day a week of on-campus education, but there will be a lot more scope than there is now.’

Excursions and field trips have come to a standstill during the lockdown too. After all, no more than two people are allowed to get together out of doors. Elkhuisen: ‘If teachers want to do something of that nature, at present it has to be at walking or cycling distance from Wageningen with a maximum of two people in the field. So real excursions are not possible, but you



Empty for now: hopefully we'll soon be able to meet up and have lunch together in Orion. Photo Guy Ackermans

see that teachers have found creative ways of offering practical experience using other instruments like the PEEK app (a Wageningen interactive education app for fieldwork, ed.).'

Since period 5, which started on 15 March, it has been possible again to take students by bus – sitting one and a half metres apart – to a location for a field trip done in pairs. Elkhuisen: 'If restrictions are eased, we want to see whether we can make use of rapid tests to do real group excursions again. We are also looking at whether we can do field practicals over several days again in period 6 (from 10 May, ed.). That would take place in the fresh air at a campsite, in one-person tents and with daily rapid tests. We are discussing this with the ministry at the moment.'

No guarantee

Why doesn't WUR aim for a campus education guarantee for all students once restrictions are eased?

'Our last campus activity was Sinterklaas'

Education dean Bregt: 'We tried that in the first period. Halfway through that period, I got a phone call from a full professor who was completely stressed out and said: "Arnold, we are all keeling over." That was a wake-up call for me. Then we made a few changes. We stayed firm on the learning goals at the programme level but became more flexible on learning goals at the course level, and teachers are now mandated to organize courses as they see fit. We stopped micromanaging as much. That is necessary, because the teachers are under tremendous pressure.'

To ensure the situation stays workable for teachers, they will decide whether to switch to on-campus education if and when the current restrictions are eased. But, says Elkhuisen, 'it is difficult for us to know how best to communicate that to students and teachers. The media paints a picture of all students soon being

'I'm concerned: the more people, the less distancing'

back on campus for a day a week. But it simply won't work like that here. If you are taking two courses in period 6 that the teachers have decided to teach online, then the courses will stay online. That will create differences between students.'

Bregt is not too worried about that. 'Our teachers are very student-minded, so if it's at all possible, they will make use of the campus hours they get. And also: there are already differences between students, because students with "wet practicals" are getting on-campus teaching during the lockdown, while the rest don't. Once restrictions are relaxed, the differences will actually decrease.'

Study associations

Once restrictions are eventually eased, the study associations will be allowed to hire rooms again for activities, says Elkhuisen of the Covid taskforce. 'As long as you meet certain criteria, of course.' That would be nice, says Shun Hei (Nathan) Lee (19), a board member of study association Aktief Slip. 'Our last activity on campus was Sinterklaas on 4 December. During the lockdown, we have organized online activities, like pub quizzes, discussions and an event where students learn to make their own eco-friendly deodorant. If the restrictions relax a bit, it will give us the option of running activities on campus again.'

Lee hopes the national measures will soon be relaxed further too. 'Normally, Aktief Slip organizes a weekend for the new first-year students at a campsite outside Wageningen. We have postponed that weekend time and again, but I hope we can organize it in May or June, depending on the corona restrictions.'

In the library, any possible easing of restrictions won't make much difference, says Marens van Dalen, who works in the front office of the Forum Library. 'There are 216 workstations in the Forum Library. That number won't change after restrictions are eased: the one-and-a-half-metre rule will still apply. So more on-campus education doesn't have direct consequences for us. Perhaps more students will come in to borrow books if they are on campus more often.'

'I notice that some students find it hard to distance,'

says Van Dalen. 'If they go downstairs soon after each other for a coffee break, for instance. They are all good about wearing their face masks and hand-sanitizing – that goes well. But if any easing of restrictions makes it busier in the Forum, I am concerned. The more people, the less distancing.'

At last

For first-year BSc student Laura Sólveig Lefort Scheefer (21) it would not be a bad thing to have a few more classes on campus – to put it mildly. 'I arrived in Wageningen last August. We are now in period 5 and I haven't attended a single lecture on campus. There was some lab work and group work on campus until the end of period 3, around the end of last year. So it feels like I haven't been on campus for ages.'

'The teachers are obviously trying their best, but you can learn more on campus,' says Scheefer. 'Because of the discussions in class, the group work and just from chatting with your peers. Of course, we are also missing the practicals and excursions. All those activities and study methods that are usually employed to help you fully grasp the course content are cancelled. So it's a lot harder to really understand it all.'

'It can be incredibly difficult to concentrate in one room all day, so I try to study with a friend or book a place on campus if possible. I think I can speak for everyone when I say that relaxing the restrictions would be better, for our studies and in general. It would be nice to get a bit of freedom back. Experiencing student life like it was last August would be great: some things on campus, some online. It was a good mix. Now, every day is just the same.' ■



Typical Dutch Physically Dutch



Illustration Henk van Ruitenbeek

It has been a year now since I arrived in the Netherlands and joined WUR. Among the many typical Dutch features and habits that have impressed

'I was inspired to make exercise part of my daily routine'

me – like cycling, early dinner, lots of more group work, tall stature – the way the Dutch are always in shape and their active approach to work really stood out for me. I needed to find out what their secret was – or at least, one of their secrets. After careful observation, I discovered one: physical fitness!

I noticed how sports and physical exercise is part of a typical Dutch lifestyle; be it walking, cycling, jogging or group sports. My room gives me a good view and I see people jogging on the streets, and the sports fields full of both children and adults with their coaches playing the different sports. The sports fields are busy during the day and sometimes even in the early evening.

This inspired me personally to take up sports and physical exercise and make it part of my daily routine. I challenged myself to take walks and cycle more often, and I also joined fitness, aerobics and Zumba classes at De Bongerd sports centre. This has given

me a remarkable boost in morale and I am now more active in my studies and my daily tasks as well. Unfortunately, the lockdown has put a stop to indoor group exercise but thanks to the gym app and online workouts offered, I can still exercise in my room. Regardless of the coronavirus, I am still on my journey of learning to become typically Dutch by being physically Dutch.

Do you have a nice anecdote about your experience of going Dutch? Send it in! 300 words max. Send it to resource@wur.nl and earn 25 euros and Dutch candy.

