WUR from within: straight, sharp, transparent

No 01

Resource

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Was AID such a great idea?

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FOREWORD

NEW

We've been working on the future over this past year and we've taken a good look at our mission, our identity and our intentions. We've redefined our mission as 'WUR from within: straight, sharp and transparent.' A promise like that calls for a new format that reflects what *Resource* stands for: committed independent journalism on everything that goes on at WUR and is relevant to WUR people. So both the magazine and resource-online.nl (for your daily dose of *Resource*) have had a thorough makeover. We would love to hear how you like the restyled *Resource* - or how you don't, and what you'd want changed. We are easy to reach at resource-online.nl or through our social media (Facebook, Instagram, Twitter and LinkedIn), so do give us feedback and your news tips! Do you suspect something's going on, have you come across something *Resource* should know about? Let us know and we'll look into it. You'll still find copies of *Resource* magazine every other week in the trays on the campus (a limited print run because of the Covid-19 situation). And the digital version is available on our website. That this edition has been delivered to your door is thanks to the Executive Board. 'Now more than ever, *Resource* is what connects us, and is the medium to help us go on seeing, hearing and reading about each other,' says Board President Louise O. Fresco, explaining that decision. That's how we see it too: now more than ever. And no, the Board didn't ask for anything in exchange, so *Resource* is as independent as ever. And always will be. Read on, and judge for yourself.

Willem Andrée
Editor-in-chief

TWICE THE FUN

It was touch and go whether it would happen at all, but the introduction for first-years (the AID) was held in mid-August for 1800 students in line with the coronavirus rules: keeping one and a half metres apart, with two AIDs divided over several days, and going home at 10 o'clock every evening. And no beer... But some things were no different to previous years: first-years got to know each other, the campus and the town. And they could do sports (see photo) and other activities. Jessie Beirnaert, chair and CREW commissioner: 'We look back on the two AIDs with pride and satisfaction. The goal of the AID is to get all the participants off to a flying start to their university years, and I reckon we managed that even with all the measures. In spite of some stressful moments, we had two fantastic weeks.' Read about the AID and the coronavirus cases on page 4.

Photo: Anna den Hartog

First-years down slightly

By the end of August, 3037 first-years had enrolled at Wageningen University, nearly 70 fewer than last year. The number of Bachelor's students (1757) is up a little on last year while the number of Master's students (1280) has fallen slightly. The biggest drop is in international students from outside Europe due to the coronavirus crisis. AS

Jacket-on classes

Starting today, first-year WUR students will get classes where they need to keep their jackets on.
Despite the coronavirus rules, the university is trying to offer as many practicals as possible in small groups. First-years can also look forward to a lot of fieldwork in the coming months. Students will be meeting up in a barn at the Droevendaal organic experimental and teaching farm near the campus. They will get an introduction there from the teacher before setting off by bike or bus on an excursion in the Netherlands. The barn, which normally houses agricultural machinery, has no heating.
The social distancing rules and other coronavirus measures mean far fewer students can be taught together on campus. Programme organizers are therefore looking at creative solutions for teaching space off campus. AS

Photo Roelof Kleis

Coronavirus outbreak during AID week

Seventeen Wageningen students were infected with the coronavirus during the introduction week. Was AID such a good idea? An analysis from Resource editor Roelof Kleis.

There was a coronavirus outbreak among Wageningen students halfway through the AID week. As far as is known, the outbreak was limited to 17 cases and did not spread to the wider Wageningen population. Even so, some are questioning whether Wageningen's approach to AID was such a great idea.
It depends on how you look at it. In contrast to other universities, many of WUR's AID events were not online. But the introduction *was* coronavirus-proof, as all possible measures were taken to prevent infections.
The facts support this viewpoint. Investigations by the municipal health service show that the students did not become infected during AID activities. While the infections *were* among mentors and first-years attending the AID week, they became infected at private parties. That is why the municipal health service saw no need to stop AID.
But it's surely no coincidence that the infections occurred during AID? Probably not. There were a lot of students in the town because of AID and that resulted in contacts that were not coronavirus-proof. But possibly despite rather than because of AID. The coronavirus attacks as soon as you let down your guard. That is the real lesson of the AID week.
The outbreak could be seen as a dress rehearsal for the new academic year, which starts today. There will be a few classes on campus. However strict the measures, that is a risk, both on campus and even more so off campus and in the town. See that outbreak as a warning shot. RK

resource-online.nl FULL STORY ONLINE

600

The opening of the academic year last Monday, 31 August, took place online because of coronavirus restrictions. Or rather, there was room in the Auditorium for only a select group (30 people). The opening ceremony with 'Nature and agriculture: a continuous balancing act' as its theme was watched online by about 400 to 500 people — rising at one point to around 600.

Resource every day

Resource Magazine has been completely renewed. The website has had a make-over too. At *resource-online.nl* you will find WUR news, debates about hot topics, opinion pieces and dialogue every day, as well as background information and follow-ups online to the magazine stories. To make sure you don't miss anything, follow us on the social media channels Twitter, Facebook and Instagram. And on LinkedIn for our science stories. So if you are currently mainly working or studying at home, follow us every day online and read the digital version of our fortnightly magazine on the website. Check it out with this QR code:

Typical Dutch Say cheese

'Every time I pulled out my camera, I noticed the Dutch are quite shy to say cheese'

Anyone coming to the Netherlands knows the country is famous for its cheese. But there is a lot more to experience of course: the scenic countryside, the old-world charm of the cities and their canals, and great beer amongst other things! My family and friends back home were waiting to see what I have been up to through my pictures and Instagram posts. But every time I pulled out my camera, I noticed the Dutch are quite shy to say 'cheese'!

When I got to Wageningen, I soon joined some running groups. After one of the runs in the Bos, the very friendly group I was a part of had organized hot coffee and cake for everyone. It was a really nice setting on the edge of the forest with the happy post-workout vibes. Instinctively, I pulled out my phone and asked my host if I could take a picture of the group. I was expecting a cheery 'yeah, of course!!', but instead noticed a bit of hesitation and a cautious 'ok with me, but maybe we need to ask everyone else'. Well, I was quite new to the group and didn't want to disturb the friendly banter going on, and so eventually took a picture of just my host and me smiling with our coffee and cake!

On many other occasions I noticed that the Dutch are quite camera shy and consent for a picture is taken seriously! I am more cautious now, and also there is no dearth of beautiful countryside to take pictures of. So I haven't stopped pulling out my camera! :D

Arjuna Srinidhi PhD candidate from India – WSG chair group, WIMEK

Far more members for student societies

There has been a big increase in applications, both nationwide and in Wageningen, 'due to the need for social contact'. SSR-W has seen applications double. KSV Franciscus remains the most popular.

Interest in Wageningen's student societies has increased. SSR-W, which had 131 applications last year, has seen that figure double to 262 this year — a record. Chair Bram Duurland: 'It's great. But it's also a big challenge.'
KSV Franciscus has about the same number of new members as last year (291). Chair Emiel Dijkstra: 'It will be very challenging to get to know so many people but it's nice they made the decision to join *our* society.'
With 216 applications, Ceres is back up above 200, which last happened in 2017.

'It will be challenging to get to know so many people'

According to Ceres president Marloes Rietveld, interest in student societies has increased across the Netherlands. 'I think students want to have enjoyable experiences wherever they can.' Rowing club Argo has 270 new members, up from 190 last year.
There has been a big increase in people joining societies nationwide too. Yorick van der Heiden of the National Association of Societies says 'new students are longing for a network'. LZ

See also: Running a student society during the corona crisis, on pages 12-13.
Want to know how many new members Unitas, Nji-Sri and the Navigators have? See ***resource-online.nl****.*

Covid-19 in drawings

Illustrator Henk van Ruitenbeek has his own take on the coronavirus: one that is both mischievous and bleak. Showing now in Impulse.

What does a cartoonist do in times of Covid-19? Draw, of course. 'When things happen around me, I always draw something,' explains Van Ruitenbeek. 'And if a series is finished, I might suddenly get the idea of doing something with it. An exhibition, for instance.' The work is typical Van Ruitenbeek. He deals with Covid-related themes such as healthcare, death, working at home, debt, religion and the contrast between young and old. He makes his viewers think, with some brilliant flashes of inspiration. The print called 'party horn', for instance, which shows a virus particle with little party horns instead of spikes. Is that the virus letting its hair down? Or a cynical reference to the carnival that helped the virus spread in the Netherlands? RK

Impulse, daily until 16 October

WUR has highest sickness absence

WUR has the highest sickness absence of all Dutch universities. The rate has increased by 50 per cent in five years.

Wageningen University & Research has been struggling with rising sickness absence since 2015. In five years, sickness absence has increased from 2.6 per cent to 4.5 per cent at the university, a rise of 75 per cent. The rate increased by a quarter at Wageningen Research (from 3.7 to 4.7 per cent), according to the recent Rathenau report 'Science in Balance'.
This issue has been the focus of attention for a while, says Micheline Horstman, Vitality and Health HR adviser at WUR. She calls the figures concerning. Work pressure and overtime are key causes. The Rathenau study gives average overtime for researchers at a quarter of their official working hours.
In 2017, WUR drew up a plan to tackle work pressure. For example, chair groups were given more scope to hire additional lecturers, and various vital@work courses were introduced aimed at reducing work pressure or helping staff cope better.
Of course everything has changed with people working from home due to the coronavirus crisis.
After an initial peak in sickness absence, the crisis led to falling figures. Horstman thinks WUR's flexible leave scheme is one reason for this. RK

Back to Groningen

Maurice Olthuis swapped Wageningen for north-east Groningen — close to his parents' home — so that he could do his Master's thesis despite the coronavirus measures.

