

## Commuting for 7 hours

Many Dutch students still don't have rooms | **p.4** |

## A summer to learn from

The drought was a gift for climate scientists | **p.18** |

## 1800 euros

That you'll miss out on if you don't apply for a grant | **p.27** |

# RESOURCE [EN]

For everyone at Wageningen University & Research

no 2 – 6 September 2018 – 13th Volume

## Dirty fashion

p.12



The textile industry is the second most polluting after the oil industry



>1/3

Over a third of all microplastics in the sea comes from textiles



In 2015, the textile industry emitted more CO<sub>2</sub> than all international flights and marine transport combined

**INTERNATIONAL EDITION**

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# Mart-Jan + Toro 4000

Mart-Jan Prins, a groundsman with Donker Groen

## THE MASTER'S EAR

Mowing the grass involves some fine-tuning. Literally, explains Mart-Jan Prins (53). 'I can hear from the sound of the engine whether it is hard going for the machine. And therefore whether I should speed up or slow down.' The machine is a Toro 4000, the 'Mercedes of the lawn mowers.' Prins mows the grounds of WUR with it every day. 'And I enjoy it again every day.' No, it really isn't lonely work. Even if there are days when he doesn't meet any of his colleagues. 'I enjoy seeing all those students lying on the grass and benefitting from my work.' © RK, photo Sven Menschel



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It's true: healthy food is blander



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Even if gastroenteritis did spoil the fun a bit



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WUR team wins Greenhouse Challenge with 'Open Bajes'

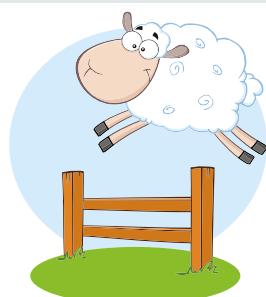
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## NEVER ENOUGH

The textiles industry is the biggest polluter after oil. That came as a surprise to me: I thought at least air travel would be worse. Fortunately, scientists are working on new technologies for making the textiles industry more sustainable – from eco-friendly bacterial dyes to biodegradable fungal leather (see p. 12). So things are looking up. But the idea that science and technology can solve all our problems is dangerous. If we think that, we ignore the crux of the problem. Because who buys all those products of the polluting fashion industry? We do. Maybe you already bring all your cast-offs to a charity shop or recycling centre. But however much recycling we do, the real problem is that we accumulate so much stuff. People are buying more and more new clothes, and then discarding them more and more quickly. Not because they are damaged or useless but just because they want something new to wear all the time. I love the idea that I can soon wear fungal leather shoes or a shirt that can change colour because of bacteria growing on it. But now I'm wondering: do I really need them?

*Tessa Louwerens, editor*



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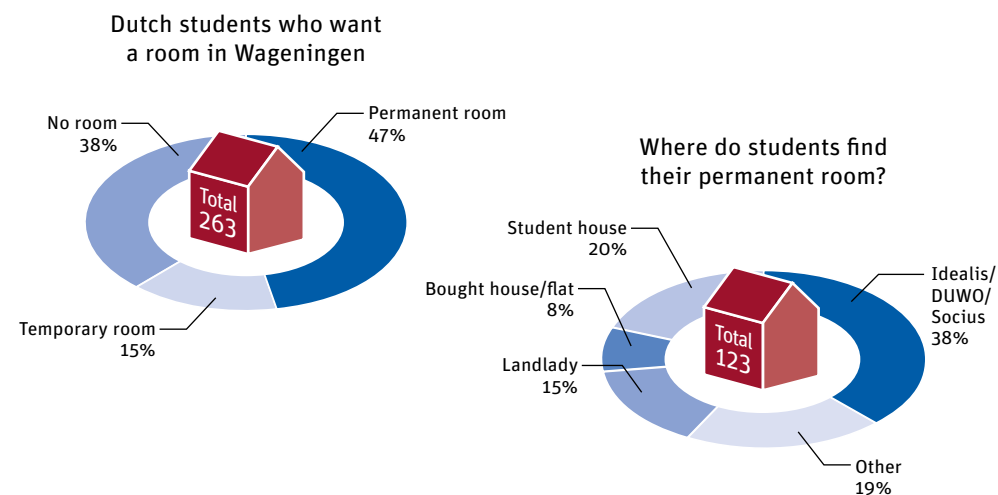
# NO ROOM YET FOR FOUR OUT OF TEN DUTCH FIRST-YEARS ROOM SHORTAGE AS BAD AS EVER

Nearly 40 percent of Dutch first-years had still not found accommodation in or around Wageningen during the Annual Introduction Days (AID), according to a survey by *Resource*. Many students are having to commute, with journey times of up to seven hours a day.

305 Dutch first-year students completed the questionnaire. 86 percent wanted a room in Wageningen while 14 percent preferred to live at home. Of the group looking for accommodation, 47 percent had found a permanent room and 15 percent temporary space. The remaining 38 percent were still looking for a room. This is in line with the results of the *Resource* survey during last year's AID. Which shows that the room shortage among Dutch students is as bad as ever.

Most of those room hunters (65 percent) will be forced to commute over the next few months. Their average journey time is three hours a day, with outliers of as much as seven hours, according to the survey. Over a quarter of the students will be lodging with relatives, friends or acquaintances and a few will be camping or have 'no idea yet'.

The Dutch students who have found a room are mainly renting from private accommodation providers: 43 percent are in a student



house, staying with a landlady or in a house or flat bought by their parents while 38 percent have found a room via student accommodation providers such as Idealis, DUWO or Socius.

The survey also shows that unlike the Dutch students, all the international students have somewhere to live. Of the 85 international first-years who completed the questionnaire, 82 percent have their own permanent room and 8 percent a shared room in the former barracks in Ede. The rest are in lodgings or a hotel or are

subletting. Some are not satisfied with the accommodation in the barracks in Ede. Apparently 70 students have to share one kitchen, the cleaning is not up to standard and there are regularly break-ins.

Idealis and the university are searching hard for places and options for expanding the supply of rooms. For example, Idealis is considering building temporary accommodation on the car park attached to the Hoevestein student flats. **AS**

## STUDENTS IN NANO WANT RENT REFUND

**Socius's temporary housing in Nano, the former chemistry building at De Dreijen, has not lived up to expectations, says a group of international students. They are considering organizing a petition and asking for a refund of the first month's rent.**

Socius, an accommodation provider for young people, had the building converted to create about 250 student rooms in the summer. But on delivery on Saturday 1 September, the rooms, kitchens and bathrooms were not finished, nor had all the areas been cleaned. That irritates the students

as cleaning is included in the rent of 400 euros a month. The furnishings are also the bare minimum, says student Thibault Peyard from France. The rooms have just a bed and a cupboard, the kitchen has only two fridges whereas three were promised and there are no extraction fans, ovens or microwaves. Peyard's section is working on a petition. 'We want to pay rent only once the housing is as it should be.'

Socius has worked hard on getting the new accommodation ready on time, says spokesperson Manon Jacobs. Socius has already arranged extra cleaning and fridges.



▲ Nano residents in their kitchen.

Jacobs also points out that there is a budget for each section that residents can use to

furnish their living rooms. 'A lot of students don't know that yet.' **AS**

PHOTO: GUY ACKERMANS

## 'WE ACKNOWLEDGE THAT WORK PRESSURE HAS INCREASED A LOT' EXTRA FUNDING FOR CHAIR GROUPS

**The Executive Board decided this summer to allocate an extra 40,000 euros per year to all the chair groups at the university. The funding is intended to help the groups cope with the work pressure and growing student numbers, says rector Arthur Mol.**

The additional funding comes on top of 25,000 euros extra per year allocated to each chair group from this

year. This constitutes a systematic increase in budgets. The professors can decide for themselves whether to spend the additional funding on education or research.

The university has 93 chair groups so the measure will cost the Board nearly four million extra. 'Our financial position permits us this investment,' says Mol, 'and it is an acknowledgement of the fact

that the work pressure has increased a lot.'

The Student Staff Council has already asked questions about how the extra education funding was being spent. Up to now, the chair groups only seem to have used a little of it to appoint new staff. This autumn the Student Staff Council will investigate how the money is being spent. **AS**

## COLUMN|VINCENT

### Homeless students

My coursemate spend the holiday in Lumen, finishing off his thesis. It was a long hot summer, full of coffee breaks and uninspiring strolls over the campus. He hadn't had any interesting experiences, with the exception of that strange encounter recently, when it was time for an afternoon walk in the garden behind the building.

When he was by the pond he heard some muffled sounds from the direction of the hedge. A bit further along, near the bat sanctuary, he went through the hedge to get to the trial fields. And there he stumbled upon a boy and a girl. They had tousled hair and rosy cheeks and they were tugging at their clothing. He wanted to have a chat – after all, he was on his break – but they walked off, giggling.

I don't think they were just any girl and boy. If you ask me, there was something going on that explains why they felt caught in the act. I think so many first-years can't find a room that some of them are secretly sleeping rough on the campus: homeless students. Sleeping under the bridge at the Forum pond, showering in the toilets at the Leeuwenborch and secretly doing their laundry in that washing machine in the basement of the Forum – that kind of scenario.

It is all very well of course, but now the winter is coming. Idealis cannot build fast enough and the university does not see housing as its responsibility, so I have made up my mind. The first homeless student I come across myself is welcome to my sofa. **B**

**Vincent Oostvogels (22)** is exploring the delicate interface between nature management and food production through his two Master's programmes, Forest and Nature Conservation and Animal Sciences



### in brief

#### >> 7000<sup>TH</sup> PHD Cum laude

The 7000th Wageningen PhD degree ceremony in the Aula this summer went unmarked. The recipient was biochemist Tom Ewing, who graduated cum laude on Tuesday 3 July for research supervised by professor of Molecular Enzymology Willem van Berkel. The 6000th PhD ceremony took place in February 2015, the 5000th in 2011. Those milestones were celebrated in style. According to Dean of Research Richard Visser, it was decided to skip the 7000th and celebrate the 7500th PhD graduate instead. That is expected to be sometime in the spring of 2020. At the moment, the university produces about 300 doctors a year. **RK**

#### >> COLLABORATING WITH NGO Projects in developing countries

WUR is going to collaborate with the international humanitarian organization Mercy Corps. The two parties signed an agreement at the SDG Towards Zero Hunger conference on 31 August. The partners are going to set up joint projects in developing countries. There are proposals in the pipeline for a project on agro-logistics and post-harvest management in Myanmar, and for a big project in the field of big data and access to agricultural credit for African farmers. WUR and Mercy Corps are also collaborating on promoting sustainable agriculture in Niger. **AS**



PHOTO: TOM EWING

▲ Tom Ewing receives his doctorate – the 7000th awarded by WUR.