This Typical Dutch was sent in by **Dinah Faith Nabudadiri**, an MSc student of Plant Sciences from Uganda.





SHOE PROTEST

On 11 March, campaign organization ASEED Europe and action group XR Wageningen filled a field on campus with shoes in solidarity with Indian farmers protesting against new farm laws in India. The Modi government wants to replace regulated trade with an open market system. The campaigners and the farmers accuse the Indian government of putting the interests of multinational corporations before those of farmers. The shoes represent the demonstrators, who can't protest in groups at the moment because of the coronavirus measures.

Photo Abdul Manaf

Two sides

We need a ministry of Spatial Planning

Should the new Dutch cabinet reinstate the ministry of Spatial Planning to reorganize land use in Netherlands? Yes, says Martha Bakker, professor of Land Use Planning at WUR. No, says Arjan Koomen, Sustainable Land Use programme leader at Wageningen Environmental Research. A debate on the shortage of space in the Netherlands. Text Albert Sikkema Photos Guy Ackermans



Bakker: 'There are a lot of claims to land on the table at the moment. We want to produce sustainable energy, we want to store more water, we want to plant trees and we want sustainable agriculture. All those things have an impact on the landscape. We currently organize these things by sector, but all those sectoral developments have side effects and sometimes they affect each other negatively. You need to coordinate that at the national level.'

Koomen: 'I see all sorts of claims to land too. There's an increase in distribution centres and data centres and in sustainable energy farms, whereas we also want to build more housing and create more space for nature. But I don't think you should decide top-down: this goes here and that goes there. Stakeholders in the

regions – nature organizations, farmers, water boards and provincial councils – must get together to come up with made-to-measure, innovative solutions. The government shouldn't create blueprints but act on a vision that supports the regions in planning.'

Bakker: 'Land is a scarce good. We have the ministry of Finance to allocate scarce funding across the various sectors. In line with that, we should have a ministry of Spatial Planning to allocate scarce space.'

Koomen: 'That reminds me of the reconstruction of the pig-farming industry when the government divided the countryside into zones. That national plan ran aground because it was top-down, it wasn't specific enough, and it met with resistance. What did become clear at that time was that you must involve stakehold-

'The minute you draw a map, the discussion is all about the map and not the vision'

Arjan Koomen



‘Make a map of all the spatial claims, then you see that there are too many of them’

Martha Bakker

ers in the planning and keep local people informed of the benefits of the plan.’

Bakker: ‘If you do the planning at the municipal level and give everyone a say, you get endless local lobbying by building contractors and locals with their nimby behaviour. There must be scope for local people to have a say, but it should be up to the government to break impasses and take unpopular decisions. Then you can invite the region to come up with a better plan. It’s all very well to talk about creating space for provincial governance, but it’s no fun to have to balance dozens of spatial claims, half of which you won’t be able to approve.’

Koomen: ‘If you start drawing maps in The Hague with ‘farms here, solar farms there, houses here and new nature there’ on them, you won’t get synergy and lots of things will still be unclear. I would like a government vision on spatial planning, but who is it that combines things like extensive agriculture, water storage and nature management? You have to do that in the regions because that is where the local knowledge is.’

Bakker: ‘That is true but start by making a map of all the spatial claims. Then you see that there are too many of them and that you’ve got to combine functions. And combining means giving up some things. The government can make those painful decisions, which makes implementation at the provincial level easier.’

Koomen: ‘The minute you draw a map with clear dividing lines, the discussion is all about the map and the dividing

lines. And not about the tasks we face, possible opportunities, and the vision.’

Bakker: ‘The map clarified the problems. There are dividing lines on the map.

Discuss them, fight over them. But if you don’t draw a map, you close your eyes for the choices that have to be made. All the municipalities side with the economically powerful sectors and leave the weaker functions like nature and agriculture for someone else to deal with. The government must put those weaker functions on the map, because no one else will.’

Koomen: ‘We used to have the Rural Areas Development Act, which provided a framework for spatial planning in the Netherlands and included powers of enforcement, so measures could be imposed. But this act is no longer in force. It might be worth taking a fresh look at it; it strikes me as a useful instrument.’

Bakker: ‘National legislation only works when the political will is present. And that kind of spatial planning map has to be valid for 20 years and not be up for discussion with every change of cabinet. That’s not easy, because it means politicians sticking their necks out. The current trend among politicians is not to do that: they have to defend every decision and step, and they are cautious. Then you end up taking the path of least resistance, and lobbyists get their way. The government should stop playing “hide and seek” and start offered daring solutions.’

Koomen: ‘Great, but then do make use of regional knowledge in the implementation. Work out a plan for an area like



the Achterhoek together with the people who live there. Then it means something to the locals.’

Conclusion: The new government should develop a vision on spatial planning and draw up a map showing where land is to be designated for woodland, farming, energy generation and housing. The regions will then work out the details and fine-tune the plans. ■

The answer to the big questions is seldom clear-cut. In *Two sides*, people with different views on a complex issue engage in dialogue.

Darwin from A to Z

Darwin mania is not something you can do justice to in one handy guide. But Paul van Helvert gives it his best shot in *Darwin. A Companion*.



Text Roelof Kleis

Darwin is dead – and will have been for 129 years come 19 April. But the Darwin industry is still going strong. ‘You only have to write a book with Darwin in the title, and it will get published and will sell,’ says Van Helvert. ‘There just is a lot of interest in Darwin.’ Van Helvert, a patent expert at WUR, realizes he is jumping on that bandwagon. He and science historian and Darwin expert John van Wyhe (National University of Singapore) have written a 466-page guide to Darwin. To call it an encyclopaedia is no exaggeration.

Our discussion of the book must start with Van Helvert’s own Darwin mania – if only because we are sitting in front of an impressive bookcase full of volumes by Darwin. A wall of the brown and green spines of countless editions of Darwin’s books published in Britain and elsewhere during his lifetime. A collection Van Helvert started on the advice of a colleague.

You collect these thanks to a colleague?

‘Yes. Dick Peters, one of my supervisors when I was a student, came to my office one day. You are too busy, he said, you need a hobby. And he chucked a catalogue of a Darwin auction in London onto my desk. That was in 1992.’

And? Did you buy anything?

