

'Modern slavery'

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Disturbed

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RESOURCE [EN]

For everyone at Wageningen University & Research

no 15 – 4 April 2019 – 13th Volume

Your fridge will soon tell you what to eat

p.12




**INTERNATIONAL
EDITION**

Stephan + Goupil Elektrotruck

Stephan van Setten, groundsman with gardening company Donkergroen



SILENTLY COLLECTING RUBBISH

He's pretty happy with his electric Goupil – French for 'fox'. The little truck is manoeuvrable, brand-new, and above all, silent. 'So much better than that noisy, smelly diesel,' says Stephan Sanders. He does his daily round to empty the bins around the WUR campus, and of course to pick up litter. There is just one downside: students on bikes don't hear him coming anymore. So he must watch out in the busy campus traffic.  RK, photo Sven Menschel

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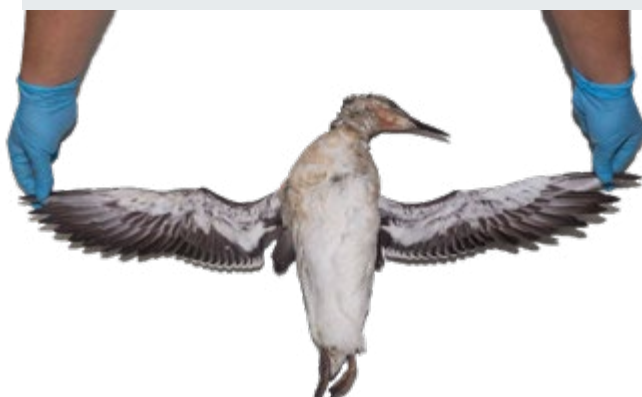
WAKE UP

The consultative bodies at WUR are sounding the alarm: they are not getting enough candidates (see p. 6). It seems as though staff and students don't feel like advising and overseeing the Executive Board and the directors of the Science Groups.

Perhaps one factor here is that staff are very satisfied, as we see from the latest staff monitor (see p. 7). They give WUR a 7.4 out of 10. And students, too, continue to rate WUR highly in the Universities Guide, *Keuzegids*. Not the right climate for striding into battle with the ruling elite with motions, campaigns and pamphlets. Irritation is a better inducement to democratic participation than satisfaction. The staff's biggest grouse is the high work pressure, and what better excuse than that for not sitting on the WUR Council?

And yet, it doesn't quite add up. Because every two years, the WUR directors get very poor marks in the staff monitor. For example, a big majority agrees with the statement: 'The board is out of touch with what is happening in the workplace.' So, armchair critics: wake up. You can do something about that. By signing up for one of the many consultative bodies.

Albert Sikkema, Science and Organization editor



>> **Stranded guillemots died from a 'deprived youth' | p.11**

‘END SANDWICH PHD EXPLOITATION’

The labour conditions for sandwich PhD students are often dreadful. They earn very little and sometimes have to do their research in their spare time, says researcher Mark Zwart in a letter on resource-online.nl. He thinks WUR should do something about this.

As a microbiology researcher at ecological institute NIOO-KNAW, Zwart regularly supervises WUR PhD students. He previously worked in WUR’s Quantitative Veterinary Epidemiology chair group. He sees the benefits of the sandwich PhD programmes for foreigners, in which the research takes place both in Wageningen and in the researcher’s home country. ‘It is a unique opportunity for young talented researchers. For us they are cheap labour because their salary is paid by their own country.’ But he sees downsides too. Agreements with the university in the home country are not always kept to: salaries are often quite a bit lower, and the research sometimes has to be carried out in the researcher’s spare time. ‘I think it is no exaggeration to call this modern-day academic slave labour.’ Zwart thinks clear rules are needed, which can be used when discussing the terms of employment with the home institute. Antonella Petruzzella, a sandwich PhD stu-

dent at the Aquatic Ecology chair group, who also works at NIOO-KNAW, backs Zwart’s comments in a letter of her own. She does not feel appreciated as a researcher due to the big salary gap between her and

‘I think it’s no exaggeration to call it modern-day academic slavery’

NIOO researcher Mark Zwart



the Dutch researchers. ‘We should value people’s talent and hard work and discuss how we could reduce those enormous salary differences.’

‘These PhD students are not in our employ, so they don’t work under WUR’s collective labour agreement and terms. Indeed, the salaries are not comparable,’ says Rector Magnificus Arthur Mol in response to the pieces by Zwart and Petruzzella. He thinks there has sometimes been a lack of good funding arrangements in the past. ‘We now follow a stricter policy on that. We make clear agreements with the grant-awarding body, and we go into action if they are not adhered to.’

According to Mol, it is difficult to formulate a general policy, given that each individual situation is different. ‘For example, we also have Dutch PhD students who do their PhD alongside their jobs. The chair group keeps in touch with the university in the home country and they come to an agreement. You often only notice later that it’s not going very well. Then you can refuse to collaborate, but then it is mainly the PhD student who suffers.’ **TL**

Read too Opinion on p. 22-23: ‘In December, what with the Christmas bonus, a 4th-year PhD student at WUR takes home four times my monthly salary.’



BOOTCAMPUS

The early evening air is still a bit cool, but that doesn’t put off these boot campers. After lifting a few tree trunks you’ll soon warm up. All year round, Casper Helling, a sports teacher at De Bongerd Sports Centre (in green) runs boot camp(us) training sessions for staff and students. The winter season has just ended; this training session on Thursday 28 March was the last on campus this year. When the clocks go forward, the sessions move to the Belmonte Arboretum, up the hill in Wageningen. And then the boot campus is just a boot camp.

TL, photo Guy Ackermans

DIJSSELBLOEM CHAIR OF SUPERVISORY BOARD

Ex-minister of Finance Jeroen Dijsselbloem is succeeding Job Cohen as chair of WUR's Supervisory Board. Minister of Education Ingrid van Engelshoven announced the appointment on Tuesday.

Dijsselbloem studied Agricultural Economics at Wageningen and worked as a civil servant in the ministry of Agriculture, Nature and Food Quality (LNV) before entering parliament in 2002 as a PvdA (Labour Party) member. Ten years later he became minister of Finance and a year after that, chair of the Eurogroup. He lives in Wageningen.

Dijsselbloem became chair of the Supervisory Board on 1 April. This board

advises the WUR Executive Board, assesses its policy and appoints its members. The Supervisory Board is made up of Tjarda Klimp (Akzo Nobel), Siem Korver, Berry Marttin, Robert Smith and Mariëtte Verhoef. Cohen chaired the Board for six years.

The editors of *Resource* saw Dijsselbloem's appointment coming. In number 10 of 17 January, we forecast it in the article *This will be the news in 2019*.

📌 AS



PHOTO: RIJKSOVERHEID

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Lose-lose

Get a few of scientists together and it won't be long before they are complaining about the funding climate. Steadily falling rates of pay, and all the non-billable time that goes into writing proposals and setting up consortiums.

Although these are serious issues, I see a more fundamental problem with the current financing model. Encouraged by government policy, the NWO and other financing institutions are increasingly looking for proposals that are to be implemented in collaboration with industry. At first sight, that seems useful, as it means the results will be applied immediately and the gulf between science and society will get smaller.

But apart from the fact that it's not easy to find industrial partners for research in certain fields, such as languages, this requirement also narrows the focus of research.

Companies are looking for new products and other innovations, but they do have to be able to market them in the short term. A topic like the effect of fasting on health, for instance, holds no commercial promise. And processed food is of more interest to industry than unprocessed food. Nutritional properties with no potential health claim are also less interesting for research with the industry. In short, none of these kinds of proposals stand much chance because they can't count on as much support from industrial partners.

We can't blame industry for that; it acts in its own interests. The government, however, is guilty of double dealing. The government thinks linking industry and research like this will create a win-win situation, but for fundamental research and research without commercial potential, it is more likely to be lose-lose. 📌

Guido Camps (34) is a vet and a postdoc at the Human Nutrition department. He enjoys baking, beekeeping and unusual animals.



IN BRIEF

>> RECTOR MAGNIFICUS

Arthur Mol reappointed

Arthur Mol will be Rector Magnificus at Wageningen University and vice chair of the Executive Board of WUR for another four years. The Supervisory Board made this decision yesterday. In an interview on the *Resource* website, Mol expressed his delight at his reappointment. 'Things are going well with the university and with Wageningen Research. We are working hard on that across the organization.' In the past four years, Mol has sometimes been concerned about the growth. 'In that respect, the future looks good. More and more funding for both education and research is coming our way, so I am expecting the great work pressure to ease off a bit.' 📌 LZ

[Read the interview with Mol on resource-online.nl](#)

>> OPEN LETTER

'Stop the march of English'

More than 180 academics and prominent people have signed a letter to the Dutch parliament asking them to stop English from taking over in higher education. Among them are the Wageningen professor of Biochemistry Sacco de Vries and Job Cohen, former chair of WUR's Supervisory Board. The appeal is an initiative of the Netherlands Association for Better Education (BON), which has had concerns about the Anglicization of Dutch higher education for years. 📌 HOP

>> MUST TURN

Beetle has turned

If you don't know better, you won't notice anything. But if you cross the bridge between Orion and Forum on a regular basis, you are probably wondering what has changed about the artwork *Must Leave*. Wait, wasn't the beetle facing the other way? Right, says Professor Marten Scheffer, the spiritual father of the beetle. 'This is because of the storms of recent weeks. The beetle can turn a bit, like a kind of wind vane.' To prevent problems with the cables, the beetle's freedom of movement is soon to be restricted. 📌 RK



PHOTO: ROELOF KLEIS

▲ *Must Leave* is suddenly facing the other way.

Possibly no Student Council elections in May

NOT MUCH INTEREST IN THE COUNCILS

The WUR Council and Student Council have sounded the alarm: not enough students and staff want to stand for election to these consultative bodies. The Student Council elections in May might not go ahead.

New elections for the Student Council are scheduled from 20 to 23 May. In the past few weeks, students have been able to apply as candidates for the student parties VeSte, S&I and CSF, or as independent members. 'The application processes are underway but so far we haven't had as many candidates as we'd hoped,' reports Student Council chair Sophie Galema. She hopes sufficient candidates will emerge in the end to enable the elections to take place. Students have until 12 April to apply.

The various staff councils are also facing a lack of candidates. Both Wageningen Research's Central Works Council (COR) and the university's Student Staff Council (SSC)

have too few members. Both consultative bodies have had one unoccupied seat for some time. 'Anyone who is interested can join the council straight away because there's room,' says COR secretary Joost van Opheusden.

