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Insect study 'makes no sense at all' | p.4 |

## Relocated

You follow your partner to Wageningen. And then? | p.18 |

## Poop pots

Students see chance to make money | p.27 |

# RESOURCE [EN]

For everyone at Wageningen University & Research

no 7 – 16 November 2017 – 12th Volume

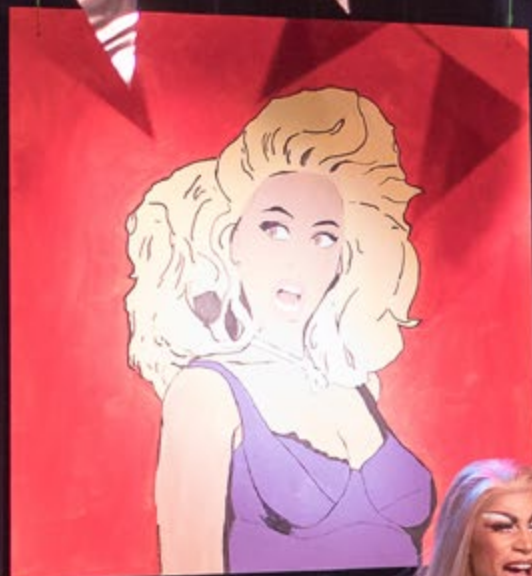
## Weed killer under fire

| p.12



## DRAG QUEENS

It was an experiment, explains Kees van Asselt, chair of Shout Wageningen. 'We had to do something different. At least, that's what we thought. We were a bit nervous because we had no idea how Wageningen would react.' The experiment worked out well, as he now knows. With a turnout of 170, the Wageningen LGBT association's first drag queen party in the Wilde Wereld was 'a roaring success'.  VK, Photo: Sven Menschel



See the photo series  
on [resource-online.nl](http://resource-online.nl)

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## GOOD NEWS

Journalists are often accused of only being interested in negative news. And indeed, I was raised as a journalist on the idea that 'Good news is no news' – the motto of one of my editors. Yet this goes against my nature, and I don't believe an exclusive focus on bad news is good for the credibility of a journalist or a publication. You need a balance in the subjects you choose as you manoeuvre in the territory between euphoria and bitterness. The litmus test for a news reporter can be to ask yourself what the story is that you are going to tell. The news reached us yesterday that WUR is ranked the best university in the Netherlands in the student guide *De Keuzegids*. Good news, and a great achievement. Thirteen times. But where is the story in this? It's just like the skating. When Sven Kramer won the European and World championships for the first time, it was big news. This year it happened for the ninth time. It really isn't breaking news at the coffee machine anymore. But that doesn't diminish the achievement in the least. So not much space is devoted to the 13th triumph in this magazine. But I'd just like to say: hats off!

Edwin van Laar



> [Ietje Termietje: a picture book with a Wageningen tint | p.7](#)

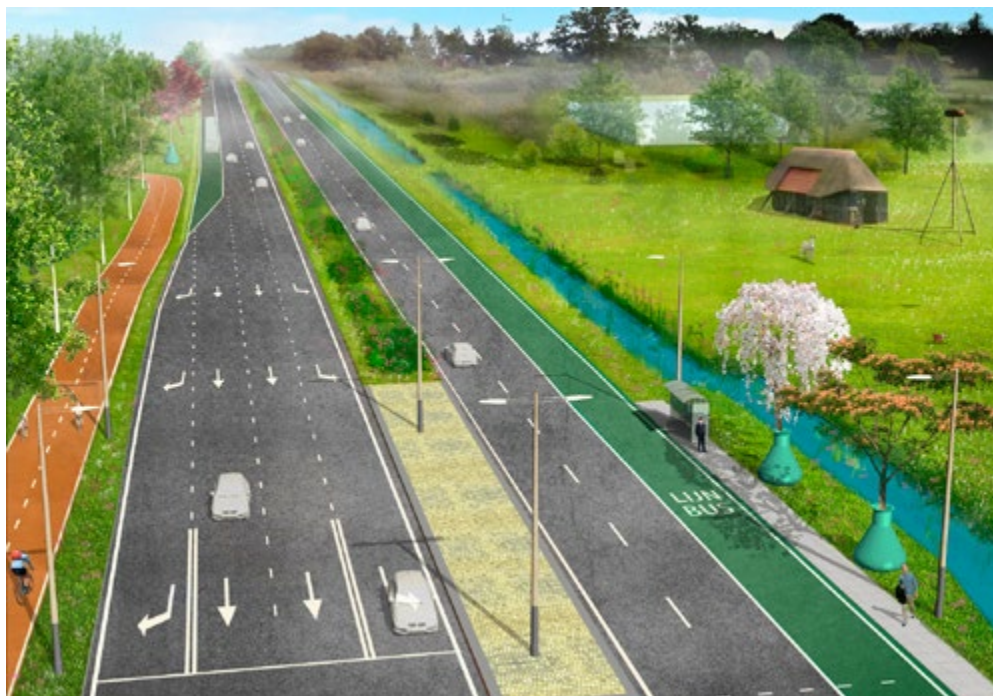
# MAKEOVER FOR ROADS TO WAGENINGEN

**As you come off the motorway and drive into Wageningen, there is not much to draw your attention to the proximity of WUR. That has got to change, agree Gelderland province, Wageningen, Ede and WUR itself. The road is to be lined with trees in green Erlenmeyer flasks, wooden lampposts and a green bus lane.**

Erlenmeyer flasks are an essential piece of equipment in the chemistry lab. Trees encased in 2.5 metre-high green flasks will make visitors aware they are entering distinct territory. The territory of the Ede-Wageningen Knowledge Axis. This term denotes the roads linking expertise centres in the two towns: the Business Science Park and WUR in Wageningen, and the planned World Food Centre in Ede.

The roads in question in Wageningen are the Nijenoord Allee and the Mansholtlaan. And in Ede, the new road running south of the A12, the road to the station and the new Parklaan past the former military barracks. This adds up to a total of 11 kilometres of roads that are not currently recognizable as 'an axis of knowledge'.

With a view to changing that and creating more coherence, the province, the municipality and WUR have come up with a few ideas, of which the flask-encased trees are an eye-catching example. This 'linear arboretum' is a nod to the botanical gardens in Wageningen, say the planners. Trees and flasks express the central theme of the landscaping: nature meets innovation.



An impression of the new, spruced-up Ede-Wageningen Knowledge Axis.

The flasks are fake, though: they are bottomless and the trees are rooted in the soil. The casings are made of biobased materials. The trees will be chosen for their flamboyant autumnal colours, unusual fruits or other striking features.

The dedicated bus lane along the Mansholtlaan will be coloured green and the cycle paths along the entire route will be given an earthy terracotta colour. Wooden lampposts with an aluminium base will be used for the

LED lighting along the roads. The cycle paths will have aluminium masts with dynamic lighting which shines brighter when cyclists or pedestrians approach at night.

The verges along the road will blend into the environment. Along the Mansholtlaan that means orchid-rich verges with species that thrive on soggy ground. The changes will be made gradually over the next few years. Nothing is known about the price tag of the Knowledge Axis's makeover. **RK**

## 'ALARMING INSECT STUDY IS SHAKY'

**The study in which Nijmegen researchers conclude that three quarters of the flying insects in Germany have disappeared is based on inadequate data, according to Wageningen entomologists Keen Booij and Theodoor Heijerman, writing on Kennislink.**

A publication in *PlosOne* about the study prompted a flurry of alarming articles in media at home and abroad at the end of last month. The British newspaper *The Guardian* went so far as to talk of an Armageddon threatening all life on earth.

But is this story correct? Are there really three quarters fewer insects than there were 30 years ago? Nonsense, say Booij and Heijerman. They have fundamental criticisms of the statistics supporting the article. 'This should never have

been accepted by *PlosOne* in this form,' responds Booij when asked about it.

The researchers at the Radboud University used a long-term dataset from the Krefeld Entomological Association, which placed insect traps in 63 German nature areas. Between 1989 and 2016, the average catch had gone down from 9 to 2 grams a day, according to the researchers, falling by three quarters. But this is jumping to conclusions, say the Wageningen scientists.

Booij: 'This is not a monitoring exercise, because for that you would have to monitor the biomass at a large number of locations spread over the whole of Germany. The measurements were only taken in a small area of Germany, and at many places only once or a couple of times in 27 years. So the setup makes no sense at all for

monitoring an overall trend in the period.'

According to both entomologists, the dataset is not a suitable basis for trend analyses. The data show enormous fluctuations in biomass between different years. According to Booij, that is a known fact about insects. Insect numbers can vary by a factor of 10 from week to week or from year to year. By distilling a trend from this, the Nijmegen scientists are on very shaky ground.

Booij is now working on a sound scientific response to the *PlosOne* article. **RK**



Kees Booij

PHOTO: GUY ACKERMANS

## TWO NEW RESOURCE COLUMNISTS

**Guido Camps and Vincent Oostvogels are Resource's new columnists. Together, they are taking over from ex-PhD researcher Stijn van Gils, who has been baring his soul to us for the past two years.**

Guido Camps (34) is a familiar face for many people. He is a vet, and is due to graduate soon from the department of Human Nutrition for MRI research on gastric emptying in humans. He keeps bees and has a soft spot for unusual animals. At home he takes care of his 'much-loved' tortoise Binky Poe. Guido is also chair of the WUR Council. He achieved national renown last year when he showed off his baking skills on

the TV programme *Heel Holland bakt*.

Vincent Oostvogels (22) comes from Zundert in Brabant but has already lived in Wageningen for five years. He is in the second year of the MSc programmes in Forest and Nature Conservation, and Animal Sciences. What interests him is the delicate relationship between nature management and food production. Vincent is very involved in a project aiming at intensifying vanilla production on Madagascar and he relaxes by working in his own Wageningen vegetable garden.

Camps and Oostvogels will take it in turns to provide the column. Camps kicks off in this number. **EVL**

## © COLUMN | GUIDO

### Symbolic campaign

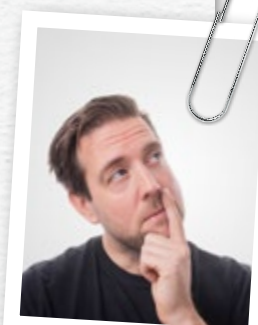
The new Dutch government has just climbed into the saddle. One of its plans is to raise the lower VAT rate, which applies to food among other things. Much has been written in the media about a letter to the cabinet from several interest groups which argue for exempting fruit and vegetables from the VAT hike. The letter was the initiative of fruit and vegetable growers but – according to the media – was also signed by Ingrid Steenhuis, professor of Prevention and Public Health at VU Amsterdam and Wageningen University. The food watchdog Foodwatch is supporting the campaign with a petition which has been signed nearly 58,000 times to date.

Now as a PhD candidate in the field of Nutrition, I am all in favour of initiatives that promote a healthy diet, but I do think this campaign is purely symbolic. On its website Foodwatch claims that a Mars bar costs 36 cents and an apple 59 cents. The organization calls on the government to make fruit and veg VAT-free. 'Because an apple that is cheaper than a Mars bar – that would be a healthy food policy in practice!'

The VAT on an apple is just over 3 cents. Frankly, that won't stop anyone eating a Mars bar. And ironically enough, that apple still won't be cheaper than a Mars bar even if the Foodwatch plan is implemented.