'The farmers suspect that adding green manure crops might be encouraging groundkeepers'

Olthuis, a second-year Plant Sciences student in Wageningen, has been back in Zeerijp in north-east Groningen since May. The seed potato company based there, where he has long worked part-time on his days off, had a research question. In recent years, arable farmers have increasingly had problems with 'groundkeepers' due to the mild winters. These are tubers that are left behind in the soil during harvesting and survive for another year. The farmers don't want this as the groundkeepers propagate and can pop up three years later when the farmers grow a new crop of seed potatoes. A batch of seed potatoes that includes groundkeepers will be rejected or allocated a lower class and price.
The farmers suspect that adding green manure crops might be encouraging groundkeepers. So Olthuis has set up an experiment with 20 strips of arable land with newly planted potatoes in which he is sowing various green manure crops — such as fodder radish and yellow mustard — plus fallow strips as a control. Over the next few months, he will be monitoring whether the potatoes come up. The aim of the experiment is to test whether green manure crops do indeed boost the number of groundkeepers. AS

'Going through a disruption is not easy. But we have seen that our organization is flexible, adaptive and robust. We are proud of everyone who made this possible.'

Rector magnificus Arthur Mol at the opening of the academic year

CHINESE POTATO FARMERS NEED BETTER SEED AND IRRIGATION

Chinese potato growers could increase yields by more than 60 per cent with agronomic improvements and by using less fertilizer, concludes PhD candidate Na Wang.

Na Wang investigated the options for the sustainable intensification of potato production in China in the three main potato-growing regions. Current production is far from optimal. Firstly, the seed material is of poor quality. That can be tackled using regulations and a quality label. Secondly, the availability of rainwater in northern China is limited. Drip irrigation resolves that problem without wasting too much water, says Wang.
Furthermore, most Chinese potato growers currently use too much fertilizer. Excess application of nitrogen, which results in soil and water contamination, also curbs production. Fertilization can be reduced by phasing out fertilizer subsidies and restricting the use of nitrogen, says the PhD student. She also advocates tailored solutions as there are considerable differences between the key potato-growing regions in their environmental conditions. The Heilongjiang region, where potatoes are grown primarily as a starch source, has enough rainwater whereas in Inner Mongolia potatoes are grown in dry conditions for use as French fries. Wang received her doctorate on 25 August; her supervisor was Martin van Ittersum, professor holding a personal chair in Plant Production Systems. AS

resource.wur.nl FULL STORY ONLINE

Model predicts future for nature

A new model created by WUR scientists calculates how climate change and nitrogen will affect nature areas as habitats.

Models for this kind of forecasting already exist. ‘But they usually only reckon with the changing climate,’ says ecologist Wieger Wamelink, first author of the article. ‘We are combining climate change with nitrogen deposition. And our model is based on field observations.’
Wamelink and his colleagues took a large number of plants in Europe and correlated their presence in an area with environmental variables in that area. Between them, these variables determine the chances of a species occurring. This produced a formula with which developments in nature areas can be forecast. Wamelink did this for two nature areas in the Netherlands. The result provides few surprises. The more nitrogen is deposited, the less suitable an area is for typical species for the habitat. What *is* surprising is that climate change has hardly any effect. ‘The biggest effect is caused by nitrogen,’ says Wamelink. Actually, climate change can even increase biodiversity a bit. But he warns against optimism. ‘We have used a moderate climate scenario, in which precipitation increases. In reality, it’s been getting drier in recent years. And hotter. Then you lose a lot of species.’ RK

Climate change has hardly any effect

Snow White (with a tracker) is released together with Luke. PHOTO JEROEN HOEKENDIJK

Seal with tracker provides wealth of data

Researcher Sophie Brasseur of Wageningen Marine Research monitored a seal she called Snow White for months. She discovered that he liked to fish near IJmuiden and to chill out on the island of Ameland.

The young seal came to Ecomare’s seal refuge on Texel island at the end of last year. He was treated and then freed in January with a tracker. The tracker has probably fallen off since then, as the researchers haven’t received any signals since June. ‘In July and August, the seals moult and the tracker probably came off with the fur.’

Unique opportunity

Brasseur: ‘This was a unique opportunity to get a glimpse of the life of a young seal. In the wild, we would never track a young animal; catching them would cause stress in animals that are already vulnerable.’
Brasseur discovered that Snow developed his own favourite spots over time. ‘To begin with he swam aimlessly around the whole Wadden Sea, and after some time he started exploring the western North Sea as well. After a few months he began to stay above IJmuiden to forage, and to swim to Ameland to rest.’
Brasseur says you can’t really draw conclusions based on data from a single seal. She hopes this project will pave the way to further research. ‘We still don’t know much about the development of young seals. Where do they go and how do they develop a preference for certain areas? For Ecomare, this is relevant in order to determine the best time and place to release animals, and for scientists to gain a better understanding of how young seals develop.’

Plastic leaks in birds

Substances added to plastics easily leach in birds' intestines.

Northern fulmars produce a great deal of stomach oil in the glandular stomach. This oil, which the birds extract from their food, serves as reserve fuel. Substances added to plastics such as plasticizers and flame retardants dissolve easily in the oil. That makes this bird a good model system for demonstrating leakage of these substances from plastic.
Susanne Kühn (Wageningen Marine Research) and her colleagues put this test. They added a mixture of ground plastic to stomach oil taken from fulmars and monitored the leaking process. Five of the 15 substances identified in the plastic leaked into the stomach oil to a considerable degree. What is more, the leakage started almost instantly.

'Some substances are carcinogenic'

It is not clear whether the concentrations reach harmful levels, as the measurement method used does not give absolute concentrations. Even so, Kühn finds the results worrying. 'Some of the substances are carcinogenic or disrupt the hormone balance.' RK

Just as with children, 'parenting' styles play a major role in overweight among dogs, concluded PhD student Ineke van Herwijnen, who got her PhD in the Behavioural Ecology chair group on 28 August, for her study of 'dog-directed parenting styles'. Indulgent owners more often have fat dogs. She also noticed that the parenting style affected the relationship between dog and owner. This is important because 'every year many dogs are brought to the dog shelter by disappointed owners'. TL Photo: Shutterstock

In brief

Loss of taste
The majority of Covid-19 patients experience a loss of taste and smell, says nutrition researcher Sanne Boesveld. Boesveld is a member of the Global Consortium for Chemosensory Research, which is doing research on the sense of smell and taste in coronavirus patients. Worldwide, about 40,000 patients, including 5000 in the Netherlands, have filled in a questionnaire on their sense of smell and taste. The vast majority of patients report that their sense of smell is diminished. In fact, a sudden loss of the sense of smell is the best indication that people have contracted Covid-19, says the researcher.

Mother's milk
The breastmilk of women infected with the coronavirus contains key antibodies against the virus, announced researchers from Amsterdam University Medical Centre last week. The Food Quality & Design chair group is doing research with Amsterdam UMC on making breastmilk "safe". 'Currently this is done by warming the milk for half an hour at 62.5 degrees Celsius,' says researcher Kasper Hettinga. 'That way you kill all the pathogens, but you also kill lots of useful proteins. A PhD student, Eva Kontopodi, is now looking into whether there is a smarter way of heating the milk.'

Effect of nonchalance
Quirine ten Bosch, a researcher at Quantitative Veterinary Epidemiology, is researching how we catch the coronavirus in indoor space, and what can be done to prevent that. We are all trying to bring the coronavirus epidemic to a halt with physical distancing and one-way routes in offices, restaurants and shops. The experts expect us to become increasingly nonchalant about this as time goes on, and we don't know what effect that will have on the spread of the disease. Ten Bosch is now going to use crowd-monitoring systems to map the interactions between people in indoor spaces.

Read the full report on our website resource-online.nl.

Some but not all first-years get to be on campus

THIS IS THE COVID CLASSROOM

The university is working with 'blended education': a lot of online courses combined with 25 per cent delivered in small classes on campus. So what is this academic year going to look like for first-year students? *Resource* investigated.

Text Albert Sikkema

Ariëtte van Knegsel is one of the coordinators of the first-year course Health, Welfare and Management for the MSc in Animal Sciences. This is a compulsory course for about 80 to 100 students, half of whom are international. The course is traditionally organized with a reader, a lot of course material, five weeks of lectures and an individual written assignment. As many as 12 teachers contribute to the course.

Due to the Covid-19 measures, it originally looked as though the course would go fully online for the coming academic year: either 'live' in virtual classrooms, or using recorded lectures from 2019, accompanied by online question-and-answer sessions. 'Luckily, it seems that teaching on campus is possible now, but with all the coronavirus rules, you can only have 17 students in a classroom,' says Van Knegsel.

It has now been decided to divide the students into five groups of 17. They can take it in turns to attend a lecture on campus and ask questions in person. The other groups listen to the lecture online and can ask questions via Teams. 'To make sure this goes smoothly, there is a moderator for every class who passes questions on to the teacher.'

Evenings too

Many teachers have been working over the summer on making their courses 'corona-proof'. This involves complying with the Dutch government's coronavirus rules and with the university's 14 'design principles' for Wageningen education. WUR has opted for blended education in which students attend small classes on campus. Because of the coronavirus restrictions, the capacity of the teaching accommodation is only 25 per cent of the usual numbers, so the courses have been distributed over the entire teaching period – including the weeks usually reserved for revision and for exams – between 8:20 and 19:20. According to Education and Student Affairs, the first-year students will spend half a day on campus twice a week, on average, and will be taught online at home for the rest of the time. The new timetable will be published at the end of August.

Even though it is made up of lectures rather than tutorials, the Health, Welfare and Management course will be allocated space on campus because it is a first-year course and the teachers think the interaction with the students is very important. But if the risk of spreading the coronavirus increases, the course can easily be converted to 'online only'. 'All the lectures will be recorded as well,' says Van Knegsel.

Pity

The core courses on Mathematics and Statistics will be run entirely online this academic year. Much to course teacher Eric Boer's distress. 'With online education you get less idea of whether students understand and whether they are keeping up.' The tutorial groups and intensively supervised computer practicals will be replaced by online supervision via Microsoft Teams.

