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## Nearly 78

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# RESOURCE <sup>[EN]</sup>

For everyone at Wageningen University & Research

no 11 – 26 January 2017 – 11th Volume



This has got  
to change

p.12

INTERNATIONAL  
EDITION



## CHINESE NEW YEAR

Chinese street dancers perform in honour of the Chinese New Year in a full lecture hall in Orion. The celebration was organized by Cassw, the student association for Chinese students in Wageningen. A total of about 900 Chinese students came to Wageningen from all over the country to bring in the Year of the Rooster together.

© LvdN, photo Guy Ackermans

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



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## SUMMIT

The Food Summit starts in The Hague today. Everyone who is anyone in the Dutch food sector will have their say about consumption. It seems to me there is a growing awareness but it might need a bit of a push, or maybe even a real kick in the pants. Just look around you. What I see is a new way of thinking about food. Every day at the table my 12-year-old son studies all the labels in front of him. It's not just that he and his sisters calculate how many sugar lumps there are in the tomato sauce. He really thinks about what he is being told. 'Why does it say here that this honey is organic?' On Radio 2 recently a DJ paid a lot of attention to pangasius. 'This is a farmed fish which swims in its own excrement. I used to eat it a lot but I can't face it now.' This week I walked into a history lesson during an open day at a secondary school. A teacher was explaining what history lessons cover and talking about the past. 'Yes, lad,' she said, 'history is great, but if we go on like we are there isn't going to be a future. The main thing we can do is to eat less meat.' The summit is today. I hope now we're going to get a move on and really change things for good. Because tomorrow's fish will be wrapped in today's paper (or *Resource*).

*Edwin van Laar*



>> [Consumer turns up nose at blemishes | p.9](#)



# FUTURE OF ALGAEPARC SECURED

**The future of AlgaePARC, the Wageningen research facility for algae research, is safe for now. Researcher Maria Barbosa of Bioprocess Engineering has acquired four research projects, including a major EU project.**

Further funding for the Wageningen algae research was hanging in the balance last year. The funding of a large eight-million-euro research programme came to an end at the end of 2015, and the consortium of WUR and algae companies did not succeed in finding funding for a large-scale follow-up study. With the handful of smaller projects she has acquired, there is now sufficient funding, says Barbosa. This year she can take on six new researchers.

First of all she got a six-million-euro EU project, and she can spend one and a half million of that in Wageningen. In the Magnificent project, researchers will try to extract pigments and omega 3 fatty acids from algae. Barbosa: 'We have selected algae strains which manufacture the fatty acids DHA and EPA. Now we are going to make those strains more robust, breeding them to produce more of these healthy nutrients.'

Secondly, Barbosa's group will use NWO research funding to develop algae to replace palm oil. The idea is to genetically modify algae to produce the same fatty acids as the oil palm. That is then the first time modified algae have



FOTO: MARTE HOFSTEENGE

been tested at the research facility. They are bred in a sealed reactor and are intended for non-food use, says Barbosa.

The third line of research Barbosa has lined up is to test a new algae reactor on Bonaire, with funding from the NWO. Her aim is to test and scale up a new, efficient and cheap reactor in a hot country. And then there is another project

funded by the Norwegian equivalent of NWO, the Research Council of Norway, which will study the use of algae for bread, beer and fish feed. 'The aquaculture companies are looking for alternatives for fish feed in salmon farming. The idea is to use the proteins and oil in the algae as fish feed, and the sugars for the production of bread and beer.' **AS**

## SPYING ON MAMMALS IN YOUR BACK GARDEN

**What mammals are foraging in our back gardens? Starting last year, researchers from WUR and the Dutch Mammal Society have been using camera traps to investigate this. In the spring they hope to extend the project by getting the general public involved.**

Joep van Belkom is walking around a garden in Wageningen armed with a camera and a tin of sardines. 'This is the camera. It looks a bit rough and unwieldy but that's because it has to be able to withstand all kinds of weather.' The Forest and Nature Conservation student places the camera – which reacts to the body heat of mammals – next to a tree and puts the tin of sardines about one-and-a-half metres away. 'The sardines will lure mammals visiting this garden towards the camera. That's the best way to record the animals living in our back gardens.'

Van Belkom is one of the students working

on the *Wild Camera* project, which is managed by Patrick Jansen from the Resource Ecology chair group. 'Most wild mammals in the Netherlands originally lived in forests. But their habitat has largely been cleared and has become increasingly urbanized. In this study, we are looking at the extent to which wild mammals are using this new habitat. To do that, we are sampling gardens along a gradient, from gardens in the middle of a wood to those in the middle of a city.'

Camera traps have now been placed in more than 150 gardens in Nijmegen, Wageningen, Amersfoort, Deventer and Lelystad, among other places. The gardens differ in their layout. Jansen: 'We are curious to see how the presence of mammals differs between gardens with lots of greenery and gardens with lots of paving.'

Jansen has plans to extend the project by using citizen science. He would like everyone who owns a camera trap to set this up and then easily

be able to upload the photos to a database. 'And if you run into problems, you should be able to phone someone who sorts out that problem for you.'

However, as in so many studies, there is a lack of funding. According to Jansen, another 60,000 euros is needed this year to manage the technical side properly, provide assistance for the volunteers and pay someone for technical support. Jansen has looked at crowdfunding as an option but the target amount seems to be too high for that. 'That's why we are currently talking to public authorities and funds about support.' Jansen hopes to have raised some of the money he needs by the spring. **VK**

**Watch the video  
on [resource-online.nl](http://resource-online.nl).**



## BERENDSE NEW DIRECTOR OF VALORIZATION

**Sebastiaan Berendse is to be the new director of Valorization at Wageningen University & Research. On 1 March he will launch a new department of Valorization.**

Berendse currently works for the consultancy firm KplusV, where he advises companies, provinces and municipalities about innovation. One innovation programme he led was for the Kiemt foundation, the network of biotechnology companies in Overijssel and Gelderland. His team also supported 50 companies in forming a consortium, in order to develop new products with partners. This led to 17 million euros in investments, more than 300 jobs and financing for new activities in the east of the Netherlands.

Now Berendse wants to help WUR with valorization. Asked what that means for a scientific

institution, he replies: 'There was a nice example in the last Resource. The patent on the Crispr technology shows how you patent fundamental knowledge and valorize it together with partners.' How he will valorize knowledge

on the Wageningen campus is something Berendse first wants to discuss with his new department. That department will be created over the coming months as part of a reorganization of several departments including Education, Research & Innovation (ER&I). **AS**



PHOTO: SEBASTIAAN BERENDSE

## ©COLUMN|STIJN

### Conspiracy

I sigh, adjust my blanket and close my eyes. Maybe I shouldn't have done it. Shouldn't have written that my bosses at the Royal Dutch Academy of Sciences (KNAW) were naïve and arrogant. But I did write it. And then I didn't hesitate to send it to the paper. And I don't even hate my bosses. Our opinions even overlap. How am I going to explain this to my supervisor? 'Hi, by the way, I've also written a KNAW-grumbles piece. It might be in the NRC tomorrow.' I try to convince myself that they won't publish it. I roll over and squeeze my eyes tightly shut. Wait a minute, I think suddenly. I mean it, don't I? Surely I do think the KNAW should improve its scientific practice instead of accusing the general public of a lack of trust? And I do think their piece is naïve, or at least arrogant, don't I? I meant what I said. And I'm still a proud KNAW PhD student. I fall asleep.

My letter is published. It's very small but it doesn't go unnoticed. I receive angry responses as well as furtive expressions of support. 'I wouldn't have dared.' At work I am told that some big shot somewhere said a Wageningen PhD student has shot himself in the foot. That would be me. It is getting dizzying. Maybe this is behind all the dissatisfaction that's in the air. All kinds of institutes full of highly educated people – the elite – do what they want and any of their staff who do not agree with it just keep quiet. They don't dare. But for the outside world the image is still one of a united elitist front which gets to decide what the man in the street should do. That looks like a conspiracy. No, I mustn't have doubts about critical articles. More discerning opposition is precisely what is needed. **B**

**Stijn van Gils** (29) is doing doctoral research on ecosystem services in agriculture. Every month he describes his struggles with the scientific system.



PHOTO: SVEN MENSCHER

### in brief

#### >> WUR.NL

##### In Chinese

The Chinese version of WUR.nl was launched at the Chinese New Year celebration in Orion on Sunday 22 January. The site is not geared to recruiting students, says Xiaoyong Zhang, manager of International Cooperation China. 'We don't need any extra promotion for that. The website focuses on Wageningen Research.' So the Chinese website primarily offers information about what the Wageningen research institutes do. WUR.nl can now be read in a total of seven different languages: Dutch, English, German, Spanish, Portuguese, French and Chinese. **LvdN**

#### >> TEN MILLION

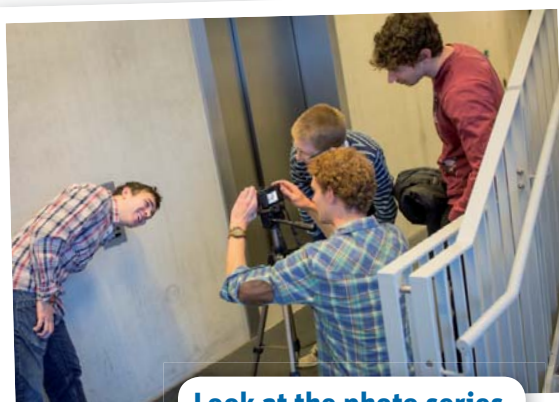
##### Industrial doctorates

The cabinet has allocated ten million euros to scientific PhD research in industry. These 'industrial doctorates' should help make science contribute more to solving societal problems and to innovation in industry. PhD candidates will divide their time between the university and the companies, says secretary of state Sander Dekker in a letter to the lower house of parliament. The idea is that this increases the chances of scientific insights eventually being applied. **HOP**

#### >> VIDEO COMPETITION

##### 30 Hours of Film

Plan, script, shoot and edit a film in 30 hours. That is what 46 students did during the 30 Hours of Film event. The result was nine films. Nick Rensen, one of the organizers, was pleasantly surprised by the quality and variety of the films. 'While one group approached it very cinematically, others produced a kind of promotion film.' The films were screened in The Spot on Wednesday 18 January in the evening. They can also be watched on WUR's Youtube channel. The competition was won by Angel Chacon Orozco, Loes Masselink, Dewi Septanty Widyaningrum and Teddy Prayoga. Their prize is a part-time job at the new WUR studio. **VK**



**Look at the photo series on resource-online.nl.**



## STUDENTS CAN PUT THEIR OWN COURSE TOGETHER

**The Master's programme Earth and Environment will be experimenting with a new course this spring. Students who choose this course may decide for themselves what they want to learn.**

The course is called *Trending topics in biology and chemistry of soil and water*, and deals with themes of social relevance in the field of environment and sustainability. Which exact themes are studied is up to the students. 'The only criterion is that it relates to the expertise of the four chair groups involved,' says assistant professor and course coordinator Ingrid van de Leemput of Aquatic ecology & water quality management. 'Beyond that, we give the students freedom to choose the theme.' Her colleague Jeroen de Klein says: 'We think they are up to that, now they are towards the end of their degree programme.'

The course is taught in the first weeks of period 6 (in May), but students who register for it start talking to each other on an online platform between February and April, in order to choose the themes they want to learn about together. Van de Leemput and De Klein do not want to give examples, so as to give the student maximum freedom to brainstorm for themselves.

The teachers will provide small assignments and focused feedback in order to guide the students in fine-tuning their themes to the right level. The course itself consists of subject-related lectures by WUR and guest lecturers, and literature study of the chosen topics. The students will work in groups, interviewing experts, writing a popular science article, and presenting their findings to their fellow students.

The two teachers hope students will be enthusiastic about the new learning approach. De Klein: 'In the programme committee people were a bit reluctant to set students to work three months before they start the course. But students spend a lot of time on social media, and in our opinion they can afford to spend half an hour a week discussing their own subject.'