If you ask me, there is little scientific evidence that a reduction of a few cents will prompt consumers to eat fewer unhealthy snacks and more apples. Next time I hope Wageningen will only sign up to campaigns that aim higher. **EVL**

**Guido Camps** (34) is a vet, and will soon graduate with a PhD for MRI research on stomach emptying in humans. His hobbies are baking, beekeeping and unusual animals.



### in brief



#### >> LISA BECKING

##### Young Academy member

Researcher Lisa Becking at Wageningen Marine Research is to become a Young Academy member. The platform for high-flying young researchers made that announcement this week. Becking investigates how marine organisms adapt to climate change. She and nine other new members were selected from the 90 scientists who had applied. The committee decided that Becking would be an asset to the platform with her research and interests. She wants to raise awareness among scientists and the general public about life under water. She is currently travelling and could not be reached for a comment. **EVL**

#### >> NEW PROFESSOR

##### Two million euro grant

The Plant Physiology group will get a new professor, Christa Testerink. She is currently professor of Plant Cell Biology at the University of Amsterdam (UvA) but she will start work at Wageningen on 1 December. Testerink will succeed Harro Bouwmeester, who left for the UvA in 2016. She will be

bringing nine researchers from the UvA with her plus a prestigious personal ERC grant of two million euros for research into the stress responses of plants to soil salination. Testerink will give her inaugural lecture at the end of 2018. **EVL**

#### >> GUIDE

##### Wageningen top again

Wageningen has been declared the best university in the Netherlands by the Higher Education Guide, for the 13th year in a row. Despite the increasing pressure of numbers, students are still pleased with the quality of the education. Wageningen scores above average – usually 'excellent', in fact – in nearly all subjects, according to the 2018 Guide, which is published on Thursday 16 November. The gap with respect to other universities is becoming bigger. Last year Wageningen scored 74.5 points while the Open University and Eindhoven University of Technology were ranked second and third respectively with 73.5 and 64 points. This year Wageningen has 76 points, 13 more than the university in second place. Read the full story at [resource-online.nl](http://resource-online.nl). **EVL**



## GROWTH IS KEY TOPIC FOR NEW WUR COUNCIL

The new WUR Council will be focusing on the university's growth and an evaluation of the tenure track, says the new chair, Guido Camps.

The central representative body wants an open debate on how the university is growing, says Camps. 'At present we talk about growth in relation to buildings or evening lectures, but we think there also needs to be a discussion about the policy. We want to know what the exact plans are. What size is WUR aiming for in the longer term and will it fit in the campus we have now?'

Tenure track is another item on the agenda. All WUR researchers are on a track where they can become a professor holding a personal chair in 12 years as long as they fulfil strict requirements for teaching and research. 'If we stick to this combination of education and research, everyone with a permanent position who teaches will eventually end up as a professor with a personal chair,' says Camps. 'It's debatable whether this is sustainable when the demand for teachers is rising. Perhaps there should be another career path for lecturers who aren't interested in doing research.' Camps would like to hear the chair groups' thoughts on this. **LvdN**

## CBS FINE-TUNES REPORT ON NORTH SEA FAUNA

Following criticism from Wageningen Marine Research, the CBS (Statistics Netherlands) has adjusted its report on the fall in numbers of several animal species in the North Sea.

At the end of October, the CBS reported that the number of animals in the North Sea had gone down by 30 percent as a result of bottom trawling. The statements are based on the Living Planet Report published by the CBS together with the Worldwide Fund for Nature WWF, which is partially based on data from Wageningen Marine Research. Wageningen Marine Research reacted with astonishment because the report's conclusions cannot be drawn from the Wageningen data.

'We have no doubt that bottom trawling has an impact on seabed life, but the intensity of fishing has actually gone down over this period,' says Ingrid Tulp, a researcher at Wageningen Marine Research. She also thinks it is odd that a causal relationship is asserted on the basis of data collected for monitoring purposes. These data do not provide a basis for identifying causes, says Tulp. 'You need much more searching research for that, in which you try to work out the reasons for particular population fluctuations per species or group of species. It seems as though the writers of this report arbitrarily decided on a cause. There have been other changes in the system too, such as sand replenishment and the water temperature.'



PHOTO: SHUTTERSTOCK.COM

The CBS, the WWF and Wageningen Marine Research will confer about the contents and conclusions of the report, says Tammo Bult, director of Wageningen Marine Research. The CBS looks forward to the consultations, says CBS spokesperson Cor Pierik. He wants to wait until after the consultations before making a more detailed statement. The news bulletin on the CBS website has already been adjusted, to the satisfaction of Tulp. 'We place a high value on careful formulation of conclusions and are open to consultations with the CBS.' **TL**



PHOTO: SVEN MENSCHER

## MARTIAN WORMS

Would wild rocket salad plants grow better on Martian soil if there were worms in it? Probably, suggest preliminary results from Wieger Wamelink's experiments in gardening with Mars-like soils. He harvested his rocket yesterday. In the photo, Wamelink is bisecting a clump of soil to examine its structure. Three live worms appeared. They will now go into a worm hotel to recuperate from their 'space travel'. **RK**

Read more about the Mars research on [resource-online.nl](http://resource-online.nl)

## TERMITE STUDY LEADS TO CHILDREN'S BOOK

Niels Kerstes studied termites during his university years in Wageningen. Now the alumnus has put his knowledge into a Dutch children's book: *Ietje Termietje*.

Termites are mightily interesting little creatures, if you ask Kerstes. Just take the gender equality in the termite world, for a start. 'When termites are born, all the possibilities are open to them. It makes no difference whether you are male or female. Any termite can become a soldier, a worker or a king or queen. The future is still wide open.'

Kerstes became fascinated by these insects when he was doing a degree in Biology in Wageningen. He did a few months' fieldwork in South Africa for a study on fungus-growing termites. 'I saw with my own eyes what incredible things these tiny insects are capable of. I wanted to share my sense of wonder through the book *Ietje Termietje*.'

The book follows the life of Ietje the termite. 'Along the way I explain how a termite hill is constructed and what everyone's role is in that.' It will come as no surprise to hear that Ietje ends up as queen. The book is for children of up to about seven years old. And what more could you want than to become queen? 'But it was necessary for the storyline too,' says Kerstes, 'so as to be able to describe the entire life cycle of a termite colony.'



An illustration from alumnus Niels Kerstes's children's book *Ietje Termietje*.

In actual fact, he adds, being a termite queen is no fun at all. 'Queens can live for up to 30 years, and they spend all that time in the same room, with just one task: producing eggs. The queen's back end gets so big she can no longer move. She is just an egg factory.' Until she dies. But the book doesn't take the story that far.

Kerstes's illustrations are simple, clear and colourful. 'I did a lot of drawing at pri-

mary and secondary school. I stopped doing it at university, and only picked it up again after I got my PhD.'

It is still a hobby for now. 'I would like to do more with it, but it's not easy.' Kerstes, who works at natural history museum Naturalis, used to be the editor of *De Buitendienst*, a TV nature programme for children.

*Ietje Termietje* is not in the shops yet but is available online. **RK**

### GUYS ON CRATES

Four guys sitting on crates in a greenhouse. The photographer is apparently chatting to them and you can clearly see they are having a laugh. We have no information on the year and location, nor can we identify the men. Smoking on the job was clearly not an issue, at any rate. If you can tell us more about this photo or if you have another nice story, then pop into the *Resource* office in Atlas or send an email to [edwin.vanlaar@wur.nl](mailto:edwin.vanlaar@wur.nl). WUR will be celebrating its centenary in 2018. As part of the celebrations, the *Resource* editors have been unearthing unusual photos in the archives.

See the photo series  
'100 years of... laughter'  
on [resource-online.nl](http://resource-online.nl)



PHOTO: LEEN VERSCHOOR

## NEW ROUTE TO BETTER PHOTOSYNTHESIS

**Wageningen geneticists have succeeded in improving photosynthesis in plants by means of classic plant breeding. This paves the way for higher crop yields.**

Scientists have been working continuously on improving crop yields, but have only recently started targeting photosynthesis. 'Breeding for photosynthesis is tricky,' says endowed professor Mark Aarts (Genetics of Plant Adaptation). He thinks this is because it is difficult to measure the impact of natural variation in photosynthesis on growth. Moreover, for a long time scientists believed that nature itself had optimized photosynthesis, and that it could not be improved upon.

But that is a misunderstanding, shows research by Aarts and his colleagues. They grew *Arabidopsis thaliana* in very low light conditions and then exposed the plants to light that was five times stronger. Initially this halved the

efficiency of the photosynthesis. The plant protected itself against so much light, but recovered again after a few days.

The speed of that recovery varies. Some *Arabidopsis* plants recover much faster than others. That variation can be traced to genetic differences. Aarts's group, with Roxanne van Rooijen as first author, managed to identify one gene – Yellow Seedling 1 (YS1) – that plays a key role in that recovery. Some variants of the gene promote fast recovery. So Aarts concluded that it is possible to breed plants for more efficient photosynthesis. And no genetic modification is required: classic plant breeding suffices.

This is not to say that YS1 is the miracle gene that will lead to better crops. Aarts 'In itself, this gene is not the most interesting thing about our research. There are at least 30 different genes in *Arabidopsis* that are involved in the adaptation of photosynthesis.



PHOTO: SHUTTERSTOCK.COM

Some *Arabidopsis thaliana* plants recover from sudden exposure to bright light faster than others.

Now we have zoomed in on this one gene.'

The Wageningen researchers also figured out how the YS1 gene influences photosynthesis. Light influences the expression of the gene, which codes for a protein that is active in the chloroplasts – the compartments of plants' cells

responsible for photosynthesis. In plants with the most useful form of the YS1 gene, that expression is much less dependent on changes in light intensity than in plants with the least favourable form. These plants therefore recover faster from a change in light intensity. **© RK**

## B12 NO BETTER THAN PLACEBO FOR BOWEL DISEASE

**Patients with irritable bowel syndrome or chronic inflammatory bowel disease who take extra vitamin B12 do not become any less tired than patients on a placebo. This was discovered by researchers from Human Nutrition in a clinical study published recently in *Clinical Nutrition ESPEN*.**

Irritable bowel disease, ulcerative colitis and Crohn's disease are accompanied by chronic fatigue in many patients. Alternative health practitioners often prescribe high doses of vitamin B12, even when the patient has normal blood levels of B12.

'Initially we didn't believe in this,' says co-author and research leader Ben Witteman, endowed professor of Nutrition and Intestinal Health Transitional Care. 'But when seven out of ten people in a pilot benefitted from high dose B12, I wanted to do a placebo-controlled study. I had a hunch that this result had to do with the placebo effect. So we tested that with this study and indeed, it turns out that extra B12 has no added value.'

The study involved 95 patients with normal blood levels of vitamin B12. Patients with an



active bowel infection were excluded. 'We focussed purely on patients with chronic fatigue without any physical anomalies,' says Witteman, who is also a gastroenterologist at the Gelderse Vallei hospital in Ede.

It was difficult for the researchers to get their study published, says Witteman. 'That surprised me. At the moment vast amounts of vitamin B12 are taken without giving it much thought. We show that this treatment is nonsense, but scientists do not seem to be as interested when there is a link with alternative medicine.'