‘A third edition of *On the Origin of Species*. I wanted to bid for the second edition really, but bidding started at 2000 pounds and that was too much for me. First editions are totally out of reach for ordinary mortals nowadays. There was a very fine one for sale there, which was valued at 12,000 to 15,000 pounds. Bidding started at 9500 but nobody bid. Later I asked what had happened to that copy. Not long after the auction it sold for 30,000 dollars in America. Now it’s worth 400,000. It’s an expensive hobby.’

You’ve got a lot, but not everything. What is still on your financially doable list?

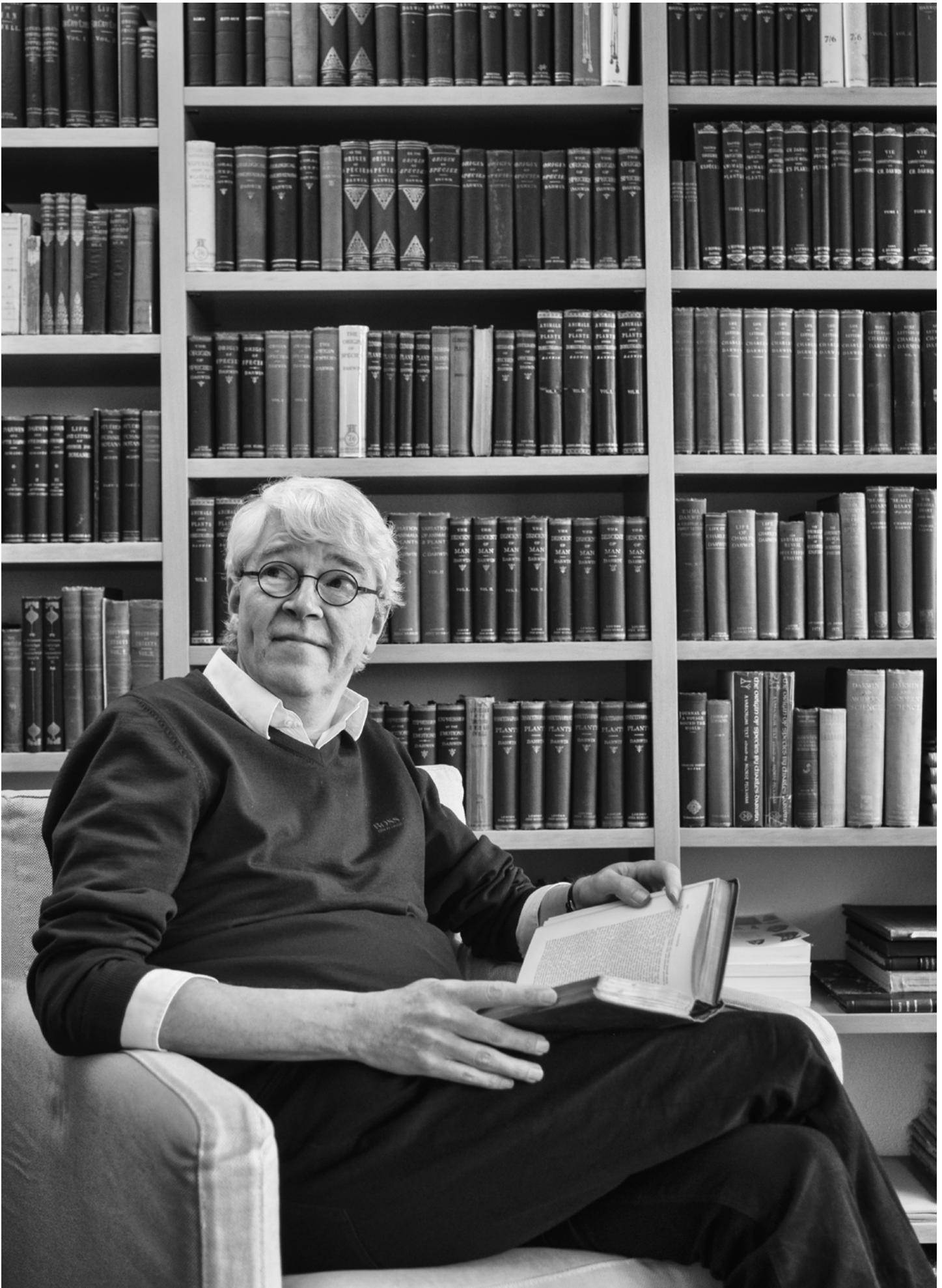
‘The first edition of *The Descent of Man*. I must get hold of that. Without that book, there’s a gap in my collection. The first edition, I mean: I’ve got most of the subsequent editions. It gets put up for sale quite often but so far there hasn’t been a copy that was acceptable to me at a moment when I could afford it. Because that’s another criterion of mine – they’ve got to be “fine copies”, as they are called. Not a repaired or rebound copy – I’m not interested in those. They are not original or attractive enough for me.’

There are a lot of Darwin collectors but Paul van Helvert can lay claim to being the biggest in the Netherlands. He is not just a collector of Darwin’s work, but also a great expert on the subject. His collection of books about Darwin is at least as big as that of Darwin’s own books. And now he can add a volume of his own: *Darwin. A Companion*. A kind of sequel to *Charles Darwin. A Companion*, published in 1978 by R.B Freeman.

What happened to the Charles in the earlier book’s title?

‘We left it out to make clear this is a different book. It’s not a second edition but a new version. The book is based on the first one, but it is far more extensive. The first book was 100,000 words and this one is 235,000. There are loads of new topics in it.’





'The question that has never adequately been answered is: how did Darwin arrive at his theory of evolution?' Photo Guy Ackermans

Was this a book that had to be written?

‘Yes. There is a demand for it. There are lots of good things in the 1978 edition, but there are a great many mistakes in it too. So the new version had to be done at some point. Freeman toyed with the idea himself, but he passed away in 1985.’

Why you?

‘It came my way, really. I met John van Wyhe in Cambridge in 2009. He manages the Darwin Online website and he had put Freeman’s book on it two years previously. I said, “You do know there are a lot of mistakes in that book, don’t you?” And he replied, “Then it’s time you corrected it.” To be honest, that had been in the back of my mind for some time, but I was daunted by the task. I knew it would be an awful lot of work. You’ve got to be really keen to painstakingly correct a book from A to Z. It is the sort of work that suits me, though: checking things, correcting facts, collecting material and adding things. And that was how we divided the roles. Van Wijhe did all the iconography, with an overview of all the known pictures of Darwin taken throughout his life. I did the rest of the book.’