It is not just the central councils: the councils for the various science groups are also short-staffed. Almost half the seats on the council of the Agrotechnology & Food Sciences Group are unoccupied, as are a quarter of the Plant Sciences Group council seats. Elections are a rarity these days; the councils are pleased if they can find enough candidates at all. There is certainly no 'pool' of activist employees in the science groups who could make the move to the central councils.

It is also unclear whether any PhD candidates will be coming forward soon for the SSC. Two seats on the university's council are reserved for PhD candidates. They are



▲ The current WUR Student Council.

now occupied but Sabine Vreeburg and Job Claushuis still don't know who will succeed them. 'We haven't had any applications yet,' says Vreeburg. The deadline is 25 April. **AS**

THREE BIG EUROPEAN GRANTS FOR WUR

Professors John van der Oost, Lourens Poorter and Dolf Weijers have bagged European grants worth 2.5 million euros. They have each won an advanced grant from the European Research Council (ERC).

These three grants put Wageningen among the highest scoring universities in the Netherlands. The University of Twente has got three ERC grants too, while Nijmegen comes out top with six grants. In total, Dutch universities have won 23 advanced grants.

These grants for individual scientists, awarded once a year, consist of 2.5 million euros intended for experienced researchers, who can do five years of research with the funding. This year, the ERC handed out



▲ Lourens Poorter

540 million euros to 222 scientists.

Wageningen has been remarkably successful this year. Seven WUR researchers submitted a proposal, and three of them were honoured, says Henrieke de Ruiter of the Strategic Accounts department. Wageningen did not get an advanced grant last year, and the year before it got one.



▲ Dolf Weijers

But this year's grants have not come out of the blue. Personal professor of Microbiology John van der Oost won a Spinoza Prize last year, while chair-holding professor of Biochemistry Dolf Weijers won an ERC starting grant in 2011. Personal professor of Forest Ecology Lourens Poorter, one of the most published WUR researchers, got an NWO Veni grant 17 years ago.



▲ John van der Oost

The United Kingdom scored the best again this year, with 47 grants, followed by Germany (32) and France (31). The Netherlands, although much smaller, is in fourth place with 23 grants. European scientists submitted 2052 research proposals to the ERC, and just under 11 per cent of these were honoured. **AS, HOP**

‘You know litter is bad for the environment?!’

RECYCLE WASTE OUTDOORS TOO

At the litter hotspots on campus there are going to be more, and larger, bins in a bid to prevent litter. And they will now offer us the chance to sort our waste out of doors as well as indoors.

Litter on the campus, surely there’s not much of that? Oh yes, there is, says Master’s student of Biology Sylvana Harmsen. And if you don’t see much litter, it is because the groundsman from the gardening company Donkergroen pick it up every day. At the end of January, Harmsen went around with them for a day. The result: ‘Three sacks of litter. And that’s in the middle of winter. On a summer’s day they get seven to 10 sacks.’

Harmsen lives at Campus Plaza. ‘The campus is my back garden and I often walk around it. I see a lot of litter and that irritates me. It’s people’s selfishness and laziness which annoys me most. Because you know litter is bad for the environment.’

Harmsen decided to do something about it and knocked on the door of campus manager Elike Wijnheijmer at Facilities and Services. ‘The waste problem is worst around the education buildings,’ explains Wijnheijmer. ‘People buy something to eat at Campus Plaze, take it to the Forum or Orion and throw out their rubbish there. That leads to full bins and litter. Donkergroen would need to empty the bins three times a day to keep up.’

A start was made on installing new, larger bins for separate waste collection at the beginning of this week. Bins for plastic, non-recyclable waste and food waste will be placed outside the Forum, Orion and Radix. Elsewhere on the campus, too, the non-recyclable waste bins are being replaced by the new model.

The new bins are a discreet grey, with coloured labels for plastic, organic or non-recyclable waste. A campaign to inform students and staff of the new recycling possibilities will follow later



PHOTO: SVEN MENSCHER

▲ The new rubbish bins are an initiative by Master’s student Sylvana Harmsen, who finds litter on campus annoying.

this month. Harmsen has no illusions that this will solve the litter problem at one blow. ‘But it is definitely a step in the right direction.’ **IK RK**

UNHAPPY ABOUT NOISY OFFICES AND WORK PRESSURE

WUR staff are generally pretty satisfied – slightly more so than two years ago, indeed. However, they are not always able to work undisturbed in the office and the pressure of work is still too high. These findings come from the latest Employee Monitor.

In the survey, being able to work undisturbed when necessary scored a 5.7 on a scale of 1 to 10. So it scraped a pass, but was still half a point down on the previous monitor two years ago. Staff say the workplace doesn’t exactly help your productivity (5.6) or collaboration with others (6.2). The figures fit with the irritation caused by the open-plan offices that WUR Council revealed last month.

The poorest scores for ‘being able to work undisturbed’ were for Corporate Staff, Facilities & Services and the Plant Sciences Group (PSG), units where hot desking and open-plan offices have been introduced at least to some extent. Interestingly, the workplace as a whole scores a comfortable 7.

The monitor shows that WUR employees are generally content people. We give our work, our colleagues and the organization a healthy 7. Facilities & Services stands out in particular. It scores just under 8 for most of the nine as-



PHOTO: GUY ACKERMANS

▲ The poorest scores for ‘being able to work undisturbed’ are given for departments with open-plan offices, such as here in Radix.

pects that were measured, such as enthusiasm, commitment and atmosphere at work. The Social Sciences Group (SSG) scores less than the WUR average but still gets a 7.

The pressure of work is the other big issue apart from noisy workplaces. Four out of ten employees say the pressure is too high. As many as half the employees at SSG and the Environmental Sciences Group (ESG) feel this

way. Jophan Kanis (Human Resources) says further research is planned to find out more about the work pressure.

Another striking result concerns inappropriate behaviour. One in ten employees experienced some form of inappropriate behaviour in the past year. The figure for Rikilt is 13 per cent. The most common forms are verbal violence, bullying and discrimination. **IK RK**

RESISTANT BANANA BUILDING BLOCKS FOUND

PhD candidate Fernando Garcia-Bastidas tested almost 250 different varieties of banana for resistance to Tropical Race 4 (TR4), a notorious variant of Panama disease. He found resistance genes that are now being used to develop resilient bananas.

The cultivation of Cavendish bananas is one of the biggest monocultures in the world. The genetically identical plants are resistant to TR1 of the *Fusarium* fungus, the pathogen that causes Panama disease, but a new variant — TR4 — is gaining ground. This soil fungus has infected banana plantations in almost all countries in Southeast Asia and has also been spotted in countries such as Jordan, India and Mozambique. No chemical or biological pesticides have yet been found that can kill off the fungus. If TR4 were to infect the large banana plantations in Latin America, it would endanger the cultivation of bananas worldwide.

Garcia collected 245 banana varieties from various countries, grew them in a greenhouse in Wageningen and infected them with TR4. He found a number of plants that did not become diseased and isolated the resistance genes, both in Cavendish bananas and in wild species. The wild species do not produce suitable bananas because the fruits are full of seeds but they can be used in a breeding programme.

Garcia collaborated with Australian researchers who have developed a transgenic banana that is resistant to TR4. 'This banana may never reach the market because of GMO legislation but the study showed that we can grow resistant bananas,' says Garcia.

He, however, is taking a traditional plant-breeding approach and therefore needs to use cross-breeding and selection to get resistant plants. That is a lot more difficult. Bananas sold as food are triploid, which means they do not produce seeds and are sterile, whereas the diploid wild banana spe-

cies do have seeds and can propagate sexually. It takes 5 to 12 years to get a gene from a wild species into an edible banana, says Garcia.

After obtaining his PhD on 19 March in Wageningen, Garcia started on this process at the plant breeding company KeyGene. **AS**



TRADE IN SICK CHICKENS KEEPS BIRD FLU GOING

Why is bird flu constantly raging among Indonesia's poultry population? Because there is a distribution channel for sick chickens, discovered PhD candidate Dikky Indrawan, who received his doctorate on 13 March. His supervisor was Henk Hogeveen, professor holding a personal chair in Business Economics.

Indrawan investigated why Indonesia has been unable to eradicate the highly pathogenic bird flu H5N1 in West Java. He discovered that Indonesia has four supply chains for chicken meat with different market leaders that coordinate the production. Two modern supply chains provide 20 per cent of the meat, mainly in the form of frozen chickens. Two traditional supply chains deliver live chickens to markets. They account for 80 per cent of chicken meat.

In the biggest traditional supply chain, poultry farmers, traders, butchers and consumers meet up at a market with no safety regulations or checks. 'The price is all that matters at this fresh meat market,' says Indrawan. He discovered that sick chickens are

also being traded in this supply chain. 'If poultry farmers notice clinical signs of bird flu in their chickens, they sell the chickens at this market.'

For many farmers, it is not worth investing in medicines or vaccines to tackle bird flu, explains Indrawan. Poultry farmers in all four supply chains, so including the modern ones, use the traditional markets to dump their sick birds.

Indrawan concluded that traders are the key players in this 'sick chicken chain'. They provide farmers and butchers with loans and control the business by directing the chickens towards the markets with the highest margins.

The PhD student recommends that the Indonesian government should involve these meat traders in its policy for eradicating bird flu. 'You can acknowledge their role as bankers for the poultry sector and then make agreements for them to stop the trade in sick chick-

ens.' It is crucial for the government to give the economic actors incentives not to trade in sick birds, says Indrawan. **AS**



▲ Indonesian poultry farmers use traditional chicken markets to get rid of sick animals.

WORM POO CONTAINS AVAILABLE PHOSPHATE

Earthworms increase the fertility of the soil because they convert bound phosphate into available phosphate, shows PhD research by Mart Ros.

Ros graduated with a PhD on 29 March for his study of ways of making the phosphate in the soil more available to plants. That might seem odd, since the Dutch soil contains too much phosphate due to over-fertilization. 'But a lot of that phosphate is not available to the plant because it is bound to soil particles and organic matter.'

Also, environmental and agricultural legislation means less and less artificial fertilizer may be used. So there is a demand for ways of releasing the buffer of bound phosphate in the soil for use by plants. Ros did various experiments on the effect of earthworms on phosphate availability. Three different types of worm were placed in pots of English ryegrass growing in phosphate-poor soil: worms that live in the topsoil, those that live deeper underground, and those that go up and down between the two layers.

It was not easy, actually, to get hold of phosphate-poor soil in the Netherlands. 'In the end, I found some soil on a small farm in Joppe. It did contain some phosphate, but only in the bound form. The

soil was red with iron, and that iron binds phosphate.'