It is customary for participants in an intervention study to be allowed to continue taking medication that they benefitted from. 'In both the research group and the placebo group, there were people who wanted to go on taking the pills. That was a bit of a problem because we had only made limited quantities of the placebo.'

Meanwhile, a lot of research has also been done on bowel patients who do have a vitamin B12 deficiency. Witteman: 'Those people are tired too. But of course you *can* treat them with vitamin B12. They get a lot better on it.' **© AJ**



## PROSPECT OF BETTER VACCINES AGAINST *MYCOPLASMA*

**Efficient production of vaccines against the bacterium *Mycoplasma hyopneumoniae*, one of the commonest causes of pneumonia in pigs, has come a step closer. PhD candidate Tjerko Kamminga studied the growth and survival of the bacterium. His results can be used to improve the production of the vaccine.**

'Vaccines exist, but the production process is tricky,' says Kamminga, who received his doctorate from the Systems and Synthetic Biology chair group on Thursday 16 November. 'One of the reasons for this is that we don't know which factors cause the disease, and therefore don't know exactly which components you need to put into the vaccine to provide protection.' So the vaccine is currently made using whole, dead bacteria. One disadvantage of this is that the bacteria first have to grow on a nutrient base with animal components. That is expensive and it delivers variable results.

In the course of his research, which was financed by pharmaceutical company MSD Animal Health, Kamminga discovered that the bacterium grows

faster on other nutrients. 'Our analysis showed that the bacterium only uses 16 percent of its energy for growth. When we add the substance pyruvate to the nutrient base, the bacteria grow faster and we end up with more than twice as many of them.' This makes it possible to produce more vaccine in the same time, bringing down the costs of the process.

Kamminga also analysed the genes of 80 species of *Mycoplasma* bacteria. On the basis of the results he could predict whether a bacterium can infect a pig, a ruminant or a human. He also looked at which genes were active during an infection. 'If we know which genes are involved and exactly what they do in different animal species, we can focus specifically on these components when developing a new vaccine.'

Kamminga found a total of 62 genes which were more active – or indeed less active – during infection. In some cases, it is already known what their function is. In a follow-up project (MycoSynVac), further research will be done on exactly what the genes do and which are the key ones during infection. **TL**



*Mycoplasma hyopneumoniae* is one of the commonest causes of pneumonia in pigs.

## VISION

### 'There've been antidepressants in our rivers for years'



**American research has proven that fish in the Niagara ingest antidepressants via the river water. According to Ivo Roessink, an Environmental Risk Assessment researcher at WUR, this is a global problem.**

**Are there antidepressants in Dutch rivers too?**

'Yes, active ingredients in antidepressants largely survive conventional water purification technology and end up in our surface water. Little is known about the effects on the ecosystem. Nor are the effects very obvious: fish don't go floppy straightaway and plants just keep on growing. The substances can bring about a shift in the ecosystem, but we do not know how big that shift is.'

**Why is so little known about this?**

'The alarm bells only started to ring about seven years ago, and that is too short a time to be able to establish a long-term effect. Lab studies have been done on the behaviour of fish which ingest different amounts of antidepressant. Some fish became very relaxed, and others weren't affected at all. A few years ago researchers discovered that endocrine substances in contraceptive pills were giving male fish in the Dommel female characteristics. You don't want that, of course.'

**How can we prevent medicinal substances getting into surface water?**

'First of all by taking fewer pills. Also, water purification technologies have improved in recent years and you can remove medicines with extra purification stages. That is expensive so we still have to weigh up how necessary we think it is to invest in it. Water boards are giving the issue a lot of attention at the moment: they want to find out whether there is indeed cause for concern. Increasingly often, they measure exactly which pharmacological substances water contains.'

**Should we be wary of eating fish?**

'Eating fish can cause you to absorb undesirable substances, as we saw in the case of eel. Whether there is any question of what is called secondary poisoning from drug residues, we don't know. Theoretically it is a possibility.' **DdV**

# SPONGE CRABS SETTLING IN EASTERN SCHELDT

**It looks as if the sponge crab is gaining a foothold in the Netherlands. Divers have come across the crab several times in the Eastern Scheldt estuary. Reindert Nijland of the Marine Animal Ecology group has now reported on the finds in *Marine Biodiversity Records*.**

Crab expert Nijland has a soft spot for the sponge crab, which was last seen in the southern North Sea in 1953. The creature is covered with tiny yellow hairs that give it a woolly appearance. Nijland: 'That makes the crab look rather cute and cuddly. What is more, its claws have bright pink fingers as if it's wearing nail varnish.'

Two of Nijland's friends, the biologists Floris Bennema and Godfried van Moorsel, discovered the crab in August last year near Zee-

land Bridge. They brought the crab back in a bucket and phoned Nijland. 'I jumped in the car immediately.' The news about the sponge crab was covered in various media, after which reports came in via the ANEMOON Foundation's Facebook page from divers who had also seen sponge crabs in the Eastern Scheldt. Analyses by the three friends suggest there are at least a handful of different sponge crabs out there, both male and female.

The sponge crab gets its name from the fact that it carries a sponge on its back as camouflage. An almost perfect trick when the seabed is covered with sponges. The crab has two pairs of hind legs that have evolved into little pincers that keep the sponge in place. Nijland says the sponge is hallowed out until it has become a



PHOTO: MICK OTTEN

The sponge crab gets its name from the sponge it carries on its back as camouflage.

close-fitting 'jacket'. 'The sponge is still alive; it can cope with that kind of treatment.'

The sponge crab normally lives in the Atlantic Ocean off the coast

of Portugal and Africa and in the Mediterranean. Nijland thinks the crabs came up here as larvae. It remains to be seen whether they will stay in Zeeland. **✎ RK**

# FENLAND EMISSIONS OFFSET STORAGE IN WOODS

**Dutch woods capture only a small fraction of the total national emissions of CO<sub>2</sub>. What is more, that sequestration is offset by the emissions in fenland. This sobering conclusion was drawn by Wageningen researchers and the CBS (Statistics Netherlands) in the Netherlands' first Natural Capital Accounts.**

The report was commissioned by the Ministry of Economic Affairs and the Ministry of Infrastructure and the Environment. According to Professor Lars Hein of Ecosystem Services and Environmental Change, this approach is new because it is the first time that carbon movements in the economy and nature have been combined in a single overview. That has resulted in some illuminating comparisons. 'For example, a large coal-fired power station emits as much CO<sub>2</sub> as all the fenland in the country combined.'

Linking the data to ecosystems also gives detailed maps of where CO<sub>2</sub> is emitted and stored. That spatial aspect is useful information for policymakers in particular. It is even possible to see whether individual plots of land are a source of carbon or a carbon sink.

When looking at ecosystems, fenland is the main culprit for emissions. One hectare of fenland emits as much CO<sub>2</sub> as three

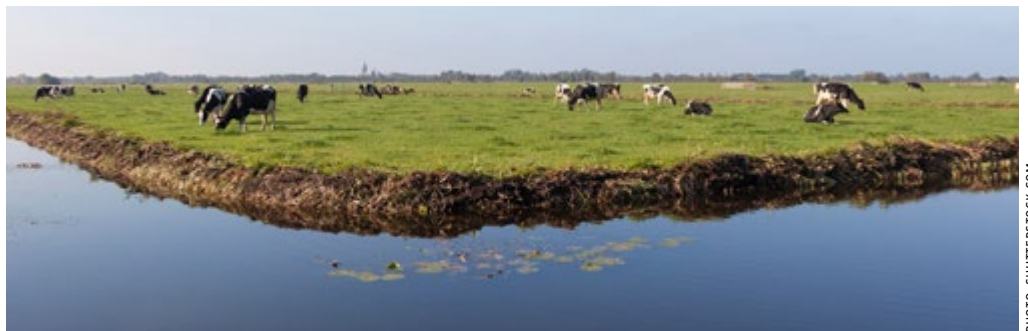


PHOTO: SHUTTERSTOCK.COM

The emissions from fenland in the Netherlands are twice the amount stored in all other ecosystems combined.

households. Forests and other natural environments sequester carbon but the emissions from fenland are twice the amount stored in all other ecosystems combined.

The fenland areas in Friesland and Drenthe are largely responsible for the emissions. Low groundwater levels are making the peat oxidize in the air. A lot of CO<sub>2</sub> is released in that 'combustion' process. It should however be noted that this is merely a fraction of the country's overall emissions into the atmosphere (less than four percent). Those emissions total 195 megatons of CO<sub>2</sub>.

Hein says a lot needs to be done if the Netherlands is to become climate neutral.

'We won't get there just by planting more forest.' He supports the government's plan to store CO<sub>2</sub> in the ground. 'But out at sea rather than on land.' However Hein argues that the real solution to the climate problem lies in tackling the peat areas in other parts of the world. 'Indonesia, for example, has over 15 million hectares of peatland, half of which has already been drained and is therefore degrading. If we want to keep the rise in temperatures to less than two degrees, we have to make that peatland wetter and replant peat forests. Of course we also need to work on the emissions from our own fenland areas.' **✎ RK**

Not all our news bulletins, videos and photos get into *Resource* magazine. Here is a selection of what is online.

#### NOBEL PRIZE WINNER

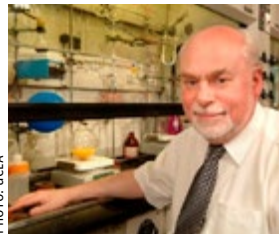


PHOTO: UCLA

Fraser Stoddarts, winner of the Nobel Prize for chemistry in 2016, is coming to Wageningen to talk about his work on Friday 17 November. Hosting the event will be professor of Organic Chemistry Han Zuilhof. The two scientists know each other as they are both visiting professors at Tianjin University in China. The Scottish scientist will give a lecture and will have lunch with five students.

#### OPPORTUNITY FOR STARTUPS



PHOTO: SVEN MENSCHEL

There were two startup events on campus this week. One of these was a seminar for the Philips Innovation Award (PHIA), at which students with good ideas could get all the information they needed to make a good pitch. And then there was Start-up24, at which participants had to develop a

good business plan within 24 hours. The winner was Topsport Consultancy.

#### MOL GOES DIGITAL



PHOTO: JELLE MAAS

Rector Arthur Mol is going to lead a nationwide project on digitalization in higher education, at the behest of the universities association VSNU. The aim is for all the higher education institutions to move forward together in introducing and testing new technologies.

#### WAGENINGEN DICTATION



PHOTO: JOOST LUTTENBOGAARD

Five members of staff at WUR won the Great Wageningen Dictation on Wednesday 8 November. Legal expert Reynout Hana (on the left of the photo) won the individual competition with 12 mistakes, and bagged the team prize, together with his four teammates. D66 MP Pia Dijkstra read out the dictation, which was full

## MEANWHILE ONLINE

of booby traps such as *impardonnabel*, *kaf-kaësk*, *bouillabaisse* and *gazpacho*.

#### TIMES RANKING



Wageningen University & Research appears for the first time this year in a new category in the Times Higher Education ranking. WUR has gone straight to 84<sup>th</sup> place in the ranking for Clinical, Pre-clinical & Health. This is probably because this time WUR submitted its data under several different headings, such as health, nutrition and life sciences.