#### >> OPEN MONUMENTS DAY University buildings

A century of WUR in Wageningen has produced a lot of buildings of historic interest. On Open Monuments Day (OMD) on Sunday 9 September, 23 of these building are open for viewing, including Villa Hinkeloord, the Building with the Clock, architect Blaauw's 'ship' and Villa Arion. This year's Monuments Day is all about the Wageningen University centenary. In the evening of Friday 7 September, the book *From Clusters to Campus*, describing many of WUR's prominent buildings, will be presented in the Aula. Urban architect Paul Kurstjens will give a lecture about the development of campuses in Wageningen, Nijmegen and Utrecht. More information on [omdw.nl](http://omdw.nl). **RK**



# RUTTE KNOWS ‘WAGENINGEN’S SECRET’

The prime minister Mark Rutte was a very complimentary guest when he attended the opening of the academic year on Monday 3 September. ‘The Netherlands is the world champion in innovation in food and agriculture, and WUR is the scientific engine driving these achievements.’

Rutte had also figured out ‘Wageningen’s secret’. Firstly, WUR has an international focus so its knowledge is disseminated around the world. Secondly, in Wageningen practical application and research strengthen one another. And thirdly, WUR looks to the future, said the prime minister. In that future, WUR will have to combine more closed-cycle agriculture with new technology and sufficient production, predicted Rutte.

The other honorary guest, European commissioner for Agriculture Phil Hogan, also stressed the importance of innovation. The European Union will be earmarking 100 billion euros for research and innovation between 2021 and 2027, he explained, ‘the most ambitious programme ever’. Of this money, 10 billion euros will go on research in food and agriculture.



▲ President of the WUR Executive Board Louise Fresco welcomes prime minister Mark Rutte to the opening of the academic year.

The European Commission also wants more coordination between the food and agriculture policies of the EU and the member states, said Hogan. ‘Every member state will have to explain in detail how they plan to encourage research and innovation in the agrifood sector.’ **AS**

## FRESCO WEARS SUSTAINABLE OUTFIT

President of the WUR Executive Board Louise Fresco wore clothes and accessories that showcased innovation in the fashion industry to the opening of the academic year. The dark purple dress (see photo) is made from deadstock silk — from unsellable surplus stock — and dyed with waste ink that would normally end up as chemical waste. The shawl is made of organic ‘peace silk’, whereby the caterpillars are not boiled alive. Bacteria produced the environmentally friendly dyes used to colour the shawl pink. Fresco’s shoes are decorated with golden details in Piñatex, sustainable ‘leather’ from pineapple leaves. A sustainable finishing touch is the watch strap, made from the mycelium of the reishi mushroom. **TL**

Read *Dirty Laundry*, the article about sustainable fashion, on page 12.

PHOTO: GUY ACKERMANS

# ‘OPEN ACCESS COSTS MONEY. WHO’S GOING TO PAY FOR IT?’

**Richard Visser, Dean of Research at WUR, has reservations about the plan by 11 European research funding bodies to make open access publication compulsory. ‘Open access costs money too. Who is going to pay for it?’**

From 2020, scientists should no longer be allowed to publish research done with public funding in subscription journals, say the 11 researcher funding bodies, including the Netherlands Organization for Scientific Research NWO, in their Plan S, which they presented this week. They hereby put a gun to

the heads of major publishers such as Elsevier, whom they accuse of dragging their feet over the transition to open access.

In their plan, the funding bodies place the costs of open access publishing at the doors of the research financiers and/or the universities. Universities could cover these costs out of their savings on subscriptions to academic journals, they say. But it is not as simple as that, says Visser. ‘How are you going to do that, and what allocation ratio do you apply?’ The Dean of Research is also worried that the baby will be thrown out

with the bathwater. ‘Publishers do good things too. They make sure there is quality control. It remains to be seen how good that will be in a lot of open access titles.’

Hubert Krekels, director of the Forum Library, was surprised by Plan S. ‘Insisting on “gold” open access is going very far. About 90 percent of our current publications fall outside this category. Are we going to be able to change that totally in the space of two years?’ In his view, compulsory open access will limit scientists’ freedom of choice. ‘And it could have consequences for evalua-

tions in tenure track if you can no longer publish in particular journals.’ Krekels is afraid of the financial implications too. ‘I have already calculated that exclusively open access publishing will cost the university an extra 300,000 euros.’

Professor Bram Buscher is pleased with the attempt to enforce open access, but is afraid that this plan won’t make any difference to the way private publishers make exorbitant profits out of public funding. Early this year Buscher called for a boycott of Elsevier. **RK**

## BUILDING OF DIALOGUE CENTRE DELAYED

**The building of the Dialogue Centre on campus is delayed by at least six months. The budget WUR allocated to the project is not sufficient, say the potential contractors.**

The Dialogue Centre is to be built opposite FrieslandCampina, on the corner of the bus lane and the Mansholtlaan. The building, which will replace the Aula in the town centre, is intended to form a hub for dialogue between WUR and the wider community. A draft design was presented in November 2017. But the tendering process that followed ran into difficulties, says Peter Booman, director of Facilities and Services at WUR.

According to Booman, five consortia of contractors, architects and consulting firms applied. 'But none of the parties

could work with the maximum sum we had allocated to the building work.' This is a reflection of the recovery of the construction market, says Booman. The tender process has been halted and a new one is under preparation.

The new tender differs from the first one in that this time a more fully worked-out design is being put out to tender. This is being produced by Broekbakema Architects from Rotterdam, who made the draft design too. The design and a new budget are currently on the drawing board. Booman says the costs will certainly be higher than originally foreseen. Whether the Executive Board will give the go-ahead will be announced at the end of October. After that, the new tender process can start and Booman expects work



ILLUSTRATION: BROEKBAKEMA ARCHITECTS

▲ The provisional design for the Dialogue Centre.

to begin in April or May of next year. Originally the idea was to start building during the centenary year, 2018. WUR will get 1.6 million euros in government funding for the meeting place on campus, which will host not

just PhD graduation ceremonies but also symposia and other meetings. A further donation of 2 million euros is coming from the WICC Fund (from the sale of the former International Agriculture Centre). **RK**

## NEW STUDENT CHALLENGE ON FOOD SYSTEM TRANSITIONS

**WUR and four other agricultural universities want to organize a 'student challenge' on food system transitions. The universities of this 'A5' coalition also want to update their education.**

Wageningen University, UC Davis, Cornell University, the University of Sao Paulo and the Chinese Agricultural University have been holding talks about collaboration for a year. At the Towards Zero Hunger SDG conference on 30 and 31 August, they made specific arrangements about how they want to tackle global food production problems together through their education and research. A central theme is the transition of food systems towards the production of healthy, affordable food without environmental pollution, waste, and impact on the climate.

Besides the student challenge, the five universities are thinking in terms of distance education on which international teams collaborate, getting together a few times a year, and in terms of MOOCs. The joint project education, with teachers in the role of coach, could also lead to teacher exchanges between the universities, thinks Tiny van Boekel, who represented WUR in the discussions.

A5 – A stands for agrifood – also wants to develop course material about food system transitions for professionals in the field. The universities are going to start by looking at each other's course material, and then agree on who will develop which additional courses. Finally, A5 is going to see if the members can develop a minor track on food transitions for other universities. **RK**

# Earth

- 9 sept. Open Monumentendag
- 13 sept. Creative Innovation: Meeting the artist and the scientist: Gionata Gatto
- 15 sept. #WUR100Fest
- 15 sept. - 15 okt. WUR on Wheels - Fiets mee de wereld rond

Alles over 100 jaar WUR vind je op [www.wur.nl/100years](http://www.wur.nl/100years)



# THREATS TO WETLANDS UNDER SCRUTINY

**Wetlands such as the mudflats of the Wadden Sea are under constant threat. In a new international project, landscape architect Roy van Beek is going to document those threats. The two-year project, entitled *Wetfutures*, is funded to the tune of half a million euros, half of which is for WUR research.**

Van Beek, who works in two chair groups, Soil Geography and Landscape and Cultural Geography, wrote a 695-page thesis in 2009 about the long-term developments in the landscape of the east of the Netherlands. Two years ago he bagged a Vidi grant for research on the cultural significance of raised peat bogs. Peat bog reconstruction is a component of the project. Van Beek: 'How did those bogs develop? Did they grow at a steady pace or in phases? We still don't know much about that.' What is clear is that these are threatened landscapes. 'Only five percent of the original peatlands are left. But they do include some exceptional landscapes. Archaeologically exceptional as well as in cultural-histori-



PHOTO: BRIAN MACDOHNAILL

▲ Peat-cutting in the Irish Midlands, one of the threatened wetland areas to be studied in the new *Wetfutures* project.

cal and ecological terms.'

The recently approved European project is an extension of the peat bog research. Led by Van Beek, the international project team is going to study how the dynamics of wetlands influence special heritage in these regions. The focus in the Netherlands is on the Wadden Sea, Schokland and the peaty areas in the south west. The British partner (Bradford Universi-

ty) will study areas including the Somerset Levels and the Humber estuary. The Irish partner (University College Cork) will look at the Irish Midlands.

Climate changes and economic and demographic developments all threaten to change the wetlands and their cultural significance profoundly. 'They are "contested landscapes" where different groups have interests that often conflict

with each other. The project wants to address that. With the ultimate aim of enabling policy to deal with it better.'

*Wetfutures* is a European JPI (Joint Programming Initiatives) project. The funding allocated to it will enable Van Beek to appoint a postdoc and a research assistant. Van Beek's colleague Maarten Jacobs (Cultural Geography) will work on the project too. **IK**

## HEALTHY FOOD IS NOT AS TASTY

**Food lovers have always said so, and now there is proof: healthy food is not as flavourful as an unhealthy diet. This may explain why people find it so difficult to stick to healthy eating habits, says Astrid van Langeveld, who graduated with a PhD in Human Nutrition on 29 August.**

Van Langeveld did research on the role of flavour in Dutch eating habits. A trained tasting panel assessed nearly 500 food-stuffs for the fattiness sensation they provided and the essential tastes present: sweet, sour, bitter, salty and umami. Then the researchers compared these data with information about the

eating habits of the Dutch. This gave them some insight into the tastes of the food people eat, whether this changes with age, and how it relates to people's calorie consumption.

