



rubber news

on tap – angezapft

When leaf death comes with the wind

A fungus threatens global rubber production



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Leaf fall disease is currently spreading

Over the past few years, a fungus has reduced latex yields by 20 to 40 percent in many growing regions.

The fungal pandemic

In 2016, the first major outbreak of *Pestalotiopsis* was recorded on a plantation in the north of Sumatra. Since then the disease has been spreading rapidly. The fungus is now found on plantations in Thailand, Malaysia and Indonesia – 70 percent of the world's rubber come from these three countries. *Pestalotiopsis* is also spreading in Vietnam, the third biggest rubber producer, in India and China. The Philippines aren't a major grower, but rubber is one of the country's major export goods. In March, the news magazine Rappler reported, that a state of emergency had been declared in Basilan province because 90 percent of rubber trees were affected by the fungus.

High humidity and strong winds promote the distribution of fungal spores. The leaves of infected trees at first show round, light brown spots. As the disease progresses, the leaves turn brown and drop off – hence the name “leaf fall disease”. According to a study by the Faculty of Agriculture at the Sumatra university, the latex yield is reduced by 25 percent when a tree has lost half its leaves, a leaf loss between 75 and 90 percent decreases the yield by up to 75 percent. The leaves regrow, but only to a smaller size, the leaf canopy is lighter, individual branches die off, and when the tree is infected multiple times it will die. The spores can infect trees at any time of the year and any stage of their development – saplings and young trees are as much at risk as old, mature trees. The first symptoms will appear between four and 16 days after the infection. The scientists on Sumatra compared six rubber tree clones. They found that their susceptibility to *Pestalotiopsis* varies, but none of the clones were resistant.

Attempts to fight *Pestalotiopsis* spores with fungicides have been mostly unsuccessful. That's unsurprising: to be effective, a fungicide has to be sprayed from the ground as well as from above with drones to treat the tree canopy. And once the first brown spots have been detected on the leaves, any fungal treatment is pointless because the tree has already been infected.

Stressed and malnourished

These days, many plantations replant with only one type of clone: a high yielding variety is grafted onto fast growing rootstock. This type of clone yields more latex milk and can be tapped 12 to 18 months earlier than previously possible. On the flip side: such high yielding clones are extremely stressed and therefore more susceptible to disease than other, lower yielding trees. It is possible that a reduced availability of chemical fertilizer contributed to the increased spread of *Pestalotiopsis* in 2022. On plantations where sufficient amounts of fertilizer were applied, yield reductions seemed to be less significant. Rubber tree monocultures, too, are problematic. Small holder farmers who grow rubber trees as solitaires or in small groups amidst other timber varieties report fewer or no *Pestalotiopsis* infections. The use of compost rather than synthetic fertilizer would be advantageous, though on plantations, compost cannot be produced in sufficient amounts.



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Fair Rubber guarantees tappers a better income.



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Higher world market prices: Palm oil plantations displace rubber cultivation.

Palm oil replacing rubber

The spread of *Pestalotiopsis* throughout the big rubber producing countries has on many plantations led to the decision not to replant with rubber. Rubber tree nursery are often no longer maintained. Instead, on large areas even productive rubber trees are ripped out and replaced with oil

palms. Compared with rubber, the world market price for palm oil is very good. Oil palms come into yield after only four years and hence are profitable much earlier. All tasks on palm oil plantations can be done by unskilled labourers, but as the work is physically very demanding,

most plantations employ only men. Rubber tapping is less strenuous, but it is highly skilled work that requires training.

With the spread of *Pestalotiopsis*, the availability of natural rubber no longer is guaranteed. If tire manufacturers and other producers want to

make sure, that plantations will not continue to replace rubber trees with oil palms, they will have to break the cycle of low world market prices and the resulting necessity to produce ever more latex milk in ever shorter time. Supporting rubber producers through better prices, investments in research on plant nutrition, the breeding of more resistant (but possibly lower yielding) clones and the promotion of growing rubber trees as part of a diverse timber culture would be important steps. The Fair Rubber Association is an important partner in this.

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A longer version of this article in German appeared in the magazine *Der Eilbote*, No. 14/2023. ■

Did you know that rubber trees have sweet spots?

Natural rubber trees (*Hevea brasiliensis*) are, of course, best known for the production of latex milk, which is turned into anything from bottle teats to airplane tires. At the end of their productive life, usually after about 35 years, the trees are cut down and their wood is used for furniture or other wooden items.

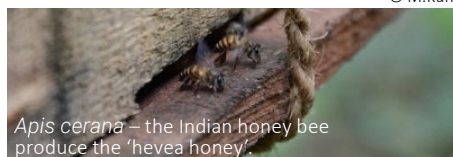
But throughout their life time, for a few short weeks every year, rubber trees also have 'sweet spots', literally. Every spring, when the trees grow new leaves to replace those they shed in winter, the tree supplies a sugary liquid to the leaf joints. Initially, until the leaf is fully grown and a balance is struck between demand and supply, rubber trees, like over eager parents, provide too much. This surplus emerges at the base of the leaves via so cal-

led 'nectaries': Providers of nectar. Insects and humans have long learnt to exploit this: beekeepers bring their hives into rubber plantations to harvest a unique crop. With the help of enzymes, the bees convert the syrup from the tree in their stomachs into honey and store it in their hives as feed for brood and other bees – unless a beekeeper comes and takes a share.