PHOTO ANNA DEN HARTOG

Boer: ‘That way we hope to get interaction with students after all, and to monitor whether students can follow us. The tutorials are recorded and a discussion forum, self-tests and extensive feedback are available.’
Boer would have preferred to teach on campus, but he is not complaining.
‘I understand that we are going fully online for practical reasons. We give the same course on several degree programmes. That makes it difficult to coordinate things with all the programme directors. What is more, we now create space for all the more subject-oriented courses.’
One such subject-specific first-year course is Introduction to International Development Studies on the International Development programme. Daniëlle Teeuwen coordinates this course, which consists of lectures, tutorials, a course on academic skills, and guest lectures.
‘From the beginning of September, only the tutorials will be on campus,’ says Teeuwen, ‘because that’s where the interaction takes place.’
In practice the six campus hours available for this course turn out to be hard to organize: because of the coronavirus rules, the tutorial groups have to be small. Teeuwen: ‘That doubles the number of tutorials and there are only two hours of tutorial time per group per week on campus. And you can’t divide up the other components.’

Practicals

Other programmes get a more generous allocation. The BSc programme in Biotechnology, for instance, offers first-years the course Organic Chemistry 2. This course is made up of online lectures and practicals that are taught on campus.
‘Our priority lies with the practicals,’ says teacher Maurice Franssen. ‘The students need to learn the techniques, so they must hold the glassware in their hands. We want to look over their shoulders to see how they do.’
That is why first-year Biotechnology students will be getting 20 hours of practicals on campus over a period of four weeks. Franssen struck lucky. ‘Not all the degree programmes can get that many hours of practicals on campus. The Biology and Nutrition & Health first-years get 12 of their 20 hours of Organic Chemistry on campus, and 8 hours of practicals are done online.’ Meanwhile, the chemists are now working on a fully online practical, using virtual reality. Franssen: ‘That looks very fancy, but it can’t compete with the real practical.’

‘STUDENTS HAVE TO HOLD THE GLASSWARE IN THEIR HANDS’

Running a student society is crisis management

The coronavirus crisis demands huge creativity and flexibility from student society boards. Old blueprints can go in the wastepaper bin.

Text Luuk Zegers

Most student societies get a new board in the summer, so they can prepare for the AID and the introduction period in relative peace. During these weeks, board members get used to the job, a kind of warming up for their board year. That was the case at Ceres, where Marloes Rietveld took over as chair in July. Only, thanks to the coronavirus crisis, there was no question of a gentle warming-up period. ‘Straightaway, I was the contact person for the safety region, the university and the municipal council. That is a lot, all at the same time.’

Long-term plans could be put on ice: running a student society is crisis management nowadays. ‘I ask a lot of people for advice, such as former board members and people from our advisory body. We have regular phone calls. My advisers said recently: “I don’t know either, I reckon you know more about it now.” When I’ve finished, if there’s another pandemic, I’ll be the expert. Then they can call me for advice.’

Nothing is certain

The uncertainty of the coronavirus crisis makes it difficult to look at the long term, says Emiel Dijkstra, the new chair of KSV Franciscus. ‘You have to adapt constantly because the situation changes all the time. Take the AID. We have a committee that has been working hard from period six of the previous academic year to prepare for it. First, there was going to be a normal AID. Then it got split into two AIDs because of the coronavirus measures. Then came one of Rutte’s press conferences and the whole AID was called off. Later, it was allowed again, but on the evening before the AID it still wasn’t completely clear what student societies were and were not allowed to do. In short, nothing is certain and at any moment, new information can come which means all the plans have to be adjusted. And then they have to be approved by the safety region and the municipality.’

‘Look, we totally understand that everything has to be coronavirus-proof,’ adds Dijkstra. ‘But it does make it very challenging for the boards. On the other hand, you learn a lot from it of course. You can’t just pull out an old blueprint; now it is real management.’

Puzzling over space

With 291 new students enrolling, Franciscus is the most popular society in terms of enrolments for the second year in a row. ‘It’s going to be a real challenge to get to know each other. Because of the coronavirus measures, we can’t all be in the building at the same time, but if things get more normal later, there’s enough space for us all.’ In the first and second periods, first- and second-years will get priority in the Franciscus building. ‘You have consider the choice between existing members and first-years. In the end, the more important consideration is that the first-years still need to meet

people and make friends. There is room for the rest of the members, but it is more limited to things like small-scale activities and drinks parties.'

At SSR-W student society too, the board will be puzzling over space in the age of physical distancing. The society broke its enrolment record this year (262, twice as many as last year). 'Really cool,' thinks chair Bram Duurland, but 'It is also very overwhelming and it brings lots of new challenges with it.' While new members can usually be found at the clubhouse every day during the first few weeks of the year, that will have to be done in shifts this year. 'And you also want the new members to get to know the existing members. That is important for integration. We've got to find a solution to that.'

Longer opening times

During the AID, 216 members signed up at Ceres. The clubhouse currently has room for about 100 people. 'So instead of three or four days, we are now open five days a week,' says Rietveld. 'You have to be able to offer members a place to come to. In any case, we shall reserve two days a week for the first-years. If we divide them into different groups over two days, they can all come here once a week. This "reservation" will apply to the first period and maybe the second. After that we want to get the different years mingling, because that is one of the charms of a society.'

There is no shortage of creativity among the new board members during their baptism by fire. At Franciscus, they are looking into whether the food can be prepared faster so that more people can come and eat in several sittings. 'It is constant management,' says chair Dijkstra. 'We want new members to have just as nice a start as we had. That's difficult, but we are doing our best.'

There is one big advantage to the crisis situation, says Ceres's Rietveld. 'In the end, you do a board year in order to learn. I had never expected to learn so much in such a short time.'

'YOU CAN'T JUST PULL OUT AN OLD BLUEPRINT'

Student society SSR-W holds a Covid-proof informative event for first-years during the AID. PHOTO ANNA DEN HARTOG

A LITTLE WISER

Are mosquitoes attracted to light?

That irritating whine keeps you awake at night but as soon as you switch the light on, the blood-thirsty creature is nowhere to be seen. Strange, because aren't mosquitoes attracted to light?

No, says Jeroen Spitzen, a mosquito researcher at the Entomology lab. 'Mosquitoes are attracted to carbon dioxide (CO_2) in the air we breathe out. When they get closer to us, they follow heat and body odour.' Our body odour is determined by the bacteria on our skin, says Spitzen. 'That depends on your genetic predisposition and/or your lifestyle. There are studies, for instance, that show that people who have been drinking beer are more attractive to mosquitoes. That is probably because their body odour and breath are changed by the process of breaking down alcohol.'

So some people really are more attractive to mosquitoes than others, but 'sweet blood' is a myth, says Sptizen. 'In the sense that sugar doesn't play a role in it. But there is a kernel of truth in it. The composition of our blood is a factor in our body odour, even though we still don't quite know how that works. Some species of mosquito have certain preferences because they can lay more eggs with "good blood". That's why one person can be bitten to death while the person sleeping next to them is left in peace.'

Spitzen thinks the best way to solve the mosquito problem is to tackle it at source. 'Most of the problems are caused by mosquitoes that hatch out close to your house. So be alert to water in buckets, watering cans or flower pots, and empty them regularly. And of course you can also keep mosquitoes out with screens or a bed net.'

A summary of how to fend off mosquitoes, then: empty the watering can, install screens and pick a partner who is a mosquito magnet. TL

'*Sweet blood* is a myth'

Jeroen Spitzen, a mosquito researcher at the Entomology lab.

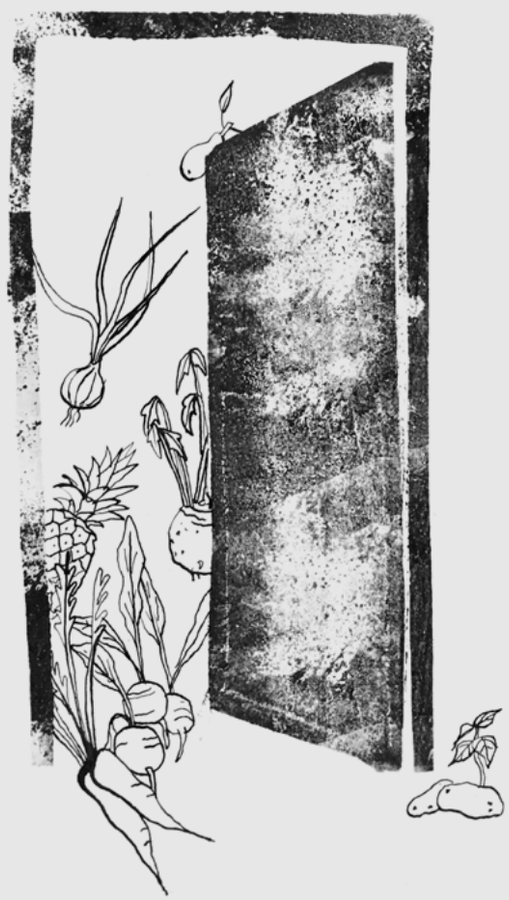
Every day we are bombarded with masses of sometimes contradictory information on pressing issues. In this feature, a WUR scientist gives you something to hold on to. What are the facts of the matter?

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

‘You need the nerve to open doors yourself’

Turning points: sometimes you recognize them immediately, and sometimes only in retrospect. In this series, members of the WUR community talk about a decisive moment they’ll never forget. This time, assistant professor of Public Administration and Policy Jeroen Candel.

‘It was quite by coincidence that I ended up in Wageningen in 2011. I didn’t know much about agriculture or food; I had studied Public Administration at Utrecht and done research on police collaboration between the Netherlands, Germany and Belgium. I found that very interesting, but when I applied to the Police Academy to continue down that path, I didn’t get in. My thesis supervisor suggested that research might suit me. I had never considered that option, but I thought: “Wow, that’s a good idea.” So I went to Wageningen to do a research Master’s. But there was too much overlap with what I’d done at Utrecht, so I wanted to stop after just three months. One of my supervisors forwarded a Wageningen PhD vacancy to me.