Watch and read it all on [resource-online.nl](http://resource-online.nl)

*Raising a child during a PhD creates a healthy balance between time spent to work and private life.*

## PROPOSITION

### ‘Children put everything into perspective’

**PhD research and babies don't seem an ideal combination at first sight. But there is never a perfect time to start a family anyway, says Jordi Boshoven. And after a frustrating day in the lab, nothing helps give you a sense of perspective more than two tiny arms around your neck.**

‘My eldest son was born about halfway through my PhD research. My wife and I deliberately decided not to wait. She's five years older than me and of course we didn't know how long exactly my PhD would take.

On the one hand you could say that doing a PhD becomes more difficult once you have kids. But on the other hand children really help you switch off as soon as you get home. Then you don't have time anymore to worry about your research. I saw fellow



Jordi Boshoven graduated with a PhD on 10 November for his study of the resistance of tomato plants to the fungus *Verticillium dahliae*.

scientists working up to 60 hours a week, including in the evenings and weekends. That wasn't an option for me. But this also made me more focused during the hours that I did spend on my study.

Children also put everything into perspective. When you come home to your family, you immediately see the day's problems in a different light. Then you think: what's it really all about? There are more important things in life.

I would advise other people facing this choice to not let yourself be influenced too much by rules such as “you have to finish everything first before you start a family”. It's really never quite the right time. So if you want children, don't let your career get in the way.

No, my sons won't be at my PhD ceremony on Friday. We didn't want to put them through the ordeal of an entire day surrounded by talking adults.’ LdK



# The perfect enemy

The weed killer Roundup is under fire. On social media, criticism is raining down on the manufacturer Monsanto and anyone who dares to question the harmfulness of the herbicide in any way. But how damaging is it? And why has this herbicide in particular aroused so much hostility?

text Stijn van Gils illustration Geert-Jan de Bruins

Opposition to glyphosate (sold under the brand name Roundup, among others) has increased considerably in recent years. It is alleged to be carcinogenic, cause damage to the liver, harm aquatic life and affect bees' sense of orientation.

The evidence for this is not strong. The herbicide is not on the EU's 'list of candidates for substitution', which lists hazardous substances that have not yet been banned. Unlike fipronil, which is used legally to deal with fleas in cats and dogs. Nor does glyphosate appear among the top ten most damaging substances in the *Atlas of Pesticides in Surface Water*. Unlike the insecticide imidacloprid, for instance, where there are much clearer links to damage in aquatic life and insects.

## NO DEBATE

And yet there are few other substances that are as reviled as Roundup. Only a few weeks ago, WUR researcher Violet Geissen in the Soil Physics and Land Management chair group put her oar in as well. She published a study that showed that glyphosate can be found in almost half of all agricultural land and that it can spread more easily by wind and water than was previously thought. She advocated a ban, even though her study does not say anything about the ecological risks from glyphosate remnants. She also said that there were lots of traces of other substances too, although the data on this have not yet been published.

Why does Roundup keep getting lambasted? Paul van den Brink, researcher at Wageningen Environmental Research and professor holding a personal chair in the Aquatic Ecology and Water Quality Management group, thinks he knows why. 'Monsanto, which produces Roundup, barely engages in the scientific debate at all. They just claim their herbicide is safe and are not prepared to investigate this properly. Other manufacturers are not quite as bad. They do at least attend scientific conferences and take part in the debate.'

## GENETIC MODIFICATION

What is more, many of the environmentalists who oppose herbicides and pesticides are also against the use of genetically modified crops. That generally leads to complex



arguments full of contradictions because the genetic modification of plants can reduce the need for herbicides and pesticides. But opponents see the ‘two evils’ united in Roundup. In the US, the herbicide is often marketed in combination with GM crops. ‘They are resistant to Roundup so their cultivation has become highly dependent on that herbicide. Whereas we want agriculture to become *less* dependent on chemical crop protection,’ explains Bert Lotz, team leader at Wageningen Plant Research. ‘This has damaged the weed killer’s reputation, even though that combination of variety and herbicide is never used in Europe.’

Lotz has seen the debate about Roundup become more entrenched in the past few years. About ten years ago, his team compared the herbicide with other weed control methods. ‘Drinking water companies were finding it in the surface water and wondered whether it should be banned. The manufacturer Monsanto thought not because the measured concentrations were comfortably below the ecological risk threshold. We were then commissioned by Monsanto *and* the drinking water companies to look at what would be the best option.’

#### ABSENCE OF NUANCE

His team recommended using the herbicide less and taking measures to prevent it ending up in the surface water. Lotz: ‘If you use the herbicide occasionally, that already has a big effect on the weed pressure; you can then use mechanical weed control methods and concentrate more on prevention in the intervening period. Assuming that the weed killer is safe (I leave that decision to the authority in charge of approval), we concluded that alternatives would be more harmful as they scored worse in a life-cycle analysis, especially on air quality. I still stand by that conclusion. But I

can’t see us doing that kind of research again in the near future. There’s no more room for fine distinctions in the debate. The drinking water companies simply think the herbicide should be banned. No one is interested in further research.’

Lotz deplores the total absence of nuance. ‘Everything is so extreme. Either the weed killer should be banned outright or it should be approved for use for at least another five years. I’d prefer to see an intermediary solution where the approval could be withdrawn again on the basis of interim studies.’

#### DOSAGE OPTION

Various other WUR researchers would also like to see a less polarized debate. ‘Glyphosate isn’t that harmful for the groups that are my area of expertise — birds and mammals,’ says Nico van den Brink, assistant professor in the Toxicology group and Paul’s brother. ‘But the herbicide is used an awful lot. We also need to properly investigate its degradability, which appears to be worse than we’d assumed. It’s a pity that we can only choose whether or not to approve the herbicide again — there’s no dosage option, for instance, where we approve it but only for a maximum of so many kilos a year for the country as a whole.’

His brother, Paul van den Brink, says, ‘We only ever talk about the possible risks; we never discuss how much risk we find acceptable. Every time we get into a car, we run a risk that it seems we find acceptable. Only in chemistry do we apparently want zero risk.’

#### RESPONSIBILITY

Industry and the approval authority have primary responsibility for the risks, says Paul van den Brink. ‘The manufacturer is responsible for the weed killer from its development until the very end but they often don’t accept

that responsibility. A lot of tests are carried out before a herbicide is approved but you only really find out what it does when it gets used in practice. But that’s when the research stops. That’s why so little is known about the behaviour of herbicides in field conditions. There are hardly any large-scale field studies. I think the industry should facilitate far more research into the impact in the field of a herbicide after it has been approved. Only then will the outside world feel the sector is taking the potential risks seriously. That seems to me the best way of ending the polarization.’

However, there is little chance of that for now. Monsanto is keeping mum and the government authorities are bickering about whether or not to approve the herbicide. The controversy and polarization look set to continue. **B**

### IMPASSE AROUND APPROVAL

European farmers can use the weed killer glyphosate (marketed under the trade name Roundup, among others) up until 15 December. That is the date on which the licence expires. It is not clear whether the herbicide’s approval will be renewed. The European Commission initially wanted to renew it for another ten years but there was no valid majority for this in the European Council (the member states). Last week, the member states voted on a renewal for five years but they couldn’t agree on that either. The Dutch parliament voted in favour. If the member states fail to reach a decision in the coming weeks, the European Commission will be allowed to decide for itself.

# Old herb book deciphered

She wanted an out-of-the-ordinary internship and she certainly got one. Like a true detective, Biology student Ingeborg Swart unravelled the secrets of an old book of plants in the Artis library.

*text* Roelof Kleis *photos* Sven Menschel



**T**he safe in the library of Artis Zoo in Amsterdam contains a flat cardboard box. In that box is a book, A4 size, with exquisite hand-coloured drawings of flowers and plants. The illustrations have been glued in carefully and are accompanied by hand-written texts. At first glance it appears to be a kind of catalogue.

Artis curator Hans Mulder had the book brought up to the library especially for the *Resource* photo session as the catacombs of the Artis library are strictly forbidden territory. Even Master's student Ingeborg Swart has never been there. But there is plenty to enjoy in the library itself. It's like walking into a Harry Potter film. Thousands of brown, leather-bound volumes cover the walls. Scholarship from days gone by. The only painting in the room is of a stern-looking Carl Linnaeus.

#### WHO WAS THE AUTHOR?

'Isn't this fantastic!' Swart's eyes sparkle at the sight of this treasure-trove. She 'really loves' books. 'I wanted something different from your average ecology internship. I wanted to do something with biology and communication.' She contacted the Naturalis museum, which was convenient as Tinde van Anandel, who works at Naturalis and is also professor by special appointment in Ethnobiology at Wageningen, had just come across something interesting: an old, forgotten, mysterious book of plants in Amsterdam.

*Corpora ex Regno Vegetabili of Ligchaamen uijt het Plantenrijk*, it says in flamboyant letters on the cover (which translates as 'bodies from the kingdom of plants'). That's all. No author, no town, no date. The book contains 271 descriptions of plants, with hand-coloured drawings added of 136 plants. Swart was given the job of identifying the plants and finding out who the author was.

To start with the second task: she wasn't able to discover who wrote it. Swart thinks the author must have been a dealer in medicinal plants and that he produced the book in around 1800. She arrived at that date based on the watermark in the paper. Swart drew her conclusion about the profession of the man (or woman, but that is less likely) because of aspects of the texts. But the author is still unknown.

**Biology student Ingeborg Swart investigated a book of herbs around 200 years old that is in the Artis library.**

#### DETECTIVE WORK

It was a bit like CSI, only with books. She started by taking photos of every page in the Artis library, perched on a stool and using a borrowed camera. The book itself is too fragile to work with. Then she read the book, converting the old-fashioned language into modern Dutch and eventually translating it into English. That was the easy part.

The real detective work was in finding the names of the various plants. Swart says, 'That took a lot of effort. A Dutch name and two semi-scientific names were given for most of the plants. The author didn't use the Linnaeus classification, which is the standard these days. That made it difficult to find the Dutch names for the exotic plants in particular.' Swart spent a lot of time in the Naturalis Herbarium in Leiden tracking down similar illustrations and descriptions in old reference books from that period. 'Really fun detective work.'

#### CORNFLOWER

Incidentally, the illustrations in the manuscript are not original. The author has cut them out of a known standard work from 1549 by the German botanist Leonhard Fuchs. So the author was clearly affluent as such books were expensive. According to Swart, he must have cut the illustrations from two copies. He also made quite a few mistakes: some illustrations did not end up with the right descriptions. A good example is the cornflower on page 47, which he has confused with the poppy.

This makes Swart think he can't have been a botanist or biologist. That is also clear from the descriptions of the plants, which are more about their provenance and how to recognize them than their botanical characteristics. And given the lack of detailed information on their medicinal applications, her supervisor Van Anandel does not think the author was a pharmacist either. 'It doesn't contain any recipes for medicines. But the author does give very pre-

cise information about what a good quality plant should look like and he knows exactly where the exotic plants come from and where the native plants grow.'

#### TRADE IN HERBS

Artis was given the *Corpora* in 1860 by someone called J.F. Steenbergen. It is not clear at present who that was. 'I've never actually seen a book like this before,' says Van Anandel. 'It's a manuscript, so it wasn't published. Books like this often spend ages on a shelf with other unknown manuscripts in historical libraries. They end up there when a house is cleared, for example. Artis asked me whether I wanted to do some research on it.'