All three groups of earthworms make more phosphate available through their faeces, according to Ros. But the worms that have the biggest effect are those that live in the topsoil and eat plant litter, and those that move up and down in the soil. Their faeces contain levels of freely available phosphate that are up to 1000 times higher than those of the surrounding soil. So the worms provide good manure, which can improve growth and increase biomass in phosphate-poor conditions.

Ros also studied which grasses can best cope with a shortage of phosphate. He tested the growth rates and root development of eight varieties under phosphate-poor and phosphate-rich conditions. Fertilization seems to have no effect on root growth. But grasses with longer roots do considerably better than those with shorter roots.

According to Ros, this study shows that solutions are within reach for when farmers are not allowed to use as much phosphate. 'It is important to maintain the worm density in the soil. And if you are not allowed to apply as much phosphate, it helps to sow grasses with long roots.' **IK RK**



VISION

'New law protects farmers against market forces'

The European Parliament adopted a law in March which is aimed at protecting farmers and horticulturalists against unfair trade practices. Buyers will no longer be allowed to pay late for perishable goods, to cancel orders at the last minute, to change contracts unilaterally or to charge suppliers for waste. 'A step in the right direction,' says Michiel van Galen of Wageningen Economic Research.



Is this law useful?

'Certainly. Talks about unfair trade practices have been going on in the EU for 20 years and it is already illegal to break off a contract unilaterally. But this legislation gives the farmer a stronger basis for going to the Netherlands Authority for Consumers and Markets (ACM). And it gets us a bit further in the dialogue about unfair practices.'

Why does the EU opt for these four specific trade practices?

'They looked at a long list of unfair practices which arise from the powerful position of big companies in the food supply chain, in particular. The EU is now targeting unfair practices which are demonstrable. Take late payment or last-minute cancellations: a supplier can prove these. If there are a lot of complaints about a company, the ACM can carry out inspections and if necessary impose sanctions.'

Are these the main unfair practices in agriculture and horticulture?

'We did a survey in 2018 among 600 farmers and market gardeners. It emerged that individual farmers are not faced with unfair practices on a large scale. But their clients can encounter them. Farmers and horticulturalists mainly complain that buyers exert pressure to lower the prices and raise the requirements for products – in terms of environment, wellbeing and biodiversity – without being willing to pay any more for them. These were the most commonly expressed complaints, but it is difficult to prove abuse of power in these cases. You can see pressure to reduce prices as abuse of power, but you can also see it as good entrepreneurship. So at Wageningen Economic Research, we want to study this point in more depth. How is pressure exerted, and can the process still be described as fair negotiations?' **IK AS**

READING A GREAT TIT'S MIND



Animals are individuals, and their behaviour expresses their personalities. Kees van Oers, who was inaugurated at the end of February as professor by special appointment of Animal Personality, investigates this complex relation. He has been doing research on great tits at the ecological institute NIOO-KNAW since 1998.

How do you identify a great tit's personality?

'Our standard test is simple. We put a great tit in an unfamiliar space without many stimuli and watch how he explores the space. The test reflects great tits' explorative behaviour. Are they extravert, inquisitive and aggressive, or just the opposite? There are also tests for looking at finer details of behaviour. How do the birds react to objects in a space, and what happens if you put certain personality types together?'

The great tit is a model bird for behavioural studies because it is common and quite resilient. But aren't there much more interesting birds, as far as personality goes?

'It is difficult to measure personality differences between species. When you develop a test you have to think in terms of the species, because the test needs to be geared to the species' ecological behaviour. A foraging great tit explores its surroundings. But a pied flycatcher, for example, sits still and looks around him. Only if he spots prey does he fly off towards it. If you used the open field test for great tits on pied flycatchers, you wouldn't detect any personality differences.'

So do the great tit results tell you anything about other animals?

'What interests us is not personality as such, but the underlying question: is variation in personality important for a species' evolutionary success? Why do great tits lay so many eggs, and how much of a role does personality play in that? If that brings great tits evolutionary success, in the sense of fast adaptation and therefore fitness, the same will apply to other species. You don't have to know all the details of the personalities of those other species. It's a question of generic processes.'

How do you observe a great tit in nature?

'I don't see the great tit just as one species like all the others. I always try to identify the individual. I pay attention to the colour, the sex, to whether it is bold. When I go for a walk in the woods with my wife, she sometimes jokes: it seems as though those birds know you are coming. Alarm calls straightaway. Some of them really approach me and scold me.'

'Some great tits really approach me and scold me'

Can comparisons be drawn between personality in great tits and in humans?

'To some extent, yes. Take the dopamine system. That generates positive or negative feedback when animals behave in certain ways. Mountaineers, for instance, get a stimulus within the dopamine circuit. The higher the mountain, the bigger the stimulus. And in great tits you can see a relation between the expression of the gene for dopamine and inquisitive behaviour. But that plays a limited role in both humans and animals: it explains only 2.5 per cent of the variation in this behaviour.'

What will the research focus on in the near future?

'We want to study how personality changes over time under different conditions, by changing the size of the brood, for example. We'll remove some of the young and let them grow up in different conditions. What are the consequences

of that for personality and behaviour? So this is about the nature or nurture issue. I also want to find out where in the great tit's brain those processes take place. Are certain areas of the brain more important than others? We still don't know much about great tits' brains.'

And any teaching plans?

'I've been running modules on personality in existing courses for 10 years now. I want to take that further with an in-depth course of my own for Master's students. It will be about asking the right research questions. Anyone who works with animals needs to know that personality is very significant to the outcome of the research.' **RK**

KEES VAN OERS (1971)

1998-2003 PhD at the Netherlands Institute of Ecology (NIOO-KNAW) and Utrecht University

2003-2004 Postdoc at NIOO-KNAW

2004-2006 Postdoc at the Max Planck Institute for Ornithology, Germany

2007-present Veni and senior researcher at NIOO-KNAW

2018-present Professor by special appointment of Animal Personality at WUR

Van Oers is married with two sons.



GUILLEMOT DEATHS DUE TO 'DEPRIVED YOUTH'

The large numbers of common guillemots that washed up along the Dutch coast at the start of this year died of starvation, WUR and Utrecht University researchers have concluded from an extensive study.

According to the researchers, there is no link between the guillemot deaths and the disaster with the container ship *Zoe*. It was not surprising that a link was suspected. The *Zoe* lost at least 345 containers in the night of 1 to 2 January, and a lot of dead and ailing guillemots stranded on the coast in the weeks that followed. A thorough study was commissioned by the ministry of Agriculture, Nature and Food Quality.

Mass strandings of guillemots, assumed to be caused by starvation, are fairly common, says re-

search leader Mardik Leopold of Wageningen Marine Research. "The last one in the Netherlands was in the early 1990s. But never before has a mass stranding been as thoroughly researched as this one. The opportunity to do this arose out of the commotion about the *Zoe*, and I seized it with both hands."

According to Leopold, the only possible conclusion is that the guillemots died because of their 'deprived youth'. It was not toxins, plastic or a virus that felled them but hunger. This matches the findings of Scottish researchers. The last brooding season along the east coast of Scotland was tough for guillemots. The weight of the chicks was extremely low when they left the colony, say the Scots.

Low weight among chicks goes together with high death rates



▲ Dead guillemots on the research bench.

PHOTO: VINCENT KOPEERDRAAT

during their first winter at sea. Two out of three stranded guillemots were birds of less than six months of age. Their difficult youth raises new questions

though, says Leopold. Why were the birds hungry and is this a systemic problem? He and his Scottish colleagues are going to do further research on this. **AS**

OP ZOEK NAAR EEN BIJBAAN/ PARTTIME JOB?

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- DHL pakketsortering (pakketsortering op route)
DI t/m ZA - 08:00 tot 09:15
- Flexbezorging (bezorgwerk in teamverband of individueel)
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OnePlanet wants to measure its way to a better future

Smart with sensors

Biodegradable mini-sensors that you sow between the potatoes, watches that give their wearers personal dietary advice, microchips that measure how long you can keep your chicken filet in the fridge. They'll all be on the market in about 10 years' time. Or they will be if it's up to OnePlanet, the new innovation centre for nano-electronics and digitalization.

text Tessa Louwerens illustrations Pascal Tieman

The province of Gelderland decided at the end of last month to invest 65 million euros in OnePlanet, a new research centre to be housed on Wageningen Campus that is launched by WUR, Radboud University, Radboud University Medical Centre, and the Belgian research centre Imec. The aim of OnePlanet is to develop technology that will improve agriculture and healthcare. The insti-

tutions will do this in four programmes focused on nano-electronics and digitalization in the areas of: Data Driven Nutrition & Health, Citizen Empowerment, Precision Production & Processing, and Tailored Supply Chains.

The arrival of OnePlanet will turn Wageningen into the Silicon Valley of the agri-food sector, said provincial newspaper *De Gelderlander* in January. But exactly what kind of innovation

are we talking about, actually? And what can research by WUR contribute to the high-tech precision technology that OnePlanet is supposed to deliver? Three researchers talk about the innovations they are already working on within WUR, and which they hope to develop further with the OnePlanet partners and companies.

'Sensors in your fridge will keep track of what ingredients you still have in stock'



Liesbeth Luijendijk

PERSONALIZED DIETARY ADVICE

What shall we eat? In five to ten years' time we might not answer that question ourselves anymore. Then we'll just check the shopping list and recipe that an app on our smartphones serves up, explains Liesbeth Luijendijk, programme manager of smart customized nutrition & health at Wageningen Food & Biobased Research and planner for OnePlanet. 'Dietary recommendations are currently one-size-fits-all, but in future they will be completely tailored to your nutritional needs, preferences and, if applicable, allergies.'

Luijendijk outlines a future in which sensors in your watch or elsewhere monitor your body and measure things like sugar and cholesterol levels in your blood via your sweat. Meanwhile, sensors in your fridge keep track of the ingredients you have in stock so that you



'Growers will soon be sowing small biodegradable sensors on their land'

use them up in time and don't buy too much of a product, only to throw it out later. The ingredients for the perfect meal for you can even be ordered automatically from a local source, and all you have to do is to follow the recipe. Luijendijk: 'Most people want to eat healthily but because of the excessive amount of information they are exposed to, they can't see the wood for the trees. Our aim is to make the healthy option the easy option.'