It came from Katrien Termer, whose class I was taking at the time. Just before I finally dropped out of the Master’s, I went up to her after class and said, “I’m Jeroen and I responded to the vacancy ad.” Later she told me that spontaneous move played a positive role in the selection process.

And that’s how I came to join the Wageningen Public Administration chair group in 2011, to do research on European food security policy. Over the past nine years, I have totally specialized in this area.

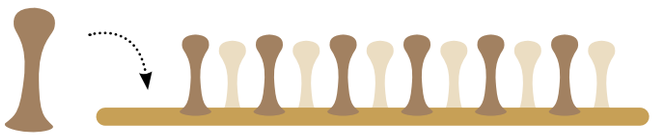
‘Later she told me that spontaneous move played a positive role in the selection process.’

The nice thing is that not many public policy specialists work on agriculture/food, even though it’s in the media every day. There are so many public administration and policy issues at stake! I enjoy advisory work and at the same time I get inspired to develop new theories in this field. Without good coaching and a little push from my supervisors back then, I would never have gone in this direction. It taught me the importance of mentorship. I want to be a good mentor myself, both on the subject matter and on broad skills and talents. And from that moment with Katrien I learned that you need the nerve to open doors yourself too. Things don’t just fall into your lap.”

Illustration: Marly Hendricks

Testing for coronavirus

In a serological test, antibodies against the coronavirus are tracked down in four stages. This test is currently only used to find out whether the Dutch population is building up immunity to the virus.

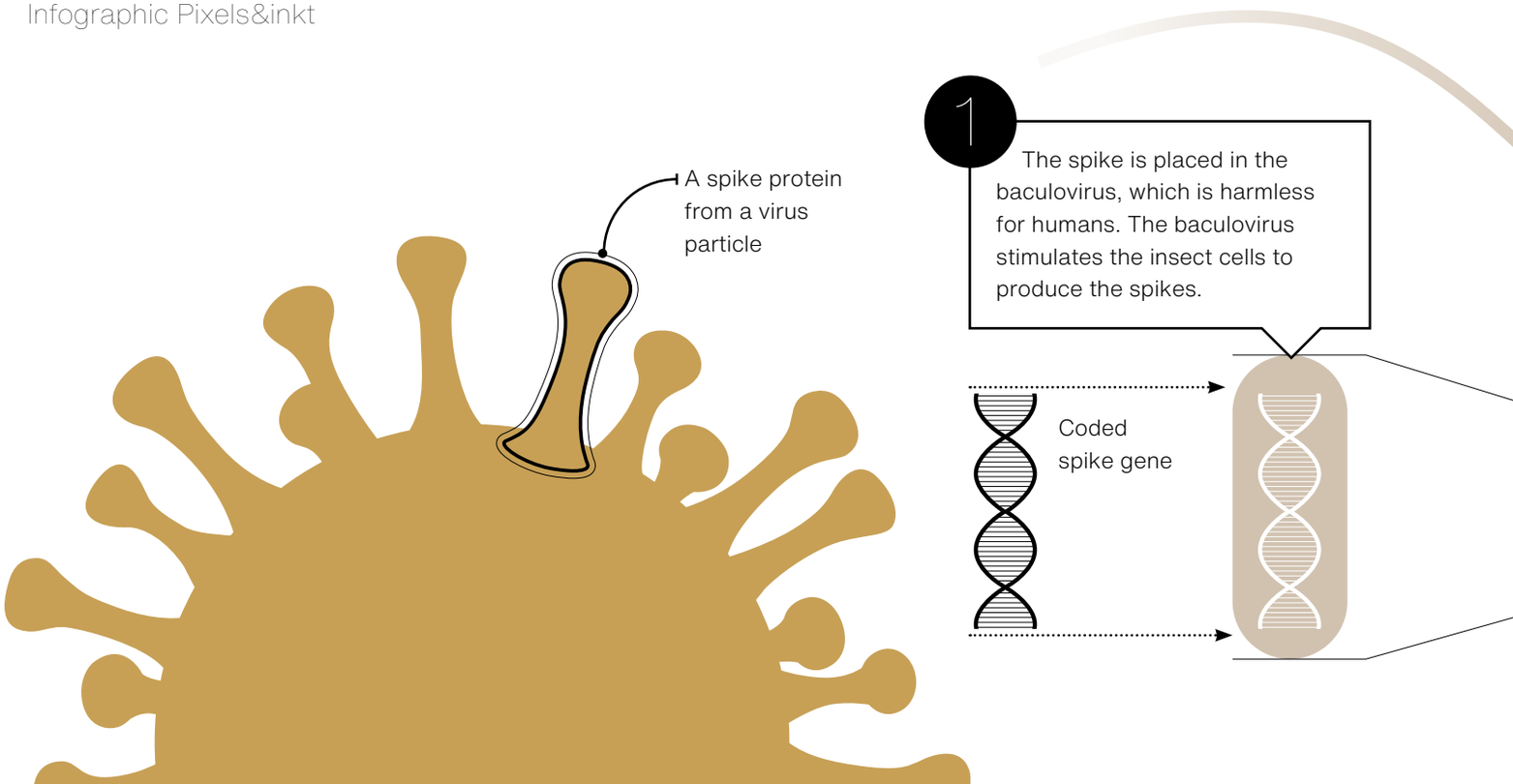


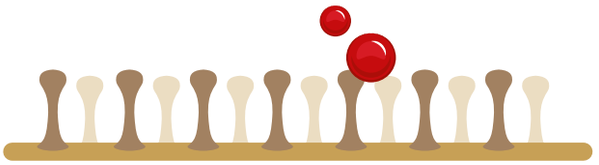
1 Spike proteins are attached to a base.

THE WAGENINGEN ROUTE TO A COVID-19VACCINE

In the quest for a vaccine against the coronavirus, scientists around the world are adopting different strategies. Wageningen has a unique approach of its own. 'We replicate the protein fragments found on the outside of the virus, the spikes,' says virologist Gorben Pijlman. That is done in insect cells, a Wageningen specialism. You can see how that works in this infographic.

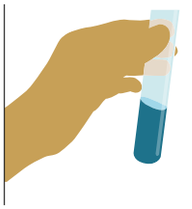
Infographic Pixels&inkt



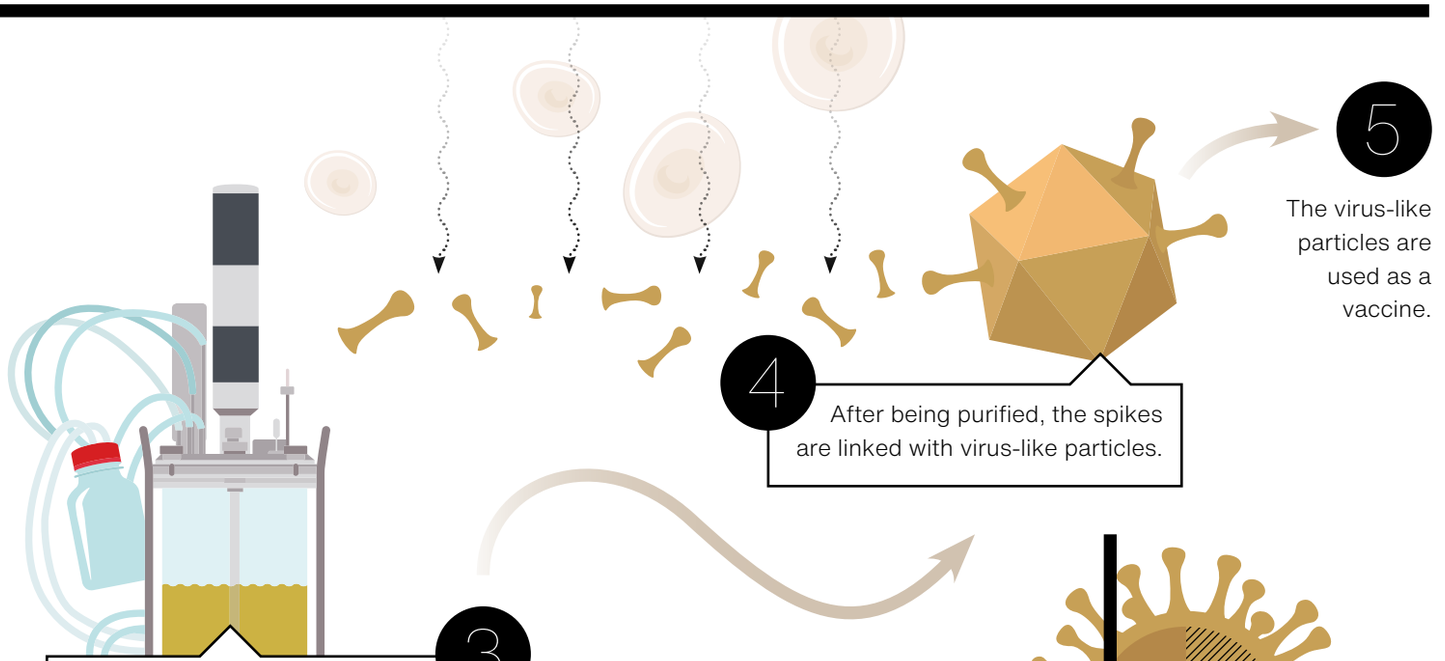


2 A drop of blood is added.

3 Antibodies against the coronavirus attach themselves to the spike proteins.



4 Colourant is used to make the antibodies visible.



5

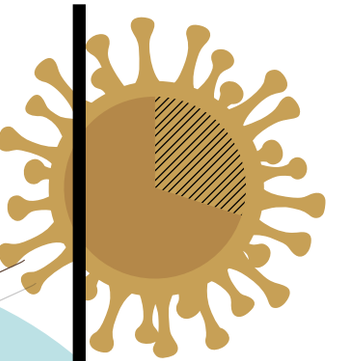
The virus-like particles are used as a vaccine.