The book includes lists of all the 350 visitors Darwin received (individuals, couples and groups), the 38 different theories about his illness, and an inventory of the 130 tributes to him around the world, ranging from postage stamps to statues. You name it, it’s in there.

Who wants to know all that?

‘There are enough Darwin maniacs in this world. It’s not so much a question of wanting to know as wanting to have the information. There’s a difference there: it’s about access to information.’

‘You are too busy, he said, you need a hobby’

‘It’s a useful, worthwhile book, but it is not a scientific work’

I can well imagine that not everyone is all that interested in how many times Charles Darwin’s neighbour popped in, but there are people who want to know about that.’

The Darwinstraat in Ede is missing from the summary of street names.

‘A list of all the Darwin streets in the world would be a volume in itself. On some topics, we just give an impression, and our choices are subjective. The book had to be affordable, and a complete encyclopaedia on Darwin would be impossible. But we did for example aim at a complete list of all the plants named after Darwin. There are already more than 700 of them at this point.’

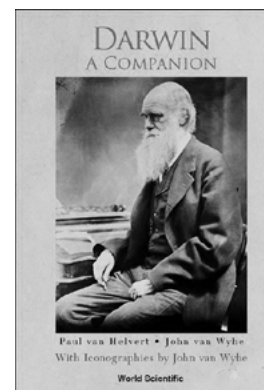
If time travel were possible, which day in the life of Darwin would you like to witness?

‘18 June 1858. That was the day he got Wallace’s letter enclosing his article on natural selection. On that day, Darwin realized he was actually too late. He had already started writing his major work *The Origin*. At the time, Wallace was on Celebes in Indonesia, where he posted the letter on 9 March. The letter has since been lost. A few years ago, a controversy blew up around the date on which Darwin received the letter. Might he have received it earlier after all, and had he secretly lifted some of Wallace’s ideas? We now have enough evidence

that that was not the case. But it would be nice if I could go back in time and talk to the postman. Just to check whether it really was 18 June.’

Is this book your life’s work?

‘No. This is something that had to be done. It’s a nice book and it contains a lot of information. It’s useful and worthwhile, but it is not a scientific work. The question that has never adequately been answered is: how did Darwin arrive at his theory of evolution? What led him to it? There are a few well-argued theories, but I don’t find any of them satisfactory. I’ve been thinking about this for 30 years. That’s the book I would love to write. But whether I ever will, I don’t know.’ ■



Darwin: A Companion.

Authors: Paul van Helvert and John van Wyhe.
Publisher: World Scientific

Students coach students

For students who have difficulty studying, WUR has recently started offering help from Peer2Peer coaches. These are students trained to help their peers with study-related problems – from motivation dips to learning how to plan.

Joke Marinissen has been involved in the Peer2Peer project from the start. Previously, she set up the Writing Lab at WUR, where students help each other to master the art of academic writing. 'Peer2Peer works well because you are not in a teacher-student relationship. With Peer2Peer, we encourage students to stay in control themselves.' Even before the Covid outbreak, Marinissen was toying with the idea of rolling out the Peer2Peer concept more generally. 'Students come to our university from a wide variety of backgrounds: people with no experience of an academic environment; people from very different learning cultures, and so on. So it can be hard for them to

navigate the situation.' There are currently eight Peer2Peer coaches at work. Marinissen: 'After learning the ropes in a training project, they independently map out learning paths with

'Things often look up at once for students who come to us'

students who seek our help. The focus lies on study skills; students with bigger problems are referred to professional services.'

'Things often look up straightaway for the students who come to us,' says Marinissen. 'They have then taken the first step towards doing something about their problems themselves and taking things into their own hands.'



Soraya Lamochi (23) is a Master's student of International Land & Water Management and a Peer2Peer coach. 'I was a student assistant when I was doing my Bachelor's at Groningen University, and I gave private tuition. I like the contact with other students and in this job, I also got the chance to learn about coaching myself. We first had training in communicative techniques: what kinds of questions to ask so that students find solutions for themselves.'

'I've had clients since December. Their problems are mainly with motivation and often Covid-related. And some of them find it hard to plan effectively. International students sometimes have to adjust to Dutch culture – how to approach your teachers, for instance. I definitely get the feeling my clients benefit from the coaching. Even if we only meet a couple of times, you can see them making progress.'



Thijs Stegmann (23), a Bachelor's student of Biotechnology, is a Peer2Peer coach too. 'Students come to you because they want to change something about their lives. I start a conversation with them to identify the problem and look for possible solutions together. I've been in the position myself when I thought I really wasn't going to manage a course. When that happens, you can feel stuck. It's nice to be able to go to someone to talk about it.' LZ ■