The course is compulsory for students of Earth and Environment taking the Biology and chemistry of soil and water track, but students from other degree programmes are welcome too.

So far 11 students have registered for the course. Registration is open until 1 February through [ingrid.vanleemput@wur.nl](mailto:ingrid.vanleemput@wur.nl). **LvdN**

## MULTI-STOREY CARPARK AT RADIX TO SOLVE PROBLEM

**A multi-storey carpark is planned at carpark number 1 at Radix, subject to the approval of the executive board. This will add 200 parking spaces to the number available on campus.**

There is considerable pressure on parking on the northern side of the campus. On a typical weekday, all the spaces are full from early in the morning. This has been the case for some time, but the pressure has increased since the opening of Helix, says Eise Ebbelink, head of Real estate at Facilities & Services.

The arrival of Unilever on campus costs parking spaces in the short term too. Ebbelink: 'The carparks that we have there now, next to Plus Ultra, will go so we can build on that ground. Other carparks will replace them later, but only once construction is completed.' In the short term parking needs will be

met by building the multi-storey carpark at Radix, near the future northern entrance to the campus. The building will have three storeys of parking space, including the ground floor. The top floor will be open-air.

The new building is currently under design. It will have a green look, says Ebbelink, thanks to wall vegetation and/or the use of wood.' The carpark's walls will be parallel with those of Radix along the Droevendaalsesteeg, so the paths along that lane can continue to Axis.

Ebbelink hopes to get the green light from the executive board by the summer. Then building can start in the summer vacation, when the campus is least busy. The building will be under WUR management and parking will be free. The carpark complies with current planning permission so only an environmental permit is needed. **RK**



The multi-storey carpark will go up on this location next to Radix.

PHOTO: GUY ACKERMANS



## WUR LEADS EU PROJECT ON FARMERS' MOTIVES

**Now that more and more farmers are stopping for lack of successors and prospects, it is time to pose the question: what makes a farmer want to go on farming? Business economist Miranda Meuwissen is going to address this question in a big EU project.**

Meuwissen comes from a Limburg family of pig, asparagus and dairy farmers. But most of them have given up farming. 'That's what you talk about at birthday parties there. Who is going to supply our food in future, and under what circumstances can farmers carry on farming?' She gets to try and figure that out now in an EU project to the tune of about 5 million euros.

Sixteen research institutes in thirteen countries will be studying the resilience of European farmers.



Researcher Miranda Meuwissen visits De Hooilanden farm in Bennekom.

WUR is coordinating the study, and with four chair groups involved, is the main partner. Plant Production Systems will look at business mod-

els, Business Economics at the economic aspects, Strategic Communication at communication and Public Administration and Policy

at policy. As well as researchers there are banks, insurance companies, food-processing companies, and farmer and consumer organizations involved in the study.

Meuwissen will focus on risk management. Over the next four years she will find out how farmers assess the risks and which risks they want to limit. A second sub-project will look at the extent of the aging of the farming community, as well as at the farmers' children and other groups who do decide to go into farming. That should generate recommendations about passing on the business. A third group of researchers will look at possible improvements to policy. Attention will also be paid to the positive contextual factors for a farm, including rural living conditions and relations with consumers. **AS**

## NEW: TASKFORCE TO COMBAT FOOD WASTE

**At the National Food Summit in The Hague today, WUR is launching a taskforce called Circular Economy for Food. The participating food producers – ranging from small to medium enterprises to multinationals – are going to join forces to halve food waste between now and 2030.**

There are already a lot of initiatives aimed at preventing food waste, says initiator Toine Timmermans, programme manager for Sustainable Food Chains at WUR. But none of these solutions over the past few years have led to a real reduction in food waste in the Netherlands. So the strategy of the new umbrella Taskforce, set up at the beginning of January, will be to connect up the various solutions and to create the right conditions. New legislation will be designed to stimulate the recycling of food waste, and companies will be expected to revamp their production processes so as not

to produce any more waste.

Timmermans is pleased that leading lights such as Dick Boer of Ahold Delhaize and Feike Sijbesma of DSM ambassadors are members of the Taskforce, and that 80 percent of the 25-member group are entrepreneurs and directors from the food industry and the retail branch. WUR set up the Taskforce together with the ministry of Economic Affairs and the Alliance for Sustainable Food, in which the food industry promotes sustainable production processes.

Food waste often gets blamed on the supermarkets, says Timmermans, but actually they discard relatively little food. Consumers are the biggest culprits, but food producers waste a lot too. So 100 food producers are going to share their experiences of trying to prevent waste in the Taskforce. **AS**

*Read too the article on page 9:  
Consumer doesn't want 'ugly' food*

**Science Cafe  
Wageningen**

[www.sciencecafewageningen.nl](http://www.sciencecafewageningen.nl)

**HUMAN REPRODUCTION  
IN THE 21<sup>ST</sup> CENTURY**

Thursday, January 26<sup>th</sup>  
19:45 - Live music  
20:15 - Science  
Café Loburg  
FREE ENTRANCE

**Prof. Dr. Sjoerd Repping (University of Amsterdam)**  
**Prof. Dr. Wybo Dondorp (Maastricht University)**

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# TIPPING POINTS IN NATURE CANNOT BE PREDICTED

**It is still not possible to predict tipping points in nature, such as when a lake switches from clear to cloudy. The early warning indicators developed by ecologists do not give a reliable signal, according to researchers at the Netherlands Institute of Ecology (NIOO-KNAW).**

For years, ecologists including Marten Scheffer, professor of Aquatic Ecology and Water Quality Management at Wageningen University & Research, have been studying how apparently small changes can cause complex ecosystems to suddenly turn around. Scheffer has looked for the underlying patterns and warning signs for these tipping points. He found such early warning indicators for turnarounds in the climate, depression in human beings and ecosystems in the laboratory, for example. His colleague Stephen Carpenter and Chinese researchers also found such indicators for lakes.

For their study, researchers Alena Gsell and Annette Janssen at NIOO gathered data on five freshwater systems that had been studied over a long period of time and had experienced an ecological turnaround. They carried out a retrospective analysis to see whether there had been signs of the impending calamity beforehand. They concluded that none of the four early warning indicators had a high predictive value.

The conclusion might seem to be a spanner in the works for Scheffer, who had been looking for general, robust signs of an approaching col-



PHOTO: SHUTTERSTOCK

It is harder than people thought to predict when a clear lake will become overrun with algae.

lapse in ecosystems. But the professor had already concluded that a turnaround can never be predicted. 'There is always a random effect,' he says. 'But we *can* measure whether a system is losing resilience or in fact gaining it. To prevent any misunderstanding, we now prefer to talk of indicators of resilience rather than early warning signals.'

Gsell does not rule out the possibility of being able to predict ecological tipping points in the future. 'In our study, we looked back in time using data that had been collected once per week or per fortnight. New equipment makes it possible to collect data on a daily or even hourly basis. We might be able to make more progress then.' **AS**

## MODEL SHOWS COSTS AND BENEFITS OF FOOD

**Do we pay too much or too little for our food, in the light of its environmental and health costs? A new model developed by Wageningen University & Research with a company called True Price can answer this question.**

The researchers made a model for 'true pricing' – including the social costs and benefits of food – for the ministry of Economic Affairs. The model, which was presented on 12 January, distinguishes 37 'impact categories' for food,

distributed over six forms of 'capital'. The benefits of food production, such as job creation and contributions to the economy and knowledge generation, come under financial, produced and intellectual capital. The negative environmental effects come under natural capital, issues such as animal welfare come under social capital and the health benefits and risks under human capital.

WUR researcher Willy Baltussen demonstrated the way the model works using several typically Dutch products: potatoes, green

beans, milk and minced beef. What emerged was that the pros and cons of potatoes and green beans were very similar. Both make an average contribution to the economy, have low environmental impacts and are healthy. Milk scores much worse environmentally, and socially as well due to the low price dairy farmers get for their product. The health effects of milk are both positive (nutritional value) and negative (fat). Minced beef scores similarly to milk.

The aim of the model is to pro-

vide government and food producers with insights into the pros and cons of food products so they can increase the pros and reduce the cons, explained director of True Price Adrian de Groot Ruiz. 'The results provide a basis for a good discussion between stakeholders in the food chain. About the way African cocoa farmers are underpaid, for instance, and Dutch dairy and pig farmers too.'

**AS**

*See too the article on p. 12: Case for radical change in agriculture sector*



# CONSUMER DOESN'T WANT 'UGLY FOOD'

**An apple with a spot on it or a dented packet of juice. Consumers are not interested. Our distaste for 'ugly' food is strong, Wageningen researchers have discovered.**

About half of all food products for human consumption never reach our plates. 'Supermarkets prefer not to put misshapen products on their shelves because no one buys them,' says Ilona de Hooze of the Marketing and Consumer Behaviour chair group. This lead to wasted resources and financial losses. 'We have therefore investigated under what circumstances consumers are prepared to buy and eat suboptimal products.'

The researchers conducted an online survey among 4200 consumers from Norway, Sweden, Denmark, Germany and the Netherlands. They gave the respondents two choices: an optimal and a suboptimal product. The suboptimal products deviated from the norm in appearance, use-by date or packaging. One half of the respondents were asked which of the two products they would buy, and the other half were asked which of the products they would eat if they had them at home.

Only 2.6 percent of the respondents were prepared to put an apple with a spot on it in their supermarket trolleys, and one in five people said they would eat such a piece of damaged fruit at home. Even products of which only the packaging is damaged were deemed unacceptable. Only six percent of the respondents were prepared to buy a packet of fruit juice with a dent in it, and one third would drink from such a packet at home. Oddly shaped food products were the least off-putting for people.

It also appeared that young people are less bothered about imperfect products than older people. 'A lot of attention has been paid to food waste in recent years, and the young generation seems to be more concerned about sustainability,' says De Hooze.

Retailers could use the research results to adjust their marketing, thinks De Hooze. 'People are more willing to buy suboptimal products if they are on offer. And you could also emphasize on the label that by buying this product you help reduce food waste. Or you take a different tack and actually make the products more expensive, emphasizing their authenticity. We are still studying these options.' **TL**



## VISION <<

### 'Toddler milk might not be necessary for all children'

**All toddlers should be given a cup of special milk enriched with vitamin D and iron every day, say paediatricians in a clinical study. Researcher Alida Melse at the Human nutrition department thinks the conclusion is premature. 'Before you come out with general recommendations you need to get a better picture of the situation nationally.'**

#### *What was studied?*

'From this study, sponsored by Nutricia and looking at more than 300 toddlers in the Netherlands, Germany and Great Britain, it appeared that one in five children have a vitamin D deficiency and one in ten an iron deficiency. Toddler milk would prevent most cases of deficiency, concluded the researchers. They compared the effects of toddler milk with those of standard cow's milk.'



#### *Isn't it enough for toddlers to get a healthy diet?*

'Yes, but even then it can be difficult to get all the essential nutrients. The nutrient requirements of growing children are not in proportion to their energy needs.'

#### *Is toddler milk the solution?*

In composition, toddler milk is much more like breast milk than cow's milk, but it is also a lot more expensive. The participants in the study got the milk free. The question is whether parents will buy it if they have to pay for it themselves. And the deficiency problems are worst precisely in the lower social classes.'

#### *What about breastfeeding then?*

'Breast is best. The WHO recommends breastfeeding babies for at least six months. But this study was about toddlers of between 12 and 18 months. Most women in the Netherlands have stopped breastfeeding by then.'