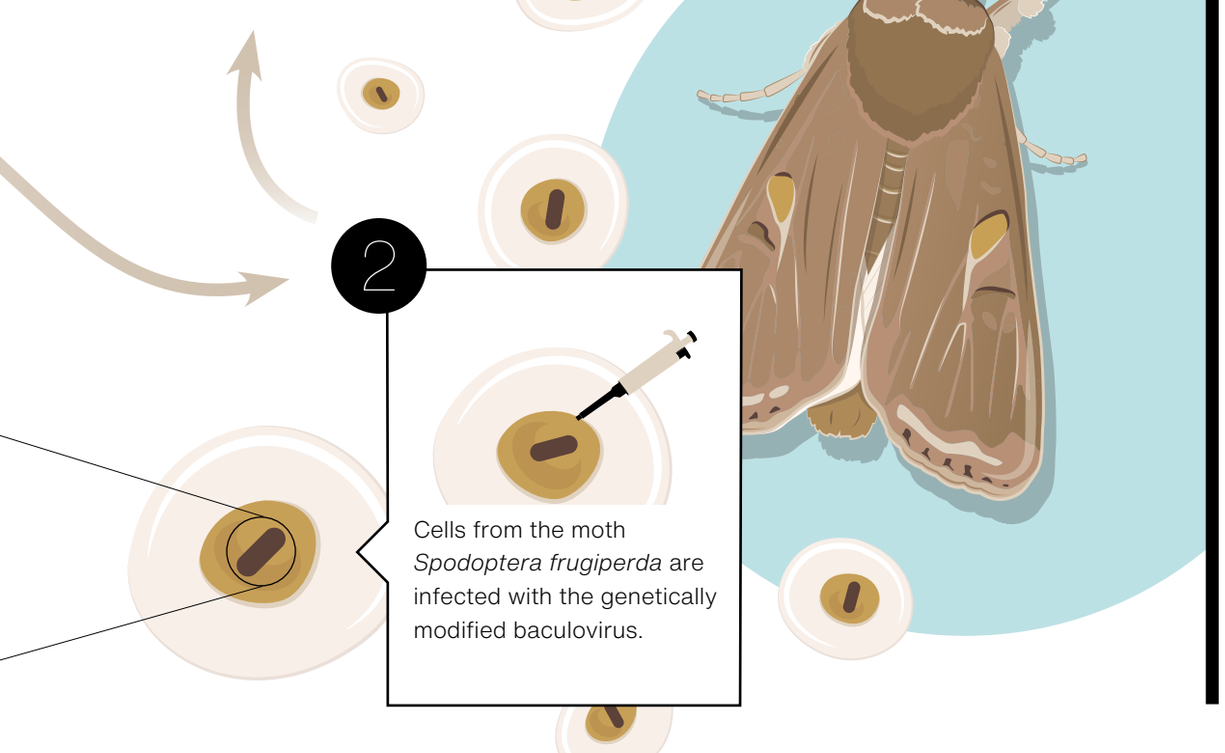
4

After being purified, the spikes are linked with virus-like particles.

3

The insect cells produce the spike protein in large quantities in a bioreactor.





2

Cells from the moth *Spodoptera frugiperda* are infected with the genetically modified baculovirus.

30

PER CENT

A cell can produce up to 30 per cent of its own dry weight in protein. This is how some familiar vaccines are produced, such as the vaccine against human papillomavirus (HPV), which causes diseases including cervical cancer.

Making our food system completely circular and sustainable demands a change of course. That is explained in Professor Imke de Boer's vision of the future (see inset). The vision paper was written by farmers and a group of researchers, and Professor Katrien Termeer helped write it. Agricultural economist Roel Jongeneel has his doubts. *Resource* invited them to have a conversation about it. **Photos Eric Scholten**

Text Albert Sikkema

Jongeneel: 'I think the plan is a good thought experiment in the right direction. The current agricultural system is in trouble, and we've got to aim for circular agriculture. The integrated approach appeals to me too: the plan also addresses the natural environment, health, wellbeing and human habitats.'

Termeer: 'It is a holistic narrative, based on the doughnut economy: a food system within the earth's carrying capacity. And it must be a social system. In contrast to the current food system, in which a handful of market players dictate how our food is produced, everyone should be able to participate.'

Jongeneel: 'The current economy is one-sided in its focus on efficiency. Nevertheless, I think this new vision ignores the economy somewhat. Its starting point is land: arable land is for human food, grass is for animal production. That sounds like a paternalistic blueprint thought up by academics. Where is the space for economic activity?'

Is there space for that?

Termeer: 'We don't tell people how much meat and vegetables they are allowed to eat, but we indicate the limits of our planet's carrying capacity. It is up to entrepreneurs to use the available resources as smartly and sustainably as possible. Fewer animal products is a logical consequence of that, as is the realization that we should use every part of an animal. The plan is definitely not a paternalistic blueprint; the aim is precisely more food democracy. And it dovetails nicely with existing initiatives like the Herenboeren cooperative, in which consumers become joint owners of a farm. In these kinds of initiative, which increase the role of the consumer, you notice that consumers opt to cut down on meat.'

Jongeneel: 'I support the idea of establishing requirements for food, but in a

'We indicate the limits of our planet's carrying capacity'

‘I would wish consumers a more varied diet, and it *is* possible’

healthy economy you’ve got supply and demand – unrestricted. If you set limits to plant and animal production based on environmental thinking, I miss the role of economic considerations and consumer preferences. I think you will end up with only small quantities of meat, dairy produce and eggs left in our diet. I would wish consumers a more all-inclusive diet, and I believe that is compatible with sustainable agriculture.’

Termeer: ‘We have used the market mechanism for 50 years and we’ve seen the damage it’s done. It creates all kinds of externalities, such as problems to do with nature and the environment, which are not covered by the price. We are not saying that the government must totally control the market, but we do say it should set limits. No more nitrogen losses, for instance. Within that framework, farmers have plenty of scope to look for new value propositions with other parties.’

Jongeneel: ‘I think agriculture can also be made a lot more sustainable without saying: animal production only on grasslands. And then there’s the question: where is world trade in this plan? We know that many Asian and African countries have to import food. Which countries produce that food? Your narrative veers towards autarchy – a direction we mustn’t go in, and for which there is little support.’

Termeer: ‘The plan is a vision for the Netherlands, not for the world. In the wider world we are seeing a trend towards regional food networks – especially since the start of the coronavirus crisis. The follow-up process should indeed look at food systems in other countries as well. I do research in a few African countries, where I have seen that the emphasis on export has a disruptive effect on the local food systems.’

How realistic is this vision of the future?

Jongeneel: ‘I think the business model is a big stumbling block. The idea of paying farmers for other functions such as biodiversity and water management requires a fundamental change in the economic order and EU policy. Half the farmers in the EU now receive less than 1750 euros per farm per year from the agricultural policy – you won’t win them over with that. According to your plan, more money is needed, but I can’t see yet where that is to come from.’

Termeer: ‘That change comes step by step. You can already see a shift from income support to support for public goods such as nature values, so we’re moving in the right direction. We say: pay the farmers for social services such as water management, and for contributing to the climate policy, for which there are other funding sources you can apply to as well.’

Jongeneel: ‘Transformation of European policy and subsidies goes slowly because of the many and diverse interests…’

Termeer: ‘That transition can’t and doesn’t have to happen overnight. It actually needs to happen step by step, with democratic checks and balances in between. But an appealing prospect on the horizon does help us start taking those steps.’ ■

About the vision

With the report ‘Re-rooting the Dutch food system: from more to better’, professor of Animal Production Systems Imke de Boer’s team got to the final round of the Rockefeller Food Prize. In a nutshell: in 30 years’ time, arable farmers will no longer use pesticides, but will practice strip cropping and agroforestry. Livestock farmers will no longer use food crops for livestock feeds, while our own faeces will be used as fertilizer. We will have halved our meat consumption and citizens will have shares in farms and buy directly from the farm. Read more about it on **resource-online.nl.**

Roots have principles too

Why are some roots thick and others thin? Which principles guide the construction plan in underground architecture? Wageningen ecologists have put a big piece of the puzzle in place.

Text Roelof Kleis

Ordinary mortals won't bother their heads with the construction of a root. But for root researchers like Liesje Mommer, personal professor of Plant Ecology and Nature Management, the principles of root growth are crucial.

'Above the ground, things are clear to us. We have a pretty good understanding of why some leaves are thick and others thin, why they grow fast or slowly, and why they contain a lot of nitrogen or not much,' explains Mommer. The construction principle is 'fast versus slow'. Thin, fast-growing leaves that don't use much carbon die quickly. Thick leaves that use a lot of carbon are longer-lived. A measure of the rate of growth is the amount of nitrogen. Nitrogen is an indicator of the presence of rubisco, the main protein in photosynthesis. With a lot of nitrogen, the plant can convert a lot of CO_2 into sugars, and can therefore grow fast. That nitrogen has to be supplied by the roots. It has long been assumed that fast-growing leaves require a fast-growing root. 'Numerous studies have tried to prove that,' says Mommer, 'but they couldn't do so. The surface per gram of leaf didn't actually correlate with the length per gram of root. No one understood that.'

Underground dimensions

So there had to be more to this than the principle of 'fast versus slow'. 'Leaves "only" have to capture CO_2 and light,' says Mommer. 'But there are many more dimensions at work underground. A root has to store not only the easily absorbed nitrogen, but also the strongly soil-bound phosphorus, 12 other essential nutrients, and water.' A root is also affected by the density of the soil. Thin roots cannot easily penetrate dense soils. And, not unimportantly, roots are a habitat for many micro-organisms that can interfere with all those nutrients for the plant. It is precisely the latter element, and the collaboration with mycorrhiza fungi in particular, that now turns out to be the most important factor in explaining root structure. Mommers' colleague Thom Kuyper, personal professor of Soil Biology, tried to prove this some years ago – in vain. 'At that time I focused too much on roots in temperate zones,' he recollects. 'Then you see too limited a range of root variation in nature and that puts you on the wrong track.'