To create personalized dietary advice you need not just sensors but also complex algorithms which help figure out whether you had better eat less meat today or perhaps a bit more cauliflower. And this is where WUR scientists come

into the picture. Because it takes scientific knowledge to design those algorithms. Not just knowledge about nutrition and its effects on the body, but also knowledge about things like food preparation methods and consumer behaviour. Luijendijk: 'The targeted innovations sound primarily technical in the first instance, but they must also meet the needs of the consumer, so people will adopt them. In OnePlanet, we are going to develop the sensors and algorithms to make the technology affordable and accessible for the wider community. The aim is not to make new gadgets: there are plenty of those on the market. We want to develop technology that helps create a healthier and sustainable society.'

Jos Balendonck

A SENSOR FOR EVERY PLANT

Big data, sensors, self-driving tractors, drones... The technology for precision agriculture is developing at a rapid pace. 'Where the traditional arable farmer looks at how much artificial fertilizer and pesticide is needed for optimal growth of the crop per field, in precision agriculture this is done per square metre or even per plant,' says Jos Balendonck, a sensors and robotics researcher at Wageningen Plant Research.

Balendonck and his colleagues develop sensors for use in agriculture and horticulture. Those sensors measure things like humidity levels, temperatures or the electrical ▶

conductivity of the soil. The latter tells them something about the amount of fertilizer and the salinity. The sensors then send that information to the internet cloud, where it is subjected to various calculations. This produces a map which shows the farmer exactly which areas of the farm need additional chalk, perhaps, or more water or less fertilizer.

'It is not unthinkable that this will be

done for each individual plant in the future,' says Balendonck. 'The problem is that the sensors are still much too expensive to place one on every plant. In OnePlanet we want to develop small, affordable sensors, which might be reusable or biodegradable. That could make it possible to sow the sensors in between the plants, for example. Many growers have big acreages, so they cannot check

on everything every day. Thanks to the sensors, the grower of the future will know which parts of the farm need extra attention, enabling him to manage it more efficiently.'

Like this, precision agriculture ensures optimal crop growth. And farmers do not have to use as much artificial fertilizer, pesticides and other products, which is good for the environment and for the bank balance.



Toine Timmermans

FOOD SUPPLY CHAINS WITHOUT WASTE

About one quarter of all the food that is produced gets lost somewhere in the food supply chain or is used for something other than human consumption. 'To prevent such waste, production needs to match consumption requirements,' says Toine Timmermans, sustainable food chains programme manager at Wageningen Food & Biobased Research and director of the campaign against food waste *SamenTegenVoedselverspilling*. Food waste happens everywhere: during harvesting, storage and transportation, in supermarkets, restaurants and homes. By digitalizing and linking all the information about the product, the circumstances and the supply chain processes, we can organize and manage the chain to ensure that the right product is in the right place at the right time, says Timmermans. Which is quite complicated, since there are so many factors involved. 'With avocados, for example, it's not just a matter of storage temperature and conditions; it makes a difference which variety it is, how it was grown and harvested and how ripe it was when it was picked. By collating and integrating all that information, companies can plan better and intervene in the supply chain in good time. If you find out in time that there's a drop in demand for fresh avocados on a particular market, you can take steps so as to be able to sell the fruit that is already on the way. You might make guacamole, for example, so they don't get spoiled and end up being discarded. Which is what often happens now.'

A smart use of information also gives consumers more idea of what they are buying and whether it fits their personal needs and preferences. Timmermans: 'Before long you will scan the smart tag on the packet of chicken curry with your smartphone, and see straightaway where the chicken filet comes from, when the chicken was slaughtered, and whether it meets your personal nutritional needs.'


There are already sensors that can detect the use-by date of the product in a packet themselves. They measure

'If you find out in time that there's a drop in demand for avocados, you can make guacamole'

temperature, humidity, or levels of ethylene, a substance that causes fruit to ripen. Timmermans: 'But those sensors are still too big and so expensive that they are only used for expensive products such as drugs.' In OnePlanet, researchers and businesses are going to collab-

orate on designing small, affordable alternatives.

According to Timmermans, it is vital that they think about the applicability of the technology right from the start. 'For example, the Commodities Act lays down that the use-by

date must be printed on the packaging.' Once we have sensors that can detect that date on the spot, that law may have to be changed. 'Also, packaging should be recyclable, the sensors should be too. These are all hurdles we are going to take with OnePlanet.' 

HOW IS ONEPLANET GOING TO WORK?


OnePlanet will work on the principle of open innovation. That means more intensive collaboration between companies and science institutions in the early stages of product development, even when they are competitors. As an example, numerous different companies are involved in developing sensors that can detect a product's shelf life, from food manufacturers to packaging manufacturers to the producers of the packaging material. Getting these companies together at an early stage enables them to share costs and thus speeds up development.

At a later stage, companies can go on to develop, commercialize and possibly patent their own end products.





TAKING THE PLUNGE FOR MONEY

Almost 100 members of student society SSR-W ran into the Rhine on Thursday 20 March in the evening to raise funds for the National MS Foundation. 'This Rhine challenge is a follow-up to the ice bucket challenge,' says Robbert Boers, deputy chair of SSR-W. 'Members can challenge each other. If a member accepts the challenge, the challenger has to put down at least five euros.' This is the fourth time SSR-W has run the challenge. 'I've take part twice and it is really awful,' laughs Boers. 'It is freezing cold.' The students have raised about 700 euros.  LZ, photo Guy Ackermans





A gas-free greenhouse

Greenhouse horticulture uses a lot of fossil energy. With its brand new All Electric greenhouse in Bleijswijk, WUR wants to showcase an alternative.

text and photo Roelof Kleis *illustration* Annet Scholten

There are several large demonstration greenhouses at Wageningen Plant Research's Greenhouse Horticulture business unit in Bleijswijk. They all look the same from the outside, so the 'All Electric' at the far end of the site doesn't jump out at you. But this newest addition to the business unit is different from the other greenhouses. It is state-of-the-art as far as sustainability is concerned, explains business unit manager Sjaak Bakker. A demonstration greenhouse that offers the sector a peek into the near future.

LIGHT AND WARM

'At the beginning of 2018, we were asked by the ministry of Agriculture, Nature and Food Quality to build a greenhouse that is as sustainable as is currently possible,' explains Bakker. It is easy to see why. Greenhouse horticulture uses vast amounts of light and heat. The lighting requires a lot of electricity and the heating and dehumidifying are still mainly gas-fired. So the environment

can benefit greatly if greenhouses are made more economical and gas-free.

It did not take long for project leader Frank Kempkes and his team to design, commission and build a greenhouse. 'A demo that uses no gas and as little energy as possible, and has zero emissions in terms of nutrients and crop protection products,' says Bakker. The building costs: a mere 2.3 million euros. The greenhouse is not completely finished yet. Inside, workers are busy setting things up. Bakker: 'It is a miracle, really, that it is already built. There is a lot of building going on in the greenhouse sector. We started building in September and in another week the plants will be going in.'

STRAWBERRIES AND FREESIAS

In consultation with the ministry, the designers decided to make the greenhouse suitable for crops that usually require 10 to 25 cubic metres of gas per square metre per year. There is a reason behind this decision to go for the middle of the range, in terms of heat consumption. Bakker: 'A lot of research has already been done on crops such as tomatoes, paprika, roses and chrysanthemums. These are crops of the type that requires a lot of heat, about 30 to 50 cubic metres of gas per square metre per year. And that is logical: if you want to save energy, start with the big energy guzzlers. That's why we are now looking at the middle of the range.'

In the All Electric greenhouse there are experiments



▲ Manager of the Greenhouse Horticulture business unit Sjaak Bakker in the brand-new sustainable demonstration greenhouse.



with strawberries, gerbera, freesias and pot anthurium. ‘Crops that are representative for a particular group and are economically important,’ explains Bakker. ‘Growing strawberries under glass is on the rise. Gerbera is a typical example of a mid-range decorative plant, anthurium represents pot plants, and the freesia is specific because it requires soil cooling and is still grown in the ground, which makes it harder to limit emissions from nutrients.’

COMPLETELY CLOSED

Each of the four crops has its own cultivation system. So in fact, All Electric is made up of four different greenhouses, taking up 350 square metres each. The pot plants stand on tables, the gerberas in gullies on the floor, and the freesias in trays. The strawberries hang in hoistable containers in order to make the best possible use of the available surface. All Electric is unique in its concept and the combination of applied techniques drawn on, explains Bakker. ‘The greenhouse is completely closed. It has a 100 per cent recycling system for water and nutrients. Water that the plants do not use is captured, purified, mixed with clean water and nutrients, and reused. The greenhouse is lit with efficient LED lighting, and natural light comes in through special glass that creates a diffuse light distribution in the greenhouse. The right light conditions are created using double screens which are adjustable independently of each other.’

HEAT PUMP


The same screens help keep the heat in as much as possible. That is positive, but a closed system also traps moisture so rising humidity is a problem. ‘Traditionally, the air vents are opened to ventilate the place,’ says Bakker, ‘but then you lose the heat too.’ This problem is solved in the new greenhouse with a dehumidifier/ heat pump which retains the heat and extracts the moisture. ‘That may cost electricity but it is still more energy-efficient than opening the window.’ The name All Electric is due to the use of this electric pump, which makes the greenhouse gas-free.

So the greenhouse is not fully climate-neutral? ‘It all depends how you define that,’ says Bakker. ‘We don’t generate the electricity ourselves, but use electricity from the net. The emphasis in this project lies on minimalizing CO₂ emissions. The system runs entirely on electricity.’

ARMY OF INSECTS

The greenhouse is also full of measuring equipment. All the flows of water, electricity and nutrients are monitored precisely. At the same time, the use of crop protection products is kept to a minimum. The plants are protected by a ‘standing army’ of insects: biological pest control. This army of predatory insects is constantly on standby in the greenhouse. The challenge is to keep these predators alive when there are no pest insects present. By feeding them, for instance, or by installing special host plants on which they can survive.

‘Growers are involved so that results are relevant to their operations’

The project in Bleijswijk is led by four groups of growers – one for each type of crop. This is essential, according to Bakker. ‘The entrepreneurs are involved from the start so that the result is relevant to their operations. That is the strength of our organization. It is my experience that this enables you to push the boundaries. You’ll see that parts of this greenhouse will be in use in the sector in about five years.’ 

SERIES EXPERIMENTING FOR THE CLIMATE

The Netherlands aims to cut its greenhouse gas emissions by 49 per cent by 2030, compared with 1990. How we are going to do that is to be laid down in a comprehensive Climate Agreement. Ahead of that, ministry of Agriculture funds are being used for numerous experiments in emission reduction. WUR is coordinating these pilot projects for the Agriculture and Land Use sector. *Resource* is currently taking a look at these experiments in four numbers. This week, episode 4: greenhouse horticulture.