Even if the man who produced it really was a dealer in medicinal herbs, that still leaves lots of options because there were hundreds of such dealers in Amsterdam back then, says Van Anandel. 'The medicines in pharmacies consisted primarily of plant extracts, which were kept in convenient quantities in stoppered bottles. The pharmacists bought the plants off dealers, who in turn purchased them from growers. The exotic plants arrived by ship in the ports.' The Utrecht researcher Wouter Klein hopes to get a PhD soon for his study of the trade in medicinal herbs between 1650 and 1800. He will also do more research on the possible sources for the text in the *Corpora*.

#### BACK IN THE SAFE

Swart's work on the case has now finished. The legacy of her internship is the website [plantenrijk.wordpress.com](http://plantenrijk.wordpress.com), where you can read the entire book; finally, the book has been made public after over 200 years. Van Anandel hopes this will lead to more such books turning up. The *Corpora* itself has now been returned to its cardboard box in the Artis safe. **B**





## TAILORMADE

André Sanders' workplace is commonly referred to as 'the workshop' but its official name is the Technical Development Studio. It is chock full of apparatus, tools, machinery and materials. It's very neat though. A skylight provides light. Dire Straits can be


heard softly from speakers on the wall. 'Easy listening, something for everyone. Classic rock, that sort of thing,' explains Sanders, who shares the workshop with seven colleagues. All men. They deliver tailor-made work. Anything you can't buy readymade

at the shops. He's been working for WUR for 38 years now. He started out as a kind of amanuensis at Organic Chemistry at the Dreijen, and ended up at the workshop in the Biotechnion building. Six years ago, the group moved onto campus, where the stu-





dio is tucked away behind Zodiac. Sanders is in his element here. 'No two days are the same. The diversity in assignments is super.' He grabs his mobile phone to show me some completed projects. A series of cupboards, racks, shelving, couplings and

all sorts. 'Creative? Yes, you definitely have to be that here. Clients often ask: how did you come up with that? And I say: well, you asked for it! It is a question of listening carefully and of practical insight.'  RK, photo Margriet van Vianen

Read all the instalments  
of Workplace  
on [resource-online.nl](http://resource-online.nl).

# Relocated partners

Wageningen University & Research attracts researchers from all around the world. Sometimes they bring their partners along for the ride. Artist and writer Anna van Diepen — who also recently accompanied her husband to the United States for a period — spoke to five such ‘relocated partners’. On Western freedom, tasteless food and complex dilemmas.

*text and photos* Anna van Diepen *illustration* Marieke van Diepen



**I** relocated temporarily just over a year ago. My husband, who is a development economist at WUR, wanted to go abroad for a while. He said it would be good for his academic career. The options were Oxford, Cambridge, New York, Berlin or Berkeley – he let me choose which. It took years for me to give in. Eventually I said OK, but let's go somewhere sunny. So we went to Berkeley, California.

Before I knew it, he had found a position with the university and we were preparing to leave, together with our two children. Four lives temporarily turned upside down for the sake of one man's career. I left my job, one of the children had to leave her school and the other his day-care centre. We waved goodbye to our friends, neighbours and family. Off to America!

We soon got back into a daily routine on 'the other side of the world'. My husband went to work, my daughter went to school, while I tried to create a new home in a foreign country, with a toddler in my wake and our closest friends a mere 8900 kilometres away.

It was fascinating. It felt like I had to rediscover life from scratch, from figuring out where the supermarket was to deciding on a new temporary goal in my life. I felt like a new person, with no past or future. It was so fascinating, in fact, that I started searching for other relocated spouses, to learn about their experiences in 'starting afresh'.

I spoke to people from all four corners of the world.

None of us had an actual job. We were all searching for our own solution in dealing with this temporary life. A life that we had chosen out of love for our partners. We would often raise a toast with a smile: 'All for science!'

After returning to the Netherlands, I quickly got sucked back into my normal life. I was happy to be working again, taking my own path. I didn't miss the US, but I did miss the feeling of being relocated. That sense of starting afresh. So I searched for relocated partners in Wageningen. I wanted to record their stories as an inspiration for others, but also to generate more understanding and respect for them.

I spoke to five people who have moved to Wageningen from Germany, India, Indonesia, Mexico and Iran together with their partners — and in some cases their children. This resulted in five different stories that have one point in common: they are here because their partner works for WUR.



Anna van Diepen eating pizza with her son in Berkeley, USA.

## PREGNANT IN WAGENINGEN

Anne Morbach from Germany, interviewed in *The Spot, Orion*, on 28 June 2017

We meet in *The Spot*, the place where Anne has been coming almost every Friday for years to pick up her other half so they can spend the weekend together. She used to come over from Germany and she always felt like she was stepping into a different world: warm and welcoming. She has since moved to Wageningen, but her weekends still often start in the same place, with her husband and his colleagues. 'I'm just the partner, but I still feel I belong.'

The *Spot* is quite warm and a tad stuffy, like a tropical greenhouse. Warm and welcoming, with a lot of plants. 'You'll recognise me by my belly,' Anne said on the phone. Sure enough, she is sitting at a table with a huge belly.

Anne came to the Netherlands to be with her partner. She never meant to move in with her boyfriend without having a job, but that's how it ended up. After years spent travelling 800 kilo-

metres there and back during their PhDs, Anne came to Wageningen pregnant after a disappointing job in Göttingen, by which time her boyfriend was working for WUR. And that was the end of the long-distance relationship. 'Problem solved.'

She loves it here. 'The Dutch are so much more positive than the Germans.' She dreams of having her own company, creating science movies for education. Bite-sized genetics for German children and teenagers. 'I feel most at ease in German,' she explains in perfect Dutch.

But first things first: the baby. She tells me the baby is due tomorrow. Tomorrow?! Yes. Anne is perfectly calm. Because despite her family living so far away, the oat flakes being too small and her initial dislike of those soggy Dutch croquette balls, she feels at home. 'I can be myself here.'



Anne Morbach hadn't intended moving in with her boyfriend without a job, but that's how things ended up.

## HIS WIFE'S CAREER COMES FIRST

Sourav Chakraborty from India, interviewed in Bagels & Beans in Wageningen on 8 July 2017

Somewhat hesitantly, Sourav starts telling his story as he fiddles with his teabag. He is worried his situation will not satisfy the requirements for this article as he is a tenured professor in mathematics himself, but one who more or less voluntarily relocated by encouraging his wife to find a good postdoc position. So not your average story.

After a long-distance marriage of three years, Sourav's wife came to 'his' university in Chennai, India, but her postdoc position didn't suit her. When she got pregnant, he thought: she has to keep moving or she won't be able to get back into the academic world. His wife found an interesting position as a postdoc in Wageningen and Sourav decided to take a sabbatical. He found a job for himself at the University of Amsterdam. Not ideal at this stage in his career, but it had to be done. And so they moved to the Netherlands for a year, together with baby Adrita.

'And what do you like about Wageningen?' I

ask. He thinks, takes a sip of his tea, and then says, 'Putting your finger on what you like is hard'. He laughs when I ask him to try answering the question *not* as a mathematician. And then he finds the words: how orderly things are in the West. He has travelled a lot and wherever he goes in the West, he can always find the same chains of shops, hotels and restaurants. He appreciates that consistency. And the calmness. No yelling, honking or chaotic traffic. Although Wageningen is a little *too* calm for his taste.

What is the next step? He doesn't know yet. The best thing for him would be to go back to Chennai, but not for his wife. Is there a university, anywhere in the world, that would suit them both? In mathematics, this is called 'solving a two-body problem'. It's something he's good at – at least, in maths.



Sourav Chakraborty would love to find a university with suitable positions for both him and his wife.

## NO WORK AND TIME IS SLIPPING AWAY

Pily Monsivais Alonso from Mexico, interviewed at home on 13 September 2017

In Pily's own words, her home is the place where biscuits, chocolate and tea are always available. So there we are, sitting at her little kitchen table, although no tea as yet. She starts telling her story.

Pily initially didn't want to come along when her husband suggested going to the Netherlands for a year. She found the idea too nerve-racking, too unpredictable. But she gradually became more curious, and her employer's promise to hire her back after the year was up eventually persuaded her.

The first few weeks were stressful. She was cold, had to search for suitable food at the market, got lost on her way home and longed for spring. But as soon as the sun started warming the Dutch soil, she began to relax. She enjoyed her peace and freedom. She would go for walks, learned to cycle, made new friends and marvelled at the extreme tastelessness of Dutch cuisine. Then, when the sun's strength started to wane again, she began to feel homesick. That's when the shock came: her husband got a one-year extension at work. They stayed in the Netherlands and couldn't even go back to Mexico for Christmas due to visa problems.

'Tea! Do you want tea?' She had almost forgotten. She puts the kettle on and hands out chocolate biscuits. Pily is finding this second year a lot harder. She has had enough of relaxing and wants to do something. She would love a job, but her English isn't good enough, and her teaching qualification and years of experience as a maths teacher aren't worth much here. She cooks, does the groceries, goes for walks, cycles, meets up with friends ... and feels time slipping away. She feels she is growing older while a safe, stable future seems further away than ever. But when she went to Mexico for five weeks last spring, after the fourth week she was longing 'to go back home'. That was a very confusing feeling.

'If you were granted two wishes, what would they be?' I ask. Her first wish would be for her entire family to come to the Netherlands, to show

them how big and open-minded the world is. Her second wish would be a good job for her husband. What about herself? She wishes she could speak Dutch fluently, drink tea with Dutch friends and joke along with them.

Pily Monsivais Alonso would like to find work teaching maths but her English isn't good enough.



## ENJOYING FREEDOM

Zulfia Listyani from Indonesia, interviewed at home on 5 September 2017

Zulfia came to Wageningen together with her children and husband, who is doing a PhD here. They landed at Schiphol airport in winter 2016. Stopping only briefly at their still-empty apartment, they drove straight to the second-hand shop Emmaus in Wageningen. That's when it hit them – they had absolutely no idea what they needed. 'We had to learn to think independently.' They were used to the situation in Indonesia where the community arranges everything for you.

Now, 18 months later, they have settled in completely. The smell of spices fills the house. Children's drawings adorn the walls. Her eyes smile as she pours us sweet jasmine tea. Her husband helps during our conversation whenever our English proves insufficient. They sit next to each other and happily talk about their life in Wageningen and the freedom they feel here.

Zulfia does the housework and looks after the children. She also often cooks for friends in Wageningen's Indonesian community, together with other women. Those occasions spent chatting, drinking tea and cooking together are what makes her feel at home here. 'What does it mean to feel at home?' I ask. 'It's the feeling of never wanting to leave this country.' She smiles broadly. But when I ask if she would like to stay here forever, she answers decidedly: 'No! Indonesia is our home.' That's where she belongs. Their time here is like a dream, but all dreams must come to an end.

Although Zulfia is sometimes unsure about her English (which is actually much better than she thinks), she is happy the dream will last for a while longer. With her husband and children, safe in the warm embrace of Wageningen.



Zulfia Listyani had to learn how to think independently in the Netherlands; lots of things were arranged for her in Indonesia.