Architect

Together with Alexandra Weigelt of Germany (and with German funding), Mommer assembled a diverse team of 20 researchers to solve the riddle of root construction. Along with plant ecologist Jasper van Ruijven, Kuyper was a prominent member of the group. In fact, Mommer says, 'Thom was the architect of the idea that cooperation was the guiding principle we were looking for.' Kuyper tones this down: 'I'm honoured to hear that, but I don't think I would ever have thought up and proven the concept on my own.' Either way, Kuypers' summary of everybody's ideas, and especially the introduction of the term 'outsourcing' caused quite a

PHOTO DIANA SCHERER

stir at the first workshop. And then everything suddenly fell into place.

Roots can absorb important nutrients themselves, or they can outsource that job to symbiotic fungi (mycorrhiza). So is the decisive construction principle for plant roots 'do-it-yourself as opposed to outsourcing'? The group refined that theoretical concept, in which root characteristics such as diameter, length per gram, tissue density and nitrogen content play decisive roles. The data crunchers in the team then set to work to reveal underlying relations, using root data from 1800 different species of plants that between them represented the large variety of climates and soil types around the world. 'Within an hour, the people doing the calculations were heard saying, "Yes, it's right",' Mommers recalls. Between them, the two construction principles explained 77 per cent of the root variation in nature, with the principle of 'do-it-yourself versus outsourcing' in the lead role.

Good mix

Mommer speculates about possible applications of this fundamental concept. 'A better understanding of roots could play a role in making farming systems more productive. We know that more biodiversity leads to higher production. Why is that? One of the ideas is that it has to do with the root strategy. Perhaps there needs to be a good mix of do-it-yourselfers and outsourcers. That might apply to strip cropping as well. Undeniably, mycorrhiza play a big role, and we don't fully understand that role yet.'

'A better understanding of roots could play a role in making farming systems more productive'

What counts most for Kuyper is the simple 'pleasure of understanding'. 'Having an explanation for 77 per cent of the variation is a lot in biology,' says Kuyper. 'There are about 300,000 species of plants. It is pleasing that nearly all the diversity can be explained with two construction principles. It gives you a kind of deep philosophical feeling that there is order in the world. There is an aesthetic value in the fact that you can understand nature with a couple of simple principles.'

Scientific analysis delivers personalized dietary advice

HOW HEALTHY IS MY DIET REALLY?

By no means everyone gets enough vitamins from their food. With NutriProfiel, you know whether you are getting enough of these essential nutrients. *Resource* editor Tessa Louwerens checked it out. **Photo Aldo Alessi**

Text Tessa Louwerens

It is quiet in the Gelderse Vallei hospital (ZGV) in Ede, where I am waiting my turn to have a blood sample taken. I'm in perfectly good health and I see myself as a fairly fit person: I exercise regularly, don't drink or smoke, and I think I have a healthy diet. But how healthy is my diet really, and what could be better? NutriProfiel has the answer, says the website. It can give me personalized dietary advice based on my blood values and eating habits. It is a project of the Dutch Nutrition in Healthcare Alliance (Alliantie Voeding in de Zorg), which seeks to apply scientific findings on diet and exercise in healthcare. The key partners are Wageningen University & Research, the Gelderse Vallei hospital and Rijnstate hospital in Arnhem.

Creating a buffer

The nurse takes four tubes of blood so as to measure my levels of haemoglobin, ferritin (iron level), folic acid, and vitamins B6, B12 and D. 'Those values provide a picture of the long-term balance of the micronutrients,' explains Michiel Balvers, a researcher in the Human Nutrition and Health chair group in Wageningen and the NutriProfiel project leader. The body lays down a store of certain vitamins. You have a buffer of B12, for example, to last you over a year. Balvers: 'So if your blood values are too low, you've had a deficiency for some time.' It is these vitamins which are tested for because deficiencies are common. 'About 20 per cent of the elderly have too little B6,' says Balvers. 'We also see in our analyses that 5 to 10 per cent of the patients have a folic acid or a B12 deficiency. And in winter you can assume that half of the Netherlands has a vitamin D deficiency.'

Deficiencies can cause serious health problems. A lack of B12, for instance, can cause neurological symptoms such as exhaustion, tingling feelings, memory loss and muscle cramps. Insufficient vitamin D increases the risk of fractures. Balvers: 'With NutriProfiel we can detect the threat of deficiencies in time, before serious and sometimes irreversible symptoms occur.'

But the test results don't tell you everything. 'You can't really interpret these blood values properly if you don't know what a person eats,' says Balvers. So the blood test is complemented with the Eetscore (eating score)

‘MAYBE I HAVE A DISTORTED IDEA OF WHAT IS HEALTHY’

questionnaire developed by the Human Nutrition and Health department.

Filling in the questionnaire

At home at my PC, I spend 15 minutes answering questions about how much I eat of various product categories, and how many times a week I eat them. The categories are dairy produce, whole grain products and vegetables. That information is set against the Dutch Nutrition Centre’s Healthy Diet Guidelines.
Some questions are hard to answer, like how many 50-gram spoonfuls of vegetables I eat per day. How reliable is my memory? I don’t weigh my food. ‘The questionnaire has to be easy to fill in, so you don’t have to weigh your food,’ says Balvers. ‘The eating score measures the quality of your diet and gives a good picture of the degree to which your diet matches the guidelines, and where there is room for improvement.’
The programme draws up personalized dietary advice based on the Eetscore questionnaire and the blood tests. While I’m waiting for that, I call Ben Witteman, a gastro-intestinal consultant at ZGV who has been involved in NutriProfiel from the start. He uses the method in his practice, and even as a diagnostic tool. ‘Let’s say a person has low blood values but a healthy diet. Then I first look for other causes such as intestinal problems that impede the absorption of vitamins.’
NutriProfiel also helps make people more aware of how important diet is, says Witteman. ‘Patients will tell me that their diet is healthy. But when I see their answers on the Eetscore, there can be room for improvement. I can go into that with the patient. Everyone has some idea of what is healthy, but few people follow the Healthy Diet Guidelines.’ Witteman notices that patients often feel better after changing their eating habits. ‘Diet is important: not just for keeping people

‘IN WINTERTIME, HALF THE DUTCH HAVE A VITAMIN D DEFICIENCY’

‘I HAVE IDENTIFIED SEVERAL COELIAC PATIENTS USING NUTRIPROFIEL’

healthy, but also for helping people with chronic conditions feel better. I have identified and treated several coeliac patients through NutriProfiel, for instance.’

Iron deficiency

My NutriProfiel result is ready in just under a week after the blood test. I’m curious and a tiny bit nervous. Maybe I too, like those patients of Witteman’s, have a distorted idea of what is healthy.

My blood test results are good, except that my iron level is low. It turns out my diet doesn’t contain enough iron. NutriProfiel advises me to eat iron-rich products (with more than 0.8 milligrams of iron per 100 grams) such as meat, fish and whole grain bread. Or, for vegetarians like me: eggs (four per week is fine), tofu, tempeh, nuts and iron-rich readymade meat substitutes. It is also sensible to eat more citrus fruits with a bread-based meal: vitamin C supports the absorption of iron. Polyphenols in coffee and tea do just the opposite.

From the eating score questionnaire, it seems that my diet is generally fairly healthy (illustration below), although I don’t get the recommended daily allowance of 150-200 grams of vegetables (four serving spoons). Tips to improve that: make homemade soups with fresh or frozen vegetables, or a vegetable omelette.

Sven Kramer

What about vitamin pills? Balvers says that they are not usually unnecessary. ‘In fact, you sometimes run the risk of consuming too much. In the case of vitamins, it is certainly not always true that “it can’t do any harm”. Supplements often contain vitamins in large doses, sometimes a lot more than it says on the label.’

You excrete an excess of vitamin C in your urine, but that is not the case with all vitamins. Balvers: ‘In 10 per cent of our blood samples, we see levels of vitamin B6 that are too high. That is due to supplements, because you won’t get amounts like that from your food. Every year in ZGV, we see a few patients with vitamin B6 toxicity.’ A famous example of this was the skater Sven Kramer, who incurred nerve damage in his right leg as a result and could not skate for a winter.

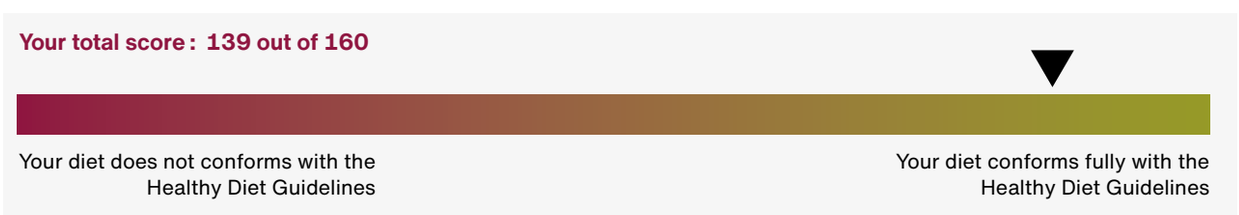
NutriProfiel was started five years ago and has already achieved a lot, says Balvers. ‘We started out with three GPs, and now we’re working with all the GPs in the region and several specialists at ZGV, and we are creating dozens of profiles every week.’ NutriProfiel is free for people referred by their GP, while consumers who want to take the test on their own initiative pay 89 euros.