Van Langeveld compared the taste pattern of the popular paleo diet and recommended diets such as the Dutch equivalent of the Food Pyramid with the tastes in the current average diet in the Netherlands. In taste terms, the paleo diet comes closer to this than the recommended diets. According to Van Langeveld, that is probably because the paleo diet does not contain any milk or grain, which are neutral in taste, but does contain a lot of salty and umami

tastes and fats from meat and fish.

'The healthy, recommended diets contain relatively little sugar, salt and saturated fats, and are therefore less strongly flavoured,' says Van Langeveld. 'You could perhaps make it more appealing to stick to that kind of diet by adding flavour in other ways, using herbs and spices, for instance. This is not that easy for everybody, though.'

Van Langeveld also found out that people with overweight get relatively more calories from savoury food than those whose weight is normal. 'People often think that overweight people eat more sweet stuff, but that doesn't seem to be the case.' **IK**



ILLUSTRATION: VOEDINGSCENTRUM.NL

▲ A diet in line with the Dutch healthy eating pie chart is not as tasty as an unhealthy diet.





This illustration on the cover of Wigboldus's thesis on the upscaling of innovations contrasts small-scale African farming with vertical modern farming.

## UPSCALING INNOVATIONS CARRIES RISKS

**Upscaling innovations without giving it due thought can go badly wrong. PhD candidate Seerp Wigboldus appeals for responsible upscaling, in which the possible effects are calculated beforehand and then monitored.**

Solutions to the world's problems are usually sought in technology. Innovations are welcomed with open arms and rolled out on a large scale as quickly as possible, all in the interests of progress. But is that really so smart? No, says rural sociologist Seerp Wigboldus. In his thesis, *To scale or not to scale – that is not the only question*, which he will defend on 11 September, he seriously questions this approach.

The core of his message is quite simple, really: watch out, because something that works well on a small scale could turn out quite differently on a large scale. Wigboldus: 'When people scale up they usually only look at how to do it and hardly at all at what it will bring with it from a broader perspective, in terms of the ideology it is based on, and who stands to benefit from it. But scaling up often leads to new problems, which may be preventable.'

**'Irrigation in the Soviet Union led to the draining of the Aral Sea.'**

### FAMINE

Examples abound. Plastic packaging material was a fantastic invention. But it has now caused massive pollution all over the world. 'Irrigating farmland in the Soviet Union led to the total draining of the Aral Sea. The concentration on potatoes in Ireland led to the potato blight, famine and poverty.' Vulnerability is often a result of scaling up, says Wigboldus.

'Scaling up one thing often happens as the expense of something else. Another crop, for example. And also at the expense of biodiversity, the environment or the social structure in a community.' As a case study in his thesis, Wigboldus studied rubber cultivation in south-western China, which started after World War II in order to reduce dependence on foreign imports.

'That rubber was a success and small farmers made a fortune. But its impact on nature

was huge. One third of the landscape was taken over by rubber plantations. The local climate, biodiversity and the ecology were totally disrupted. And the community was damaged as the increased wealth led to an erosion of cultural values and norms, in which the landscape and community were central.'

### ANTICIPATE

So how should it be done? Wigboldus has coined a phrase for it: responsible scaling. The key word is anticipate. 'Ask yourself what will happen if something new is applied on a large scale. Calculate the effects: not just the economic effects but also the ecological, cultural and social consequences. And carry on monitoring effects. Some things cannot be anticipated, but you can build in mechanisms for noticing those unintended effects.'

The cover of Wigboldus's thesis contrasts in a single image horizontal, small-scale African farming with vertical modern western farming in a tower block. 'In English, to scale means not just increasing size or scope, but also to climb. That tower stands for both climbing and scaling up, and the question of whether that is really the way to tackle the world's problems.' **RK**

# 'CHINA'S LIVESTOCK SECTOR MUST GET GREENER'

Nowhere in the world did the production of animal-source food increase as fast between 1980 and 2010 as in China. This livestock revolution has led to mass imports of animal feed and tremendous environmental pollution, says PhD candidate Zhaohai Bai. So China must change tack.

The number of farm animals in China tripled in this period and the amount of animal protein went up by five times, says Bai. So China overtook Europe and the US as the biggest livestock-farming country in the world. The growth mainly took place in enormous landless livestock farms, close to the growing cities. The advantage of this large-scale intensive livestock farming over small-scale traditional Chinese agriculture is that it halved the environmental pollution per kilo of meat. But this additional production of meat and milk did go hand in hand with an enormous increase in livestock feed imports – which grew by a factor of 49 in 30 years –, as well as with poor utilization of manure and a lot of water pollution.

The livestock revolution in China is still going on, says Bai, because half of the Chinese population still eats relatively little meat, but will start buying more meat in the coming decades. If China continues on the current course, by 2050 it will need to buy up all the livestock feed currently traded in the world.



▲ A large-scale dairy farm in Luannan County, China. Many livestock farms in China are landless and import their feed.

Bai, who is doing his PhD in the Sustainable Soil Use chair group, sketches an alternative scenario in an article in the journal *Science Advances*. In that scenario, the plant-based and animal-based food sectors should be linked, with livestock farms selling their manure to crop farmers, who in turn supply them with livestock feed. Bai outlines how

this intensive sustainable livestock farming would use much more manure, halve its consumption of artificial fertilizer, and ensure a more efficient food supply with smaller harvest losses. To achieve this, the Chinese government needs to tighten its environmental legislation and ban intensive landless farming in the vicinity of lakes, suggest Bai. **AS**

## PEE AND POO BEST SOURCES FOR REUSABLE PHOSPHATE

The planet has a limited supply of phosphate, so we need to consider ways of saving and recycling it. PhD candidate Heleen van Kernebeek has come up with a remarkable conclusion: recycling phosphate from human pee and poo is the most profitable approach.

All the world's phosphate mines have sufficient deposits for another 300 years, which is a relatively short period. That is why it is important to have a circular setup for our food system in which we minimize the loss of phosphate, says Van Kernebeek, who works at Wageningen Livestock Research and is doing her doctorate with the Animal

Production Systems and Plant Production Systems chair groups. She developed a model that quantifies all the phosphate flows in a food system, using data for the Netherlands. This shows that we can recover the most phosphate from sewage.

There is a lot of phosphate in our food that goes directly into the sewers after we have consumed it. The greater our phosphate intake, for example from eating a lot of dairy products, the more important it becomes to recycle the phosphate in human excrement. All that phosphate ends up in water purification plants where it is removed. At present, much of that is then processed in asphalt, says

Van Kernebeek.

We can also save on fertilizer by recycling phosphate from wastewater. Van Kernebeek doesn't know how feasible that is. 'I didn't investigate that. I use the model to try to understand the phosphate flows and show the impact of particular measures.'

The reuse of animal meal – waste from the meat processing industry – is also important in a circular food system. Van Kernebeek: 'Animals accumulate phosphorus in their bones but recycling that within the food system is currently not allowed because of the food safety risks. So that is a point where we lose phosphate.' The idea is that new techniques, risk analyses and



rules will make it possible to recycle phosphate from animal meal within the food system.

Van Kernebeek published her model study last month in the scientific journal *Animal*. **AS**



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## RESOURCE

For everyone at Wageningen University & Research



## PROPOSITION

### What if your mind's eye is blind?

**Maritza can Dop** always thought 'counting sheep' was just a metaphor. Until, in the course of her PhD research, she read an article on **aphantasia**. Suddenly she realized that, unlike her, most other people actually saw those sheep in their mind's eye.

'People with aphantasia are not very able to visualize something mentally. I had never realized other people could do that, when they "count sheep" for instance. It has nothing to do with being able to recognize things, because if I see a sheep, I know what it is. And I can usually describe the general characteristics of something I've seen earlier. I just don't picture it. Maybe there is an image stored somewhere in my brain, but I can't access it consciously. Sometimes, for example, I see images in my dreams, although they are fairly vague.



Maritza van Dop graduated with a PhD in Biochemistry on 7 September, for her study of the role of polar proteins in the development of plants.

People can have various degrees of aphantasia. If you ask them to imagine a blue ball, some people can see a vague

shape. I can't even see that. That is what I mean in my proposition by "lack of visual memory".

In the course of my research I examined cell patterns under the microscope. At the start, if someone asked me to draw them afterwards, I would find it difficult. I could only work out what they ought to look like based on my knowledge about them. So I first have to remember details about visual information in words or concepts, and perhaps that is more demanding of my memory than it would be if I could picture what I had seen.

It doesn't mean that I am less able to learn things. And I don't experience it as a handicap or a lack. I have other strategies for remembering things and retrieving them from my memory. I remember more in words, sounds and concepts. Aphantasia has only recently started to come in for some attention, and research on it is still in its infancy. I try to contribute to research, by filling in questionnaires, for instance.' **TL**

*People that lack  
visual memory  
learn differently, not  
necessarily less*



11%

Conventional cotton production is responsible for 11 percent of global pesticide use



100 billion

Sales of clothing doubled between 2000 and 2015, to more than 100 billion items per year



When synthetic fabrics such as polyester and nylon are incinerated, they release CO<sub>2</sub>



<1%

Less than 1 percent of all clothing is eventually recycled to create new clothing

>60%

of all fabrics are synthetic



0.5 million tons of microplastics end up in the sea every year from washing synthetic clothing

>1/3

Over a third of all microplastics in the sea comes from textiles



In 2015, the textile industry emitted more CO<sub>2</sub> than all international flights and marine transport combined



The textile industry is the second most polluting after the oil industry



20%

Dyeing, bleaching and stonewashing textiles is responsible for 20 percent of all global industrial water contamination





Mid-season sale, buy one get one free, everything must go — fashion is getting ever cheaper and changing ever faster. Those cool clothes might look good, but the price is immense environmental damage. WUR scientists are looking into ways of making the rag trade more sustainable, from hemp fabric to algae dyes, from chemical recycling to vintage clothing.