Irregular Opening Hours – April and May 2021

Forum

	2021	The Building	The Library	Student Desk	IT Service Point	WURshop	Restaurant	Grand Café	Wageningen in'to Languages
Good Friday	2 April	8 am - 11 pm	8 am - 10 pm	closed	8 am - 5.30 pm	closed	closed	closed	closed
Saturday	3 April	10 am - 6 pm	10 am - 6 pm	closed	closed	closed	closed	closed	closed
Easter Sunday	4 April	closed	closed	closed	closed	closed	closed	closed	closed
Easter Monday	5 April	10 am - 6 pm	10 am - 6 pm	closed	closed	closed	closed	closed	closed
Saturday	24 April	9 am - 7 pm	9 am - 7 pm	closed	closed	closed	closed	closed	closed
Sunday	25 April	9 am - 7 pm	9 am - 7 pm	closed	closed	closed	closed	closed	closed
Monday	26 April	8 am - 11 pm	8 am - 11 pm	closed	8 am - 5.30 pm	9 am - 4.30 pm	closed	10 am - 2 pm	9 am - 5 pm
King's Day	27 April	9 am - 7 pm	9 am - 7 pm	closed	8 am - 5.30 pm	closed	closed	closed	closed
Wednesday	28 April	8 am - 11 pm	8 am - 11 pm	10 am - 5 pm	8 am - 5.30 pm	9 am - 4.30 pm	closed	10 am - 2 pm	9 am - 5 pm
Thursday	29 April	8 am - 11 pm	8 am - 11 pm	10 am - 5 pm	8 am - 5.30 pm	9 am - 4.30 pm	closed	10 am - 2 pm	9 am - 5 pm
Friday	30 April	8 am - 11 am	8 am - 10 pm	10 am - 5 pm	8 am - 5.30 pm	9 am - 2.30 pm	closed	10 am - 2 pm	9 am - 5 pm
Saturday	1 May	9 am - 7 pm	9 am - 7 pm	closed	closed	closed	closed	closed	closed
Sunday	2 May	9 am - 7 pm	9 am - 7 pm	closed	closed	closed	closed	closed	closed
Monday	3 May	8 am - 11 pm	8 am - 11 pm	10 am - 5 pm	8 am - 5.30 pm	9 am - 4.30 pm	closed	10 am - 2 pm	9 am - 5 pm
Tuesday	4 May	8 am - 11 pm	8 am - 11 pm	10 am - 5 pm	8 am - 5.30 pm	9 am - 4.30 pm	closed	10 am - 2 pm	9 am - 5 pm
Liberation Day	5 May	9 am - 7 pm	9 am - 7 pm	closed	8 am - 5.30 pm	closed	closed	closed	closed
Thursday	6 May	8 am - 11 pm	8 am - 11 pm	10 am - 5 pm	8 am - 5.30 pm	9 am - 4.30 pm	closed	10 am - 2 pm	9 am - 5 pm
Friday	7 May	8 am - 11 pm	8 am - 10 pm	10 am - 5 pm	8 am - 5.30 pm	9 am - 2.30 pm	closed	closed	9 am - 5 pm
Saturday	8 May	10 am - 6 pm	10 am - 6 pm	closed	closed	closed	closed	closed	closed
Sunday	9 May	10 am - 6 pm	10 am - 6 pm	closed	closed	closed	closed	closed	closed

During working hours, the building is open to the public. After working hours, entrance is only possible with a WUR card. Due to precautionary measures regarding the Corona virus, opening hours may change.

Orion

	2021	The Building	Bike Basement	Restaurant (only grab&go)
Good Friday	2 April	closed	closed	closed
Saturday	3 April	closed	closed	closed
Easter Sunday	4 April	closed	closed	closed
Easter Monday	5 April	closed	closed	closed
Monday	26 April	8 am - 7 pm	closed	8 am - 7 pm
King's Day	27 April	closed	closed	closed
Wednesday	28 April	8 am - 7 pm	closed	8 am - 7 pm
Thursday	29 April	8 am - 7 pm	closed	8 am - 7 pm
Friday	30 April	8 am - 7 pm	closed	8 am - 7 pm
Saturday	1 May	closed	closed	closed
Sunday	2 May	closed	closed	closed
Monday	3 May	8 am - 7 pm	closed	8 am - 7 pm
Tuesday	4 May	8 am - 7 pm	closed	8 am - 7 pm
Liberation Day	5 May	closed	closed	closed
Thursday	6 May	8 am - 7 pm	closed	8 am - 7 pm
Friday	7 May	8 am - 7 pm	closed	8 am - 7 pm
Saturday	8 May	closed	closed	closed
Sunday	9 May	closed	closed	closed

Orion is closed on Saturday and Sunday. Due to precautionary measures regarding the Corona virus, opening hours may change.

Leeuwenborch

	2021	The Building	The Library	Coffee Bar / Restaurant
Good Friday	2 April	7 am - 6 pm	closed	10 am - 2 pm
Saturday	3 April	10 am - 5 pm	closed	closed
Easter Sunday	4 April	closed	closed	closed
Easter Monday	5 April	closed	closed	closed
Monday	26 April	7 am - 10 pm	8.30 am - 6 pm	10 am - 2 pm
King's Day	27 April	closed	closed	closed
Wednesday	28 April	7 am - 10 pm	8.30 am - 6 pm	10 am - 2 pm
Thursday	29 April	7 am - 10 pm	8.30 am - 6 pm	10 am - 2 pm
Friday	30 April	7 am - 10 pm	8.30 am - 5 pm	10 am - 2 pm
Saturday	1 May	10 am - 5 pm	closed	closed
Sunday	2 May	closed	closed	closed
Monday	3 May	7 am - 10 pm	8.30 am - 6 pm	10 am - 2 pm
Tuesday	4 May	7 am - 10 pm	8.30 am - 6 pm	10 am - 2 pm
Liberation Day	5 May	closed	closed	closed
Thursday	6 May	7 am - 10 pm	8.30 am - 5 pm	10 am - 2 pm
Friday	7 May	7 am - 10 pm	8.30 am - 6 pm	10 am - 2 pm
Saturday	8 May	10 am - 5 pm	closed	closed
Sunday	9 May	closed	closed	closed

30 Minutes before closing time you will be requested to leave the building. After 6 pm entrance is only possible after registration at the reception desk. Due to precautionary measures regarding the Corona virus, opening hours may change.

From CO₂ to organic matter

THE SEVENTH PATHWAY IS FOUND

Some bacteria and archaea are capable of growing with carbon dioxide (CO₂) as their only source of carbon, just like plants. They convert CO₂ into organic matter via six different pathways, and biologists have been looking for a seventh route for decades. Last year, a seventh route was found by Irene Sánchez-Andrea, a researcher at the Laboratory for Microbiology at WUR.

Sánchez-Andrea studied *Desulfovibrio desulfuricans*, a bacterium that lives in sediments and soils under oxygen-free conditions. This bacterium grows on a mix of hydrogen, sulphate and CO₂, all inorganic compounds. Sánchez-Andrea received University Fund Wageningen's Research Award 2021 for her discovery. Sánchez-Andrea's tutor Fons Stams was already studying *Desulfovibrio desulfuricans* in 2008. Researchers first thought this bacterium needed organic matter to grow, but it was then proven capable of growing on formate, a simple carbon compound, along with another microbe.

Experiments

Originally, it was thought that this microbe provided *D. desulfuricans* with organic compounds, but that theory was disproven. Sánchez-Andrea discovered that this bacterium could grow in the absence of organic compounds. After three years of laboratory experiments and computer analyses, she identified the chemical pathway by which the bacterium makes carbon building blocks out of CO₂.