The new face of WUR in the region

Outstations new-style

In recent years WUR has been steadily concentrating its research on the Wageningen campus. The various 'outposts' were under pressure. But the institution has now started investing in the region again. No longer in experimental farms, but as a participant in 'living labs'.

text Albert Sikkema illustration Alfred Heikamp

- current WUR outposts
- recently closed outposts
- outposts due to close



Our full name may be Wageningen University & Research, but WUR is present all over the Netherlands. Besides the Wageningen campus, you'll find 'Wageningen' researchers in Randwijk, Lelystad, Den Haag, Bleiswijk, Leeuwarden, Sterksel, Hengelo in Gelderland, IJmuiden, Den Helder and Yerseke (see map). Not to mention a number of regional offices and smaller experimental farms.

A nice list, but shorter than it used to be. Ten years ago, WUR had four more experimental farms for research on pigs and cows. Those have been sold off. And fewer people are working in the remaining outlying branches. In 2018, 800 of WUR's 5000 staff worked outside Wageningen; in 2014, the figure was 950, show statistics from the Corporate Human Resources department. And although the figure for the previous year is not available, it is known to be even higher.

BETTER COLLABORATION

The drop in the number of staff working outside Wageningen is largely due to two relocations. Firstly, Wageningen Livestock Research moved from Lelystad to Wageningen in 2014. This institute, with its staff of 200, made this move to strengthen its collaboration with others within WUR. Secondly, Wageningen Economic Research (WEcR) is slowly moving to Wageningen. Originally based in The Hague, this 250-strong institute has been appointing more and more staff in Wageningen, and about 75 of its staff work there now. 'We are heading for a situation in which 50 per cent work in The Hague and 50 per cent in Wageningen,' says Martijn Hackmann, Director of Operations for the Social Sciences Group. Here too, the aim is better collaboration with other groups within WUR.

NEW MODEL

It has been a difficult few years for the applied research programmes in the 'outposts'. Budgets shrank due to government cuts and the abolition of the agricultural product boards, and several institutes and experimental farms went through a rocky patch.

Wageningen Marine Research in Yerseke almost closed down for lack of research assignments, and was saved at the eleventh hour by a Zeeland-based coalition of shellfish fisheries and other regional parties. The old model of contract research is being replaced by a new model in which Yerseke functions as a regional centre where clients and researchers decide on the research topics and financing together. A helpdesk was established, along with a 'strippenkaart' system in which clients buy 'tickets' for a number of research projects. That is working well, says regional manager Nathalie Steins. 'The research is closer to practitioners now and has more of a support base.'

The new regional centre in Yerseke has also started presenting itself as an outpost of the whole of WUR. So, for example, if the public works directorate (Rijkswaterstaat) comes along with an economics question, the regional centre can easily bring in a WUR economist.

Meanwhile, Wageningen Economic Research has started positioning itself as a WUR outpost too. Since July 2018, WEcR has been located in the World Trade Centre in The Hague, walking distance from the ministry of Agriculture, Nature and Food Quality, and from the Parliament. 'Anyone from WUR who needs to be in The Hague can come and work here,' says Martijn Hackman. 'It's easier now to quickly consult someone at the ministry. And the link with the ministry is very important.'

CRITICISM OF WUR

These success stories in Yerseke and The Hague are one side of the coin; the other is the recent loss of five experimental farms for livestock. The pig innovation centre in Sterksel, in Brabant, will shut up

shop in 2020. The experimental farms for cows and pigs in Zegveld, Heino, Lelystad and Raalte have already done so.

These closures brought down criticism on 'Wageningen' for no longer being visible in the region. There's something in that criticism, says Frank Lenssinck, former head of the now closed experimental farm in Zegveld. In his view, WUR has thrown away its strong position in applied research. Agricultural suppliers such as Agrifirm, Schothorst and MS Schippers have started their own research centres and pushed WUR out of the market for applied research, says Lenssinck. 'That is because WUR doesn't understand how to market knowledge.'

Lenssinck is now head of the private Veenweiden Innovation Centre in Zegveld, the successor to the WUR experimental farm. He says there are 'managers' and there are 'entrepreneurs' in applied research. For the managers, the research centre is there for the benefit of the research. In that model, 'the researchers give top priority to their research assignments, and the centre is at the back of the queue.' The entrepreneurs, on the other hand, make the research serve the interests of the centre, says Lenssinck. They discuss assignments directly with external clients and then decide which research they can and want to 'buy' from WUR. With managers in charge, Lenssinck does not think WUR will recover its position in the region.

'In the new approach we join the region as a knowledge partner'


COLLABORATION

Director of the Animal Sciences Group Martin Scholten thinks Lenssinck's ideas are outdated. 'We no longer want our own experimental farms where we do restricted sectoral research, and which also have to compete with other research businesses. That is not how it's done nowadays.'

Sterksel is closing, says Scholten, because the facility was old. 'We couldn't and didn't want to keep it going anymore. We are now looking for partners with whom we can set up modern facilities for pig research, along the lines of the Dairy Campus in Leeuwarden.' This research centre for a sustainable dairy supply chain is a joint initiative by WUR, local and regional governments, a large dairy company, an applied sciences university and a vocation college.

Collaboration with parties in the immediate vicinity: this is WUR's key to maintaining its position in the region. To give a recent example: WUR wants to make the experimental farm De Marke in Hengelo (Gld) part of a 'living lab for circular agriculture'. De Marke, which has been monitoring the mineral cycle of dairy farms since 1990, will then play a broader role as part of a living lab in the Achterhoek region of the eastern Netherlands. Scholten: 'We will make the research station available for the regional innovation agenda, with farmers, agri-food companies and educational institutions involved as well.'

BACK IN THE REGION

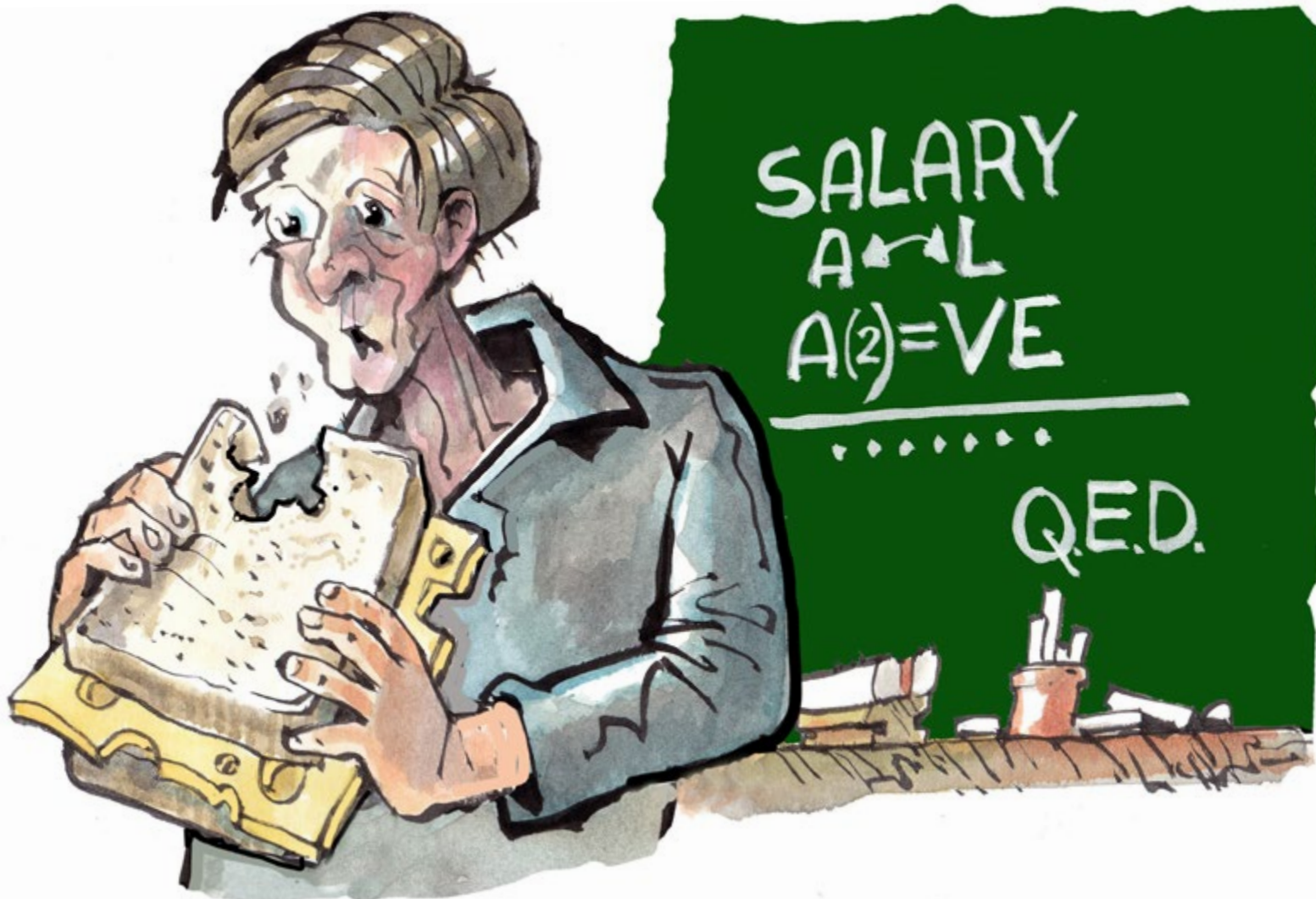
So WUR is becoming more active in the region, says Scholten. 'In the new approach, we join the region as a knowledge partner, so as to take an integral view of agriculture, the landscape and society. Mainly working in the field.' He wants to make use of the Dairy Campus in Leeuwarden as WUR's base for participating in field projects on nature-inclusive circular agriculture in the north of the Netherlands. 'That is broader than dairy cows. And it means we are back in the region.' 

SANDWICH-PHD

Academic slave labour?

Sandwich PhD students, who do part of their research in Wageningen and part of it in their home countries, sometimes work under difficult labour conditions. So says researcher Mark Zwart in an opinion piece on resource-online.nl (see too p.4). He argues for strict rules against exploitation. Does he have a point?

text Tessa Louwerens *illustration* Henk van Ruitenbeek



Mark Zwart



Currently microbial researcher at the Netherlands Institute of Ecology (NIOO-KNAW), formerly a researcher in the WUR chair group Quantitative Veterinary Epidemiology

'Sandwich PhD programmes bolster international collaboration and give young researchers from abroad a unique opportunity. At the same time, sandwich PhD researchers are cheap labour, because most of their salary and research costs are covered by their own country.