Behaviour change

There has not been any research on whether people follow the advice they get. Balvers: ‘NutriProfiel brings together the science on a healthy diet and uses it for practical advice on how to eat in line with the Healthy Diet Guidelines – which have been proven to contribute to your health. We have not investigated whether our recommendations are actually leading to behaviour change.’

There is, however, work going on to support people in putting the advice into practice. Wageningen municipality, for instance, joined the Nutrition in Healthcare Alliance six months ago and started a project that links NutriProfiel to cookery courses in a community centre, aiming to help people cook healthy affordable meals.

It is indeed surprisingly difficult to change your habits and I don’t know if I’ll manage, but I’m going to try. Time to dust down the blender and make soups, and I can easily manage four eggs a week, given the rate at which my chickens lay them.



The result: how well does Tessa do according to the Healthy Diet Guidelines?

Disruptors ahoy!

Guido Camps

Of course, it cheered everybody up to see the first photos of students on campus, evidence of a cautious return to a university that isn't extinct. But while the Dutch academic world was focusing on starting a new academic year under unusual circumstances, I think there was another important piece of news in the media.
I read online that Google has new plans: 'Google Has a Plan to Disrupt the College Degree. Google's new certificate program takes only six months to complete, and will be a fraction of the cost of college.' (Justin Bariso in Inc.com).

Google is coming and the academic world had better watch out

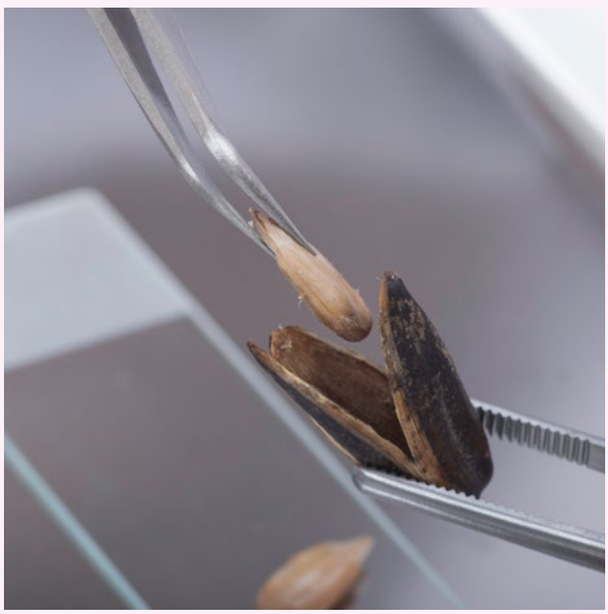
Ask Altavista, Hotmail or Blackberry if you don't believe it, but if Google suddenly looks in your direction it can mean a serious disruption of your business model. Google claims that its six-month certificate is the equivalent of a four-year Bachelor's degree (that is how long a first degree usually takes in the US). And the costs will be a fraction of what is normal in the expensive American college system. By doing this, Google is pushing both prospective students and established universities to ask: what is the value of a university education? Does it always have to take three or five years, or could it be shorter?

I decided to put this to the test, and I've embarked on a six-month programme, Google IT Automation with Python. I am struck by the high quality of the systems in all these kinds of programmes. But what I dislike is that all the variation that is woven into human life and the world is removed from the learning process. In order to cope with large numbers of students at the same time, all the questions are kept simple so they can be graded instantly by the system. Longer assignments are simply impossible because they would create too many variables, so all the assignments are served up in tiny chunks: very manageable but the students doesn't get much of an overview of the subject. You learn how to debug one small function, but not how to write an entire program.
Google is coming and the academic world had better watch out. But now the first students are back on campus, you can see where the added value of a physical university lies: in learning to solve real-world global problems using both theoretical and practical skills. You can't do that sitting in front of a screen, however hard we try to do so in the new normal.

Guido Camps (36) is a vet and postdoc in Human Nutrition. He enjoys cooking, beekeeping and unusual animals.

NWO grants for Wageningen startups

Six Wageningen researchers have been granted funding by the Dutch Research Council (NWO) to help them go into business with their knowledge. For three of them, the grant is for further developing their startups; for the others, the money enables them to turn their ideas into a business plan.



Dimitri Karefyllakis, until last year a PhD student in the Food Technology chair group, is receiving 40,000 euros for a startup called Time-Travelling Milkman. He wants to use the money to extract fats from sunflower seeds and process them into cream cheese, fresh cheese and quark. The goal is to make the products as creamy as regular cheese based on dairy fat. Karefyllakis works on this with Costas Nikiforidis, co-founder of Time-Travelling Milkman as well as a member of the Biobased Chemistry and Technology chair group. 'We use the university's laboratories, so we keep in close touch with WUR.'

Vittorio Saggiomo, who works in the BioNanoTechnology chair group, is due to get 40,000 euros to make special made-to-measure bioreactors using a 3D printer. He is working on this with alumnus Carlos Serrano's startup Remode Solutions. The company focuses on bioreactors with a capacity of five to ten litres for locations such as pharmaceutical and environmental technological research labs.

There is also an NWO grant for Lammert Kooistra, who works at Geo-information Science and Remote Sensing at WUR, and is the technical advisor for Van Boven Drones. He works with the Delft engineering scientist Kaz Vermeer and WUR alumnus Eric Verhoeff on harvest optimization and forecasting for field-grown vegetables, using GEOBIA algorithms.

From idea to product

Three other Wageningen researchers are getting 50,000 euros apiece this month from another of NWO's funds, to work out their idea for a business. Andrijana Horvat of the Food Quality and Design group wants to develop a simulation model that can predict the presence of harmful campylobacter bacteria in chickens. Dennis Oonincx of the Animal Nutrition group wants to reduce nitrogen and methane emissions from cows by mixing insects into livestock feed. And Francesca Orsi of the Landscape Architecture and Spatial Planning group wants to develop an app that finds links between our ecological footprint and where we live, to be able to advise us on how to reduce that footprint. All three researchers want to use the NWO funding to assess the feasibility of converting their idea into a commercial product. AS

They are indispensable for keeping the campus going: the cleaners, caretakers, caterers, gardeners, receptionists – the list is long. Resource has been seeking out these key people. This time, meet Mirjam Rutten (54), a receptionist at Leeuwenborch. Text Milou van der Horst Photo Paul Lagro

‘I studied Spanish language and literature, mainly just because I liked it. I never really thought about a career because I wanted to be a mother. That didn’t happen because my ideas about parenting changed when my relationship broke up when I was 27: suddenly it felt like a very big responsibility. After that, my working life became a mishmash of different jobs and courses without a clear aim. It all made me into a person who relates to people easily. That contact is the most important part of my work for me, and it’s why I like this job so much. Here at WUR, I work with people from all over the world who come from other cultures and have a very different perspective on life. I find that so inspiring!

During the lockdown, the reception desk still had to be staffed because our colleagues came to collect equipment like their keyboards and screens. They needed permission from their boss to do that, and we were asked to keep an eye on it. It was strange to see colleagues going off with their things and not to know when you would see them again. On the other hand, the situation created solidarity. I am a sensitive person and I’m very interested in other people; I have some understanding of where behaviour and habits come from. Besides this job, two years ago I started my own practice using Emotional Freedom Techniques, with which I help people let go of negative beliefs, habits, thoughts and emotions. During the lockdown, I was able to help several colleagues from reception, because I saw that they were very anxious and stressed. The technique cleared that up straightaway.

‘All receptionists have to be first-aiders, only I can’t stand the sight of blood’

Normally, my main tasks as a receptionist are to greet people and help them find their way around. The work also includes things like reserving meeting rooms and loan bicycles for people, keeping track of lost property, binding theses and registering technical failures – too much to list it all, really. Also, all the receptionists have to be first-aiders, only I can’t stand the sight of blood. That is not so handy, but I can’t help it. There is a very nice atmosphere at the Leeuwenborch, partly because of all the mutual support. We really rely on each other, and we show it. I’ve been working here for four years now and the combination of my own practice and the job at reception is ideal for me. So if it can stay this way for now, I’m perfectly happy.’

In other news science with a wink

GARLIC Nº 5

Researchers at Virginia Tech in the US have discovered how the garlic plant makes allicin, the substance that when broken down causes garlic's typical flavour and smell. This discovery makes it theoretically possible to breed garlic of different strengths. The cookery books will have to be rewritten. 'Add one clove of garlic Nº 5.'

DINOSAUR CANCER

Is cancer a modern disease of prosperity? Not really, shows a study of the lower leg of a dinosaur from the Royal Ontario Museum. The dinosaur, a *Centrosaurus apertus*, had malignant bone cancer when it died about 76 million years ago. The diagnosis by scientists from McMaster University certainly comes too late for the animal. But it is the first time cancer has been identified in a dinosaur.

COPULATION (1)

People don't (usually) copulate in public. We are fairly unique in that, as a species. But we are not the only one, suggests a study by an anthropologist from Zurich University. The Arabian babbler prefers to mate in private too. The bird – no surprises here – is found in the Arabian peninsula. Remember this as a conversation starter.

COPULATION (2)

The Zurich anthropologist ploughed through 4572 ethnographic studies to find common ground between *Homo sapiens* and *Turdoides squamiceps* – this babbler. Why do we do it behind closed doors? To hide the female's arousal, the anthropologist thinks. An aroused female might give other males inappropriate ideas. RK

Diary of a caretaker

Early one morning I get an email from the financial department: 'Eugene, could you go and check on a room where we've planned a clearance with the bailiff shortly? The tenant is very behind with the rent. And we can't get hold of this person by email, post or telephone.'

'It's clear: this person has a lucrative little business going'

I grab my things and head for the address in question. When I get there I ring the bell and the door is opened by a friendly young man. 'Good morning, I'm Eugene, the Idealis caretaker, and I'd like to have a quick look at a room in your corridor.'

'Oh, of course,' says the lad. 'I'm the corridor rep. Does it happen to be a room which an occupant recently vacated? We last saw the main tenant a year ago, but he was hardly ever here before that. But the room has always been occupied by different people.'