'It was my hobby project,' says Sánchez-Andrea, a Tenure Track assis-

tant professor at the university. 'It was very time-consuming and there were lots of challenges, such as making sure the growth medium doesn't contain any organic compounds. Chemicals or glassware that have been used to prepare mediums can contain organic compounds, but we couldn't allow any contamination at all.' They worked with researchers from the Max Planck Institute in Potsdam and UC Berkeley, who were also looking for the seventh pathway.

They found a unique pathway in this bacterium, in which nitrogen and CO₂

'IT WAS MY HOBBY PROJECT'

were converted into formate and glycine. Glycine, C₂H₅NO₂, is an amino acid that goes on to be converted into biomass. Sánchez-Andrea published these results in *Nature Communications* in October 2020. Her discovery of this pathway is not just a scientific achievement but also useful knowledge for tackling climate issues and developing a biobased economy. *D. desulfuricans* appears to convert CO₂ into biomass and chemicals in a fairly energy-saving fashion. Making use of this, Sánchez-Andrea aims to culture the bacterium on a large scale for the



Photo Guy Ackermans

production of useful chemicals such as biofuels. 'The bacterium grows in the lab. The next step is to expand the range of products, to grow more of them on an industrial scale, and also to introduce the pathway into other bacteria that grow easily in bioreactors. That makes it possible to produce chemical building blocks on a large scale with little energy and fix CO₂ at the same time.'

Sánchez-Andrea also wants to find out whether there are more bacteria that can do this trick or others like it with CO₂, possibly with the help of a few other variants of the pathway. Perhaps relatives of *D. desulfuricans* can make chemicals for the biobased economy out of inorganic materials. AS ■

Tips against dips*



*Covid dips, remote working dips, online learning dips, curfew dips, stress dips and motivation dips

With a bit of luck, a few face-to-face classes will be starting soon on campus. And by the summer life might look a lot more like 'the old normal'. These are cautiously optimistic messages, but we all know the last lap is the hardest. So here are a few tips from the pros about keeping going in the face of the curfew, remote working and studying and a severely limited social life.



Text Coretta Jongeling

Structure your time

'If you are at home all day, it is not as clear when studying time or work starts and when it ends,' says student psychologist Roeland Cloin. 'So set clear boundaries: this is time for studying or working, and this is my spare time. And try to fill your spare time with nice, relaxing activities, as far as possible.' Even during your home-working or studying hours, it is important to structure your time. Take regular breaks. Corporate social worker René Hoevenaren: 'As a minimum, take a 10-minute break every two hours. Move around a bit, have a chat with your housemates or go out for a breath of fresh air. If you are in the office or in class, this happens automatically because of the built-in coffee breaks or colleagues who drop in for a chat. Now you have to consciously plan these breaks.' Not got as much done as you would have liked? It happens, says Hoevenaren. 'You are not equally productive on all working days, and that is the same at the office. Tomorrow is another day.'

1



To help you cope with the Covid blues, Surf your Stress is organizing an online encounter between Emma Holmes, Ernst Bohlmeijer (psychologist and professor at the Twente University) and Roeland Cloin (student psychologist at WUR) to talk about happiness and resilience. 31 March, 19:00-21:00

Don't go it alone

The past year has felt lonely for a lot of people due to lack of contact with their friends, colleagues and fellow students. 'We tend to focus on what we lack,' says Cloin, 'rather than on the question of what is possible. You could ask a fellow student to go through the course material together now and then, or you could make brief contact with a colleague every day just to vent your frustrations. A lot of people think they are bothering others with questions like that. The funny thing is that if I ask people how they would feel about such a request, they never have a problem with it. So, ask for help.' Hoevenaren agrees: 'It is fine to admit that you're going through a rough patch. That's why there are other people in the world. Look up a friend, your boss, or your

GP. Within WUR there are many professionals who would be happy to support you, including study advisors, student psychologists, the corporate social workers, doctors or the confidential advisors.'

2

Accept that it's a difficult time

'Accept that you're feeling sad, anxious, angry or hopeless,' advises Hoevenaren. 'Face the facts of your situation. This is your life at this moment. It is what it is.' Not an easy tip, but one that really can help you get out of a rut, say both the psychologist and the social worker. 'Sometimes it's totally OK to feel terrible; in fact, it is functional even. It's not surprising that after a year of being more or less confined, we're feeling gloomier,' says Cloin. 'It's easy to get into a vicious circle if we think we should change but we feel powerless to do so. Life just isn't fun at the moment. If you accept that feeling, it will immediately be a little easier to bear.' Hoevenaren adds: 'To experience your negative feelings without judgement is a fine art. But if you can do it, it will help you move on. The second stage is simpler and can only work after the first stage.'

3

Ask yourself: what could I do now to make myself feel better? It can be little things like enjoying watching a butterfly in the garden or laughing at a silly joke.'

'LISTEN TO EACH OTHER AND DON'T BE TOO QUICK TO JUDGE'

Listen to each other

Not everyone is affected by the Covid crisis in the same way, and people have different attitudes to the restrictions. Maybe you stick very strictly to the rules – for whatever reason – and you know others who are more casual about them. Maybe you can't concentrate at all online, while someone else adapts to it easily. Some people hate the curfew while others think it makes life nice and quiet. How do you cope with differences like that? A tip from the student psychologist: 'Listen to each other and don't be too quick to judge. Respect the fact that people see the measures differently and make

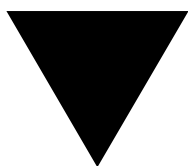
different choices around them. Try and understand that. Because it's when people don't understand each other that things really go wrong. That makes people feel really lonely and let down. Whereas we could get a lot of support from each other.'

4



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Exercise, eating well, routine and structure, keeping in touch, enjoying nature, singing a song, dancing in your room, tidying up, lazy moments, finding inspiration in hobbies (maybe a new one), art, literature, film, dance, your faith, gardening, photography, music, opera, old recordings of the Eurovision Song Contest or sweating through an online workout.



Key people: Cecile Huber

They are indispensable on campus: cleaners, caretakers, caterers, gardeners, receptionists – the list is long. *Resource* seeks out these key people. This time meet Cecile Huber (59), an administrator at Wageningen Marine Research in IJmuiden.