#### *What are we to do with these findings?*

'The study does raise a problem on which further research is needed. This was a clinical study in which a selected group of children were studied, most of them in Germany. Before you come out with general recommendations you need to get a better picture of the situation nationally. If these kinds of deficiencies are found in Dutch toddlers, we should certainly do something about them.' **TL**

# FLYING WITH BROKEN WINGS

**Fruit flies can fly perfectly well with damaged wings. Even half a wing is not a problem. Florian Muijres used high-speed cameras to figure out how that works.**

Wing damage is common among birds and insects. Birds have come up with moulting as a way of dealing with the problem: their feathers are replaced regularly. Insects on the other hand do not have such a repair service. If an insect's wings get damaged, it has to learn to live with this. And they seem to manage very well. Even removing half a wing has hardly any effect on their flying skills, as Florian Muijres explains in the scientific journal *Interface Focus*.

He took fruit flies, cut off part of one wing and analysed the resulting flying behaviour. To do this, he used three high-speed cameras at right angles to one another that recorded the flight at 7500 images per second. That produced a mass of data on the pattern of the wing movements, wingbeat frequency and the spatial position of the flies' body.

## FLAPPING FASTER

Damaging a wing reduces that wing's vertical lift force. Moreover, the remaining vertical lift force is distributed asymmetrically. One wing has more lift than the other, which results in a rotational force, causing the fly to roll towards the side with the broken wing. If the fly did nothing to prevent this, it would end up rolling round and falling to the ground. But the images recorded by Muijres and his American colleagues at the University of Washington show that this does not happen.

On the contrary, the fly immediately and apparently effortlessly adapts its flying behaviour. It compensates for the lack of vertical lift force by flapping its wings faster. The wingbeat frequency – about 200 per second in a healthy fruit fly – increases by about 10 percent, says Muijres.

But that is not all the fly has to do. Flapping faster does not stop the rolling motion. In fact, the faster wingbeat makes matters worse. The fly should really only flap its broken wing faster. 'But that's not possible,' says Muijres. So the fly adjusts its stroke amplitude in order to curb the rolling motion.

An insect's wingbeat is similar to a rowing stroke or front crawl in swimming. The fruit fly increases the size of the stroke from the front and back again with its broken wing. The healthy wing does a smaller stroke at the same time. This asymmetry cancels out the rolling movement. The result of all the forces in opera-



PHOTO: FLORIS VAN BREUGEL, DICKINSON LAB

tion is that the fly turns slightly (by 10 percent) towards the side with the broken wing as it flies through the air and loses some speed in the forward direction.

## COPING WITH DAMAGE

'The most surprising finding,' says Muijres, 'is

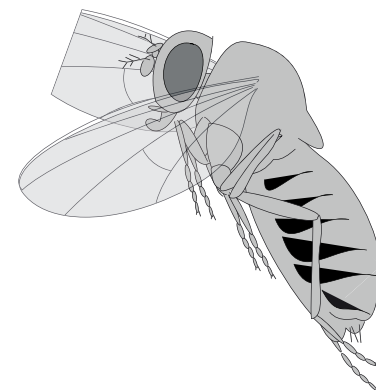
**'Fruit flies have apparently evolved to cope with damage'**

that the whole system is modular'. The loss of vertical lift force is resolved entirely by speeding up the wingbeat. The rolling movement is eliminated by adjusting the wing stroke. These two things are completely separate.' With these adjustments, the fly can still perform its entire repertoire of flying movements, according to Muijres.

'Fruit flies have apparently evolved to cope with damage,' concludes Muijres. 'Making adjustments to deal with damage is embedded in the fly's system. It has extra capacity to cope with the impairment. So damaged wings can produce much greater stroke amplitudes than you would see in normal flight.' Incidentally, there is an obvious limit to the extent of the compensation for the roll torque; the wing stroke cannot exceed 180 degrees because then the wings would touch one another. That limit is reached more or less when half a wing is removed, says Muijres.

## MINI ROBOTS

Research into the flight skills of fruit flies has practical applications too as Delft technicians can draw on this knowledge to teach their micro air vehicles to fly. That is why a follow-up to this project is being financed by research funding organization STW with money for two PhD candidates. Muijres: 'We will look at how flies respond to gusts of wind and changes in wind conditions. Delft wants to use that knowledge for their mini robots.' **© RK**





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MEANWHILE ON...



# RESOURCE-ONLINE.NL

## SENSOR PREDICTS CALVING

With a new sensor in the ear of a cow, researchers can predict when she will calve more precisely. For this study, part of the Smart Dairy Farming 1.0 project run by Wageningen Livestock Research and other institutes, more than 400 cows on Dutch dairy farm were monitored for a year.

## ICE JUST THICK ENOUGH

On Friday 20 January no one had their skates on yet for a tour of the ponds on the Wageningen campus. But people were shuffling cautiously onto the ice here and there. After the heavy frosts of that week, the ice was thick enough to hold the brave souls who ventured onto it.



PHOTO: EDWIN VAN LAAR

## SUSTAINABLE CINEMA

People watching a film at home probably don't often give much thought to how much electricity it takes. Participants in the Sustainable Cinema event in Impulse had no choice but to think about it. Because if they didn't provide the electricity by cycling on a hometrainer, the screen – showing the film *Premium Rush* – went black.

Watch the video  
on [resource-online.nl](http://resource-online.nl).



## BLUES FANS

Blues fans come in all shapes and sizes. On the eve of the Bluesroute in Wageningen, *Resource* talked to student Thom van Stralen and staff member Winand Bijlmakers of Wageningen University & Research. 'When I am playing, the rest of the world disappears for me,' says Bijlmakers, who also performed during the Bluesroute.

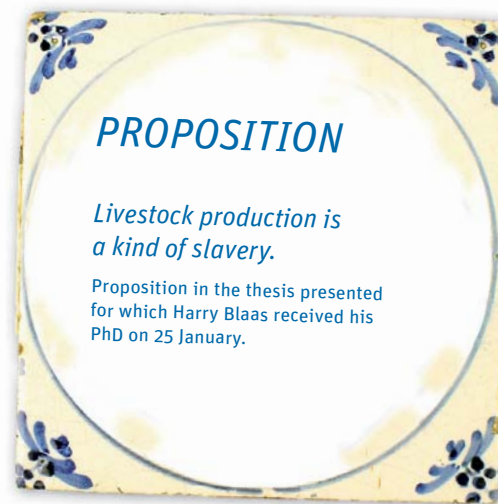
Read the whole story  
on [resource-online.nl](http://resource-online.nl).

## WEIRD VEGAN SAUSAGES

Blogger Jan-Willem Korlever is amazed in his latest blog about the fact that there is a debate going on about its permissible to call a vegetarian sausage a sausage. To him the solution seems simple: get rid of the stuff. 'If we stop imitating meat from this moment on, the while discussion about whether you are allowed to call it meat can go into the bin. Either you are

a vegetarian or you are not. If you really want to eat something that's exactly like meat, you can just eat actual meat three times a week.' Needless to say, this rubs a few people up the wrong way. Marlies, for instance, retorted: 'Your argument doesn't make sense at all, and I would like to think you understand that yourself. You go vegetarian because you feel sorry for animals, because you want to save the environment. In other words: not because you don't enjoy meat! What is wrong with trying to imitate the taste of it?' Henk's response was to the point: 'That ridiculous imitation product makes no sense. You are either vegetarian or you are not. Putin would say: 'It's like vodka without the alcohol.'

Read the whole discussion  
on [resource-online.nl](http://resource-online.nl).









If we really want to address both the climate problem and the rise of affluence-related diseases, we need to drastically overhaul the agriculture and food industries. The case for this was put by various WUR researchers last week. Their new ideas seem to resonate with others.

text Albert Sikkema illustration Geert-Jan Bruins

# Case for radical change in agriculture sector

**O**ur system of food production needs to change radically if we are to make headway against the global problems of climate and health. This message could be heard at the beginning of January at two gatherings involving Wageningen University & Research. At the New Year café hosted jointly by WUR and the consultancy bureau Schuttelaar & Partners in The Hague, politicians, civil society organizations and food producers discussed possible solutions to global warming, obesity, price slashing by supermarkets and low prices for farmers. And at Wageningen Economic Research's annual Agro-debate in Spijkenisse, WUR economist Hans van Meijl argued for a climate-neutral and circular agricultural sector.



## 'Make the ecological and social costs of food visible'

*Hans van Meijl, Wageningen Economic Research*

### CLIMATE TARGETS

We urgently need to change current agricultural practice if we are to meet our climate targets, was Van Meijl's message at the Agro-debate. At the climate summit in Paris, governments agreed to limit the rise in global temperatu-

res to between 1.5 and 2 degrees Celsius. Among the measures necessary to achieve that is a thorough overhaul of the agriculture system. Agriculture, forestry and other forms of land use contribute about 25 percent to greenhouse gas emissions, explained Van Meijl, whereas if we are to meet the climate targets this sector should actually absorb more CO<sub>2</sub> than it emits.

But this is not the only problem. The current agriculture systems depends heavily on fossil fuels. This source of energy, often heavily subsidized, causes climate change. So the agriculture sector must switch to sustainable energy. What is more, the labour income share is going down in the agriculture sector. This is a measure of the significance of labour as a production factor for the income generated. Entrepreneurs save on labour, partly because it is heavily taxed, and invest in labour-saving technology instead. This leads to a growing gap between rich and poor. Prices of farm produce should reflect the harmful effects of agriculture, says Van Meijl, so that alternatives then emerge.

### ECOTOPIA

At the Agro-debate, the researcher sketched four scenarios for developing agriculture, with sustainability and equality as variables. If we carry on with unsustainable, unequitable agricultural practices, we shall be doing 'too little too late' to solve the climate problem. If we opt for equitable but unsustainable practices, everyone will have enough to eat, but not for long. If we go for sustainable but inequitable practices, the richest one percent of the world's population will lead the good life. Only in a world

that is both sustainable and equitable can we improve both the climate and our food supply. Van Meijl calls the vision he embraces Ecotopia.

In this utopian vision, deforestation and food waste are wiped out, people in wealthy countries eat less meat and we work on raising agricultural productivity per hectare. Ecotopia therefore means opting for nature conservation, a rise in production, a change of diet, minimal tilling of the land (because of loss of CO<sub>2</sub>), and a circular economy, with all waste getting put to use.

How can you translate this revolution into government policy and business strategy? According to Van Meijl, the government needs to make the ecological and social costs of our current food production system visible and felt. This could be done through a tax on CO<sub>2</sub> emissions, meat or sugar. The revenues from these taxes could make it possible for the tax on labour to go down, says the economist. And in the interests of equality, the government could tax capital more heavily. His institute could help the government with this, says Van Meijl, by coming up with better economic forecasts which take into account the effects on the climate and the ecology.

#### SUSTAINABILITY BONUS

Businesses should embrace sustainable production and adapt their production processes so that they no longer produce waste, thinks Van Meijl. They should use renewable resources and include external costs in the price of their products. There are already some examples of this, as was shown at the Agro-debate at which Van Meijl spoke. Unilever calculates an internal 'carbon price' for its raw materials, thus taking CO<sub>2</sub> production into account in its prices. More companies should do this, to stimulate different purchasing decisions, said the Dutch climate ambassador Marcel Beukeboom at the debate. Other financial incentives can help sometimes too. Sugar cooperative Cosun has halved its energy consumption in the last couple of decades. In order to stimulate energy savings, Cosun has formulated sustainability targets, says Dirk de Lugt, chair of Cosun's management board. The company is considering making the board members' bonuses dependent not on profit margins but on sustainability targets.

#### A REFORMED LIVESTOCK SECTOR

Two days before the Agro-debate, at the New Year café hosted by Schuttelaar & Partners and WUR in The Hague, Martin Scholten also argued for a radical switch to climate-neutral food production. The general director of the Animal Sciences group said we need to move towards food production in closed cycles, in which we produce better food efficiently per hectare and make full use of nature as a valuable green resource. If we optimize these cycles we shall get a sustainable diet including 25 to 40 percent animal protein, reckons Scholten. A sustainable diet like this contains less meat than most people in wealthy countries currently eat, while scoring better on climate issues than a vegetarian diet.