Alarm bells are going off in my head. This sounds very dubious.

I open the door and see that the room is fully furnished. OK, it's old furniture, but there's everything you need: a bed, a cupboard, a desk and an office chair etc. I call my colleague from finance and ask if there are official sub-tenants registered at this address. It turns out that is not the case. No contract for sub-letting has ever been signed through Idealis.

Everything's clear to me in an instant: this person has a lucrative little business going. He hasn't paid any rent to Idealis for quite a while, and meanwhile he's sub-letting his room without Idealis knowing anything about it. His room is furnished so he gets a nice sum paid into his account every month. He thought he was onto a good thing of course, and he's been able to enjoy the extra money for a spell. But now his little business has been discovered, it's going to end up costing him more than it earned him: the rent arrears and the additional costs of the bailiff will have to be paid promptly. As my father used to say, the truth always catches up with you in the end.

Eugene van Meteren works for student housing provider Idealis as a caretaker. He writes about his experiences for Resource. Read all his columns on **resource-online.nl**

Campus ◆ residents

There are about 100 companies located on the campus. In *Resource* we'll be introducing you to one of them in every issue. This time: Remode Solutions in Plus Ultra II.

Remode Solutions prints bioreactors using 3D printer technology. The company concentrates on small bioreactors (up to 10 litres) for pharmaceutical and environmental technology research laboratories. The founder is Carlos Serrano. Serrano: 'Many researchers use small bioreactors for their biotechnological research. Existing bioreactors are made mainly out of glass or steel, they are standardized, and it takes a lot of time and effort to adapt them to the specifications of the research. Our bioreactors are made of reusable material, they can be printed quickly, they are made to measure, and they are not expensive.'

Do you already have products on the market?
'We are in the startup phase of our company and we are still busy experimenting with different materials and performance requirements. Our first product was a 300 ml bioreactor for researchers at the Netherlands Institute of Ecology NIOO-KNAW. It is now used in their wastewater experiments.'

'I've been working fulltime on optimizing the prototypes since May 2018'

What is your link with WUR?
'I come from Spain, I did my BSc in Biochemistry in Seville and then I did my Master's in Biotechnology in Wageningen. I have often worked with bioreactors and I thought about the possibility of customizing them. During the New Venture Creation course at WUR, I and a team of students worked out my ideas in a business plan. Since May 2018 I've been working fulltime on optimizing the prototypes. We are based on the campus, now still in Atlas and before long in PlusUltra II. We have had a great deal of support from StartLife and StartHub. Our first customers were the labs on Wageningen campus.' AS

What we eat has a big impact on our health and our environment. And all the flavours of the world can be found in our WUR community. Aarzoo Kohra takes us to her homeland, India.

Flavours of WUR

North-Indian egg curry

'This dish tastes like home because of the Indian spices like garam masala and turmeric. You can cook this in no time and you can find all ingredients you need in the "toko".'

Fry the cumin seeds and the rice – I like to use Basmati. When you really start to smell the cumin scent, add sufficient water and cook the rice until done.

Boil the eggs and potatoes. Peal the boiled eggs and fry them with the potatoes in sunflower oil until they are light brown. Take the eggs and potatoes out of the frying pan. Put aside for now.

Fry the garlic and onion in the remaining oil in the frying pan. When the onions turn light brown, add the ginger-garlic paste and stir well.

Add the chopped tomatoes, a pinch of salt, the garam masala, turmeric, coriander powder and red chili powder. Stir well for five minutes on a medium flame.

Add the eggs and potatoes and a cup of water. Cook for eight minutes and don't forget to stir every now and then...

BINGO! Enjoy your North-Indian egg curry!

Grocery list (for 2 persons):

- 1 teaspoon of cumin seeds
- 1 cup of rice and sufficient water to cook it
- 4 eggs
- 2 potatoes, in 1 cm cubes
- 2 cloves of garlic, chopped
- 2 onions, chopped
- 2 tomatoes, chopped
- tablespoon each of: garam masala, turmeric powder, coriander powder, red chili powder
- pinch of salt (to taste)
- tablespoon of ginger-garlic paste

Aarzoo Kohra (22)
MSc student of Plant Sciences

Corona hygiene

When I first started my Master's in Molecular Life Sciences at WUR, I worked on a joint project with a partner I'd just met during the course. One day, he came to class with a red nose. He kept on sneezing into his hands and then he would use the keyboard, which we had to share, with his germ-contaminated hands. I wanted to be polite so I didn't say anything, but a few days later, I regretted it deeply when I was lying in bed with terrible flu.

During the coronavirus pandemic, we learned to stay at home when we experience the slightest symptoms of a cold. Even when we feel fine, we take better care of our hygiene and keep a distance from each other. This prevents not only the coronavirus from spreading but other diseases as well.
A German health insurance company announced that the number of people who reported sick in April and May 2020 was at a record low, compared to the same period in previous years. They link this to the efforts to contain the pandemic.
Even though safety is still a big topic at the university, people have become more careless these days. It is getting crowded again at the supermarket, and the shopping trolleys are not cleaned for us anymore. Personally, I don't mind the measures; I even like it when it is not so hectic in public places. Why don't we keep this up in the future, even after the pandemic, if it decreases the likelihood of being sick in the winter?
The pandemic has turned me into a kind of a germaphobe. I don't even want to get used to shaking hands again. Why don't we make it a custom to nod politely to each other, as is done in Japan? And let's keep up the habit of washing our hands and sneezing into our elbow, not on our colleague's keyboard.

Blog

Katrin Heidemeyer
Katrin Heidemeyer came to Wageningen in 2014 to do her Master's. She started her PhD at the Laboratory of Biochemistry thee years ago. She hails from Germany.

IN MEMORIAM

WIM VAN DENSEN (1948-2020)

We are sad to report that our valued former colleague Wim van Densen passed away on Sunday 5 July. Wim joined the Limnological Institute (now part of the Netherlands Institute of Ecology) in Oosterzee in the late 1970s. Some years later, he became a scientific officer and lecturer in the Fish Farming and Fisheries group (now AFI). Wim laid the foundations for today's productive collaboration on research between the fishing industry and Wageningen Marine Research, which is unique in Europe. Wim was the quintessential teacher: he could enthuse people and give clear, vivid explanations of complex matters.

Also on behalf of staff at Wageningen Marine Research and the Aquaculture and Fisheries group of Wageningen University,

Tammo Bult, Johan Verreth, Bram Huisman and Geert Wiegertjes

GUUST DE VRIES (1943-2020)

We received news that Guust de Vries (1943) passed away on 27 June. Guust was an employee at WUR for many years, working in what is currently the Education and Learning Sciences group (formerly the Agricultural Education/ Education and Competence Studies chair group). Guust was an excellent group secretary who impeccably documented the history of agricultural educational sciences.
Guust loved nature. From 1983 onwards, he took photos of wild plants in the Netherlands, which resulted in a book.
In 1995, Guust became adjunct of the group. When the chair group was unexpectedly discontinued in 1998, Guust took the decision to retire.
We remember Guust de Vries with much respect as a dynamic force within the former chair group.

Minny Kop, on behalf of the current and former staff of the Education and Learning Sciences chair group.

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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[no]WURries

‘My colleague at the lab often smells strongly of sweat. I would like to say something about it, but I’m not sure how to go about it. I get on well with him and I don’t want to spoil a good work relationship.’

Woman (36),
name known to the editor

Relate it to yourself

‘If I didn’t smell so good, I would want someone to tell me. So I would do the same for someone else. Especially if you have to work with him a lot, because that is unpleasant for you. Take your colleague aside and downplay the problem a bit. You could say, “I’ve noticed recently that you smell a little bit sweaty”. You could say that you sometimes smell sweaty yourself, to make it less embarrassing for him. The smell of sweat can linger in T-shirts, and no deodorant can compete with that. Throwing out old shirts is the only solution. You could give him that tip too.’
Effie Beumer, IT manager CC&M

Grateful

‘To me, this dilemma is in the same category as when you have food on your face or your fly is undone. Body odour is a bit more sensitive, but I would still mention it. Always with a question, such as, “Do you know your fly is undone?” or in this case, “Are you aware of having a strong body odour?” The next question is whether he has tried to do anything about it. Entering into a conversation is the best way of solving a problem like this. People are usually grateful to you in the end, because they were not aware of the problem.’
Henri ten Klooster, head of De Bongerd sports centre

Just say it

‘If I were you, I would just talk to your colleague about it. Everyone smells of sweat sometimes, you too, probably. Something like that doesn’t have to be embarrassing or humiliating for him – unless you make it so. So keep it light. You might consider first whether you are very sensitive to smells. It’s nice for the other person if you see yourself as part of the problem. Good luck! Hopefully you’ll soon be able to breathe through your nose at work.’
Hanne Berghuis, education and research assistant at Water Systems and Global Change

Limits to our influence

‘First, ask yourself whether you can accept or let go of the problem. If not, then you should tackle your colleague on the matter. You are probably afraid of hurting your colleague’s feelings. So make an observation, not an accusation: “I’ve noticed that you have a strong body odour”. Then ask if the person is aware of it. Maybe there is a medical reason and your colleague has been trying to get rid of his body odour. Or the person might go on the defensive and say it is not true. Even then, something has been done. If it really is news to your colleague, you’ve probably made him think and he might look for a better deodorant. And otherwise, tough luck, unfortunately. There is a limit to how much influence we have over our colleagues.’
Rolien Willmes, teacher of Strategic Communication

NEXT WURRIE

I am a teacher at WUR I would like tips on how to better organize online group work. What works and what doesn’t? I am also curious to hear from students!

Jessica Duncan, Associate Professor of Rural Sociology

*Do you have advice, suggestions or tips for this Wurrier? **Email resource@wur.nl by 26 August (max. 100 words)**. If you need advice yourself, email your problem (max. 50 words) to resource@wur.nl with subject noWURries.*