Text Milou van der Horst Photo Guy Ackermans

‘Last February it was my 40th anniversary as an employee at Wageningen Marine Research (WMR). I worked in the library for the first 30 years. When the library was moved to Wageningen, it was quite a shock since I don’t cope with change very well.

I ended up at the library because I couldn’t find a job as a secretary, the job I had trained for. Now I do post and archiving, and I handle billing and ordering. I archive WMR’s reports and our employees’ scientific publications, presentations and interviews. I also do the ordering of research material such as small technical equipment and large apparatus, or of services such as repairs to fishing nets. Billing wasn’t actually my thing – I’m not really the numbers type – but I grew into it and I like it now. I’ve got a variety of tasks and that suits me. There are fixed procedures for ordering

products and paying bills. I am strict about following those because otherwise it just creates more work for me. I did a course at WMR on giving feedback, and now I have a better idea how to discuss issues. So I don’t let things build up until they come out in an angry outburst. Together we can figure things out. I have experienced three external reviews when the institute’s scientific research was evaluated. I enjoy these reviews because you see how much is published and cited, and how well the institute is doing.

Before the coronavirus outbreak we used to have a lot of nice receptions with

‘I want to celebrate my anniversary face-to-face, with coffee and cake’

music and dancing. Dancing has always been my hobby – I used to want to be a ballet dancer. Nowadays I just dance with the help of YouTube. At first doing everything digitally took a bit of getting used to, because I had never worked at home. Now I plan my own coffee breaks and sign up for online workshops run by WUR. I will keep going with this work for a while longer because I like it so much. I’d like to celebrate my anniversary face-to-face with everyone one day, with coffee and cake. Celebrating it online is just not as nice.’



Cecile Huber at one of her favourite haunts: IJmuiden harbour.



Campus ♦ residents

Kazuhisa Goto

Japan's National Agricultural Research Organization NARO and WUR want to collaborate. That is what has brought Kazuhisa Goto to the Wageningen campus. NARO has a lot in common with Wageningen Research. Where WUR developed the Elstar apple, NARO created the juicy Fuji apple.

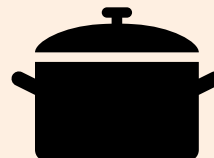
NARO wants to tackle specific issues with WUR, such as ageing and the labour shortage in Japanese agriculture

NARO employs 3300 people at six research stations around Japan, says Goto, a marketing researcher at NARO. He has been on the WUR campus since 2017, working to set up joint research projects.

NARO wants to tackle specific issues with WUR, such as ageing and the labour shortage in Japanese agriculture, and climate change. The first joint project is already up and running: a 'data-driven agriculture' robotics project for potato farming. But there are other smaller projects too, sparked off by the joint conference in 2020 that was attended by 440 researchers from the business world, NARO and WUR. More than 10 NARO researchers have already been stationed at several research groups in Wageningen, including Food and Biobased Research, Plant Breeding and Economic Research. The Japanese researchers will stay here for one or two years. New projects are also in the making, such as a project with the Animal Sciences Group on greenhouse gases and manure management, and the development of 3D food printing systems. AS

There are about 100 companies on campus. We introduce them to you in *Resource*. This time, meet Kazuhisa Goto, who works for NARO.

All the flavours of the world can be found in our WUR community. Hannah Ikkai Graham takes us to Japan to share her recipe for ramen miso soup.



Flavours of WUR

Ramen miso soup

Ramen is an easy-to-prepare Japanese noodle dish that's the perfect comfort food for any season.

Unlike other Japanese dishes, ramen doesn't have many rules, so there's lots of possibility for variety and doing your own thing. My personal favourite for ramen is with a miso soup base! You can really be as creative as you want with ramen toppings. In Japan they like to flaunt their creativity by showing a variety of colours in the bowl, usually done best by adding assorted pickled vegetables.

Fun fact: in Asian cultures we have a superstition that if you bite your noodles short while eating them, you're cutting your life short.

- 1 Boil the ramen in water for about 2 minutes — the time depends on if you have fresh or dry noodles and how soft you want them. I prefer them al dente.
- 2 Drain the noodles and set aside.
- 3 Make the broth: mix some of the water that the noodles were boiled in with the stock cube and the soy sauce. Then add the miso paste and salt and let it all fully dissolve.
- 4 Cook the pak choi and bean sprouts in the broth until soft.
- 5 In a bowl, serve a portion of noodles with a generous helping of broth and vegetables.
- 6 Add whatever topping you like!

Ingredients for 2 persons :

- Ramen noodles – 1 pack per person
- Vegetable stock – 1 cube, 700ml of water
- Soy sauce – 1 spoonful
- Miso paste (preferably red miso) – 2 heaped tablespoons
- Salt to taste

Possible toppings :

- Pak choi
- Bean sprouts
- Soft-boiled eggs
- Kimchi
- Seaweed (nori)
- Sesame seeds
- Shichimi spice (Japanese 7-spice mix)
- Takuan (Japanese pickled white radish)
- Shallots
- Sweetcorn



Hannah Ikkai Graham (18)
student of International Land and Water Management

In other news science with a wink

◆ DISPOSABLE BODY

Is your body sick? Get rid of it. That's what the sea slug *Elysia marginata* can do when necessary, discovered Japanese researchers at Nara Women's University. The slug discards its body and then grows a complete new one from its head in three weeks. An extreme case of regeneration. The old body dies off after a while – it doesn't grow a new head.

◆ FAKE NEWS

It's possible to protect valuable nature with fake news. Researchers at Manaaki Whenua Landcare Research in New Zealand rubbed Vaseline that smelled of birds into

nesting places. Cats, hedgehogs and ferrets descended upon them eagerly, only to turn away disappointed. As brooding time approached, the animals left the nests alone on the assumption there was nothing there for them. The trick halved the number of thefts from nests. The alternative is just to shoot the cats, of course.

◆ BLUE EYES

What colour eyes you inherit turns out to be much more complex than anyone thought. This finding comes from an international study that Erasmus University Medical Centre in Rotterdam took part in. The researchers found 50 genes

that combine to determine whether your eyes are light or dark blue, or somewhere in between. That is far more than the classic theory, which assumes two genes: one for brown eyes and one for blue.