Scholten painted a picture of livestock fed on grass and farm and food waste, thus drastically reducing green-

house gas emissions. Scholten says this change is necessary for improving farmers' future prospects too. 'We mustn't stick to just limiting the scope of the current livestock farming system, because then we won't have enough farmers in ten years' time. We've got to invest in new cycles in which we make optimal use of animals and manure.'

Scholten's proposal makes it clear that it is not just the climate problem that is crucial in future food production. The new approach also needs to ensure that key resources – phosphate for instance – do not get exhausted and pollute the environment. And agriculture has to be the basis of a new bio-economy when the fossil fuels run out in the not-too-distant future. So agricultural policy needs to serve more than one purpose.

#### DISEASES OF AFFLUENCE

The new term for this kind of agriculture is 'inclusive'. Politicians, for instance, want to see 'nature-inclusive agriculture', with food production that conserves biodi-



### 'Invest in cycles in which we make optimal use of animals and manure'

*Martin Scholten, Animal Sciences Group*

versity. But the term also gets used in the context of addressing inequality and poverty in the world. Van Meijl makes use of the word in his scenarios for a more equitable world. And Scholten hastens to add: the revolution in the agriculture sector must be 'farmer-inclusive' too, because there is no food without farmers. And this cannot be taken for granted: 30 percent of the Dutch farmers are underpaid at the moment, show WUR statistics.





And then there is another important challenge for the food industry. More and more people are dying early deaths due to poor nutrition. Our present diet is causing diseases of affluence. It is often said that we can only solve this with drastic measures. In a recent public lecture for the Dutch Academy of Nutrition Science, Amsterdam professor of Nutrition Jaap Seidell recently proposed a ban on ultra-processed foods.

Our basic foodstuffs are often so highly processed that their nutritional value is close to zero, while they do contain high levels of salt and sugar, said Seidell. Sixty per cent of our calorie intake comes from snacks, soft drinks and fast food. As much as 90 percent of the added sugars we consume come from these products. The vast supply of these tasty, easy, cheap products with long shelf lives is probably the main cause of the increase in diseases of affluence, said the professor of Nutrition and Health at VU University Amsterdam.

### SUGAR AND FAT

Seidell says government and scientists are focussing too much on the consequences of unhealthy eating habits. Every year billions are spent on drugs to combat high blood pressure, cholesterol and high blood sugar, but the causes of the eating habits are not being removed. 'As long as there are still so many snacks and soft drinks on offer in schools, sport canteens and hospitals, you are fighting a losing battle.'

The simplest measure would seem to be to tax unhealthy foods with a sugar or fat tax. Several political parties are in favour of a sugar tax on soft drinks. Other parties, it was indicated at the New Year café run by WUR and Schuttelaar & Partners, prefer education campaigns and clear labelling on foods warning consumers off unhealthy products. There have previously been appeals for a ban on unhealthy foods in government buildings so that the government sets a good example.

All the possible measures have their limitations. Warning stickers on packaging do not easily change consumer behaviour, as the campaign against smoking shows. Banning products only makes them more attractive to young people and does not help them learn to choose for themselves between healthy and unhealthy options, say educationalists. And opponents of food taxes say they lead to higher prices, to the disadvantage of people in lower income brackets, or to lower farm gate prices, to the disadvantage of the farmers. On the other hand, doing nothing is not an option either.

### MEAT TAX


Along with large amounts of sugar and fat, another product which is under fire is cut-price meat. At the Agro-debate, this was reflected in a discussion about a meat tax. The argument for such a tax is quite simple. We need to eat less meat, because that is better for the climate and for our health. This can be induced with classic economic policy – slapping on a tax. The main counterargument coming from the meat sector is that a meat tax will damage the competitiveness of Dutch meat on the international market, while our farmers produce meat that

meets many environmental, animal welfare and health standards. From that angle, a meat tax would be counter-productive.

Yet the Dutch meat sector does not stand to benefit from the status quo, because the present business model in the intensive livestock sector is coming under a lot of pressure. Cut-price meat is the ultimate supermarket stunt, at the expense of farmers who get low meat prices. The farmers are eager to find 'concepts' that will bring them better prices. There is a pressing need for higher margins in the livestock sector so that farmers can invest in the circular and climate-neutral agricultural sector.

### TRUE PRICING

So farmers too stand to benefit from a new computation model presented by Wageningen Economic Research and the company True Price mid-January. Called 'true pricing', it includes the social costs and benefits of food (see also the report on p. 8). Using true pricing, the government could get the food industry to pay more for unhealthy sugars and fats, inducing them to use less of them. This would generate health benefits and the government could invest these profits – more precisely, the drop in healthcare costs – in a climate-proof and circular agriculture sector. This way, health issues could have a direct influence on our food production.

Government officials at a high level are in consultations with the industry this week about a coherent food agenda (see text box). WUR scientists and their partners seem to be one step ahead with their recent discussions. What is clear is that an integral food policy needs to be about much more than just agriculture and economics. The melting icecap and the epidemic of obesity need to have an influence on our diet too. 

## FOOD SUMMIT

The Dutch government is holding a Food Summit in The Hague on Thursday 26 January. At this meeting, four ministries will present their joint food strategy, in which food production, sustainable development, health and trade all play a role. The summit will be attended by ministers Martijn van Dam (Economic Affairs), Edith Schippers (Public Health), Sharon Dijksma (Environment) and Lilianne Ploumen (Foreign Affairs), as well as more than 100 directors of companies and civil society organizations. Louise Fresco, Raoul Bino and Toine Timmermans will represent Wageningen University & Research at the Food Summit. Last September Fresco presented her vision for an integral food policy in the Mansholt lecture in Brussels.

Follow news on  
the food summit  
on [resource-online.nl](http://resource-online.nl).



## 230.000 LETTERS

Michel Heusinkveld looks around and admits that his workplace, the post room in Actio, is a bit sterile. There are a few cards and a newspaper clipping about a colleague on the pinboard, but the rest is all work-related

information. Apart from a calendar, the walls are bare. Big blocks of pigeon holes down the middle of the room dominate the scene. There is plenty of light thanks to two big round windows, so that's something. All post passes

through here, to and from the campus as well as internal mail. In figures, over the past year: 230,000 letters, 8100 parcels and 3400 items of courier mail. Heusinkveld, once a student of Agricultural Engineering, started work





here as a temp 15 years ago. And never left. He shares his workspace with eight others. Six colleagues keep the records of the ingoing and outgoing post. Heusinkveld and a couple of his colleagues sort and prepare the post for

sending. There are plans for the room. 'I am on a committee of three. We're going to make it nicer and more functional, and move desks around a bit. At the moment I sit with my back to the door, for instance. That's got to change.'

But in general he is quite satisfied. 'You get a nice view here. You can see everyone passing by and there's a nice view over the campus.'

📍 RK, photo Margriet van Vianen

# Lifelong learning

Harry Blaas defended his thesis in the Aula of Wageningen University this week. At nearly 78, he is the oldest Wageningen PhD graduate ever, although breaking that record was never his goal. 'I see this as the crown on a life of studying.'

*text* Roelof Kleis   *photo* Guy Ackermans

'For me, studying  
is not a sacrifice;  
I just can't help it'





**H**e is early for his appointment. About an hour too early. No problem. Harry Blaas uses the time to do what he's been doing all his life: study. He sits in a corner of the atrium in Atlas poring over *Algorithms to live by: the computer science of human decisions*. For ordinary mortals quite a daunting tome, but PhD candidate Blaas reads this sort of thing for fun. 'I just can't help it.' It's not that he doesn't have any other hobbies. He plays the cello in a symphony orchestra and in a string quartet. Schubert, Bach... 'I play Bach every morning when I do my exercises. A bit of Bach every day,' he laughs. If only he could play that. And he walks for at least an hour a day. Whatever the weather.

#### ENVIRONMENTAL SCIENCE

But Blaas's greatest passion is studying. And his upcoming graduation will be the high point so far in a remarkable career. After graduating from a technical college in Utrecht in the nineteen seventies, for many years he designed concrete and steel structures for large buildings. 'The nuclear power station at Borssele, among others.' He worked in this field for 40 years – for many of them in the management – and 'with very great pleasure'. 'It is exciting work. You start with nothing. Then you think something up on paper, which will be built later from that piece of paper. You can't afford to make any mistakes.' After retiring, Blaas worked for eight years as an arbitrator in construction disputes. He conducted 700 arbitrations in that time.

At some time in the nineteen nineties, when he was still designing structures for the massive building firm BAM, the idea came up of going back to studying. 'Originally I wanted to study physics. But you couldn't do that part-time. Environmental studies at the Open University in Heerlen was the nearest thing to it.' Blaas finished his Master's in 2008. A teacher at the Open University then pointed out the possibility of doing scientific research. He suggested he got in touch with Professor Carolien Kroeze. Besides being a professor in Wageningen, Kroeze also works at the university in Heerlen.

#### PROUD

Blaas ended up doing his PhD in Wageningen for practical reasons. 'Heerlen is a long way away. I live in Soest. So we agreed that we would hold our consultations in Wageningen. Anyway at that stage it was not clear yet that it would lead to a PhD. There was no question of that then. But after a couple of articles Carolien asked if I wanted to go on to a PhD. I had never really thought about that. PhD? Me? Aren't I too old for that? After all, there's no chance of a scientific career now.'

But after giving it some thought Blaas agreed to the idea. Not because it would make him the oldest PhD holder. Nor was vanity the decisive factor, he says after a moment's pondering. 'But I do see it as the crown on a life of studying. I am proud of eventually having achieved

this. I have studied endlessly throughout my life. And always with great pleasure. For me, studying is no sacrifice. I just can't help it. My driving force has always been to gain a better understanding of reality. I am not religious. The only thing that counts for me is nature. By studying I can get a grip on reality. You know the saying: 'there is nothing more practical than a good theory.'

#### INDIVIDUAL MODULES.

Is this the end of Blaas's student days now? Probably not. 'I won't embark on a whole degree programme again,' he says, 'but a few individual modules now and then... You know, that kind of network is important to me. I have enjoyed the contacts with the chair group, interacting with young people. Without those contact you fall back on family and friends. And there's nothing wrong with that, mind you, but your social network does get a lot smaller. And I'm not ready for that yet.' 

#### MARINE FARMS FOR WATER PURIFICATION

If no additional measures are put in place, eutrophication of European coastal waters is a very real threat in the coming decades. Excessive algae growth, fish deaths and a loss of biodiversity are imminent dangers, as is revealed by the model calculations made by PhD researcher Harry Blaas. Our rivers transport too much nitrogen and phosphorus to the sea. Better purification of waste water and better use of (artificial) fertilizer on farms can reduce levels of nutrients in the water. Blaas adds a third option: seaweed farms at the mouths of polluted rivers. You need farms with a surface area of up to 30 by 30 kilometres. Blaas also developed an algae nursery for producing biodiesel. Existing nurseries will only exacerbate the algae problem off the coast because of their emissions. Blaas's nursery is totally sustainable. All the nutrients are recycled and the factory runs on green energy.

#### OLDEST PHD GRADUATE EVER

Harry Blaas, born on 4 March 1939, was precisely 77.9 years old when he graduated with a PhD on Wednesday 25 January. This makes him by a narrow margin the oldest PhD graduate since the first doctorate awarded by the Agricultural College in 1920. Blaas is one tenth of a year older than Trjanius Siregar, who defended his thesis in 2000 at the age of 77.8. Third in the ranking of senior doctorate holders is Jan van Burg, who was 77.4 years old when he graduated in September 2001. Most PhD graduates are quite a bit younger, shows the database of PhD researcher Gab van Winkel. For many years now the average age of PhD graduates has been 35. The age range is remarkably constant, says Van Winkel, as the graph shows. Only four percent of PhD graduates are over 50. These three gentlemen graduated at an exceptionally great age.