## WAITING FOR A RESIDENCE PERMIT

Atousa Seif from Iran (who did not wish to be photographed), interviewed in her husband Omid's office in the Leeuwenborch on 18 September 2017

Omid's eyes light up when Atousa enters the room. Out of breath, her forehead slightly sweaty and with a big smile. 'Isn't she beautiful!' he exclaims. Atousa does not speak Dutch or English yet. We shake hands and smile. Her husband, Omid, will be our interpreter. It's a weird feeling to direct questions at someone who doesn't understand them. Words seem to hang in the air until Omid's translation gives them meaning. Then you get a brief moment of contact. Just a moment, though. Until she answers and her words form sounds that mean nothing to me.

For Atousa, the situation is clear: she wants to be in the Netherlands. This is where she feels at home. It's safe, the people are friendly and open, and the weather is nice and cool. She wants to study here and learn the language. Dance, sing, play sports. But to Omid's annoyance, she can't seem to get a residence permit. They have been married for three years by Dutch law, he has a Dutch passport and a highly respected position at a university. He raises his voice: 'Why can't this wonderful woman be with me?'

For now, Atousa travels between the Netherlands and Iran on a tourist visa, which isn't easy to obtain. She will have to learn Dutch, then once she has turned 22 and after huge amounts of paperwork and patience, her dream might finally come true. She wants to become a designer. She cautiously pushes a lock of hair back in place. 'What country would not want this gorgeous woman?' Omid says indignantly. 🗨️

# FREE FRUIT

## A healthy freebie or a patronizing gesture?

Since the beginning of November there has been free fruit at the entrance to all WUR buildings where staff work. The fruit@work project team is offering staff at least one apple, pear or banana a week. But is that an employer's task? And will it make people any healthier?

text Teun Fiers, Anne van der Heijden and Liza van Kapel illustration Henk van Ruitenbeek

### Ricardo Kristo



**Facilities and Services employee at WUR in The Hague**

'Fruit was brought in for staff here for the first time on Tuesday. **People were very positive about it. It was all gone by Wednesday. I think it's a great initiative.** I reckon some other companies

have been doing it for years; I don't know why WUR has only started now. It is healthy, because people will eat more fruit if it's there for the taking than they do if they have to bring it in to work themselves.'

### Marleen Henkens



**Researcher at Virology**

'I read on the intranet that we get the free fruit from our own experimental farm in the Betuwe. I don't know what used to be done with that fruit before this, but I like the fact that it goes to staff now. If WUR sold the fruit externally I would be less positive. Then I would say:

you had better take a look at the bigger picture of the food on offer. **The campus is full of temptations to eat fast, unhealthy food; there is a vending machine in every building and at Campus Plaza it's mainly fast food restaurants.** You can't make up for that with a couple of apples a week, of course.'

### Linda den Blanken



**Receptionist at Orion**

'A nice initiative! I took a mandarin orange. **It has gone down well with my colleagues too, although they wouldn't mind a bit more.** They said there would be 1.6 pieces of fruit per person per week.

That's not an awful lot, especially if they miscalculate like they did this week. We have to pick it up at the Forum, which is a bit odd too. Last week it stayed there and we didn't have any fruit. But this week everyone enjoyed the fruit.'

### Marie Wesselink



**Researcher at Wageningen Plant Research in Lelystad**

'We got fruit in our department for the first time last week; it was delicious! I understood that the fruit was left over at the orchard in Randwijk, so I think it's great that

it's eaten by staff. We cracked jokes in the canteen that we could return the compliment with a tipper truckful of potatoes. **Personally I don't buy as much fruit as I would like, so an extra piece a week is a nice little bonus.** In my view, staff are responsible for their own health, so WUR didn't have to do this. But we are enjoying it.'

### Henri ten Klooster



**Head of De Bongerd Sports Centre**

'In my view it is only normal to encourage healthy eating habits, just as we encourage people to exercise. **I think WUR especially should do all it can, not just to publicize its mission but also to apply**

**it to its own students and staff.** De Bongerd Sports Centre supports the mission too, and contributes to the quality of life of our own staff by providing them with more healthy food. We also offer exercise programmes for WUR staff in their workplaces, and for students in between lectures. That is to counteract the negative effects of too much sitting still.'



## Maxime Visser



**BSc student of Nutrition and Health**

'On the basis of my degree subject I can say it is good to encourage people to eat more fruit and vegetables. Most people could do with eating a bit more fruit, and it is definitely better than a cookie or other snacks. I do wonder why they don't hand it out free everywhere. **It could be that students, with their beer consumption and frozen pizzas, need that fruit more than staff do.** I myself don't always get the recommended weekly amount, so when I saw the crate in Radix recently, I took an apple. It would be good to bring down the price of fruit in the canteen, too. You can easily pay 70 cents for a banana there, whereas in the supermarket you get a kilo for one euro.'

## Ingrid Lubbers



**Lecturer in Soil Geography and Landscape**


'It just so happens I took my first apple yesterday, and it was delicious. I think it's a good initiative. **Only I do think it is the people who already love fruit who are**

**the first to take a piece. So I don't know whether it will change people's eating habits much.** At first it wasn't entirely clear to me who it was intended for. Later I saw an explanation on the intranet, but I hadn't noticed the text next to the crates. So I can well imagine it's confusing for students and that they sometimes help themselves too.'

## Written response from the fruit@work WUR project group



'It is very important to Wageningen University & Research for our staff to be and stay as healthy as possible, both physically and mentally. Then they can do their jobs with enthusiasm, motivation and inspira-

tion. Fruit@work, part of the vital@work programme, aims at promoting a healthy lifestyle through a healthy diet. **It would be fantastic if WUR could offer all students free fruit as well.** Unfortunately that is not yet possible. Facilities and Services is talking to the caterers about healthy restaurants. As for the fruit, it is true: if it's finished, that's it. We want to avoid waste.' 

# ‘POLICYMAKERS DON’T LISTEN TO YOUNG PEOPLE’

**He was the first young person to speak at a UN conference on the Sustainable Development Goals. He is a regular visitor to Dutch ministries and travels the world to voice young people’s views at the highest policy levels. Martijn Visser is now preparing for his second and final year as a UN youth delegate.**

The Wageningen alumnus (well, almost: he’s waiting for his final exam result) is about to travel to Germany to attend the climate conference in Bonn. Very sustainably, in an electric BMW. In Bonn he will meet the new Dutch minister for Climate Policy, Eric Wiebes. But his main task will be to present young people’s ideas and views on sustainability.

‘A climate summit like that attracts about 30,000 people,’ explains Visser, who studied Forest and Nature Conservation. ‘Everyone who has anything to say on the subject will be there. For me, it will mainly be a question of chasing after them and talking to them.’

## BRAZEN

Visser says those at the highest policy levels don’t listen properly to young people even though it is the younger generation’s future that’s at stake. ‘There will often be someone young at the negotiating table at a summit but that’s mainly symbolic. For example, the UN Secretary-General Guterres didn’t have time to talk to us about sustainability, but he was prepared to have a photo taken with us. We refused, in order to make a statement.’

Visser attended several summits during



Visser visits a lot of secondary schools too.



Martijn Visser speaking at a UN meeting in Bonn.

his first year as a UN youth delegate, in Marrakesh, Venice, Brussels, Berlin and New York. Together with the other youth delegates and members of youth organizations, he tries to get hold of the right people and draw their attention to the views of young people. After three summits, he figured out how things work in that world. ‘It’s all a question of diplomacy. Heading straight for your goal is not the idea, and there are a lot of rules. Fortunately you can be a bit more brazen as a young person.’

It helps that Visser will be wearing a pink badge on such occasions. ‘That means you are a member of a delegation. NGOs have yellow badges. It’s not at all nice, but whenever you address someone, they immediately look at your badge. You’re taken more seriously if you have a pink badge.’

## GREEN BUBBLE

The goodwill factor is also important, says Visser. ‘If you’ve built up a good relationship, you don’t have to take no for an answer as long as you stay polite.’ This was how Visser managed to be one of the few young people allowed to address a UN summit. In New York he held a speech for around 100 ministers. From memory, which is unique in a world where speeches

are written out to prevent slips of the tongue. He managed to arrange this through some creative networking. ‘I was in bus 50 from Wageningen to Utrecht because the trains weren’t running, when Hugo von Meijenfeldt, the national Global Goals coordinator at the ministry of Foreign Affairs, got on. I went and sat down next to him and started a conversation. That was how I set the ball rolling.’

In addition to summits and government offices, Visser can also often be found at secondary schools, youth conferences and sustainability events. He likes the contact with youngsters but gets frustrated by the lack of engagement with the subject. ‘There’s a green bubble with incredibly committed young people but not much interest elsewhere. I’d like more of a dialogue with youngsters outside that bubble. I plan to focus on that in the coming year.’

Visser already knows that he will quit the ‘diplomatic world’ after that. ‘Although I’m carrying out my duties as youth delegate very enthusiastically, I’m not finding it as fulfilling as I expected. There’s a lot of talking and prodding, but not much gets done. Everything is in little steps. I’d rather be working more on projects at a green organization or for an NGO.’ **LvdN**





PHOTO: SVEN MENSCHKE

# OFF TO THE TRIAL FIELD IN A TRABANT

**If you have cycled through the fields north of the campus you might have seen her. A girl crouching in the field, with a striking baby blue car nearby. This is MSc student of Organic Agriculture Saskia Houben. She is gathering the last samples for her thesis research. And her unusual vehicle is a Trabant.**

She has been chugging between her home in Arnhem and WUR in her little car since August. Over the past few months she has been studying a variety of ground cover plants at different trial locations, and now it is harvest time. The trial field on the Plassteeg, to the north of the campus, was the last to be sown and now the marigolds, rye and other species are ready for drying in the ovens at Unifarm. Houben's work for the Clever Cover Cropping project under the Crop Systems Analysis chair group involves comparing the amounts of biomass delivered by various combinations of ground cover plants.

## ATTENTION

Houben attracts a lot of attention with her Trabant. Out in the field, curious passers-by come to get a closer look, and at Unifarm the blue eye-catcher from the former East Germany is an attraction. The name, often shortened to Trabbi, means something like 'mate' as well as referring to Erdtrabant – German for satellite. Communist East Germany launched the car in 1957 to show that it was keeping up with the times. Houben agrees that it is not very sustainable or very 'Wageningen' to come to uni by car but she wants to stay realistic and practical as well. 'Of course it is better not to drive at all. For short distances I always go by bike, but Arnhem is just too far for that. And this is cheaper for me than going by train.' What is more, her 1987 Trabant is much more economical than you might think, she says. It does 18 kilometres to the litre. 'And a Trabant is the ultimate in recycling, actually. It has a steel frame but the chassis is made of recycled cotton and plastic.

I would certainly rather drive this than a Hummer.' The only thing that worries her is the fine particles the car emits. Because of that, Houben doesn't drive on cycle paths or in busy town centres.

## TINKERING

Houben bought her Trabant on the internet three years ago, mainly so she could learn to tinker with it. 'It is nice to be able to repair your vehicle yourself. I like learning my way around a system, seeing how something works and how it can be improved, whether it is a farming system or the mechanics of a car.' It is primarily a hobby for Houben. If she really had to commute later, she would leave the Trabbi at home. But she enjoys driving it now. And once a year they go on a road trip together. **RLH**

**LIGHT**

Light that shines through a glass of milk takes as much time to get beyond the glass as light shining through a glass of clear water. Theoretically this had already been proven, but researchers at the University of Vienna have now demonstrated it in practice. Light in milk does have more collisions en route, causing it to take longer, but it also more often gets bumped out of the glass straightaway. Those two effects cancel each other out. Strange but true.