◆ HOLIDAY

If climate change continues, by 2100 summer will go on for six months, Chinese scientists at the Chinese Academy of Sciences have calculated. Between 1950 and 2011, summer lengthened by 17 days. It already lasts 95 days, and that is set to increase to half the year. The other seasons will shrink accordingly. It makes you wonder: will the summer holiday be longer too? RK



WANTED: TWO BOARD MEMBERS FOR A FOUNDATION WITH PROJECTS IN KENYA

The foundation is engaged in food, energy and water problems of (school) communities in West-Karachuonyo. We meet 10 times a year (now online). Are you an open and curious person with interest in developmental projects and studying or working in the Netherlands?

Sign up: info@i-guide-reizen.com.
Info: www.sdg4homabay.org

IN MEMORIAM

GERRIT ZEMMELINK

On Friday 14 February Gerrit Zemmeling passed away at the age of 82. From the 1970s until 2000, Gerrit worked in the former Tropical Animal Production chair group, which later became the Animal Production Systems group. He was a specialist in the field of tropical animal nutrition. For his colleagues and students, Gerrit was thoroughness and accuracy personified. Quality was of paramount importance to him, and he was very critical of messy interpretations and hasty conclusions. He could tell long and fascinating stories about differences in animal nutrition between the tropics and in the west. In his PhD thesis he used many graphs

and smart mathematical models to capture the effect of selective consumption on feed intake and digestion of tropical forages. This PhD thesis should still be read as an example of how a theoretical approach using data analysis can result in a rich and relevant interpretation. A method developed by Gerrit for estimating potential animal production in a region is still being used by Indonesian researchers. Many Tropical Animal Production graduates have been notified of Gerrit's death and they are sure to remember him as a very special teacher.

Simon Oosting and Henk Udo, Animal Production Systems group

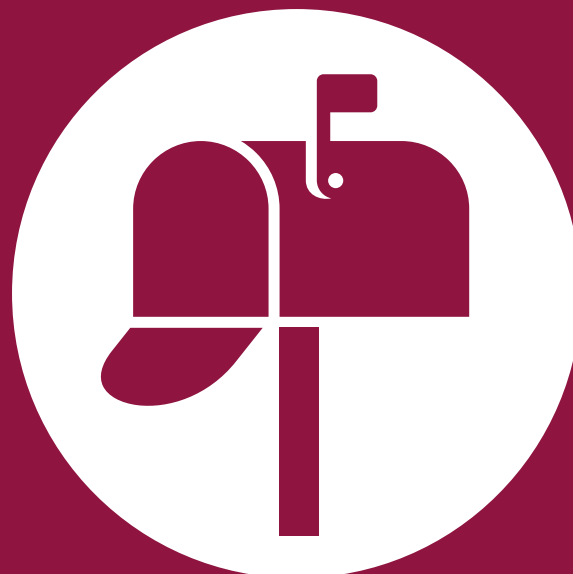
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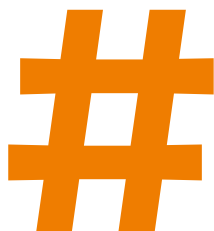
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Colophon

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

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'Staff are at the end of their tether, yet the work carries on — the research, the teaching. How can they stay motivated? Who has tips? What energizes you and what makes *you* happy? Share your tips here.'

René Hoevenaren
Occupational Social Work,
WUR



Not normal

'I have recently realized and started accepting that what was "normal" before Covid is no longer my normality. Nowadays I sometimes go for a walk in the woods in the afternoon during lectures. Because I seem to follow lectures more effectively at night, when no one rings or texts and the house is dead quiet. So my only advice is: make use of this bizarre time to discover your own normal. Because what's been normal for all those years doesn't have to be *your* normal. And stick to your own normal as much as you can – even when things go back to "normal".'

Laura Bergshoef, Master's student of Climate Studies and Geo-Information Science

Rings a bell

'This rings a bell for me too. My work as an HR advisor has changed a lot since we all started working at home and I miss the real contact with other people. I find it helpful to have regular chats with my colleagues, and to structure my days. That means starting early, getting regular exercise, and clearly marking the end of my working day in the evening. I think we can be proud of having shown for a year now that WUR can keep going in spite of everything. We shouldn't forget that.'

Maud van Boxel, HR advisor at Corporate Staff

Structure

'What helps me is structuring things. I set little deadlines for myself, and then I know what I'm aiming at and I get motivated to finish it in time. I also make a daily plan. And when I make a plan with what I want to do each day, or make a to-do list, I'm more motivated to finish those tasks so I can tick them off. It also helps me if I start with a part of a task that I enjoy. Sometimes I am daunted by what I've got to do and I don't get started. If I start with a bit of what I like best, I notice that I end up feeling like carrying on with the job. I also like working with mind maps so that I get an overview. And lastly: it helps me to discuss the topic I'm working on with other people because then I remember what I liked so much about it.'

Sandra Sikkema, student of Land and Water Management

Art

'I find motivation by thinking up art projects. Art is my big passion. So for example, during what has actually been a lonely period I dreamt up a project called "your ideal workplace" inspired by the need for face-to-face contact. My colleagues and I create an interactive artwork through personal conversations and a special contribution from each participant. I get to know my colleagues in my own way, at home over a cup of coffee or during a walk on campus. It connects people to create something together.'

Clementine Sluijsmans, secretary to the WUR Council

Go outside

'What Covid has really changed is our computer use: we spend far more time in front of our stupid screens and I reckon that's deadly. I deliberately try to keep computer time to a minimum, both for work and for my private life. Shutting the laptop and going outside – that's what energizes me.'

Vincent Oostvogels, PhD student at Animal Production Systems

NEXT WURRY

'My sister and I have always been very close. We are both students, she in Utrecht and I in Wageningen. Recently she has become more withdrawn and doesn't want to meet anymore. She says she's in a "Covid cocooning phase". I'm worried and I'm afraid she is getting depressed. She says she'll get over it. I want to respect her wish to be left in peace, but I'm very concerned. This is not like her. Should I just turn up uninvited?'

Sanne, Biology student (full name known to the editors)

*Do you have any suggestions for this Wurrer? Or could you use some advice yourself? **Email your tips or your question (100 words max) by 9 April to resource@wur.nl, subject line: noWURries.***