# SELLING LIKE HOT... INSECTS

Insects are healthy and sustainable. But people are reluctant to eat them. Scientists are on the lookout for insect recipes which do appeal to westerners. It seems to be almost as difficult as getting foreigners to develop a taste for Dutch salty liquorice.

*text* Tessa Louwerens



**I**f westerners are willing to eat insects at all, they like them mashed into something. Finely ground and unrecognizable. And even then they often try them once and leave it at that. A meal-worm chocolate is good for a laugh at a party, but don't expect us to eat insect burgers twice a week.

'So far insects are seen in the west primarily as an alternative source of protein,' says Grace Tan Hui Shan, a researcher at Food quality and design. It is different in countries such as Thailand, where insects are a common part of a meal, she says. 'The recipes there are much more geared to the taste experience.'

Tan and her colleagues studied how insect products could be adapted so that people in western countries want to buy them. 'So far most studies have focused mainly on psychological aspects. In our research we also looked at the influence of flavour and presentation. What are people's expectations of the product, and what do they enjoy?'

## MEATBALLS AND SHAKES

When a new product comes on the market, it is often extolled by comparing it with a flavour or dish that the consumer is familiar with. After all, we all tend to like what we know... But because there is no custom of eating



In Grace Tan Hui Shan's study, test subjects were served mealworms in the form of meatballs or a breakfast drink.



PHOTO: GRACE TAN HUI SHAN

insects in the west, we don't know which way of eating them would make them appeal to consumers, says Tan. She compared two products for her study: mealworm meat balls and a mealworm breakfast drink.

The researchers asked the participants in her study beforehand what their expectations of the product were, whether they would try it once and whether they would want to buy it regularly. Then the test subjects took part in a tasting session and answered the same questions again.

The mealworm meatballs were not as tasty as the participants had expected. Tan: "Because it is presented as a meatball, the expectation is raised that it should taste like meat. This can lead to a disappointment." The liquid breakfast, on the other hand, turned out to exceed expectations, but it must be admitted these were not very high. The participants rated the two products more or less equally, but most of them said they would be more likely to buy the meatballs.

### SALTY LIQUORICE

Although the taste panel said the breakfast drink tasted fine, not many of them would buy it. Tan is not surprised. She thinks it is not just a matter of flavour, but also of the way a product is presented. 'I always compare it with salty liquorice. Most Dutch people like it, but if you didn't grow up with it, it's not an appetizing

idea. A sweet should be sweet and not salty.'

According to Tan, this has to do with people's experiences and culture as well. 'In western countries insects are mainly presented as a meat substitute so they are likely to be seen as something that should taste savoury.' A grasshopper ice cream is fun to try once but most people wouldn't repeat the experience. To persuade consumers to buy a product again, it should not only taste good, but the presentation should match their expectations. By considering both aspects, you kill two birds with one stone.

But there are other factors at stake too. When the participants were asked what put them off eating insects on a regular basis, they said they thought the products were too expensive and often didn't know how to cook them. Social considerations played a role too: it is not easy to eat insects if you are sharing a meal with other people who shudder at the thought.

### MARKETING

So insects have an image problem. This is largely between our ears, thinks Ger van der Wal, director of Insect Europe, a company which breeds and markets insects. 'People should try them once first and then they'll change their minds. When insects first appeared on the market it was in freeze-dried form. But now there are already a load of lovely, tasty products on the market.' Insect sweets,

for instance. 'With these we try to tempt people into just trying them. Once people have got over that barrier and get used to the idea, they are more willing to try other insect products as well.'

But eating insects will remain a niche market, says Van der Wal. Most insects will be ground and this insect meal can then be added to foodstuffs. Then you get a meatball, for instance, containing 10 percent mealworm.

### EXPENSIVE

An incidental advantage of this is that it makes insect products cheaper. The price is still a sticking point. Per gram, insects are a lot more expensive than meat. Van der Wal: 'If you want to get consumers buying a product regularly it needs to be tasty, healthy *and* affordable.' Breeding insects has not been fully automated yet and is very labour-intensive. Currently there are about 25 companies in Europe breeding them for human consumption. 'If the industry suddenly wanted to use insect flour on a large scale, we wouldn't even be able to produce enough at present. Once that does become possible, we shall see a snowball effect.'

Van der Wal expects consumption of insects to increase further in the coming years. 'It's got to: the way we are going now we are not going to be able to feed the growing world population.' **B**

## INSECT INCOGNITO

However westerners may tend to blanch at the thought of eating insects, they are already doing so unawares. Without realizing it, we all eat an average of about 500 grams of insects. In tomato soup, for instance, or in peanut butter or noodles. It is impossible to keep all insects out of food products, which is why the US has official limits to the number of insects permissible in a given product.

But not all the insects that end up in our food get there by accident. In the supermarket you can find pink cookies. The colouring E120, carmine red, which gives these cookies their pink colour, is made out of bugs. The same colouring goes into red M&Ms, milkshakes and strawberry yoghurt.



# IS TEACHING TOP-UP THE ANSWER?

Because of their high hourly rates, hiring staff from Wageningen Research is prohibitively expensive for university chair groups. The executive board has now set up a compensation fund of 250,000 euros per year to be used to bridge the gap. A kind of teaching subsidy for institute staff. A good idea?

text Yvonne de Hilster illustration Henk van Ruitenbeek

## Ron Hogenboom



### Researcher at Rikilt

'I give a few lectures every year, both at Wageningen and elsewhere. At Wageningen they are guest lectures. I am asked because of my specific expertise on risk assessment and legislation related to dioxins and veterinary medicines. **As far as I know my institute doesn't get paid for that: I book the time under general costs.** So I can't judge whether this fund is a good idea. But I wonder whether the university will want to go on hiring me if they have to pay me an hourly rate.'

## Johan Verreth



### Professor of Aquaculture and Fisheries

'It seems logical to me that if people say WR staff should be involved in teaching, practical arrangements should be made. People from Marine Research used to lecture for us but it was supposed to be billed by the hour and I never wanted to do that so we just arranged it between ourselves. Those kinds of arrangements came to an end about a year and a half ago because of Marine Research's financial situation. **We can only applaud this fund.** Marine Research is much bigger than my chair group, and has a lot of expertise we don't have, which means extra scope for our students in terms of internships and thesis research opportunities. If I can get a total of 13 weeks a year compensation, that's quite something. And now I hope they

will also create space for tenure trackers from Wageningen Research to work at the university if that is good for their careers.'

## Jacqueline Bloemhof-Ruwaard



### Professor of Operational Research and Logistics

'We have a colleague at Wageningen Economic Research who we'd like to involve in our teaching programme. At the moment he has a temporary appointment. We are also doing a number of projects together, which means he can carry on doing research as well. We work a lot with Economic Research and it would be nice to be able to recruit more people from that institute or, for example, from Food & Biobased Research, to teach. I have never looked into that because the rates we can pay are too low for them. And I can't make up the difference, my purse is not bottomless. **This compensation arrangement opens doors which we didn't think of before now and it is going to make cooperation on education a lot easier.**'

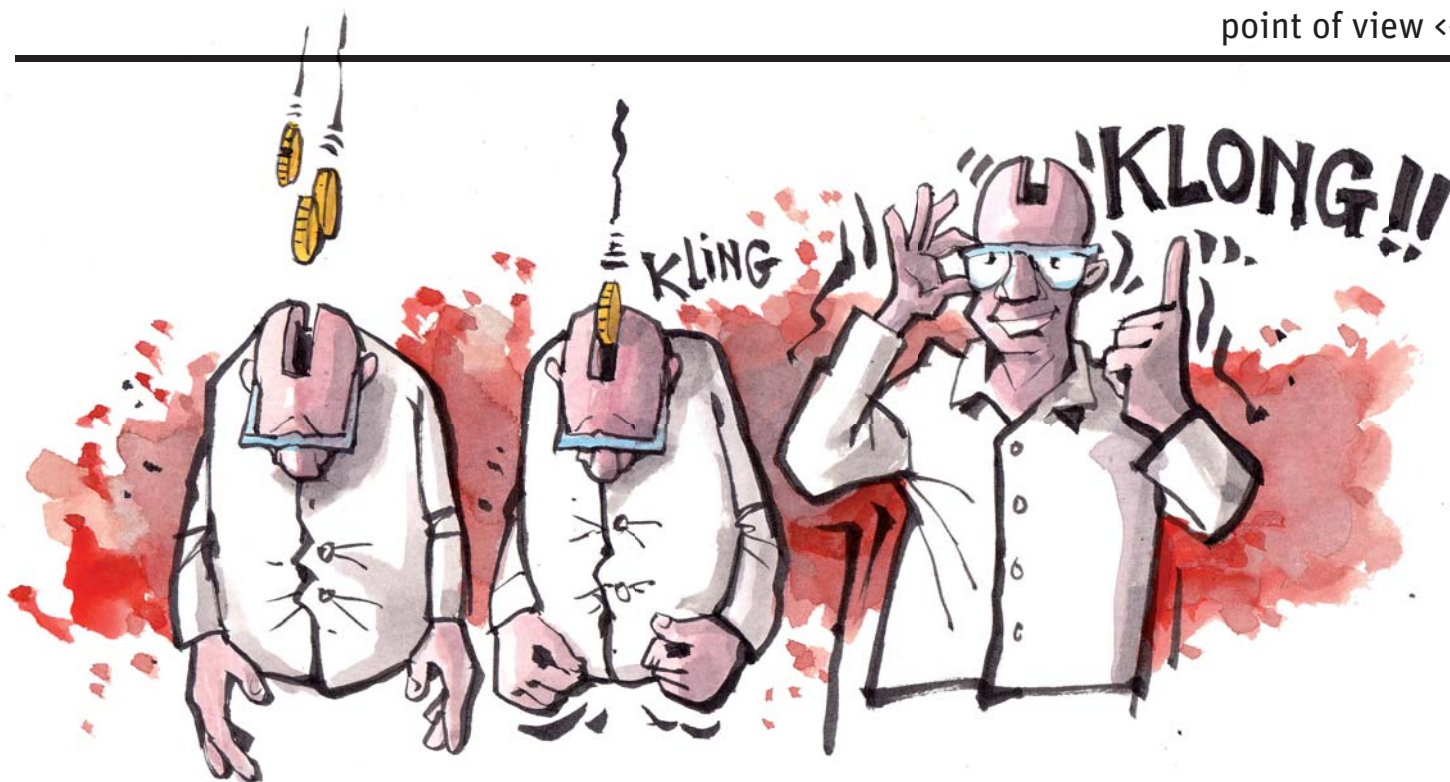
## Gerco Angenent



### Personal professor of Molecular Biology and head of a group at Wageningen Plant Research

'Personally I am involved in teaching in two ways: in my capacity as personal professor and as a member of staff at Plant Research. Together with other colleagues at Plant Research I give the occa-





sional guest lecture. At present we do that without being paid for it. We accept that because for us it is a way of recruiting students for thesis research projects. I don't think we'll ever be paid for that. **In itself the compensation fund is a good initiative, but to be honest I don't think it will be used much.** Looking around at Plant, I notice that a chair group prefers to spend as much as possible of its limited budget on its own people. Even if the fund makes up for the difference in rates, if they hire WR staff they are still transferring money to an institute. But when there is a staff shortage, due to loss of a teacher or a sudden rise in student numbers, I think people might appeal to staff at the institutes. And another situation is when a chair group starts a new course and wants to involve people from Wageningen Research in that. But new courses are not developed all that often, and it is a long process, so I don't see it happening that much.'