Many sandwich PhDs work under labour conditions that we would consider unacceptable in the Netherlands. **When one of my students enrolled in the programme, her salary was halved, and yet she was expected to do her research in her own time.** And she is not the only one. It is no exaggeration to call it contemporary academic slave labour. Research schools should make evaluating labour conditions part of their admissions procedure. If there is a clear code, it can be used when discussing terms of employment with the home institute.'

(Read Zwart's letter to the editor on resource-online.nl)

Antonella Petruzzella



A sandwich PhD candidate at Aquatic Ecology NIOO-KNAW, from Brazil

'It's great that talented people get the opportunity to develop their own research and careers at one of the best universities and research institutes of in Europe. But it is also very convenient for the university itself. We do

the same job, but a PhD student employed by a Dutch research institute or university gets a much higher salary. **In December, what with the Christmas bonus, a 4th-year PhD student at WUR takes home four times my monthly salary.** Every Christmas that feels unfair. And I'm lucky because I can manage on my Brazilian grant. My Chinese colleagues have a hard time making ends meet. We should appreciate people's talent and hard work, and discuss how we can decrease these huge salary differences.' *(Read all of Petruzzella's letter on resource-online.nl.)*

Claudius van de Vijver



Head of PhD Programme, Graduate School PE&RC (Production Ecology and Resource Conservation)

'About one in five PhD candidates at Wageningen comes through a sandwich PhD programme. On the whole, clear financial and organizational agreements are made with the home institute. Sometimes, funding is only available for three

years instead of four. In such cases, the professor in Wageningen must sign a statement that they will cover the funding for the final year. That works fine nine times out of ten. But occasionally, the home institute does not comply with the agreements, or they were not clear in the first place. **We should check when a sandwich PhD candidate registers whether the financial and organizational agreements between the home institute and Wageningen University are clear and realistic.'**

Anita Linnemann



Assistant professor of Food Quality and Design

'I supervise a lot of sandwich PhD students from countries like Nigeria, Zambia and Benin. There aren't usually any problems, except for sandwich PhD students from Zimbabwe, where the economic situation is very bad. So in theory, Zimbabwean sandwich PhDs are relieved of their teaching duties, but in practice they are not. I have sometimes commented on that. But you can't change the economic situation and the money has to come from somewhere. If I kick up a fuss, I put the PhD student in a difficult situation, whereas they are so motivated to set to work. It helps that most of these PhD students are a bit older, so they can deal with the situation better. And they work incredibly hard. **I always consult the candidate about what to expect, and I tell them I will help them as much as I can.'**

Juliet Mubaiwa



Former sandwich PhD at Food Quality and Design, from Zimbabwe

'When I started on my PhD I was working as junior lecturer at a university here in Zimbabwe. For me, money was not the biggest issue, it was more about time and workload. **When I was in the Netherlands for six months I could really focus**

on my research. Back in Zimbabwe I also had to teach three courses per semester and supervise BSc students. I had to do my experiments in the Netherlands, because the university in Zimbabwe did not have the facilities. The downside was that if my experiment went wrong I had no time to repeat it. It was very hectic and I ended up having to get an extension of 10 months. You could ask the university in Zimbabwe to reduce the workload, but that means hiring someone else. There is no money for that and I'm not sure if that is something that WUR should pay for.'

Patrick Steinmann



Public Relations Officer on the Wageningen PhD Council

'The Wageningen PhD Council is well aware of the issues surrounding sandwich PhDs, including their often precarious housing and legal situations. We hear of wildly differing contract terms. This makes it difficult for these researchers, who are often here for just a few months, to organize things and protect their rights. Sandwich PhD candidates can be tremendous sources of local knowledge. However, the success of their research depends on good expectations management between the science group, the candidate and the home organization, and clear agreements on the labour conditions. **Sandwich PhDs are particularly vulnerable in terms of issues such as compensation, workload or housing. We would therefore welcome separate representation for them within the university.** We need a professional bureau to ensure continuity and fairness in the support of sandwich PhDs, especially as they cannot always be physically present, and are systematically underrepresented in institutional councils.'

Fabian Lindner goes to world cup for student entrepreneurs

Modern-day mead

The world cup for student entrepreneurs will be held this month in Macau, China. WUR student Fabian Lindner is representing the Netherlands with Zzinga, a start-up that produces a honey beverage and invests in biodiversity.

text Luuk Zegers photo Aldo Alessie

Long before there was wine and beer, there was mead. This drink, made from fermented honey, is probably the oldest alcoholic beverage known to humans. WUR-student Fabian Lindner (25) encountered this 'nectar of the gods' for the first time in 2015 during an exchange semester in Lithuania, and it was love at first taste. 'When I came back home to Italy I started experimenting with making mead myself. I knew I wanted to do something with it, but Italy has a very strong wine culture. Wine is way too popular for mead to compete with it.'

Nonetheless, Lindner did not let go of his newfound love for mead. On the contrary: he turned it into a company that produces a modern-day interpretation of the honey wine. This month, he will represent the Netherlands at the Global Student Entrepreneur Awards in China. How did he get there?

START-UP WEEK

In September 2016, Lindner came to Wageningen for his Master's in Management, Economics and Consumer Studies. 'I picked this university because it enables you to study and learn how to be an entrepreneur at the same time. If I hadn't come here, I probably wouldn't have a company now.'

Lindner chose Entrepreneurship as his Master's track and signed up for StartHub's start-up week to see if he could turn his love of mead into a business plan. 'In this week, you work with a team of three or four people on a business model. We decided to position Zzinga as a modern interpretation of mead, a lightly sparkling honey drink. And we want to use the drink to do good, by telling the story of bees and the role they play in biodiversity, and by donating some of the profits to local NGOs that protect bees and enhance biodiversity.'

COCKTAILS

Lindner knows his strengths and weaknesses as an entrepreneur. 'I'm a sociable guy and I can make a pitch, but I'm not so good with numbers. So I asked Elias Fischer, who I have known since middle school, to

move here and be Zzinga's finance guy. We make all the important decisions together.' Through one of Lindner's StartHub coaches, the young entrepreneurs got in touch with Döhler, an international food and ingredient supplier. 'We spoke to them, they liked our idea, together we finalized the recipe and now we have outsourced production to them.'

The first 2000 litres of Zzinga were produced in 2018 and Lindner and Fischer toured Europe with their drink to get consumer feedback. 'We went to cities like Ghent, Berlin, Nantes and Paris and just walked into bars to ask if we could do a tasting in the evening. We let people taste the drink and asked them questions. This way, we found out how versatile our drink is: some like to drink it straight from the bottle, others like adding lemon, ginger, thyme or other herbs, while bartenders experimented with making cocktails with Zzinga.'

SMART COMBINATION

This testing phase is a busy time for Lindner. 'Being a student and an entrepreneur at the same time is hard work. The more you work, the less time you have to study for exams. So I tried to combine my studies with Zzinga where I could. My thesis was about how small breweries build a brand, for example, and I was allowed to do my internship at my own company, doing market research for Zzinga.' Besides this, Lindner also started participating in pitching events through StartHub. In November 2018, he won the Dutch Student Entrepreneur of the Year Award, which qualifies him for the world cup in China, later this month. There Lindner will compete against 50 student entrepreneurs from all over the world.

'Because I won the Dutch event, they gave me a pitch trainer. He has already taught me a lot. Pitching is like volleyball: you throw the ball to the crowd, and you want them to throw it back at you. And you want to get your audience involved in your start-up. Invite them to help you improve your company. Make them feel like they can contribute something to your success.'



'We donate some of the profits to NGOs that protect bees'

IN THE SUPERMARKET

Whether Lindner wins the Global Student Entrepreneur Award or not, 2019 is already a big year for him. He graduates on 25 June and his company is going full speed ahead. 'We got an innovation loan from Rabobank. In three weeks, we will produce our second batch, this time 40,000 bottles. Through StartHub we got in touch with supermarkets Marqt

and Lidl. They will sell Zzinga. This is the year that we prove the potential of Zzinga. In 2020 we will scale up, strengthen our position in the Netherlands, and expand into neighbouring countries.'

Want to try the new beverage for yourself? That will be possible in a few weeks. Zzinga will then be available in café Loburg and at Woudenberg Dranken in Wageningen. 📍

▲ Fabian Lindner chose to come to WUR because you can learn entrepreneurship here too.

FROG KILLER

A toxic fungus called a chytrid has killed off 90 species of frogs, toads and salamanders in the past 50 years. And decimated another 500 species. Research at the Australian National University has revealed this. The fungus literally eats the skin of its victims. And there is no cure. How lovely.

LUNG FUNCTION

Short people run a higher risk of heart failure, shows research by Queen Mary University of London. In figures: 6.5 cm taller means 16 per cent less chance of heart failure. The link has to do with lung function, which is apparently better in taller people. This give a whole new meaning to 'short of breath'.

BIG SISTER

Women are more often voted off the television programme *Big Brother* than men, shows a study by the University of Nottingham in six countries. England comes top for sex discrimination: women are voted off twice as often as men. The Dutch *Big Brother* wasn't included in the study. Would it help to change the name? *Big Sister* is watching you...

BAMBOO

Wageningen is going to experiment with traffic signs made of bamboo. According to the municipality, this is more sustainable than aluminium. The front of the signs – made in China – doesn't look any different, and the back is obviously made of wood. The municipality is starting small, with signs for disabled parking and charging points. One of the things being tested is how problematic it is that the signs are flammable.

A century of student music

A competition for Dutch student orchestras, a tour in Limburg and Germany, and a centennial concert. That is how Wageningen Student Choir and Orchestra Association (WSKOV) plans to celebrate 100 years of making music.

A special anniversary committee has been set up, with current and former members, to plan the centennial celebrations. They will organize public events, such as the centennial concert in the Junushoff Theatre on 7 June, as well as special activities for current and former members, such as a ball and a reunion, explains WSKOV board member Froukje Lots. 'We are also organizing an ensemble competition, in which student orchestras from all over the Netherlands will compete.'

STARTED IN THE PUB

In 1919, professor of Mathematics and Physics Marie Johan van Uven was chatting in the pub with a few students about the lack of a Wageningen Music Society. Van Uven had been actively involved in the Utrecht Student Concert. Now he took the initiative to hold a music rehearsal in the Wageningen cafe Van Brummelen on 16 October. And on that day, the Wageningen Student Orchestra was founded, first as a sub-society under Ceres, and then from 1925 as an independent society. In 1945, Van Uven founded a student choir too, and in 1947, the choir and the orchestra joined forces in WSKOV. A hundred years after it was founded, WSKOV is a lively society, says Lots. 'The orchestra rehearses on Tuesdays and the choir on Thursdays. After those rehearsals, there are drinks.' There are also barbecues and rehearsal weekends. 'Then we might go to a house in the woods near Otterloo. During

those weekends, the choir and orchestra rehearse together, but we also have activities in the forest and singing by the camp fire.' During these rehearsals, the members work on summer and winter concerts.