*text* Tessa Louwerens *illustration* Geert-Jan Bruins

## Four ways of making the fashion industry more sustainable

# Fashion's dirty laundry

### 1. ALTERNATIVE MATERIALS

Synthetic fabrics make up an estimated 63 percent of all textiles produced globally in any one year. These fabrics, such as polyester, nylon and acrylic, are based on petroleum. Washing them releases a lot of microplastics that end up in the oceans. And large amounts of CO<sub>2</sub> are released when the synthetic clothing is incinerated at the end of its life.

An alternative is to make clothes from natural raw materials such as cotton, linen, wool and silk. 'Those materials are in principle CO<sub>2</sub>-neutral and don't release microplastics,' says Jan van Dam, expert in biomaterials at Wageningen Food & Biobased Research. But the downside is the amount of land, water and pesticides they require. For example, producing one kilo of cotton takes 10,000 litres of water on average, and chemical pesticides are used in large quantities by non-organic cotton farmers. Silk production affects the climate because it costs a lot of energy to grow the food for the silk caterpillars (mulberry leaves). Then there is the animal welfare aspect, as the caterpillars are boiled alive. Bamboo is sometimes cited as an alternative. Bamboo cultivation is sustainable but turning it into textiles still uses a lot of energy and chemicals, explains Van Dam.

In the Bio2HighTex project, Van Dam and his colleagues are investigating the potential of **flax and hemp** as raw materials for textiles. These crops need less water and growers use less pesticide. At present, hemp fibres are mainly incorporated in construction materials and lightweight car parts but Van Dam says they are also suitable for the textile industry. 'This is already being done on a small scale but the technology is still in its infancy. Processing the three-metre stalks is labour-intensive and the hemp needs to go through numerous processing steps before you get yarn.' The researchers are looking at how they can improve this process and how farmers can

grow hemp for the textile industry in a financially viable way. Van Dam: 'For example, you could harvest the plants earlier when they are smaller, which makes processing easier.'

The researchers are also looking at ways of producing clothing from **bioplastic**. 'If you ferment sugar cane and starch products, for instance, you get the bioplastic polylactic acid,' explains Van Dam. That polylactic acid could replace polyester.

Some scientists are going even further in experimenting with new materials. Iris Houthoff, lecturer in Bio Process Engineering, has created shoes made from **fungal leather**. She is working with designers and scientists in the Plant Breeding Group in particular on this new material, called Mylium. This material is grown on waste products, requires little water and is processed using harmless chemicals. 'The shoes are also entirely biodegradable,' says Houthoff. 'They are not yet suitable for wearing but they do at least show where we are heading.'



▲ Shoes made of fungal leather.

PHOTO: SVEN VAN MENSCHTEL



▲ Designer Aliko van der Kruijs used waste ink to dye the fabric for the dress Louise Fresco wore this week at the opening of the academic year.



▲ Designer Ilfa Siebenhaar displays bacteria that produce a red colour.

## 2. ALTERNATIVE DYEING TECHNIQUES

Dyed, bleached or stonewashed clothes look good but they are definitely not good for the environment. The bleaches, acids, inks and dyes that are required are responsible for 20 percent of all global industrial water contamination.

Chemical dyes can be partly replaced by **natural dyes made by algae and bacteria**. 'Some microalgae produce a blue colour that is already used in sweets,' says Ben van den Broek, a researcher at Wageningen Food & Biobased Research. He collaborated with WUR students and the designers Laura Luchtman and Ilfa Siebenhaar on the Living Colours Project, one of the academic consultancy training (ACT) projects in the Circular Fashion Programme run by WUR and ArtEZ Centre of Expertise Future Makers. Van den Broek: 'The disadvantage at the moment is that the colours don't bind well to the fabric, which means they fade quickly.' The scientists are looking for ways to produce the dyes on a large scale at affordable prices and are investigating how to get a more colour-fast result that survives the washing machine.

The colours themselves can also be recycled. Designer Aliko van der Kruijs uses waste ink as a dye. 'Inkjet printers are used to dye fabrics. The printheads are sprayed clean in between every time to prevent streaking. I got inspired when I saw the lovely deep purple colour of the ink remains on the side of the printer.' That ink currently ends up mostly as chemical waste but Van der Kruijs says it could also be reused. She used waste ink to dye the dress that WUR Executive Board president Louise Fresco wore to the opening of the academic year (see too the news report on p. 6).

## 3. MORE RECYCLING

The clothing industry is a long way from a circular economy: only 1 percent of all clothing is reused to make new clothing. 14 percent ends up as insulation material, cleaning cloths or mattress stuffing and the remaining 85 percent is incinerated or dumped in landfill sites.

Van Dam sees the encouragement of reuse as crucial in making the fashion industry more sustainable. While recycling textiles also involves energy and water, the overall environmental impact is less than the production of fabrics from new materials.

One form of reuse is **mechanical recycling**, whereby clothing is picked apart and spun to create new yarns. This method is used to turn denim jeans into insulation material, for example. Synthetic textiles such as polyester can also be **chemically recycled**. Van Dam: 'However, at the moment chemical recycling is more expensive than extracting the material directly from petroleum. People are currently working on upscaling the process to make it cheaper.'

Van Dam would like to see much more use being made of the fibres in old clothing to produce high-quality material for new clothes. 'The disadvantage is that recycled fabrics tear more easily because the fibres are already damaged.' Another problem is that most items of clothing consist of a mix of materials, such as synthetic fabrics and cotton. That makes recycling more difficult. 'We are therefore working with our supply-chain partners to look at ways of recycling mixed textiles such as denim and T-shirts,' says Van Dam.

**Second-hand clothes** are best for the environment as they don't involve any factory processing. 'But you do then need someone to be buying the second-hand clothes as a replacement for new clothing and not as an extra,' says Judith van Leeuwen from Environmental Policy. Together with students from various Master's programmes, she carried out a survey in Porto, Portugal. Around half of the city's residents who were surveyed bought second-hand clothes sometimes. Those purchases were to replace new clothes in 69 percent of the cases. However, the analysis also showed that there are still problems with the recycling process. Van Leeuwen: 'Only 20 percent of the clothing that was collected and resold came from Porto itself. A lot of the second-hand clothing is imported and exported.' That requires transport, which harms the environment.

Van Dam acknowledges this. 'Many countries collect clothing for recycling or second-hand sales but then export the clothes to countries that often don't have their



## Last year, fashion house Burberry destroyed 30 million euros' worth of clothing

own infrastructure for recycling.' That means these clothes may be used one more time, but then they still end up on a rubbish dump. Van Dam: 'Meanwhile, less and less clothing is going to countries in Eastern Europe and Africa, in part because of the competition with the local textile industry and also because living standards are rising there. What is more, some manufacturers don't want to sell their fashion-label clothes at knockdown prices as that makes the product seem less exclusive and luxurious. So whatever doesn't get sold in their collection gets incinerated instead.' The British fashion label Burberry caused a furore this summer when it destroyed more than 30 million euros' worth of clothes.

### 4. MORE AWARE CONSUMERS

In the first 15 years of this century, global sales of clothes doubled to reach 100 billion items in 2015. Consumers own more and more items of clothing and get less wear out of each item. So consumers need to change their behaviour if the fashion market is to become more sustainable.

But that is easier said than done, says Arnout Fischer, researcher in the Marketing and Consumer Behaviour chair group. 'People say they find sustainability important but you don't usually see that reflected in what they buy.' According to him, this discrepancy is seen everywhere in the market. 'Everyone has principles, but once in the shop you forget about that and generally go for the quick and easy option. We are surrounded by disposable fashion so you would have to be highly motivated to shop based on your principles.' Everyone buying a bit less sounds like a good solution but Fischer does not see that as particularly feasible. 'It so happens that we are used to a lot of choice. Your clothes are a statement about who you are and your social status. Keeping up with the latest fashion is part of that, just like some people have to have the latest iPhone.'

Manufacturers who want to successfully market sustainable products are best off focusing on **added value for the consumer**, says Fischer. Some second-hand clothing, for instance, is sold as exclusive 'vintage' clothes. Fleece

### CIRCULAR FASHION LAB

WUR has set up the Circular Fashion Lab to bring together designers, public authorities, scientists, students and companies to consider ways of making the fashion industry fairer, cleaner and more sustainable. 'The industry has done a lot over the past 20 years to become greener but there are still many problems,' says Kim Poldner, researcher in the Management Sciences group and coordinator of the Circular Fashion Lab. 'The current production process is linear: clothes are produced, worn a few times and then discarded. If we are to get a truly circular economy in the clothing industry, we have to collaborate to create a new system.'



▲ Kim Poldner.

### PINEAPPLE JACKET


Starting this week, mini-exhibitions are on show around campus with actual examples of circular-economy fashion, such as a jacket made of pineapple leather and clothes dyed with algae or bacteria. The Spot is also focusing on the ethical side of the rag trade, challenging consumers to think about where their clothing comes from with the slogan 'Who made my clothes?'



PHOTO: OLVA OLEINIC

▲ A jacket made of Piñatex, a textile made out of pineapple leaves.

is praised for being nice and warm and fast-drying, not because it is made from recycled polyethylene terephthalate bottles.

Fischer thinks trying to educate consumers makes less sense. 'Processing that information costs them time and effort. And what do they get in return?' That is why he feels **labels that stress the sustainability** of the product have little effect. 'Less than 5 percent of consumers look at the labels when they buy something.' Although that doesn't mean the labels serve no purpose at all. 'Labelling can help shift the minimum standard in the market. You see that with the "Better Life" label and free-range eggs: they started off as distinctive but are now more or less the norm. That's happening in the fashion industry too, for example with organic cotton.' 



## SUN, PARTYING AND GASTROENTERITIS

In mid-August, almost 2400 first-year students got a lively introduction to WUR and Wageningen in the Annual Introduction Days (AID). It was a successful edition with lots of sun, partying and accessible social events, says AID project leader Sjef Moling. The only glitch was the gastroenteritis doing the rounds in Wageningen that also affected a lot of AID participants and mentors. 'But I don't think it had a really big effect.' For the first time, students who had not yet found a room were able to use a special AID campsite on campus behind Axis-Z. Around 120 first-years made use of that option. © LZ, photos Guy Ackermans and Sven Meschel









‘Everyone saw the effect of the drought’

# The summer that woke us

The Netherlands — and indeed all of Northern Europe — had an exceptionally hot, dry summer. It was a dream summer not just for sun worshippers but also for scientists. Now drought and climate change are finally getting attention.