### Ludo Hellebrekers



**Director of Wageningen Bioveterinary Research**

'I am pleased that this fund has been set up. This fund makes things possible and we must make good use of it and then evaluate how it works out. I have said in the past that a contribution to education by our institute is problematic, and that we always make a cost-benefit analysis of it: the core business versus the finances. We always had to top up the money. Sometimes we did so, as a strategic investment, but I expect the balance will work out more positively now. Even though it probably means an investment in preparation and travelling time to Wageningen. **Involving our staff in education also increases the scientific collaboration through personal contact and**

**knowledge exchange.** It's give and take. The more internal links we have, the more chance of synergy.'

### Gert Duinkerken



**Head of department of animal feeds at Livestock Research**

'We often made our own arrangements in close consultation for staff who were keen to be involved in teaching. For example, I had someone who was seconded to teach one day a week and supervise Master's and PhD students. That is good for the staff member's career, provides the chair group with input from the field and is good for the links between education and research. **This compensation fund expands the possibilities, in my view, especially for incidental cooperation.** But it all starts with people's intrinsic drive. They need to be motivated and qualified.'

### Theo van Hintum



**Head of PGR, Centre for Genetic Resources, the Netherlands**

'I can only applaud this fund. We would certainly like to cooperate more in education but there is not much demand. Chair groups would rather try to acquire the knowledge they need themselves, while we already have it. What probably contributes to this is that we are more expensive. And there is more knowledge available within Wageningen Research that is lacking at the university. It is a pity not to make use of it. **When there are obstacles such as different rates you need to get rid of them, and that is exactly what is being done now, so that is great.**' ⑩

# Resilience in the refugee camp

Master's student Hedzer Roodenburg Vermaat studied how refugee camps in Jordan grow into refugee cities. He was impressed by the resilience and friendliness of the residents. 'My worldview shifted; I've become much more pro-Arab.'

text Linda van der Nat photos Hedzer Roodenburg Vermaat

Until just over a year ago Hedzer Roodenburg Vermaat was a student of architecture in Delft, but the budding architect decided he didn't want to spend all his life at the drawing board. Now he is in the second year of the Wageningen MSc in Development and Rural Innovation, and is studying the development of refugee camps in Jordan. 'I have always had an interest in what goes on beyond our national borders.' When he got the chance to do his thesis research in Jordan, he thought that would be a nice adventure.

Jordan houses more than 650,000 Syrian and millions of Palestinian refugees. Most of the Palestinian refugees are spread over 13 refugee camps. 'The camps were built as temporary measures but they have been in existence now for 17 years, on average. The tents



soon wear out, but people cannot go home yet. They develop different needs and try to meet those needs by finding creative ways around the rules of the camp. In the course of time the camps develop into functioning cities. I find that fascinating.'

## SIX-DAY WAR

Hedzer visited two camps for his research: Baqa'a and Za'atari. Baqa'a, 20 kilometres north of Amman, is the biggest refugee camp in the Middle East and has existed since 1968. Most of its residents are Palestinians who fled the violence during the six-day Arab-Israeli war. Hedzer: 'They were put up in tents but now, over 50 years later, the camp looks just like a city. Concrete houses have been built and there are roads, schools, shops and mosques. The temporary nature of the camp hasn't stopped all this from happening.'

Exactly how many people live here is not clear, says Hedzer. 'There are at least 120,000 registered Palestinians, as well as an unknown number of Egyptians, Syrians and Jordanians. The population has grown from 26,000 Palestinian refugees in 1968 to what it is now.'

Hedzer compared this camp with Za'atari, the largest Syrian refugee camp which was founded in 2012. 'The first time I went to that camp was so unreal. Za'atari gets hyped up, it is in the news a lot with pitiful pictures of children out in the cold. But what I saw was very different to those pictures. It was already a growing city with container homes and huge



shops. Wedding dressings, domestic appliances, food and drink, cigarettes, patisserie, clothes, telephones... you name it, it's sold there. If you can build up all this in that situation, you are very strong and inventive, if you ask me.' The camp houses 80,000 residents, and there are schools, hospitals, shopping streets and even several football pitches.

## CHAT OVER COFFEE

Hedzer is a fast talker with a Leiden accent. His jovial nature was a useful trait for his research. 'I interviewed residents about how the camps had developed into cities. That boiled down to hours of chatting over coffee or tea, and then another coffee or tea. The people there are so hospitable and generous. Often they almost dragged me into their homes to offer me lunch or dinner. If I didn't come in, they sometimes came after me with a cup of coffee.'

At first all this could feel a little uncomfortable, says Hedzer. 'It is difficult for people to make ends meet, especially in the Syrian camp. Sometimes I was given such an extensive lunch that I wondered how the family was supposed to get to the end of the week. But to



The Palestinian camp Baqa'a in Jordan began in 1968 and has since grown into a city.



Watch Hedzer's vlog from Jordan on [resource-online.nl](http://resource-online.nl).

refuse the food would have been a massive insult. In the Arab world, a guest is seen as a gift. So I just cleaned my plate. In fact I stuffed myself silly.'

## 'The camp Za'atari is already a growing city'

### ISRAELI SPY

This hospitality was not universal right from the start, though. In his first few weeks Hedzer encountered a lot of suspicion in the Palestinian camp. 'I stood out as a foreigner, walking around with my little backpack. Once I was cornered by a group of five boys. They thought I was an Israeli spy and wanted to know what I was doing in the camp. They asked, 'Why do you hate Muslims?' I was really shaking in my shoes but I kept calm and managed to give the right answers through my interpreter. In the end I went for a cup of tea with those boys.'


Hedzer conducted hundreds of interviews. He got to know more and more people and made friends. 'I even went to someone's wedding. I began to see those camps as nice sociable places. But if I said something about that, it was immediately made clear to me that they are emergency camps. The Palestinians want

to go back to their country, even though they realize they can't. Most Palestinians still have the key of their old house in Palestine; those keys have become a symbol of the return the they long for.'

### WORLDVIEW

When he got back to the Netherlands, Hedzer fell into a black hole. 'I was incredibly bored. It was hard for me to talk about what I had seen and experienced.' He could also get extremely annoyed by people who said, 'How amazing that you've come back alive.' 'As if it were nothing but a breeding ground for trouble and terrorism. My worldview shifted in Jordan: I have become much more pro-Arab. A lot of people in the west have some idea of the Middle East as a desert populated by a bunch of hotheads, but that is far from the truth. The people are endlessly friendly and hospitable and they don't hate westerners at all. I felt really safe in Jordan; as a foreign man you are treated with great respect.'

Hedzer's adventure in Jordan is not over. He is going back soon, this time for an internship with the international aid organization UNHCR. He is keen to go, although he has enjoyed the peace and quiet in the Netherlands. 'Life here is really carefree. You can crack jokes about anything you like, and all you

have to worry about, really, is what to have for dinner tonight. Lots of things are a lot more sensitive in Jordan. The region is going up in flames and everything is politically laden. But I enjoy manoeuvring in that kind of situation. If you are good at adapting, you can cope anywhere.' 





# Students write book about organic food

## MIGRATION

It's not only birds that migrate, insects do too. Everyone knows the example of the monarch butterfly, but more 'ordinary' insects travel a lot too. British scientists have spent years mapping that migration in the south of England with the aid of radar images. Seven times as many insects as birds migrate between north and south as the seasons change. Some insects can use the wind to travel as fast as 58 kilometres per hour.

## SPICY

Eating hot food helps you live longer, according to researchers at the University of Vermont. The mortality rate among people who eat chilli peppers is 13 percent lower than for other people. Hot peppers affect the bacteria in your gastrointestinal tract and it would seem that a number of 'baddies' are being eliminated as a result. So don't forget to order the extra spicy option next time.

## NOT IN THE MOOD

Platonic fruit flies don't have sex. According to biologists at Tohoku University in Japan, a single gene is responsible for this. That gene codes for a protein that regulates the production of serotonin. This hormone affects the sex drive, not just in fruit flies but also in humans. The scientists now see possibilities for an aphrodisiac.

## GOAT BACON

Oetzi the Iceman, a mummy who was found in the Oetztal in 1991, is the most examined corpse ever. German scientists have now discovered what his last meal was: bacon. Probably from a local wild goat in South Tyrol. Oetzi also suffered from a growing stomach ulcer. However, in other respects the Stone Age man (height 1.60m, weight 50kg, age 45) was in good condition. Until he was fatally injured by an arrow.

***Biologische stellingen onder de loep*** ('Organic claims examined') is already onto its second edition. This book by five honours students tests ten popular claims about organic food, such as that it is more animal-friendly or uses up six times as much land.

'There are a lot of claims about organic food but they are not always substantiated,' says Maria-Franca Dekkers. The International Land and Water Management student studied the issue of organic food with four other students. The result of this two-year honours project is an easy-to-read book that enables consumers to make well-founded choices.

It was a while before they came up with the idea of a book. In the first months of their project — which they did alongside their regular Bachelor's programme — the five students spent a lot of time on meetings, brainstorming and finding out about the subject. They interviewed experts at the Louis Bolk Institute and Bionext, visited an organic trade fair and did a consumer survey at Utrecht Central station.

## BROKEN HIP

'That consumer survey produced a number of amusing statements,' says Tessa Canoy, who has just obtained her Food Technology Bachelor's. 'For example, an elderly lady said she really believed in organic food because it was good for her broken hip.' Other arguments were that 'organic food is safer', 'it's healthier' and 'it's climate neutral'.

At first, the students wanted to explain what organic agriculture and food is, starting with its history. 'But we realized that a setup like that would not be an easy read. Then we came up with the idea of the claims,' says Dekkers.

The five students investigated two claims each on the basis of the scientific literature and interviews, and wrote a chapter about them. They also gave each other feedback and asked for comments from professors. Dekkers looked at the claim by Louise Fresco that it costs six times as much land to grow organic crops. 'This showed that organic agriculture uses about 20 to 25 percent more land on average,' says Dekkers. 'But there are big differences between crops and between countries. For example in Western countries, where production levels are very

high, organic farming often reduces productivity a little. But in countries in Asia and Africa, where production levels are much lower, organic farming can actually increase productivity because it improves soil fertility so much.'

## PERSONAL CHOICE

The two students see that nuanced picture as a recurring theme throughout the book. 'You can't say "organic is good" or "organic is bad"; it all depends on what you as a person find important. If that's animal welfare for example, you can conclude that organic food is really good, but if you are more interested in CO<sub>2</sub> emissions, it might be slightly less good.' **AJ**

*Biologische stellingen onder de loep* costs 7.50 euros. You can buy it in Wageningen in Kniphorst and Lazuur, for instance, or order it via [biostellingen@gmail.com](mailto:biostellingen@gmail.com).



Tessa Canoy (left) and Maria-Franca Dekkers.



# Statistics doesn't have to be boring

**Students often find statistics difficult and boring. Now lecturer Sijmen Schoustra has come up with a way of letting first-years experience first-hand what a normal distribution is.**

On Friday, 20 January a large group of students gathered after lunch on the lawn in front of the Orion building. On one side were the female students standing neatly in lines, with the ones at the front holding boards. On the other side of the path were all the men. A further investigation revealed that this was not a speed-dating event; rather it was part of the first-year genetics practical.

'We are using this assignment

to show students that some characteristics, in this case height, vary continuously so that you get a normal distribution with a bell-shaped graph,' explains lecturer Sijmen Schoustra. To do this, the students were divided into rows depending on their height. Then photos were taken from above. This gave a kind of student bar chart. The textbook has an old photo from 1914 in which male students were also divided up in this way. 'The NRC newspaper has a "Recreate the photo" section, which is what gave us the idea,' says Schoustra.

The lecturer had photos taken of all the students together and of the women and men separately. It



PHOTO: RIANNE KLUCK

Students taking part in a genetics practical form a bar chart based on their height on the lawn in front of Orion.

was the second time that he had used this method for the practical and it would certainly not be his

last. 'This brings the subject to life for the students.' Statistics does not have to be heavy going. **TL**

## MEANWHILE IN... POLAND

### 'Russia has become a threat again'

**Just before the American presidential transfer of power, US troops arrived in Poland. The positioning of 4000 men and over 200 vehicles is part of the NATO response to the Russian annexation of the Crimea in 2015. After a ceremony and welcome speeches by the Polish prime minister and minister of defense, Polish citizens posed with the soldiers. Jacek Nowik feels safer now in Poland.**

'I would give these soldiers a warm welcome in Poland. In the past ten years, Russia has become more of a threat again for Eastern Europe. What has happened to the Crimea could happen to our Baltic neighbors Latvia and Lithuania, possibly leading to an atomic war. I believe that the positioning of NATO troops prevents this from happening.