INTERNATIONAL

'WSKOV now is a lot more international than it was in the early days,' says Lots. 'In fact, we do everything in English, because a lot of international students join in, especially in the choir. That is very nice when we play international pieces, from countries like Estonia, Russia or China, be-

cause there is always someone who speaks the language and can explain what it's about.' WSKOV's centennial concert will take place on Friday 7 June in the Junushoff. Student tickets cost five euros, regular tickets 10 euros. **LZ**



▲ The WSKOV in 1945 and in 2018.

Green party the big winner on campus

Voting patterns in the Provincial Council elections on campus diverged strongly from the national trend. While the far-right Forum voor Democratie was the biggest winner in the Netherlands as a whole, in the Forum building it was GroenLinks (the Green Left) – by a big margin.

In Wageningen as a whole too, GroenLinks got the most votes on 20 March, but the party was even more popular on campus (see table). Forum voor Democratie was less popular on campus than in the rest of Wageningen.

A total of 1837 votes were cast at the voting booths in the Forum on 20 March. Overall in Wageningen, 18,618 votes were cast in the Provincial Council elections. That is a much higher turnout than in 2015: 66 per cent as opposed to 58 per cent. **LZ**



PHOTO: SVEN MENSCHER

▲ Voters could vote at both entrances to the Forum on 20 March.

	Election results in percentages	
	Campus	Wageningen
GroenLinks (Green Left)	37	25
D66 (liberal democrat)	14	14
Partij voor de Dieren (animal rights)	10	7
VVD (conservative)	10	10
PvdA (labour)	10	11
CDA (Christian democrats)	5	6
ChristenUnie (Christian Union)	5	6
Forum voor Democratie (far-right anti-immigration)	3	7
SP (Socialists)	3	5
PVV (far-right anti-immigration)	0.5	3

MEANWHILE IN... THAILAND

‘The military manipulated the governmental system’

The first post-coup election since 2014 took place in Thailand on 24 March. After the preliminary results were published, both the military-backed party Palang Pracharat and the opposition led by the Pheu Thai party claimed that they had won. This could lead to continued political instability. MSc student Suvassa Ratanaprayook hopes the influence of the military will soon decrease.

‘In our governmental system, the general election is supposed to take place once every four years and a military-backed party can be in power for no longer than one year. It has been four years and 10 months since the military took control of the government in the coup of 2014. They have postponed the election several times already. This year, they felt the pressure from both inside and outside the country, and finally held elections.

We did not expect the military to stay in power for more than two years. However, they took the chance to manipulate the governmental system so that they could stay in power for longer. And they

made sure that even if they lost the election, they would still benefit politically for several years. They



PHOTO: SLEEPING CAT / SHUTTERSTOCK.COM

came to us during a very chaotic period in the name of saving the people, but they usurped power and took advantage of the people. This is dictatorship. During the election, there were also some irregular actions, which caused nearly 2,000,000 votes to be disqualified.

I voted for the Future Forward Party. As far as I know, most young Thai citizens voted for this party. Instead of pursuing power, this party has focused on solving current problems in Thailand, especially the need for political transparency. They have placed a lot of emphasis on the younger generation. I think they are better than both the old Democrat Party and the military-backed party. But they are still quite new to the older generation in Thailand. Once they know them, they will vote for them too. I believe this party can bring stability to Thailand.’ **CC**



Suvassa Ratanaprayook (28), an MSc student of Management Economics and Consumer Studies from Thailand, reflects on the recent events in her country.

YOU ON CAMPUS

Sophia Oebel (26) from Germany started on the Food Technology MSc programme in September. 'I was a bit obsessed with the Netherlands, I always wanted to come here.'

'This week I am finally moving to Hoevestein,' says Sophia, who has lived in Ede for the past six months. 'Hopefully, living in Wageningen will give me more time for hobbies and a social life. I would like to meet more people or do sports here but that is difficult now. Ede is too far to go home between a lecture and sports, which means I have to carry all my sports clothes around with me all day.'

Living in the Netherlands was something Sophia looked forward to, because she liked the people here. 'I had visited the Netherlands twice before I moved here. People are more

open-minded and easy-going than in Germany. At my old university, a lecturer announced we should forget about a private life and devote all our time to studying. Here the lecturer said we should not forget to make time for fun activities because studying can be stressful. It is a different approach, more caring.'

'I want to prove that it is economically feasible to be good for the world'

Before moving abroad, Sophia lived together with her boyfriend, their two cats and their fish. 'We were building an aquarium together, it was our mutual hobby. I see my boyfriend almost every weekend. Sometimes I go to Ger-

many and sometimes he comes to Wageningen. Coming to Wageningen means he leaves our little zoo alone, which is sad. Taking care of the animals together was better because we could share the responsibility. This was one of my main doubts before I left for Wageningen.' But she came anyway. 'It was a great opportunity to do something I'm passionate about. It sounds strange to say that my study is my passion, but I care about sustainability. I want to work on something that changes more than just my own life. I want to prove that sustainability is not just a utopia, but that it is economically feasible to be good for the world. People don't want to change because of convenience, so companies should start making sustainability standard.' **AvdH**



PHOTO: ANNE VAN DER HEIJDEN

'You don't protest by voting for a clown'

For one of his courses, blogger Angelo Braam read a dull sociology article about our ailing democracy. And an example promptly appeared in the news: Forum for Democracy triumphing in the Dutch Provincial Council elections.

'A lot of WUR students – especially outside the Leeuwenborch – think social science degrees like mine are full of vague, useless theories. Personally, I don't think my subject is that vague, even if it's hard to find a connection with real life in many an endlessly long, dry article. But the connection is there. For the course in Political Sociology we recently read a critical article about our democracy by sociologist Chantal Mouffe. She said the

quest for a universal consensus has sent us in the wrong direction. Unambitious compromise decisions are taken that are a weak dilution of what the parties involved want. This aggravates the conflict between political parties and makes voters feel their voices go unheard.

DISSATISFACTION

The article fits the image outsiders have of the social sciences perfectly: long, with endless references and not a single actual example. But real life came up with an example of its own Thursday 21 March, when Forum for Democracy emerged as the big winner in the Provincial Council elections. With slogans such as "Down with the expensive climate agreement"

and "We're taking power back", party leader Thierry Baudet appeals to the discontent among the population.

It is no longer just a handful of people who identify with Baudet's ideas. Hundreds of thousands of voters have made that much clear. And they can't have been driven by anything but dissatisfaction: in Baudet's victory speech he lambasted every echelon of society, from university-educated rulers to people who have never read a book.

PROTEST VOTES

According to sociologist Mouffe, these kinds of protest vote are a consequence of the political obsession with consensus. When you opt for the middle way, a lot of

BLOG



Angelo Braam is a BSc student of International Development Studies. Read all his blogs on resource-online.nl/blog

Dutch people are ill-served: people who are less well-off, as well as the average WUR student, who wants far more ambitious climate legislation.

Mouffe does not offer a solution but, together with the events of last week, her criticism does make clear, yet again, that our democracy is due for an overhaul. There genuinely are alternatives. Let's discuss those instead of giving our protest votes to clowns.' **B**

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.

'Hardly anything goes to plan in Nepal'

'Together with a fellow student I spent four months in Nepal, evaluating a Sappros project. Sappros is an NGO which runs livelihood projects in Nepalese villages, working on water systems, among other things. I mainly looked at water management, while my fellow student focused on earthquake resilience. We went into the field three times for five days to interview the participants in the project. We also held community meetings in which we asked people to draw their village and their water system, so we got an idea of how they saw them. A couple of project staff members came along on those trips; they were our interpreters. I also talked to several experts for my research. And I had a lot of time to spare to talk to other interesting organizations and people. We went to a conference on climate change in the Himalaya that WUR was involved in.

FARMERS' MARKETS

We lived in Patan, right by the capital, Kathmandu. In the evenings and at week-

ends we made trips like tourists do or visited places lots of expats go to, like farmers' markets and cafés. I also visited a friend of mine who happened to be doing an internship in Kathmandu. Most weekends I did nice things with her and other internationals I met there. Nepal has a lot of public holidays so the office was often closed, and everyone went back to their home area. So I had quite a lot of time off.

RELAXED MENTALITY

Hardly anything goes to plan in Nepal. Appointments, traffic: it's all chaotic. And the roads are terrible. For our field trips we were driven up and down by a driver. Once we were driving in the jeep along a dirt road to the village where we would conduct interviews. We looked out of the window down into a valley where a car lay in pieces. "Oh yes, a few months ago someone swerved off the road and now he is dead," said the driver when we asked. That's how dangerous it is.

Compared with the Dutch, the Nepalese

are very helpful. I think that's because they are a lot more relaxed about planning and time. That means people often turn up late, but they do make time for you. I spent several whole afternoons talking to an expert about my research. The relaxed mentality took some getting used to, but after I while I really enjoyed the way not everything had to be quick and efficient. Now I'm back, I miss that a bit.' **EvdG**

THE WORKS

Who? Emmy Que (22), BSc student of International Land and Water Management
What? Internship at Sappros
Where? Patan, Nepal

More interviews
[on resource-online.nl](http://resource-online.nl)