*text* Roelof Kleis *photo* Normafotografia/Hollandse Hoogte

‘A summer like this is a gift,’ says Henny van Lanen of the Hydrology and Quantitative Water Management chair group. He has been working on drought at WUR for nearly 30 years but he feels the topic has never got the attention it deserves in the Netherlands. ‘The focus has always been very much on how to avoid flooding. That we need to tackle drought is not ingrained in the same way. We don’t even use that word; we use the more neutral term “fresh-water provision”.’ When asked what lesson can be learned from the period of drought, Van Lanen’s reply — ‘Don’t be late’ — is short and to the point. ‘What this summer taught us is that we should have been much quicker to take measures. An example: it was already clear in early May that June and July could turn out incredibly dry. But the decision to raise the water level in the IJsselmeer lake was only taken

in mid-June, by which time there wasn’t much water left in the Rhine.

#### RAISING AWARENESS

Phenologist and climate scientist Arnold van Vliet of the Environmental Systems Analysis group had an excellent summer. He was forever talking to the media. Which was good for his profile but even better for raising awareness about climate change, he says. ‘Because it stayed hot and dry for so long, journalists were continually looking for new angles. That gave an opportunity to take a much broader look at the problem than is usually possible when the media cover extreme weather.’ Van Vliet says the incessant media coverage boosted the general public’s interest in climate issues. ‘Everyone saw the effect of the drought in their own back gardens. That helped stories about drought to catch on better. You can’t see higher temperatures but you can see drought.’





## 'One important lesson is that we need to prepare more for climate change'

According to Van Vliet, it is difficult to say what consequences one dry summer like that will have for nature. 'It's tricky to disentangle the impact from the extreme weather we've already had in recent years.' For the bigger picture, he refers to the study that the ecologist Wieger Wamelink of Wageningen Environmental Research published this summer. Wamelink calculated that climate change would lead to the loss of 40 percent of all today's plant species in the Netherlands by 2085. That would at any rate be the case if the average temperature on Earth rose from the current 10 degrees to 14 degrees.

### THE SHIVERS

But even a more realistic increase to 12 degrees would have a huge impact. Wamelink: 'Even then, 207 of the 1200 species we investigated — 17 percent — would be in trouble. That is, it would become too warm here so their range would shift northwards. More than one third of these species are on the Red List, which means they are already rare.' 'That gives me the shivers,' says his colleague Van Vliet. 'I can't bear to

think about it. The consequences are massive. And they include prominent species like the oak.'

Set against the loss of these species is the fact that the Netherlands will potentially become more suitable for 234 new plants. Wamelink: 'Their range will also shift northwards; it will become warm enough here for them to survive. So we could gain more plants than we lose.' But that is a scoreboard approach. 'There are species that only shift their range by a couple of metres a year. That's too slow to keep pace with global warming. The soil also has to be just right. In general, Dutch soil is more acidic than the soil in the south of France. So it's not simply a question of adding and subtracting. It's not really possible to predict what will happen.'

### TWITTER TREE

It is possible to say something about the effect a dry summer has at the micro-level. Take the Twitter tree set up by Ute Sass-Klaassen, a researcher in the Forest Ecology and Forest Management group. The poplar next to Orion has been keeping precise track of what happens to it for more than a year now. Meters and sensors monitor changes in the tree's diameter and sap flows, changes that the tree then shares with the outside world via Twitter.

The most recent data shows that the drought has had a clear effect. While the diameter increased by nearly a centimetre last year, the increase this year was only 0.6 centimetres,

37 percent less. 'That's because the tree stopped growing in mid-June in response to the drought, more than a month earlier than last year,' says Sass-Klaassen.

One dry summer is not the end of the world, says Sass-Klaassen reassuringly. Trees do not easily give up the ghost. 'But only time will tell whether and how well they recover. It was incredibly tense seeing what would happen this summer but 2019 will now be similarly nerve-racking.'

### FRESHWATER STRATEGY

The dry summer of 2018 is making us face facts, say Wamelink and his colleagues. 'One important lesson is that we really need to prepare more for climate change,' argues Wamelink. 'Should we aim to keep what we already have or prepare for what might be ahead? We haven't been talking about that enough. A summer like this is ideal from that perspective.'

'Drought should have a similar priority in policy to flooding,' says the hydrologist Van Lanen. 'The Netherlands didn't develop a national freshwater strategy until 2010. That's late compared to the rest of Europe. And really rather scandalous when you consider how much expertise in water matters we have here. It then took until 2015 before the Freshwater Delta Plan was adopted. We're still working on the implementation.' Then, with deadpan delivery: 'So the summer of 2018 was a little too early.' 



## WUR team wins Student Greenhouse Challenge

# Growing veg in the slammer

WUR's first Student Greenhouse Challenge was won by the Wageningen team GreenWURks. They designed a building where people can work, enjoy leisure activities and grow vegetables. The next edition of the Challenge will take place in two years' time.

text Luuk Zegers illustrations Student Greenhouse Challenge photo Guy Ackermans

**T**he Student Challenge: Design the Ultimate Urban Greenhouse is Wageningen's answer to such student competitions as the World Solar Challenge. 'An international, multidisciplinary competition in which students develop a comprehensive concept for an urban agriculture project,' says Challenge coordinator Rio Pals. The first edition of the Challenge, with the former Bijlmer prison in Amsterdam as its location, was organized by WUR in partnership with Rabobank, AMS Institute, Bajes Kwartier Ontwikkeling CV and Klasmann-Deilmann to celebrate the university's centenary. 24 teams of students from 40 universities in 10 different countries took part.

### MOSS ON THE FLOOR

The challenge facing the teams was 'to explore the potential of urban farming in helping to resolve food issues,' says Pals. Simply coming up with plans for food production would not be enough. 'The costs of land and energy, for instance, are far too high in the city. And there are real limits to what you can produce in a vertical farm with little natural light,' says Pals. So the

students had to look for different, complementary functions for their urban farm and for technological features that could increase the sustainability of their project.

GreenWURks managed this most successfully, according to the jury. In their 'Open Bajes' (open prison) design, they combined high-tech food production with the engagement of the local community. That resulted in the design of a building where, in the team's words, 'people can connect with nature to heal from daily pressures' and 'where they can grow food in an accessible, inclusive, functional, inspiring and open place'. The plan includes workspaces, a communal kitchen and yoga rooms with moss on the floor and ferns on the walls.

### HEALTH SHARES

The jury praised Open Bajes because the design is 'balanced', 'comprehensive' and 'both a heritage site and an icon for the future'. GreenWURks also gave more attention than the other teams to the plan's financial feasibility, says the jury. The team came up with a business plan in which visitors are involved in the co-creation of value. The team also thought up an



See the video impression of 'Open Bajes' on [resource-online.nl/video](http://resource-online.nl/video)



The winning design, Open Bajes by GreenWURks. ▶

investment system where insurance companies and banks can invest in health shares.

After the prize was handed to the team, GreenWURks member Loes Mellink emphasized how educational the Challenge was. 'Different cultures, different perspectives, long discussions. It was a fantastic journey and I learnt so much.'

After the winners had collected their prize, dean of Education Arnold Bregt announced that the next Student Greenhouse Challenge would be held in 2020. The assignment will then involve a yet to be determined location in China. 🌱



### ALL WINNERS

- Ultimate Urban Greenhouse Award (10,000 euros): GreenWURks (WUR)
- Outstanding Architecture Award (1000 euros): Thanks Work (University of Michigan)
- Sustainable Substrate Award (1000 euros): Green Spark (universities of Milan, Aachen, Cologne, Copenhagen, Twente and Wageningen)
- General Public's Prize (500 euros): Technotitlan (WUR)





# HOW CAN WE END HUNGER?

On 30 and 31 August, WUR hosted the international conference 'Towards Zero Hunger - Partnerships for Impact', on the United Nations' sustainable development goals, as part of its centennial celebrations. *Resource* asked some of the speakers how we can rid the world of hunger and malnutrition. What are the crucial actions we need to take?

*text* Albert Sikkema *illustration* Henk van Ruitenbeek

## Lawrence Haddad

Director of the Global Alliance for Improved Nutrition (GAIN)



'GAIN wants to encourage the consumption of healthy food around the world, especially among the most vulnerable groups. **The key thing is to make it uncomfortable for governments to do nothing to stop hunger.** If there's a lot of hunger and malnutrition,

there is a tendency to see it as normal or a "curse". But it is neither. Hunger and malnutrition are the result of choices about how we use our scarce resources. You can choose to use those resources differently. The media, civil society, you and I, we all need to keep this issue on the agenda and come up with facts about the extent, spread and consequences of hunger and malnutrition. We also have to help governments and companies combat hunger with effective strategies, solutions and policy rules.'



## Ertharin Cousin



**Former director of the World Food Programme**

'As the director of the UN's World Food Programme, I worked with my colleagues to help 80 million people a year get better access to food. Now that I'm an academic at Stanford University, my role is that of an information broker. I work on interventions that can create sustainable development and sustainable food systems. **I see a key role for joint actions.** You need all the parties on board in sustainable development: the local community, local and national authorities, international organizations, companies, scientists and NGOs. This doesn't just apply to developing countries, it also applies to countries like the United States. The US also has communities that don't have access to healthy food and who live in "food deserts". Sometimes healthy food might be available but unaffordable for these communities. What is more, people don't always know the difference between healthy and unhealthy food, so education is also an important element in achieving sustainable food systems.'

## Arthur Mol



**Rector magnificus at Wageningen University & Research**

'A survey showed that WUR's teaching and research are making a significant contribution to 12 of the 17 sustainable development goals. We work on food security, clean drinking water, sustainable cities, health, partnerships and so on. Collaboration is crucial for us. **We can't utilize our knowledge to make any practical progress on the sustainable development goals unless we collaborate with public and private parties that implement our know-how and recommendations in the field.** We need others to achieve something. For example, to curb the environmental impact of pesticides in agriculture, you need an effective agency for the approval, registration and monitoring. WUR has advised Ethiopia on this and I visited the monitoring agency's national office. It was an untidy room with stacks of paper where nothing was recorded on the computer and where they were severely understaffed. That's one of the institutions you need to build up in order to achieve healthier food and cleaner drinking water. To do that, we need to not just collaborate but also learn how to build up institutions in countries like Ethiopia.'