Suspicion of Russia has a long tradition in Poland. Officially, Poland and Russia still disagree about the actual start of the Second World War and this makes us feel disrespected. In contrast, I feel that the past oppression and the sovereignty of Poland are fully recognized

here in the Netherlands. This was clear for me at the Airborne museum in Oosterbeek, where Polish is the third language into which all the information is translated. Recently,



FOTO: US ARMY EUROPE

our government has been building on the old anti-Russian sentiment in the country, and increasing our fears by investing heavily in national defense.

Another aspect of this is international relations between Poland and the US. Clearly, it is a sign of close ties between these countries. However, I am not completely satisfied by how the US treats our country. Ever since the fall of the Soviet Union, it is difficult for Polish people to travel to the US; getting a visa is complicated and expensive. Some years ago, Obama promised to treat Polish people in the same way as Western Europeans, but the visa policy has not changed yet. If we are really a friend of the United States, why haven't they changed that yet?' **TL**



Jacek Nowik, an exchange student of Nutrition and health from Warsaw, Poland, talks about recent events in his country.

# YOU ON CAMPUS

**On a weekday the Forum is usually buzzing with activity. People are frantically looking around for the right classroom, talking together near the doors on their way in or out or having coffee and chatting in the café downstairs. Amidst all this hustle and bustle, Rodrigo Alonso Vico (22) can be found reading his book.**

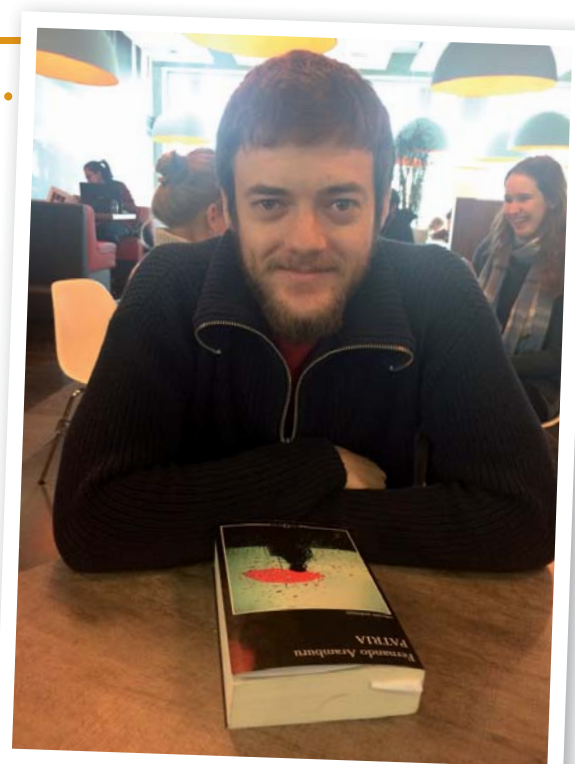
Rodrigo came to Wageningen from Madrid, Spain, to start the MSc in Plant Sciences. 'Here you get a much better education for the same price.' Apart from studying, Rodrigo spends time on the rugby field. 'I also used to play back in Madrid in the team of my biology faculty.' He joined the rugby team together with a friend with whom he has another group of friends in common as well. 'I can speak Spanish with them because they all come from countries like Mexico and Ecuador.' Rodrigo is trying to learn Dutch. He finds it quite challenging, or, as he says (note: in perfect Dutch): *'het gaat nog niet goed'* ('it's not going well yet'). His main reason for learning

Dutch was to keep his options for his future open. The only thing he is completely sure about regarding his future is that he wants to travel more. 'I have been to a lot of places and I want to go to many more.'

The things on his bucket list also relate to traveling, such as gaining one day of life by crossing time zones: 'I want to travel around the world chasing the

**'Once you are fine on your own you can build your life from there'**

sunset.' Rodrigo talks about travelling with a passion. 'I have been on the equator. I have seen water whirl the other way around on the southern hemisphere. I want to go to the North Pole where I can go 20 km south, 20 km east, 20 km north and end up in exactly the same spot.'



Rodrigo sees travelling as an integral part of discovering who you are. 'All people should be at ease with themselves and doing a trip alone helps with that. It takes you out of your comfort zone and once you are fine on your own you can build your life from there.' Travelling on his own probably did him good because he seems perfectly at ease with himself on his own, reading his book in the middle of the café. **AVdH**

## PARTIES

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



### CAFÉ LOBURG - LOBURGLIVE ROCKS!

**Saturday 28 January from 22:00 to 01:00**

Café Loburg is one of the few cafes in Wageningen where bands still play regularly. These electrifying rock gigs are guaranteed to get you dancing. Free admission.

### ICA - BA-LON

**Saturday 28 January from 23:00 to 05:00**

It seems that the International Club Association board wants to breathe new life into the venue. They should be successful with their new, hip themes. Three DJs will be playing urban, R&B, dance hall and Latin music at BA-LON.

### LUCA - UNITAS: BAM! TECHNO/JUNGLE

**Saturday 4 February from 23:00 to 04:00**

It's been a while since Unitas last had a public party. They will be starting the year with techno and jungle. This event is definitely recommended for fans of hard, fast beats. Free admission.



KSV put on its usual annual three-day Trinity party this month.

PHOTO: SVEN MENSCHER



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.

# 'A bit awkward, having a sauna with a colleague'

'I have a passion for the Arctic region and I want to do something related to it after graduating. My internship was very useful for getting some insight into what is at stake, and who's who in that research field. There was some confusion to begin with about what I was going to do there. I didn't want to do nothing but corporate communication. So I arranged to be allowed to do research as well.

## SAUNA

I helped on a study of the strategic use of culture by the Sami, the reindeer herders of Lapland. A Sami elite has grown up in Finland who decide who is and who isn't Sami. For the study we used documentation collected by my colleague, who is not recognized as Sami. He documented the process of ending up with that status. It was very interesting and exciting, because it is a very personal experience and after all, you are a foreigner there.

Although Finland is part of Europe, there were a lot of cultural differences. The Finns are very reserved. They all work in their own little offices and communication takes place by email. They are extremely shy, but once you have got through to a Finn, they are very open and welcoming, and you immediately get asked to babysit the children. I noticed that the Finns become more open in the sauna. I assumed you took it in turns to go into the sauna, and it was a little bit awkward to sit there with a colleague, especially when you start hitting each other with birch twigs to stimulate the circulation. At that point your personal

space is gone completely. But when you see how much people appreciate your joining in, it's easier to step across the cultural barriers.


## PRACTICAL DRESS CODE

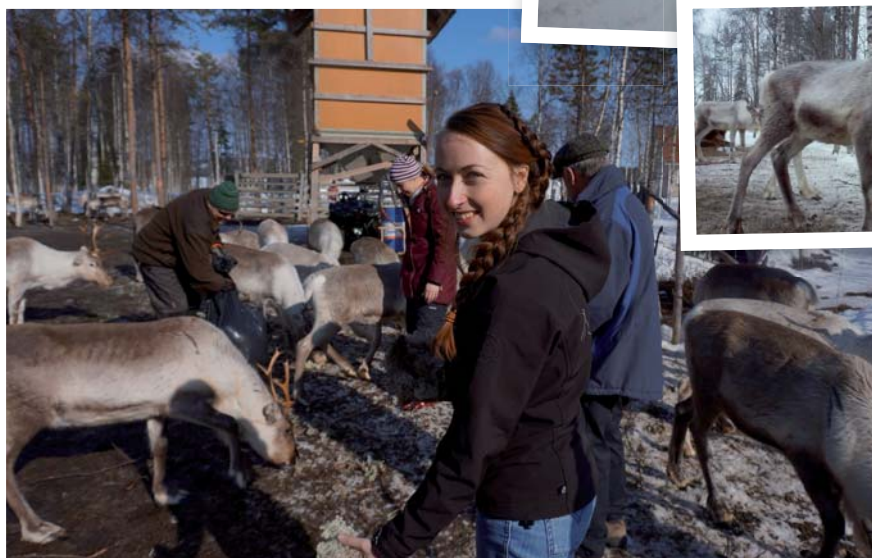
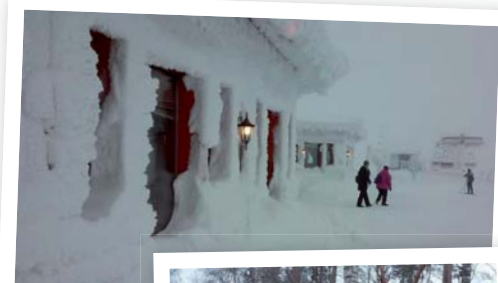
What I like about Scandinavia is that the elements are so strong that they dominate life. I had to learn not to wear makeup when I went out because your eyelashes freeze and then the heat in the buildings makes your makeup run all over your face. Also, you had to change into different clothes at work because you can't walk around in a thin skirt at minus 32 degrees. Most people just wear their Norwegian jumpers and boots at work. Eventually I adopted this informal, and above all practical, dress code myself too.

Sometimes you have to take a few knocks to learn something. I ran up against a few personal issues such as the need for assertiveness and setting boundaries. Because there wasn't a clear assignment and there was some confusion about my subject, I constantly had to ask what I could do, and after six months of that you get really

## THE WORKS

**Who?** Eva van Schijndel, Master's student of Strategic Communication  
**What?** Six month internship at the Arctic Centre  
**Where?** Rovaniemi, Finland

tired. It takes a lot of energy to adapt to another culture and that affects my performance. In that sense an adventurous personality is both an asset and a weakness. For me adventure means not preparing or planning anything, but now I have grasped the value of setting expectations, making preparations, taking time to adjust, and organizing things in advance. Don't try and do it all at once.'  MvdH



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

## in memoriam

## Hennie Boshoven



Right at the end of 2016, we had to say goodbye to Hennie Boshoven, born on 25 April 1941 in Wageningen.

Hennie went to a technical school where he chose to specialize as an instrument maker. After military service, he started working for what was then the Agricultural College in the Physics and Meteorology Department workshop. After the meteorology group split off, he worked for the general and technical physics group in the Agrotechnology and Physics Department. During that period, Hennie was sent to Malang in Indonesia for a month. He was also increasingly helping out with the teaching, for example the physics practicals. From 2002, he was part of the 'new' Biophysics group. Even after reaching retirement age, Hennie remained loyal to 'his' physics group. He was allowed to keep a workplace in Agrotechnion, where he mainly provided technical services for the laser lab. Hennie never actually left; he could be found at his workplace almost every day. Many people will remember his warmth, helpfulness and sense of fairness, which found expression in his work but also in his sporting activities (with WAVV and SKV) and musical career of more than 32 years with various musical groups.

The university is very grateful to Hennie for his work as an instrument maker and the assistance he

gave to students, PhD candidates and postdocs.

We offer his wife Tony and his two children and six grandchildren our deepest sympathy as they cope with this inevitable loss.

*On behalf of the Physics and Meteorology, Agrotechnology and Physics and Biophysics groups, Edo Gerkema*

## Johan (Joop) Bruinsma (1927–2017)



On New Year's Day, Johan (Joop) Bruinsma passed away after a long and active life. He was professor of Plant Physiology

from 1968 to 1989 at the Agricultural College (later the Agricultural University).