**ALARM**

The Australian crested pigeon sounds the alarm with its wings when it senses danger. A few of its flight feathers make a high-pitched sound that signals 'alarm', say biologists from the Australian National University. So the birds fly quite noisily. But the whistling noise does have a function, as became clear when the flight feathers were removed one by one. Darwin suspected as much, but could not prove it.

**WEAK HEART**

Sex rarely causes a heart attack, doctors from the Cedars-Sinai Medical Center in Los Angeles have concluded. They studied a large number of sudden deaths by heart attack. In only 0.7 percent of the cases could the heart attack have been sex-related. What is remarkable is that only one in five of these victims survived this 'coitus interruptus'. According to the doctors that is because an AED is seldom used in such situations.

**DEADLY HEAT**

The number of deaths caused by heat waves has gone up by 2300 percent in the past decade, calculated scientists at the University of Hawaii. They have also figured out how heat does for us. In medical terms, there are as many as 27 ways in which heat can kill. Or, as the researchers say, death by heat wave is like a horror movie in which you can choose from 27 different endings.



## Tips for a greener student lifestyle

Author and columnist Roos van Rijswijk reveals the secrets of a more sustainable student lifestyle in her newly published book *Nog groener! (Even greener!)* From local beer to how to make your own shampoo: you name it, it's covered. This down-to-earth book helps you make more environmentally friendly choices.

The author of *Nog groener!* eats meat occasionally, takes very hot showers and has been known to thoughtlessly spit chewing gum out into a drain. And yet she knows how to persuade people to make more environmentally friendly choices. She published this little book in collaboration with the Green Office at VU Amsterdam.

*Nog groener!* covers topics such as cleaning – you can use white vinegar for almost any domestic cleaning task – clothes and ethical banking. But it touches on less obvious topics as well, such as sustainable musicians and green search engines. And it includes interviews with young green entrepreneurs and with Dutch writer and ex-politician Jan Terlouw.

'Studying can be such an intensive undertaking that rising sea levels just don't interest you at all,' writes Van Rijswijk in the chapter about green universities. In the rest of the book, too, her tone is down-to-earth, witty and chatty.

Not all the tips are of practical use – 'follow a hipster down the street to find out whether there is a local brewery in the neighbourhood' – but as a whole, the book is very useful. Like the revelation that it's perfectly possible to shower in four minutes. Makes you wonder why you ever needed ten.

The book's final pages offer 25 challenges such as 'don't eat any meat for two weeks' and 'bring a



broken machine to your local Repair Café'. This invites you just to start somewhere – which seems to be exactly what Van Rijswijk is aiming at.

*Nog groener!* is not a e-book but a guide printed on unbleached paper, 'to give as a present or to leave lying around'. You'll understand this after reading it. It is the sort of book you want to share and to come across on your desk, to remind you to make a sustainable choice. Today. **EvK**



### Home theatre

It was a bit of a tight squeeze at times during the tenth edition of RoomService on Thursday 9 November. Twelve student rooms were transformed into cosy theatres and pop venues. Those who had got hold of tickets in time enjoyed music, cabaret, theatre, stories and conjuring tricks.

See the photo series on [resource-online.nl](http://resource-online.nl)

# Students investigate potential of poop pots

**Disposing of manure costs pig farmers money. So one farmer had the bright idea of turning his excess manure into flowerpots. Is there a market for this? Is it legal? And is it financially viable? He approached WUR with these questions and six Wageningen students got to work on answering them as part of their ACT (Academic Consultancy Training).**

Pig farmer Laurens Stevelink had been considering the flowerpot idea for a while. 'I think sustainability is important and I want to help achieve a circular economy. I was inspired by a company in the US that makes pots from cow manure.' Because his pigs root around on straw and sawdust, the manure is relatively dry and suitable for processing into a product.

The students first tried to find out whether there is even a mar-

ket for biodegradable flowerpots made from poop. Plant nurseries and garden centres said they were interested if the pots lasted long enough — at least one year. 'The potential buyers also want to know how safe it is because they are afraid of getting pathogens,' says Stefan ten Pierik, Master's student in Animal Sciences.

Based on these requirements, the students came up with two options: compostable pots and pots you can plant. Both are biodegradable, but the compostable pots are sturdier and last longer. They are not suitable for putting into the soil together with the plant. 'To get an estimate of the costs of the production process, we looked at a similar product in the US,' explains Ten Pierik. The calculations showed that only the compostable pots would be financially viable. The machinery for pro-



PHOTO: MICHEL HUPKES

These WUR students investigated whether farmer Laurens Stevelink (third from the left) could manufacture flowerpots from pig manure.

ducing the pots you can plant is too expensive for small-scale production.

Stevelink is enthusiastic about the result. 'Although they had to make a lot of assumptions, so we

need to work the concept out in more detail first.' His pigs produce enough manure for around half a million compostable pots or two million plantable pots a year. **TL**

## MEANWHILE IN... BANGLADESH

### 'I expect serious problems in the refugee camps'

**Since August this year, more than a million Rohingya Muslims from Myanmar have fled over the border into Bangladesh. The exodus was triggered by a military crackdown in the west of the country by the Myanmar government. Last month, the Bangladesh authorities set up one of the largest refugee camps in the world, hosting more than 600,000 people. Nazmul Hassan feels his country is trapped in this situation.**

'The background to this conflict is two-sided. Firstly, the Myanmar authorities, who are mainly Buddhists, see the Rohingya as a different ethnic group that does not belong to their nation. For that reason, the Rohingya people never got full Myanmar citizenship. Secondly, the Myanmar government plans to create an economic zone in their area, so their settlements are a hindrance to that plan. This led the Myanmar army to bomb part of the area, and non-official groups to burn down houses. The UN Security Council has been unable to intervene, because of the veto power of China and Russia. China has plans for large-scale in-



Nazmul Hassan is a Master's student of Nutrition and Health from Bangladesh.



PHOTO: SHUTTERSTOCK.COM

vestment in the region and deep sea projects off the coast are already up and running.

Of course, I agree with many people in Bangladesh that we should host these refugees initially. That is not necessarily because we are also mostly Muslim, but because just from a moral point of view, accepting those refugees is imperative. However, the hard reality is that Bangladesh is a densely populated country that is dealing with some poverty issues already. In the long term, it is practically impossible to host so many people. The current refugee camps are temporary and very crowded. Human trafficking and terrorist ideologies have already started to take hold. If the camps remain like this, I expect serious problems within six months. In order for a long term solution to come in sight, there should at least be enough international support.' **TF**

# YOU ON CAMPUS

**Simon de Grève (26) recently started on a Master's programme for the second time. After quitting his first Master's and trying his luck on the labour market, he decided to give a Master's degree another chance. 'I found a programme that marries my two main interests: biotechnology and plant sciences.'**

De Grève looks like an average Dutch guy, yet he has actually only been living in the Netherlands for a few months. He was born in Belgium but has spent most of his life in Morocco. 'I moved back at 16 but it didn't feel like going back. My first memories are of Morocco, which has always felt like home. Despite visiting Belgium often, it felt like going to a new country.'

The new country had its perks: 'I quite liked the Belgian life style: social life is much livelier there than in Morocco, and there is so much to do. The open air concerts are especi-

**'My first memories are of Morocco, which has always felt like home'**

ally nice.' He talks with the same enthusiasm about another passion of his: travelling. 'It was great to travel in Morocco: the country is really big and it has everything from mountains to the coast. In Europe, however, you can easily travel from one culture to another, since the countries are so small.'

He points out that many different cultures are represented in Wageningen, creating an international atmosphere familiar to him from the international schools he attended. 'I had definitely missed that atmosphere during my Bachelor's degree course in Brussels. Everything was in French and I felt like I was not fulfilling my full potential. I really wanted my new Master's to be in English: it

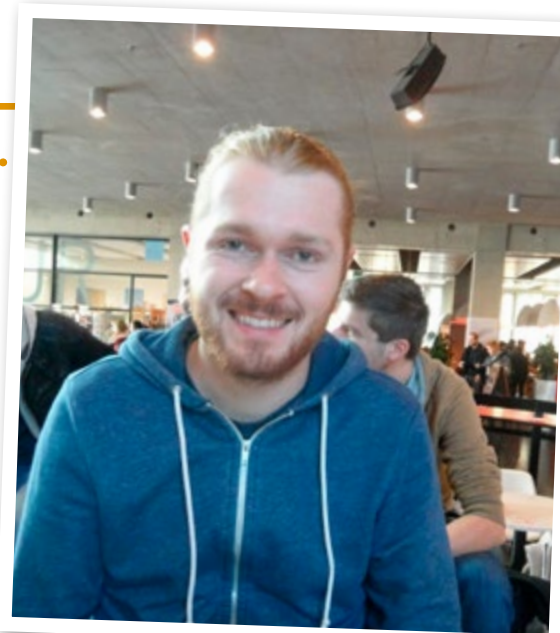



PHOTO: LIZA VAN KAPEL

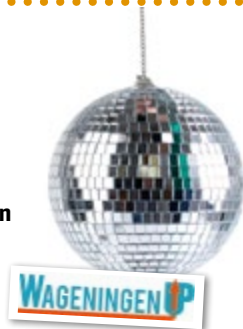
opens up far more opportunities.'

De Grève knows a thing or two about job opportunities. 'After quitting my previous Master's, I experienced the jobs you can get with a Bachelor's degree and found out how limited the options are. You often lose, either to someone with a more practical education or to someone with a Master's degree. I realized how university trains you for the full research track, all the way to a PhD.' It motivated him to start another Master's, but he is not sure yet whether he will do a PhD. 'I might, I really like the facilities and atmosphere here. So who knows, someday?' 

**Read all the interviews on resource-online.nl**

## PARTIES

**In the party mood? Wageningen Party Promotion (WUP) tells you where to find one. See too [www.wageningenup.nl](http://www.wageningenup.nl).**



### LUCA - LUSTRUM OPEN PARTY: WILLY

**Thursday 16 November from 22.00 to 04.00**

There are several parties on this night, but Mercurius's anniversary party will probably attract the most people and be the biggest fun. The study association is 55 years old and will be closing two weeks of festivities with a bang.

### CAFÉ LOBURG - DE DAM PLAYS DE DIJK

**Saturday 18 November from 23.00 to 02.00**

Café Loburg is laying on live music again, this time the cover band De Dam, familiar from Woetstok Wageningen 2017. De Dam will be out in force, with 10 musicians filling the pub with the popular sound of the Dutch band De Dijk.

### KSV - OPEN PARTY

**Thursday 23 November from 23.00 to 04.00**

The theme is still to be announced, but a KSV open party is not one to miss. No exam stress yet, so let your hair down while you can! 



PHOTO: SVEN MENSCHER

Guests enjoying themselves on the dance floor at Shout's Extravaganza Drag Night on 4 November in de Wilde Wereld. See also page 2

**Wageningen Master's students do internships and thesis research all around the world, getting to know their field and other cultures. Here they talk about their adventures.**

## 'They use leaf blowers to clean the nature areas'

'Singapore is much better organized than I'd expected. It's incredibly crowded but despite that, it isn't a chaotic mob as everything is properly regulated and modern. The city is very green, which also makes it nice to live in. And everything is permanently kept clean. Even on the island of Pulau Ubin where I was doing my research and that is supposed to be nature in the wild, they use leaf blowers to clear the paths. Quite weird.