## Marijn Faling



**PhD candidate in the Public Administration and Policy group at Wageningen**

'My doctoral research focuses on policy entrepreneurs — people or organizations that sell innovative policy to governments. I'm looking at

climate-smart agriculture, i.e. policy that is aimed at improving food security and responding to climate change. Policy entrepreneurs operate in a field where different parties and stakeholders have influence. For example, the ministry in charge of agriculture will have a different view of climate-smart agriculture than the ministry responsible for the environment, and NGOs have different interests to companies. How can you get them all agreeing? A crucial aspect is that policy entrepreneurs can frame the issue in different ways. They need a range of different messages to sell the same idea to different parties. **In the fight against hunger, we often look first at technological solutions such as artificial fertilizer and better seed, but you also need a good institutional environment that lets farmers practice sustainable agriculture.** Governments often don't have the resources to develop policy for this. That is when policy entrepreneurs can play a role in limiting hunger.'

## Paul Polman



**CEO of Unilever**

'Companies need to change the way they look at profitability and collaboration with governments and NGOs, as in many areas wastage now costs more than sustainable behaviour. Deforestation and climate change, for instance, are more costly than the sustainable alternatives. That is creating a market for sustainable development. For Unilever, sustainable food production is already the most important source of income. We are buying more and more products from small-scale farmers for a fair price, whereby we regularly collaborate with local partners. But Unilever can't achieve sustainable palm oil production all on its own; we need international coalitions for that. A crucial question is whether the financial sector will invest in this. **Investors should put their money in companies that deal responsibly with resources.** And regional development banks should concentrate on covering the risks for companies that want to invest in sustainable development rather than financing more development projects.'

## Linda Veldhuizen



**Postdoc in the Plant Production Systems chair group at Wageningen**

'I am the Sustainable Agriculture & Food Systems network coordinator for a UN organization that focuses on food security and better diets. I work on the Missing Middle concept, in which we try to bridge the gap between production and consumption and between global goals and local conditions. **An important step in this transformation is changing people's behaviour.** If people switch *en masse* from an unhealthy diet to a healthy one, this can change our food system for the better and let us beat obesity. Another important step is encouraging local value chains in developing countries that can improve diets and living conditions.'

# BSc students from abroad

Five Wageningen BSc programmes have switched to English this academic year. They are attracting people from all around the world. Why do they choose to do their degrees here? *Resource* asked five international first-year BSc students.

*Text* Luuk Zegers *photos* Sven Menschel

## ‘I was looking for a degree programme in both environmental studies and agriculture’

**Who?** Smaranda Filip (18) from Constanta, Romania  
**Degree?** International Land and Water Management

‘Constanta is a city on the Black Sea. I am used to hot weather and the beach. It’s a bit different here. But I like the fact that it’s so clean here, and nice and green.’ Smaranda Filip has plenty of plans for her time in Wageningen apart from her studies. ‘I shall probably play squash or tennis. And I like languages so I want to learn Dutch.’

Filip was looking for a degree that pays attention to both the environment and agriculture. She got to know about WUR on the internet and registered for two BSc programmes. ‘I hesitated between Environmental Sciences and International Land and Water Management. In the end I picked International Land and Water Management because of the practical approach. The field trips, talking to farmers and so on. Looking at how theory translates into practice.’



## ‘Wageningen is not very well-known in Bulgaria’

**Who?** Petar Dundin (18), from Veliko Tarnovo, Bulgaria  
**Degree?** Animal Sciences

‘My family has a farm with cows, pigs, corn, wheat and more. So I wanted to study something related to our business. I Googled “top farmer’s university in the world”, and the first place to come up was Wageningen. So when I found out that this university was starting with Bachelor’s programmes in English, I was very happy.’

Wageningen is not well-known in Bulgaria, says Dundin. ‘The Dutch universities in the bigger cities are more popular. Nobody has really heard of Wageningen.’

In his degree in Animal Sciences, Dundin wants to concentrate on cows and pigs. ‘Nutrition, behaviour, the best way to take care of them... My favourite animal? I really love pigs.’ In his spare time, when he is not helping out on the farm, Dundin does Thai boxing. ‘And I play the kaval, a typical Bulgarian instrument. It’s a type of wooden flute. My parents will bring it with them when they come to visit me.’







## ‘I already knew I would want to do my Master’s here’

**Who?** Jennifer Limanau (19) from Jakarta in Indonesia  
**Degree?** Food Technology

‘I’m an active person. I like hiking, diving and travelling,’ says Jennifer Limanau. She was always interested in Food Technology. ‘I already knew I wanted to do my Master’s in Wageningen but because there was no international Bachelor’s here yet, I started a Liberal Arts degree with a focus on food in Maastricht last year. When I heard that WUR would offer the international Food Technology BSc this year, I quit that programme and enrolled here.’

Limanau’s aunt lives in the Netherlands and works for Danone. ‘A lot of her colleagues come from this university, and they highly recommend it.’ After graduating she wants to go back to Indonesia. ‘There are still a lot of people living in poverty, and I want to help them.’

One big difference between Indonesia and the Netherlands is how people behave, says Limanau. ‘Dutch people are super-straightforward, while in Indonesia we make things as ‘soft’ as possible. We have a word for that: *basa-basi*. This means to do your best not to offend anyone. We don’t like confrontation, we are super-considerate.’

## ‘A good mix of natural and social sciences’

**Who?** Konrad Peckolt Fordal (21), from Trondheim in Norway  
**Degree?** Environmental Sciences

Konrad Peckolt Fordal, who is half Norwegian, half German, loves sport. ‘I play volleyball and handball, I bike and I love skiing. Here I will take part in a team sport, probably volleyball. It’s cool that there are so many sports here that I can try out.’ Like Wageningen, Trondheim is a university town. ‘I’m used to seeing students every-

where. They run the place in Trondheim.’

‘I wanted a nice mix of the social and the natural sciences. Not a lot of universities offer that in the way that Wageningen does. It seems to be one of the best universities in this field.’ One of the topics Fordal wants to focus on is the energy transition that is under way. ‘From fossil fuels to producing energy in a sustainable way.’



## ‘The atmosphere is different to that of French universities’

**Who?** Aude Prummel (18) from Lyon, France  
**Degree?** Soil, Water, Atmosphere

Aude Prummel is half French, half Dutch. ‘My Dutch family said I should look here because I like the natural sciences. At the open day I was enthusiastic from the start. There is quite a different atmosphere than at French universities. The university suits my personality.’

Prummel like being out in nature. ‘Lyon is near the Alps. I love hiking in the mountains.’ The Netherlands is a lot flatter of course, but that is not the only contrast with France. ‘The food culture, for instance. The cuisine is a lot simpler here.’ But the Netherlands has its advantages as well. ‘I like the way the Dutch get around by bike so much. There are great cycle paths.’

Even though she speaks fluent Dutch, she chose Soil, Water and Atmosphere because it is taught in English. ‘I want to go on to work internationally, and in France everything is in French. I wouldn’t have chosen this degree programme if it had been taught in Dutch.’



### Origin of students on English-language BSc programmes

	NL	EU	Outside	
			EU	International
Environmental Sciences	52	21	4	32%
Food Technology	154	11	12	13%
Animal Sciences	120	7	3	8%
International Land and Water Management	85	6	2	9%
Soil, Water, Atmosphere	81	3	0	4%

According to the figures on preliminary enrolment (as of 3 September), 69 international students from 29 countries are coming to take the five new English-taught Bachelor’s degree programmes. 48 of these students come from the European Union. With 8 students, France is the best-represented country, closely followed by Germany (7) and Italy (6). The best-represented countries outside the EU are Indonesia (5) and China (3). The final enrolment figures will be published on 1 October.

**COMPASS**

Fruit flies can fly up to 15 kilometres in one night. And in a straight line, too. They do this by orienting themselves by the moon, scientists at the Californian Institute of Technology (Caltech) have figured out. The wee insects have specialized brain cells for the purpose, which work like a compass. But don't let that stop you swatting them if they are on your fruit.

**MIRROR, MIRROR**

The bluestreak cleaner wrasse (*Labroides dimidiatus*) is the first fish to pass the mirror test. According to a Japanese study at Osaka City University, the little tropical fish recognizes a dot put on its skin as 'its own' when it looks in the mirror. This conclusion is based on the fact that the fish tries to get rid of the mark. The researchers see this behaviour as a sign of a sense of self.

**ALPHA MALES**

Dominant men are decisive, shows a French study at the Polytechnic School of Lausanne. That decision-making speed comes naturally to them, showed a study of brain activity while making a decision. The question is whether there is a linear correlation, say the researchers. Does the director decide faster than the deputy director, etc? And can a simple EEG scan predict how someone will function socially?

**NOISE**

Traffic noise causes premature ageing in zebra finches, researchers at the Max Planck Institute have discovered. The birds end up with shorter telomeres: pieces of DNA on the end of chromosomes which are a kind of indicator for ageing. According to the biologists, this could explain why city birds do not live as long as their country relatives. Funny that zebra finches, of all birds, can't cope with traffic.



## Go abroad for part of your degree? There are plenty of grants!

**WUR's student exchange office has grants available for internships, thesis research and exchanges abroad. Because a lot of students are not aware of this, not all the grants are made use of. As a result, students are missing out on up to 1800 euros, and there is a danger the grants will be slashed in future.**

The exchange office has the 'luxury problem' of being loaded with Erasmus+ grants. They are mainly associated with the Erasmus exchange programme but they can also be applied for by students who want to do an internship or their thesis research in one of the Erasmus countries (EU countries plus Iceland, Lichtenstein, Macedonia, Norway and Turkey). 'And a lot of students don't know that because we don't act as intermediaries for internships or theses,' says Erasmus exchange adminis-

trator Brenda Brouwer.

The grant is available to Bachelor's, Master's and PhD students. 'They can get 375 euros per month,' says Brouwer. 'So it doesn't cover all the costs, but it is a very nice extra.' The size of the grant varies per country and activity. For an exchange in Poland you get 171 euros a month, while for an internship or thesis research in Sweden you get 375 euros a month. So for five months of studying, working on an internship or research in an Erasmus+ country, a student can get between 855 and 1875 euros.