Joop Bruinsma started studying biology at the University of Amsterdam in 1945. After graduating in 1952, he did his PhD at this university with the plant physiologist Van Herk as his supervisor. After obtaining his doctorate in 1958, he came to Wageningen to work as a researcher at the Centre for Plant Physiological Research (CPO), one of the predecessors of what is now Wageningen Plant Research. In 1968 he was appointed a professor in the physiology of plants. His research interests were focused on the role of plant hormones in the regulation of plant growth. The isolation, effects and function of plant hormones played a key role in much of the research that he supervised. This research led to more than 170 publications and 21 doctorates under his management.

In his time as a professor, Joop Bruinsma also paid considerable attention to the development of theoretical and practical education in Plant Physiology, both for the Biology degree programme and for various crop cultivation programmes. Bruinsma ended his farewell lecture in 1989, entitled 'Nature-Science', with some remarks that still apply today: 'Particularly in our "green" university, plant physiology has a unique function in bridging the gap between the natural sciences on the one hand and crop cultivation and technological sciences on the other. In this way, the theory can be turned into practical applications for society while practice produces questions for basic research'.

We offer his wife Hans, his children, grandchildren and great-grandchildren and other relatives our deepest sympathy as they cope with their loss.

*Linus H.W. van der Plas, emeritus professor of Plant Physiology, Wageningen University*

## announcements

## 55th anniversary of 'De Veetelers' study association

Livestock farming study association 'De Veetelers' will celebrate its 55th anniversary (or 11th five-year anniversary) for three weeks starting on 21 March. We'd like you to join in the celebrations, which is why we are inviting you to the opening on 21 March 2017, the industry day on 23 March, the symposium on 28 March, the reunion on 1 April (not a joke!) and the closing party on 6 April. For more information, see [www.veetelers-springlevend.com](http://www.veetelers-springlevend.com) or Facebook.

## Co-organise a summer school Sustainable Tourism

Ruw Foundation is looking for green-minded people who would like to help to organise an amazing, sustainable, week-long summer trip. Because this is the year of sustainable tourism, we aim to make it our most sustainable trip yet. Let us know through [ruw@wur.nl](mailto:ruw@wur.nl) if you are



## MCB-51403: Capita Selecta Commodity Futures & Options

**Always wondered about what is happening at the trading floor of exchanges like the ones in Amsterdam, London and Chicago? Wondered about how (agribusiness) companies manage their risks using commodity futures and options? Wondered about how it would be if you were trading commodity futures in Amsterdam, Frankfurt and Paris?**

The *Marketing & Consumer Behavior Group* organizes a unique course that will introduce students to commodity futures and options markets. Students will develop an understanding of the markets and how they work, gain knowledge about the theory behind futures and options markets, identify their economic functions, and develop an analytical capability to evaluate their economic usefulness. This course is taught by Professor Joost M.E. Pennings (*Marketing & Consumer Behavior Group*, Wageningen University). There are only 40 seats available.

If you are interested in taking this course (3 Credits) please register with Ellen Vossen at MCB (room 5029, De Leeuwenborch, e-mail: [Ellen.Vossen@wur.nl](mailto:Ellen.Vossen@wur.nl), tel. 0317-483385). You can also pick up the materials here. Lecturers are on Fridays in period 5 (24 March-28 April, but no lecture on Friday 14 April), one day in a week, 10.30-12.15 hrs.

Laan der Verenigde Naties 150, Ede  
[www.cinemec.nl](http://www.cinemec.nl) / 0900 - 321 0 321

FILM

**NU TE ZIEN**  
**Demain Tout Commence**  
De nieuwe Franse bioscoop hit met Omar Sy.

FILM

**NU TE ZIEN**  
**Live By Night**  
Broeierige gangsterfilm met Ben Affleck en Sienna Miller.

FILM

**VANAF 2 FEBRUARI**  
**The Great Wall 3D**  
Hét grootste spektakel van dit moment. Met Matt Damon.

**€2 STUDENTENKORTING OP FILMS & EVENTS**



interested to become part of RUW's 'green adventure team'.

### Improve your writing skills

Wageningen Writing Lab offers you coaching by a peer-tutor to improve your writing skills. Furthermore you'll learn how to apply new strategies. You can call on us at any stage in your assignment. Sessions are free of charge for students. In some cases PhD candidates can also get coaching. Pay us a visit at Forum Library, room 251 on Tuesday 08.30-20.30 or Thursday 08.30-18.30 hrs.

[WWW.WUR.NL/EN/ARTICLE/WAGENINGEN-WRITING-LAB-FOR-STUDENTS.HTM](http://WWW.WUR.NL/EN/ARTICLE/WAGENINGEN-WRITING-LAB-FOR-STUDENTS.HTM)

### Young Scientific Award 2017. Call for abstracts Beer in a healthy lifestyle

The Organising Committee of the 8th European Beer and Health Symposium invites scientists aged below 35 years old to submit abstracts and apply for the 2nd edition of the Young Scientific Award. The award acknowledges research contributions that further the development and knowledge regarding the health

effects of moderate consumption of beer, and its role in an adult's healthy lifestyle in the broadest sense of the word. The winner will receive €500 and will be invited to present his/her work during the European Beer and Health Symposium on 20 April in Brussels. Deadline submission abstract: 28 February.

[HTTP://BEERANDHEALTH.EU/NEWS](http://HTTP://BEERANDHEALTH.EU/NEWS)

## agenda

**Thursday 26 January to Wednesday 8 February**

### FIVE FILMS FOR STUDENTS

*Frantz*: romantic drama set in the aftermath of WW1 about remorse, grief and love, with a French soldier in search of a young German widow. *A Quiet Passion*: a stylistically superior and moving moral satire about the proto-feminist and poet Emily Dickinson (1830-1886). *Noces*: an enthralling coming-of-age drama about second-generation Pakistanis in Brussels. *The Salesman*: a realistic thriller featuring a young couple in Tehran in a story of pride, re-

venge and empathy, with a clever plot and naturalistic acting. *Layla M*: a balanced account of a radicalized teenager of Moroccan origins. Venue: Wilhelminaweg 3A, Wageningen.

[WWW.MOVIE-W.NL](http://WWW.MOVIE-W.NL)

**Thursday 26 January, 20:00**

### INFORMATION EVENING: IMPROVE WAGENINGEN AND BECOME POLITICALLY ACTIVE

A significant proportion of Wageningen's population is made up of young people, the majority of whom are students. That is why it is important for them to be properly represented in Wageningen's municipal council. Several young residents were elected as council members in 2014 and they have had a visible effect on the municipality's policies over the past few years. Peter Veldman, a former student who was elected as a council member in 2010, is organizing a special evening for residents who want to know more about municipal politics and what they can contribute. Venue: Council Chamber, Town Hall, Wageningen, Markt 22.

**Wednesday 8 February, 19.45-21.30**  
**WURTALKS: 'THE AMAZING WORLD OF ANTS'**

Ants are all around us, but did you know they invented agriculture and have sophisticated brains? Tim Möhlmann (junior researcher at Wageningen Plant Research) and Jitte Groothuis (PhD candidate WUR Laboratory of Entomology), both ant keepers, will present the lecture. Tim Möhlmann will demonstrate several live ant colonies in custom-made nests, Jitte Groothuis reports about the results of studying the brains of many kinds of ant. Venue: Forum C222. Entrance is free, but please sign up via [www.wur.eu/wur-talks](http://www.wur.eu/wur-talks). Through this site you can also watch previous lectures.

Deadline for submissions: one week before publication date (max. 75 words)  
Email: [resource@wur.nl](mailto:resource@wur.nl)

## colophon

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

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# >>TYPICAL DUTCH

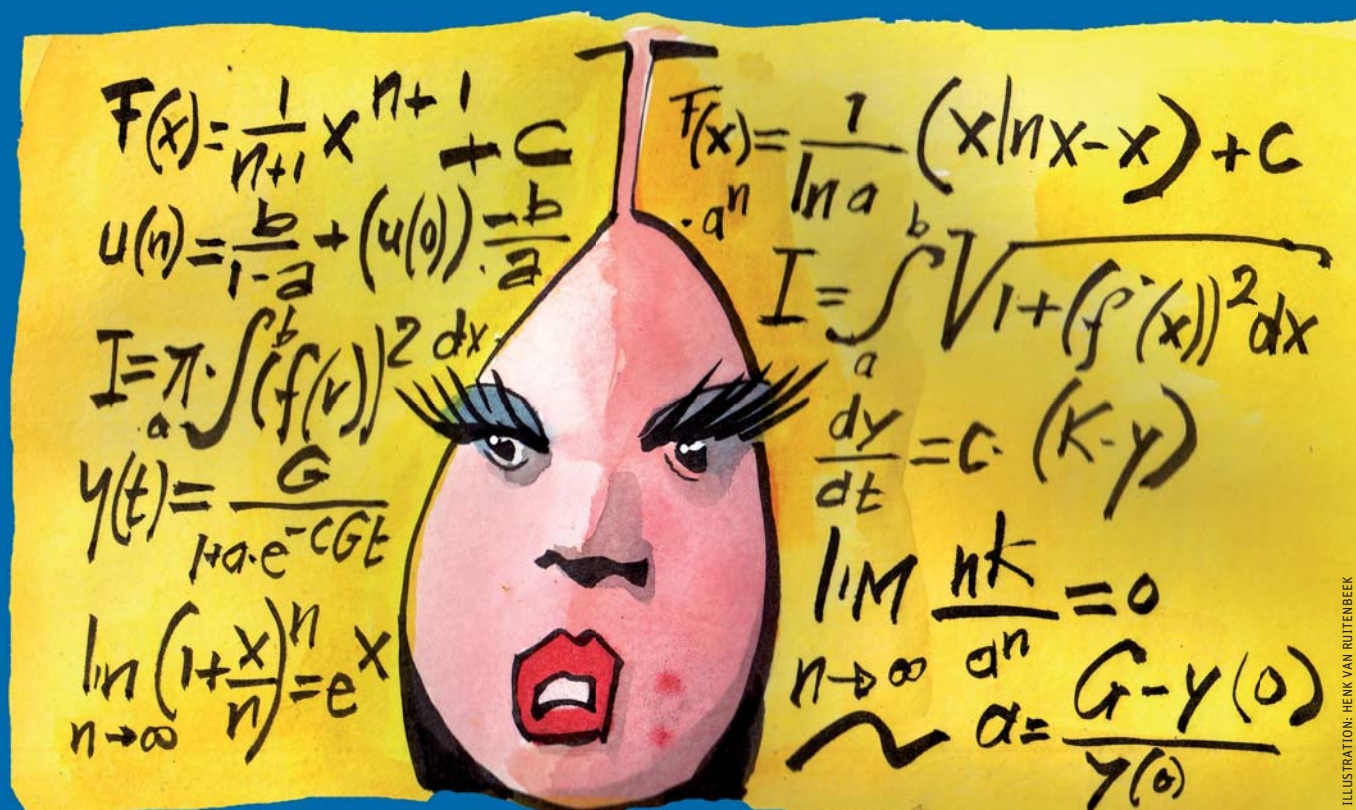


ILLUSTRATION: HENK VAN RUITENBEEK

## Dumb blonde

I was sitting in an interactive MOS module class one day. The lecturer was telling the class about the part that we had to work on and being as slow as I am, I missed some information. So I asked a friend sitting next to me. She is a Dutch girl from my major, a bubbly and friendly girl.

The lecturer heard us talking and told us again about the part that we missed. After that, he jokingly said: 'I just told you five minutes ago, so do not forget it again'. My friend then said loudly: 'Don't worry sir, I might be blonde but I'm not dumb'. The whole class laughed.

After class, I found out that there is a saying in Dutch: 'acting like a dumb blonde'. Apparently the Dutch consider blonde people to be dumb. Well, my hair is pitch black; Dutch people must consider me *so* smart. 🇮🇩 Nuruly Myzabella, Master's student of Nutrition and Health, from Indonesia

*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 euro and Dutch candy.*

**'My hair is pitch black;  
Dutch people must  
consider me so smart'**