I was studying the hydrology of mangrove forests. In Singapore, a lot of mangroves have been put to use for prawn farming. Lots of these prawn ponds have now been abandoned and the aim is to restore the mangrove forests. A method has been developed in Wageningen to find out what exactly the problems are with the hydrology: is it too dry for the mangroves, or too wet? I tested how well the method worked.

### PRAWN BOAT

I took the fantastic boat trip to the island twice a week. The island itself was also really lovely; I was even able to stay overnight there a couple of times. I became good friends with the "island boss". He knew everything and everyone, and we slept over in an old prawn boat of his once or twice.

I found the Singaporeans quite Western in their outlook and they are very open. My supervisor at the university, the expert in this area, also made sure I fitted in from the start. Not just during field work, but also by showing me round the city and inviting me to drinks. That really helped. It was my first time in Asia so it took a bit of getting used to.

### UNAFFORDABLE

I stayed in two different places: first in an Airbnb place and later in a shared apartment. Both were unaffordable but there wasn't much choice. Food, on the other hand, was cheap. They have food courts everywhere with stalls where it's easy to get a meal. You eat rice three times a day but you get used to that. In fact, it's really tasty.

I did find the heat hard going, though. I

don't cope well with it at the best of times and now it was continuously 33 degrees with really high humidity. Sometimes I actually went out jogging. You sweat like a pig but your body gets used to it. And the sea-eagles I came across then, one of the many crazy animal species I saw, made the experience all the better.' **RVK**

## THE WORKS



**Who?** Stijn Beernink, Earth and Environment MSc student  
**What?** Research for thesis on hydrology in mangrove forests  
**Where?** National University of Singapore

Read all the interviews on [resource-online.nl](http://resource-online.nl)



## In memoriam



**Hans Lyklema**  
Emeritus professor Hans Lyklema passed away on 31 October at the age of 86. From 1963 to the end of 1995, he was

professor of Physical and Colloid Chemistry, and in that period he led his colleagues in becoming a flourishing department which earned national and international recognition. For years he was on the University Council and on the PhD Council. He was one of the driving forces behind the establishment of a degree in Molecular Life Sciences, and he was also an outstanding teacher. His first-year lectures, in which he introduced generations of students from many different disciplines to basic concepts such as chemical equilibrium and osmotic pressure, were legendary. And more in-depth courses were

in good hands with him as well. He kept in touch with academic colleagues all around the world, and was one of the founders of the international research association IACIS. Retirement in 1995 was anything but a farewell to science for Professor Lyklema. He continued to work on his impressive oeuvre right up to the end of his life. He published nearly 400 articles and wrote the five-part reference work *Fundamentals of Interface and Colloid Science*. He taught numerous courses and lectured in five languages and on five continents, not just on his subject but also on sustainability and on his childhood memories of the war years. He received honorary doctorates in Sweden, Spain and Belgium, and a royal medal of honour in the Order of the Netherlands Lion. Even when he became terminally ill at the end of 2016, he did not give up, and continued to visit his beloved lab almost daily.

As a chair group we have much to thank Hans Lyklema for, and we feel

honoured to be his academic heirs. Our thoughts are with Wil Lyklema, his wife of 61 years, and his children and grandchildren; we wish them the strength to bear their sad loss.

*The Physical Chemistry and Soft Matter chair group*

## announcements

### Wageningen Young Academy is looking for new members

The Wageningen Young Academy is a diverse group of enthusiastic, ambitious, and outstanding young scientists from all WUR departments. Our objective is to stimulate interaction, to debate among researchers from different disciplines and to strengthen the position of young researchers within WUR. Would you like to join us? Instructions for applying (deadline 5/1/2018) are available at the Wageningen Young Academy intranet group and via Twitter (@youngacademy).

### Vacancy for treasurer at the Boerengroep foundation

Our treasurer is resigning soon from this role at the Boerengroep (Farmers group). As treasurer you work behind the scenes but you are an indispensable link in the chain for the foundation. Do you have an affinity with farming and would you like to gain experience on the board of a foundation? Then consider becoming treasurer of the Boerengroep!

BOEREN GROEP.NL

### Student Safaris in Southern Africa

For all students with an interest in nature travel: in 2018 there will be several student excursions to Southern Africa (Capital Selecta, 3 ECTS). You will set off to explore African landscapes and wildlife as part of a group of enthusiastic, motivated students. You are very welcome at the info meeting on Monday 27 November, 12.30-13.15 in C226, Forum. You can also take a look at [facebook.com/africastudenttours](https://facebook.com/africastudenttours) or email [iris.dewinter@wur.nl](mailto:iris.dewinter@wur.nl)

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**Sustainable City Concepts**

Thursday, November 30<sup>th</sup>  
19:45 - Live music  
20:15 - Science  
Café Loburg  
FREE ENTRANCE

Prof.dr.ir. Huub Rijnaarts - Wageningen University  
Prof.dr.ir. Arjan van Timmeren - TU Delft

Music by: Troubagroove

Sponsored by: **KLV** (WAGENINGEN LEVEN BETROF)  
**WAGENINGEN UNIVERSITY & RESEARCH**  
**RESOURCE**

Partners: **LCBURG** (CAFÉ | BAR | LIVE)

**Volunteers wanted for 4 May**

Wageningen45 is looking for volunteers to help organize the annual Liberation Torch ceremony on 4 May. The ceremony marks the transition from commemoration on 4 May to the celebration of liberation on 5 May. The high point of the ceremony is the lighting of the Liberation Torch at exactly midnight. We need enthusiastic volunteers from the Wageningen area who would enjoy planning and implementing the programme in a working group, with support if required. Experience of organizing similar activities would be nice, but enthusiasm, effort and creativity are more important to us. Info and to sign up: [harry.te.aa@wageningen.nl](mailto:harry.te.aa@wageningen.nl)

**agenda****Thursday 16 to 29 November****FILMS FOR STUDENTS**

*Kedi*: Contemporary Istanbul according to seven cats, who reflect the residents. *Loveless*: a gripping Russian drama about a couple going through divorce and the testing disappearance of their son. *City of Ghosts*: a thriller documentary about how ordinary boys in Raqqa participate in non-violent resistance through the media. *The Net*: an exciting and satirical story about a North Korean fisher in South Korean waters. *Your name*: a Japanese sensation, a romantic and captivating animation fairy tale. Venue: Wilhelminaweg 3A, Wageningen  
MOVIE-W.NL

**Thursday 16 November, 20.00****DIALOGUE:****FAITH IN SUSTAINABILITY**

The evening will be introduced by Klaas van Egmond, professor of Sus-

tainability at Utrecht University, former director of the Netherlands Environmental Assessment Agency, anthroposophist and WUR alumnus. He will talk about the relevance of *Laudato Si*, Pope Francis's encyclical about sustainability, to the social and political debate and our supermarket purchases. Rick de Vries, author of *Laudato Si, laat de Kamer zich bekeren?* presents the conclusions of his research among political parties. Then Lara de Brito, Wageningen's councillor for Sustainability, Leon Meijer, Ede's councillor for sustainability, and Catholic priest Henri ten Have will share their views. The evening will be chaired by Eric Wijnacker, a journalist with the *Gelderlander*. Admission free. Venue: bblthk, Stationsstraat 2, Wageningen.

**Tuesday 21 November, 10.00-17.30****KIVI ANNUAL CONGRESS ON THE CIRCULAR ECONOMY**

WUR is hosting the Royal Institute of Engineers' annual congress this year. More than 60 speakers will talk, in 30 sessions and two plenary gatherings, about their experiences and the opportunities offered by the circular economy. A chance to learn about different approaches to the circular economy, and about circular designs. As host, Arthur Mol (WUR) will open the day. There will be interesting keynote speeches by Diederik Samsom (HVC), René Berkvens (Damen Shipyards), Marjan van Loon (Shell) and Eva Gladek (Metabolic). You can take part in excursions to FrieslandCampina or the Dutch Institute for Ecology (NIOO-KNAW). The congress is open to all, with free admission for KIVI

members and students. For info and registration, see the agenda on [www.wur.nl](http://www.wur.nl)

**Thursday 23 November, 12.30-13.20****LUNCH WORKSHOP WAGENINGEN WRITING LAB 'OPTIMIZE YOUR PERSONAL WRITING STYLE'**

In this workshop, you'll discover your personal writing style and learn about typical pitfalls and how to avoid them. We will set to work practising some techniques that will help you to make your writing style a strength in current and future writing assignments. Be on time, as participant numbers are limited to 20. Free admission. Venue: CO106 Forum. Info: [info.wageningenwritinglab@wur.nl](mailto:info.wageningenwritinglab@wur.nl)

**Thursday 30 November, 12.30-13.20****LUNCH WORKSHOP WAGENINGEN WRITING LAB / WAGENINGEN UR LIBRARY 'REVISING OF TEXTS'**

It's a myth that a well-written text is written in one go; revising is crucial! At first you fully concentrate on the content of your text and only in the second stage do you concentrate on all the other aspects of academic writing. Wageningen Writing Lab will offer you practical strategies for revising your text. Do bring the draft version of your text with you! Be on time, as participant numbers are limited to 20. Admission: free. Venue: CO106 Forum. Info: [info.wageningenwritinglab@wur.nl](mailto:info.wageningenwritinglab@wur.nl)

**colophon**

Resource is the magazine and news website for students and staff at Wageningen University & Research. Resource magazine comes out every fortnight on Thursday.

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# >>TYPICAL DUTCH



ILLUSTRATION: HENK VAN RUITENBEEK

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## An interval at the movies

**It was my first time at a cinema in the Netherlands. I was there not only because of the movie, but also because I wanted a new experience. And I got it.**

I went with my friends on a Wednesday. We knew it might be quiet but we didn't expect the place to be so empty. Back in my country, some people go to the cinema even on weekdays. But here, we almost had the building to ourselves. We could even choose our seats on the spot. Once we were comfortably seated and waiting for the movie to start, someone in uniform came to the front. Apparently, there was to be a speech before the movie started, and I guessed it must be about the movie. The speech was in Dutch so I didn't know exactly what was said until the lady pointed to the side door and said something about toilets. I got the general idea, at least: there would be a break during the movie.

It turns out that in the Netherlands, a movie and a lecture have something in common, which is a short break. It may not be a bad idea to give everyone a chance to go the toilet or stretch their legs. But it was weird that the movie was stopped abruptly in the middle of a tense scene with loud background music. The momentum was lost, and it was a bit of a shock when the movie suddenly started up again with the same loud music. Well, maybe that has something to do with Dutch punctuality. Whatever the reason, at least I got what I wanted: a new and unique experience. 🇮🇩 **Dea Putri Utami, MSc student of Food Technology, from Indonesia**

**Going to a Dutch cinema was a new experience, with a speech before the film and a break in the middle**

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*Have you had an interesting encounter with Dutch culture? Send your anecdote (in 250 to 350 words) to [resource@wur.nl](mailto:resource@wur.nl) and earn 25 euros and a jar of Dutch sweets. The editors reserve the right to shorten and edit the contributions before publication.*

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