If the grants go unused, the chances are that fewer grants will be made available next year. And as a result, grant applications may be rejected. So it is not just good for your bank balance to apply for a grant; you would also be doing your fellow Wageningen students a favour.



PHOTO: SHUTTERSTOCK

Students from outside the EU have the right to an Erasmus+ grant, and even graduates can get one, as long as they apply while they are still registered as students. More information: [www.wur.eu/studyabroad](http://www.wur.eu/studyabroad) or [erasmus.studentexchange@wur.nl](mailto:erasmus.studentexchange@wur.nl).

📍 LZ

## Societies attract fewer new member

**For the first time in years, the number of people joining student societies during the Annual Introduction Days (AID) went down.**

With the exception of the rowing club W.S.R. Argo, the main societies did not manage to equal the results they got last year. The small societies D.L.V. Nji Sri and Unitas did grow, however. In total, 976 first-years joined a society, as opposed to 1110 in 2017 and 1106 in 2016.

Argo signed up the most new members: 304. Argo had the most sign-ups last year too: 295. Once again, the club is unable to admit all the applicants: it has room for 280 new members. W.S.V. Ceres and SSR-W both attracted 187 candidate members, compared



PHOTO: SVEN MENSCHERL

▲ Students applying to KSV Franciscus at the AID information fair.

with 231 and 195 respectively in 2017. KSV Franciscus got 166 applicants this year, which is nearly 100 less than last year (262). The number of confirmed new

members remains to be seen: in the first few weeks of the new academic year more people always join and some applicants drop out. 📍 EvdG, LvdN



Students and Idealis to build energy-neutral housing at Droef

# Experiment with sustainable housing

**Idealis and students plan to collaborate with the aim of building the most sustainable student accommodation in the Netherlands. The location they have in mind for this pilot project is Droevendaal.**

The Droevendaalsesteeg, the idiosyncratic student enclave opposite the campus is one of the most suitable sites for the pilot project, says Idealis director Sylvie Deenen. 'There is still quite a lot of space there. What is more, Droevendaal has the most sustainability-minded residents.'

Idealis wants to use this pilot to make its own operations more sustainable. Deenen: 'Sustainability is easy to build in to new-build pro-

jects. But how do you make existing buildings more sustainable?' The experiment at Droevendaal, covering 12 to 20 units, is to be a kind of living lab that finds answers to that question. 'We want to think of new things that we can apply in our other buildings too.'

The aim is to deliver a 'zero energy' building around 2023. 'But even better would be a building that can actually produce energy,' says Deenen. How that can be done is for the students to come up with. In consultation with the university, it has been decided to involve the ACT (Academic Consultancy Training) groups. The first group of six students has already formed and will start this month.



PHOTO: SVEN MENSCHER

▲ A Catalan onion barbecue was held at Droevendaal's party spot last April. The field is a possible site for 12 to 20 experimental, sustainable new rooms.

The idea was discussed with Droevendaal residents before the summer vacation. 'Their reaction to the plans was very positive,' says

Deenen. Until she proposed the big field, Droef's party spot, as a possible location. 'People were less keen on that.' **© RK**

## MEANWHILE IN... INDONESIA

### 'My family sleeps in a tent in the yard'

**The Indonesian island of Lombok has been hit by five earthquakes in the past few weeks. The heaviest shock, on 5 August, had a magnitude of 6.9 on the Richter Scale. The estimated total death is 555 people, 77,000 houses were ruined and 400,000 people are now living in emergency shelters. Muhamad Soimin's town was spared so far, but his family is anxious about new shocks.**

'When the first earthquake happened in Lombok, I was in Turkey on the last day of my MSc internship. I read many posts on Facebook and received messages from my friends, so that is how I knew what had happened. I could only try to reach my family through WhatsApp calling because I had no mobile subscription there. Luckily, they answered immediately and everything was okay. They live quite far from the epicentre of the earthquake. I have lived in Lombok for more than 20 years and I only ever experienced two or three small earthquakes, nothing like this. My family is shocked. They have set up a tent in the backyard to sleep in, because they are

afraid to sleep in the house.

A friend of mine lived exactly in the epicentre, his town is totally destroyed.



PHOTO: KURNIAWAN RIZQI / SHUTTERSTOCK.COM

I could not reach him the first day, because all electricity and signals had fallen out. He turned out to be okay, but soon after the heaviest shock he moved to the mountains to flee from the tsunami and he stayed in a camp there. In the first week, conditions there were terrible and distribution of provisions was a problem. At the moment, the basic necessities are available for the people living there. After staying in the camp for two weeks, my friend has gone home again. Many people have now returned to their ruined houses, but are still sleeping outside. As there are still shocks, reconstruction of the houses has not begun yet.

I will go back home at the end of September. I am not sure yet what the impact for me and my family in my village will be. I am lucky to live further away from the epicentre, where the damage is limited.' **© FJ**



Muhamad Soimin, a Master's student of Forest and Nature Conservation, tells of the effects of the recent earthquakes in Lombok, Indonesia.

# YOU ON CAMPUS

**To some people, the abnormally hot days we had on campus this summer were a disaster. But to PhD candidate Yue Han (30), they were the most beautiful days of his life. He proposed to his girlfriend in a hot air balloon.**

Yue spent the entire summer on campus preparing for his PhD graduation at the Laboratory of Virology and, at the same time, for a big surprise for his girlfriend Chunyue Zhang (29), a PhD candidate in the Food Quality and Design group. When she went away on a business trip, Yue secretly bought an engagement ring and agreed a special proposal plan with several friends. Sunny weather was essential to carrying out this plan.

The love story of Yue and Chunyue began three years ago. Yue had just completed his MSc at WUR and Chunyue came to the university to start on her four years of PhD

research. They met through a mutual friend and committed themselves to a relationship soon after their first few dates. They share similar hobbies and their passion for research. For Yue and Chunyue, Wageningen is a special place, as they have realized their dream of doing scientific research here as well as finding their

**‘When we have kids, we will bring them back here’**

soulmate. Chunyue has always wanted to see the city and the university from a hot air balloon, but they had never had the chance due to the typical windy Dutch weather and

their busy work schedule. So to make Chunyue’s dream come true, Yue planned to propose in a hot air balloon. As the balloon rose into the sky and floated over the campus on 21 July, Yue asked Chunyue to marry him. ‘I was crying from that second until the end of the trip,’ says Chunyue. ‘I’ll remember that moment forever! I had a feeling he wanted to ask me something, but I did not expect a proposal.’ ‘Wageningen University is the place where I met Chunyue, where we have lived together, where we have shared our best memories. That’s why I wanted to propose to her here. It had to be here!’ says Yue excitedly. ‘When we have kids in the future, we will definitely bring them back to visit this place together.’ **CC**



PHOTO: CATHY CHEN

## ‘Why am I learning Dutch? To communicate with kids!’

**You need absolutely no Dutch to thrive on your Master’s or in your student life in Wageningen. So, as an international student, why would you learn Dutch? Blogger Donatella Gasparro found her reason.**

‘I have been in the Netherlands for one year now, and I started learning Dutch seven months ago. When I tell internationals that, they give me a suspicious yet surprised look and ask: “why?” When I told my Dutch friends, they answered: “That’s so cool!” It is. It is cool to learn the code that people in the country in which you’re living use to communicate and to structure their thoughts. I think

it’s almost necessary. Necessity is precisely the issue in the academic environment: you need absolutely no Dutch here. And as many of us traveling souls have probably experienced, you don’t really pick up a language if you’re not forced to. That was the story of my Dutch: I started to pick up a few phrases but opportunities for real practice always stayed way too far away from me.

### KIDNAPPED

A challenging and fun opportunity revealed itself this summer while I was volunteering at a beautiful farm. I stayed with a Dutch farmers’ family, who had three amazing kids of almost 3, 7 and 9 years old.

After the first shy days, the kids kidnapped me to play with them whenever they could. There’s no such thing as a language barrier with kids. There I realized: that’s why I am learning Dutch. To communicate with children.

It was incredible to put together almost proper sentences while being helped by friendly kids, or to ask “*Wat is dat?*” to learn new terms. The oldest child asked me to repeat things over and over to be sure I was keeping them in mind properly. Isn’t that beautiful?

### YOUR INNER CHILD

As students in a student community we are always surrounded by people of a certain age, all of

them with good English, and it kind of feels like a bubble when you have no families around, no *oma’s* and *opa’s* and no kids. I found spending time with kids regenerating and relaxing. So yeah, here’s a reason for you to learn Dutch when living in the Netherlands: it helps you keep your inner child alive.’ **B**

## BLOG



Donatella Gasparro is a Master’s student of Organic Agriculture from Italy.



**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.**

# Interviewing Native Americans about health

'I set up my own research study at the Icahn School of Medicine at Mount Sinai, a teaching hospital in New York. The department I was in does research on public health and environmental medicine, but it also provides information to members of the public who have questions about health. However they don't yet reach that many people and those they do are mainly the well-educated. That's why they want to try and reach other target groups too.

## RESERVATIONS

I contacted Native Americans in various reservations. Those reservations have their own governments and their own health programmes. I wanted to interview residents to find out what information they needed about health. I presented my results at the end, so I hope there will be more contact from now on between the hospital and the reservations.

I lived in Webster Apartments, a huge complex that houses 300 young women. It was built at the end of the 19th century, before there was safe housing for single working women in New York. It's all a lot safer now, but the place is still women only. No men are allowed in the rooms either, which was quite funny. I had

my own room and a communal shower. Meals were cooked every morning and evening for everyone in the building, so we ate together and I got to know a lot of people that way. Everyone comes to New York for a different reason. Their stories were very diverse, which made them interesting.

## TRUMP

In the first few weeks, I also helped write an article on climate change. That area of research is suffering from Donald Trump's policy. There's much less funding available as a result and people were talking about that every day. I went with my supervisor to a talk by the chair of the United States Environmental Protection Agency. I was even introduced to her. That surprised me as I was only an intern.

Afterwards, my supervisor came to the Netherlands and visited me at my home. I'd never expected I would get on so well with my supervisor.' **RF**



## THE WORKS

**Who?** Simone Uijtewaal, Communication, Health and Life Sciences Master's student  
**What?** Internship at the Icahn School of Medicine at Mount Sinai  
**Where?** New York

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



## In memoriam

**Rinus Jaarsma**

Rinus Jaarsma passed away on 26 July after a very lengthy illness. Rinus was an enthusiastic colleague known for his charisma and perseverance. That latter quality in particular helped him keep going, especially in the final years; his glass was always half full rather than half empty.