Irregular Opening Hours – April and May 2019

Forum

	2019	The Building	The Library	Student Desk	IT Service Point	WURshop	Restaurant	Grand Café	Wageningen in'to Languages
Good Friday	19 April	8 am - 11 pm	8 am - 10 pm	Closed	Closed	Closed	Closed	Closed	Closed
Saturday	20 April	10 am - 6 pm	10 am - 6 pm	Closed	Closed	Closed	Closed	Closed	Closed
Easter Sunday	21 April	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed
Easter Monday	22 April	10 am - 6 pm	10 am - 6 pm	Closed	Closed	Closed	Closed	Closed	Closed
Tue - Thu	23 - 25 April	8 am - 11 pm	8 am - 10 pm	10 am - 5 pm	8 am - 5 pm	9 am - 4.30 pm	8 am - 7 pm	8 am - 5 pm	9 am - 5 pm
Friday	26 April	8 am - 11 pm	8 am - 10 pm	10 am - 2 pm	8 am - 5 pm	9 am - 2.30 pm	8 am - 2 pm	8 am - 5 pm	9 am - 5 pm
Sat - King's Day	27 April	9 am - 7 pm	9 am - 7 pm	Closed	Closed	Closed	Closed	Closed	Closed
Sunday	28 April	9 am - 7 pm	9 am - 7 pm	Closed	Closed	Closed	Closed	Closed	Closed
Mon & Tue	29 & 30 April	8 am - 12 am*	8 am - 12 am*	10 am - 12 pm	8 am - 5 pm	9 am - 4.30 pm	8 am - 7 pm	8 am - 5 pm	9 am - 5 pm
Wed & Thu	1 & 2 May	8 am - 12 am*	8 am - 12 am*	10 am - 12 pm	8 am - 5 pm	9 am - 4.30 pm	8 am - 7 pm	8 am - 5 pm	9 am - 5 pm
Friday	3 May	8 am - 11 pm	8 am - 10 pm	10 am - 12 pm	8 am - 5 pm	9 am - 2.30 pm	8 am - 2 pm	8 am - 5 pm	9 am - 5 pm
Saturday	4 May	9 am - 7 pm	9 am - 7 pm	Closed	Closed	Closed	Closed	Closed	Closed
Sun - Liberation Day	5 May	9 am - 7 pm	9 am - 7 pm	Closed	Closed	Closed	Closed	Closed	Closed
Mon - Thu	6 - 9 May	8 am - 12 am*	8 am - 12 am*	10 am - 5 pm	8 am - 5 pm	9 am - 4.30 pm	8 am - 7 pm	8 am - 5 pm	9 am - 5 pm
Friday	10 May	8 am - 11 pm	8 am - 10 pm	10 am - 2 pm	8 am - 5 pm	9 am - 2.30 pm	8 am - 2 pm	8 am - 5 pm	9 am - 5 pm
Saturday	11 May	10 am - 6 pm	10 am - 6 pm	Closed	Closed	Closed	Closed	Closed	Closed
Sunday	12 May	10 am - 6 pm	10 am - 6 pm	Closed	Closed	Closed	Closed	Closed	Closed

* Attention 12 am is midnight

During working hours, the building is open to the public. After working hours, entrance is only possible with a WUR card.

Orion

	2019	The Building	Bike basement	The Spot	Restaurant
Good Friday	19 April	Closed	Closed	Closed	Closed
Saturday	20 April	Closed	Closed	Closed	Closed
Easter Sunday	21 April	Closed	Closed	Closed	Closed
Easter Monday	22 April	Closed	Closed	Closed	Closed
Tue - Thu	23 - 25 April	8 am - 7 pm	8 am - 9 pm	8 am - 8 pm	11.30 am - 2 pm
Friday	26 April	8 am - 6 pm	8 am - 9 pm	8 am - 8 pm	11.30 am - 2 pm
Sat - King's Day	27 April	Closed	Closed	Closed	Closed
Sunday	28 April	Closed	Closed	Closed	Closed
Mon - Thu	29 April - 2 May	8 am - 7 pm	8 am - 9 pm	8 am - 8 pm	11.30 am - 2 pm
Friday	3 May	8 am - 6 pm	8 am - 9 pm	8 am - 8 pm	11.30 am - 2 pm
Saturday	4 May	Closed	Closed	Closed	Closed
Sun - Liberation Day	5 May	Closed	Closed	Closed	Closed
Mon - Thu	6 - 9 May	8 am - 7 pm	8 am - 9 pm	8 am - 8 pm	11.30 am - 2 pm
Friday	10 May	8 am - 6 pm	8 am - 9 pm	8 am - 8 pm	11.30 am - 2 pm
Saturday	11 May	Closed	Closed	Closed	Closed
Sunday	12 May	Closed	Closed	Closed	Closed

Leeuwenborch

	2019	The Building	Coffee Bar/Restaurant	The Library
Good Friday	19 April	7 am - 6 pm	10 am - 2 pm	Closed
Saturday	20 April	8 am - 5.30 pm	Closed	Closed
Easter Sunday	21 April	Closed	Closed	Closed
Easter Monday	22 April	Closed	Closed	Closed
Tue - Thu	23 - 25 April	7 am - 10.30 pm	8 am - 5 pm	8.30 am - 6 pm
Friday	26 April	7 am - 10.30 pm	8 am - 5 pm	8.30 am - 5 pm
Sat - King's Day	27 April	Closed	Closed	Closed
Sunday	28 April	Closed	Closed	Closed
Mon - Thu	29 April - 2 May	7 am - 10.30 pm	8 am - 5 pm	8.30 am - 6 pm
Friday	3 May	7 am - 10.30 pm	8 am - 5 pm	8.30 am - 5 pm
Saturday	4 May	8 am - 5.30 pm	Closed	Closed
Sun - Liberation Day	5 May	Closed	Closed	Closed
Mon - Thu	6 - 9 May	7 am - 10.30 pm	8 am - 5 pm	8.30 am - 6 pm
Friday	10 May	7 am - 10.30 pm	8 am - 5 pm	8.30 am - 5 pm
Saturday	11 May	8 am - 5.30 pm	Closed	Closed
Sunday	12 May	Closed	Closed	Closed

After 6 pm entrance is only possible after registration at the reception desk.

In memoriam

Frank Wijnands



Our dearly appreciated and highly dedicated colleague Frank Wijnands died unexpectedly in a Nairobi hospital in the night of 21 to 22 March. We are terribly shocked and saddened.

Frank stood out in a crowd. He had a long track record in applied research as a systems researcher, both at home and abroad. In the 1980s, he worked on the Epipré programme in which farmers could monitor their wheat crops and the weather and adjust their pest control accordingly. After that he worked with his role model Pieter Vereijken on the business systems research at the OBS in Nagele. Here he made his name as an inspirer and an engaged, expert and dedicated systems researcher. He had the capacity to develop a vision and to bring together different kinds of knowledge, skills and stakeholders in order to realize it. He guided numerous large programmes on the deve-

lopment of tomorrow's agriculture, both in conventional and in organic farming. In 2005, he was awarded the KNPV Prize in recognition of his efforts and successes in inspiring people, in making crop protection and cultivation systems more coherent, and in linking fundamental research with actual practice. In recent years, he brought all his baggage and enthusiasm to international projects. He got actively involved in Chile, Myanmar, Ethiopia and Tanzania. In Tanzania he successfully established the Stawisha Foundation for applied potato research. We owe Frank tremendous thanks for all the work he did for us and the sector. He has left an indelible mark on the development of both organic and integrated arable farming in the Netherlands. And he made a deep impression on us. Frank will always be with us.

The management team at the Field Crops business unit, Lelystad

Announcements

Bessensap 2019 open for research proposals

Around 350 journalists, press officers and researchers will be meeting on Friday 21 June in the Rode Hoed cultural centre in Amsterdam to share networks and expertise in the field of science communication. This is the perfect opportunity for scientists to draw attention to socially relevant and newsworthy research. Researchers at all levels can register to give a presentation on a topical, newsworthy and media-friendly topic. Examples might be recent or expected results, surprising insights or a new direction for research. To register (deadline 20 April), go to bit.ly/2OrXzfo. Bessensap is organized by the Netherlands Organization for Scientific Research (NWO) in partnership with the Dutch Association for Science Journalism and Communication (VWN).

NWO.NL

Agenda

Saturday 6 April, 18:00–22:00
ONE WORLD WEEK WAGENINGEN:
SYRIAN SOCIAL COHESION EVENT

You can enjoy a Syrian buffet at community centre Thuis (Stationsstraat 32) followed by a cultural evening in the bblthk, with music, poetry and stories. The event will bring people from the asylum seekers' centre into contact with other Wageningen inhabitants with and without a refugee background. The proceeds will go to a community centre in Irbid, Jordan. Tickets (€22.50) are available from the bblthk and the Chipshop on Churchillweg. Students: €10 via astrid.vandenheuvel@wur.nl.

Thursday 11 April, 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

how to approach the writing process. You will 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: Forum Library, room 259. Info: info.wageningewritinglab@wur.nl.

Thursday 11 April, 19:30–21:30
DEBATE EVENING: 'AN END TO
ELECTIONS'

We are suffering from democratic fatigue syndrome, says author David van Reybrouck in his book *Against Elections*. But democracy doesn't necessarily require elections. One possible solution is the introduction of deliberative democracy in which lotteries are held to select ordinary citizens to represent the people. Whether this is necessary and what the best approach is will be debated with the speakers: Tamara Metze (WUR), Paul Lucardie (RUG), Jeroen van Berkel (PvdA) and Sjaak Driessen (former director of Wageningen bblthk). Venue: Thuis, Stationsstraat 21. More info via Facebook.

Saturday 13 April, 10:00-18:00
ONE-DAY BASIC PHOTOGRAPHY
WORKSHOP IN WAGENINGEN.

The Workshop is for everybody looking for an introduction to the fascinating world of photography. It is designed for photographers at all levels, from beginners to those with some understanding of digital photography. Photography is not only about technical sophistication and complicated equipment; it is mostly about developing your creativity to see objects, nature and people from a different perspective. Venue: StartHub, Vijfde Polder 1, Wageningen.

MARCOMEGA.COM/WORKSHOPS

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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Publisher

Marc Lamers, Corporate Communications & Marketing Wageningen University & Research



>>TYPICAL DUTCH



ILLUSTRATION: HENK VAN RUITENBEEK

Festival? Beer!

Dutch people have a great enthusiasm for beer. No matter who, – girls, guys, ladies, gentlemen –, no matter when – Fridays, Easter, while playing darts –, the Dutch always come up to you with a beer in one hand. And when the weather is sunny, you will always see Dutch students sitting outside on the Forum steps with a beer.

One of the funniest things happened to me when I told my Dutch supervisor: 'Hey Mike, today is Mid-Autumn Festival'. For an Asian, especially a Chinese, the first thing that springs to mind when people mention the Mid-Autumn Festival is moon cake, because it's so typical and special, just like Dutch *oliebollen* at New Year. But Mike replied: 'Oh, then you are going to drink beer tonight!'

Two months later, I still can't help laughing out loud when I think of that answer; it is just hilarious. We would never combine beer and Mid-Autumn Festival because they just don't match. But I can really understand why Mike does make the connection. Beer is very important to the Dutch and to them, any festivity is a good reason to drink it.

📍 Jiajia Ling, an MSc student of Environmental Sciences, from China

Do you have a nice anecdote about your experience of going Dutch? Send it in! Describe an encounter with Dutch culture in detail and comment on it briefly. 300 words max. Send it to resource@wur.nl and earn twenty-five euros and Dutch candy.

'Beer is very important to the Dutch and to them, any festivity is a good reason to drink it'