Rinus started his career in 1970 in what was then the Land Development group. He set up the teaching and research on rural traffic. An impressive amount of fieldwork in south-west Friesland and the development of a traffic model resulted in a doctorate in 1984. The model needed so much memory on the mainframe computer that it could only be run at night.

After that, Rinus extended the traffic research to incorporate environmental and recreational aspects. Energy, traffic safety, noise nuisance, environmentally harmful emissions and road crossing opportunities for people and animals became more important. These integrated studies were increasingly being commissioned by third parties. This resulted not only in funds for additional staff, but also in a steady stream of publications and some nice case studies for use in class, Rinus's other academic passion. Many a former student cherishes happy memories of Rinus's constructive, enthusiastic supervision. After retiring in 2011, Rinus became an independent traffic planner and he continued to publish. Various clients made grateful use of his expertise. Despite his optimistic attitude, Rinus unfortunately had to give up his fight against his illness, which he had had since 2001.

We offer our condolences to his wife Anneke, his two daughters Marijke and Saskia, and their partners and children as they deal with this loss.

*Land Use Planning Group*

## In memoriam

**Dr Johannes Franciscus Wienk**

Johannes Wienk passed away at the age of 82 years on 23 July 2018. He studied tropical agriculture at Wageningen University and completed his PhD research on *Photoperiodic effects in Vigna unguiculata* (L.) Walp in 1963. Afterwards he worked as a research officer at the Sisal Research Centre in Tanzania, going on to join the department of Tropical Crop Science in Wageningen a few years later. Wienk went to the Suriname Centre of

Agricultural Research (CELOS) in 1969 and this marked the beginning of a 15-year period in this country, interrupted by relatively short periods of teaching and research in Wageningen. In Suriname, he was research coordinator and head of the management division of CELOS, and later in charge of the large research project 'Long term cultivation of non-irrigated annual crops on the low fertility acid Zanderij soils in Suriname'.

Wienk was appointed programme director of the new research site of Wageningen University in Costa Rica in 1986. He returned to Wageningen three years later and accepted the challenging job of manager of the new Department of Agronomy, a merger of the former departments of Field Crops and Grassland Science, and Tropical Crop Science. After his early retirement Wienk spent more than ten years as editor of the *Netherlands Journal of Agricultural Science*, nowadays *NJAS-Wageningen Journal of Life Sciences*, a task which he fulfilled with great devotion and knowledge.

Johannes Wienk was an agronomist with a profound knowledge of the ecology and cultivation of tropical crops and, above all, a person of great merit who did much for Wageningen University.

*M. Wessel, emeritus professor Tropical Crop Science*

*P.C. Struik, former chairperson Department of Agronomy*

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Ben jij dé persoon die energie krijgt van het communiceren met en het informeren van woningzoekende studenten en promovendi? En zorg jij ervoor dat alle administratieve processen netjes worden afgehandeld? Dan zoeken wij jou!

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Idealis zoekt per 1 oktober één medewerker voor in eerste instantie voor de duur van 1 jaar met uitzicht op vast en één medewerker voor in ieder geval 4 maanden ter vervanging van zwangerschapsverlof. Als medewerker Klantcontact zorg je dat het verhuurproces goed verloopt. Je beantwoordt vragen van onze klanten, zowel aan de balie, telefonisch als per e-mail. Ga naar [www.idealis.nl](http://www.idealis.nl) voor de uitgebreide vacaturetekst.

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Deze vacature loopt maar reacties zijn nog steeds welkom. Voor de uitgebreide advertentietekst verwijzen wij naar [www.idealis.nl](http://www.idealis.nl).



## In memoriam

## Ruben Sasanno



We have received the tragic news that our colleague Ruben Sassano passed away on Tuesday 14 August. Ruben was born in Buenos Aires (Argentina). On 1 July 2008, he joined Facilities & Services where he has worked as a caretaker and facilities employee in various buildings, most recently in Gaia/Lumen and Atlas. He enjoyed his job. Ruben did not have an easy time of it in his private life and he led a reclusive existence.

Ruben had been sick since 4 May 2017. It was clear from the chats we had regularly during his illness that wanting to work but being physically unable to do so made him feel powerless.

Ruben was only 43 when he passed away. He was cremated on Saturday 18 August, his birthday, in a private ceremony.

We offer his family our sincerest condolences.

*On behalf of all his colleagues at Facilities & Services, Brigitte Fransen and Ron Spithoven, Facilities Support team leaders*

## In memoriam

## Michiel Eskens



On June 28 2018, we received the very sad news that one of our MEE students, Michiel Eskens, had passed away. Michiel started on the BSc programme Soil, Water, Atmosphere in 2011 and then went on to the MSc programme Earth and Environment. After some delay in his studies due to personal challenges he was now doing rather well and over the past few months he finished a couple of the courses he had put on hold. He recently agreed upon a thesis topic on post-fire effects on erosion within the SLM chair group. Practical work in Portugal was planned for next fall and his enthusiasm for going there was great. Unfortunately this enthusiasm was overshadowed by other emotions.

For several years, Michiel was active in different student organizations such as Pyrus, Argo, Unitas and the Archery Club.

We knew Michiel as a clever and amiable student. He will be missed. Our hearts and thoughts go out to Michiel, his family, friends and loved ones.

*On behalf of the Programme Team BSc Soil, Water, Atmosphere and MSc Earth and Environment, Alet Leemans, study adviser, Gerrit Epema, programme director*

## In memoriam

## Prof. Dr. J.G. van Bekkum



We have unfortunately learnt that our former director Jaap van Bekkum passed away on 26 June 2018. Prof. J.G. van Bekkum was director of research at the Central Veterinary Institute (CVI) from 1958 to 1982 (Amsterdam Department, 1958-1972 and Virology Department, Lelystad Houtribweg, 1972-1982). Research on foot-and-mouth disease had always been Prof. Van Bekkum's particular area of expertise. His authority on this topic was undisputed, both in the Netherlands and abroad. The 'J.G. van Bekkum Prize' was established when he left in 1982. This prize, a medal designed by the artist R. Killars, is awarded to one or more researchers in the organization for their scientific achievements.

*Ludo Hellebrekers, director of Wageningen Bioveterinary Research*

## Announcements

## WANTED: CANDIDATES FOR TASTE PANEL

Do you fancy earning some easy money (€9 net per hour)? Got plenty of spare time? Buro Blauw in Wageningen is looking for people for a taste panel. Would you like more information or to make an appointment? Email: [geurlab@buro-blauw.nl](mailto:geurlab@buro-blauw.nl) or call: 0317-466699.

## COURSE ON ZEN MEDITATION

Interested in meditation? An introduction course on zen meditation starts on 19 September, with 12 lessons on Wednesdays from 19:00 to 20:15. Posture, concentration techniques and how to bring more focus and attention into your daily life. At KenKon, a centre for meditation, yoga and martial arts. Open day: 12 September.

[ZENINWAGENINGEN.NL](http://ZENINWAGENINGEN.NL)

## Agenda

Thursday 6 to 20 September

## FILMS FOR STUDENTS

*Lean on Pete*: a drama about a teenager who sets off on in search of adventure on horseback. *2001, A Space Odyssey*: a philosophical sci-fi about human evolution. *Don't Worry, He Won't Get Far on Foot*: a comic drama about a wheelchair-bound cartoonist. *Western*: a drama about German construction workers in Bulgaria. *Beast*: a thriller about a closed community on an island. *On Chesil Beach*: a beautifully dosed story about love, sex and the fear of the unknown. *Disobedience*: a drama about forbidden love between two Jewish women. Location: Wilhelminaweg 3A, Wageningen. €6.50/€5.

MOVIE-W.NL

Sunday 9 September, 12:00-17:00

## OPEN MONUMENTS DAY WAGENINGEN ENTIRELY DEVOTED TO THE WUR CENTENARY

Up the hill on the Wageningse Berg you can have a look inside gems such as Microbiology, Schip van Blaauw, the Building with the Clock and the almost 100-year-old Soil Science building at Duivendaal and the Forum on campus. On Friday 7 September at 20:15, a varied opening evening will take place in the Aula (Generaal Foulkesweg 1).

OMDW.NL

## Colophon

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

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## Advertising

External: Bureau van Vliet, T 023-5714745 m. [dewit@bureauvanvliet.com](mailto:dewit@bureauvanvliet.com)  
Internal (reduced rate): Thea Kuijpers, [resource@wur.nl](mailto:resource@wur.nl). T 0317 484020

## Deadline

Deadline for submissions: one week before publication date. The editors reserve the right to edit and/or shorten announcements.

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Marc Lamers, Corporate Communications & Marketing Wageningen University & Research



# >>TYPICAL DUTCH



ILLUSTRATION: HEIN VAN RUITENBEEK

## Obsessed with a suntan

**Dutch people want to get tanned in the spring and summer; they want to be brown like Asian people. So as soon as the sun comes out, they go outside and sunbathe. This makes people really happy; they enjoy the sunshine. Some even use tanning lotion to get a tan more quickly.**

I kind of understand the wish to go outside in the sun because after the long winter, it is wonderful to have sun. I was happy too during the first sunny days in Holland, but the obsession with a tan is totally new to me. My Dutch friend was really happy when I told her she looked a bit tanned after she had been to the beach. Another Dutch friend said that if you are tanned after a holiday it means you have enough money to go to an expensive tropical destination. It is a way of showing your economic status.

In Indonesia it is the other way around. People want to be white, like westerners. We avoid sunlight as much as possible and prefer to stay inside air-conditioned buildings. That is why there are many malls in Indonesia; you can stay inside to do your shopping and you don't get tanned. Malls are fancy places for Indonesians to hang out in. So for us, being white shows your economic status as well. We have whitening creams, whitening scrubs etc. If we go outside we wear gloves, masks, socks and jacket – the things that the Dutch use in winter – so the sun will not directly touch our skin.

It is funny how people never seem to be satisfied with themselves. I guess that's what makes us humans; we always want to achieve or gain something that we don't have. **🇮🇩 Khesara Sastrin Negara, an MSc student of Animal Sciences, from Indonesia**

**The Dutch love a suntan; in Indonesia people want to be white**

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