'Hevea-honey' from the rubber tree

Diversity Honeys is a licensee of the Fair Rubber Association. In 2016, the company was initially started (as the name indicates) in order to import speciality honeys from Asia. The con-

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Apis cerana – the Indian honey bee produce the 'hevea honey'



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Hevea-honey

continent is home to approx. 12 honeybee species (*Apis*) – in Europe there is only one: *Apis mellifera*. Honeybees indigenous to Asia play an extremely important role in crop production, as they are perfectly adapted to local climatic conditions and specialised in pollinating tropical plant species.

European red tape meant that it took six years until the first such honeys could legally be imported into Germany. This long period of frustration was the reason for Diversity Honeys (in order to have something to

sell) to come up with a unique range of plastic free gardening items, in particular natural rubber seed trays, but that is another story.

Among the honeys Diversity Honeys now imports from India is honey from rubber trees. Smallish honeybees, called *Apis cerana* (or 'Indian honey bee', produce this 'hevea honey'. It is a rare commodity, because the annual production is restricted by the size of these bees and the limited availability of rubber trees.

A 'honey sommelier' characterized the 'sweet rubber stuff' as follows: "Sweet/savoury, apricot jam, tangerine, pleasantly warm and rounded flavours including a hint of smoke".

Its source: The long-standing Fair Rubber Association supply partner New Ambadi in South India.

Those interested in tasting 'hevea honey' and other exotic specialty honeys can order it from [here](#) (as long as the order remains within the EU).



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Hevea-Honey

EU Deforestation Regulation (EUDR) – Implications on the Rubber Sector

The European Union has just adopted the Deforestation Regulation (EUDR), thereby leaping towards deforestation-free supply chains for EU manufacturers and traders and tackling this large driver of climate change and biodiversity loss. As tropical deforestation is mainly caused by the expansion of agricultural land, the regulation will strive to effectively ban rubber and rubber derivatives linked to deforestation or the degradation of woodland from entering the EU market. In order to achieve this, the regulation introduces a three-step due diligence mechanism, which will also apply to soy, cattle, palm oil, wood, cocoa, coffee and their respective derivatives. EU importers, manufacturers, and exporters will have an 18-month period until the December 31, 2024 to comply with the new regulation, small and medium-sized companies until June 30, 2025.

No deforestation after December 2020

The three-step due diligence obliges companies to provide detailed information on their supply chain, to conduct a prior risk assessment, and

to mitigate risks by collaborating with suppliers and potentially performing audits to ensure compliance. Traceable evidence must include the dates of production and the geolocation of the land, as products must not originate from areas that were deforested after December 31, 2020. Non-compliance will require corrective measures or lead to penalties, such as fines, the confiscation of products, and a temporary or permanent prohibition from trading the products on the EU market.

The Fair Rubber Association and the Global Nature Fund recently held a webinar on the EUDR in June 2023 and will continue to facilitate the knowledge exchange on the topic among the members of the Association.

More information on the EUDR: https://environment.ec.europa.eu/topics/forests/deforestation/regulation-deforestation-free-products_en

Briefly noted:

- 2,402,990 kg: That is the amount of fairly traded rubber (DRC) produced in 2022 – almost seven times more Fair Rubber than the previous year.
- New board member: Dr Shawn MacDonald, chief executive officer of the NGO Verité, has been newly elected to the [board of the Fair Rubber Association](#) at the annual general meeting in March 2023.
- From bath to garden: Products with the Fair Rubber logo are now easy to find on the redesigned [Fair Rubber website](#).

Flip-flops from Norway?!



Nina Granerød, cofounder of Sleepers, visited the school at Kelani Valleys, which was funded via the Fair Rubber Premium

Nina Granerød, one of the founders behind the Scandinavian flip-flop brand Sleepers, reports in our interview how the idea for a sustainable flip-flop from Norway came about. Since 2019, Sleepers are on the market with the Fair Rubber logo, and more than 100 000 pairs have been sold globally.

As Norwegians, how did you come up with the idea of producing flip-flops?

People often say, 'Flip-flops from Norway?!', finding that contrast quite funny. But we have perhaps a bit of a different lifestyle to some of our fellow Norwegians. We all live abroad – my husband and I, Frode Grønvold in Bali and Thor Marius in Lanzarote - and are always on the beach wearing flip-flops, so for us it makes total sense. We saw the human effect on the environment up close: pristine beaches filled with plastic and rubbish.

After working in fashion in our native Norway, the need to contribute with something more sustainable grew. One late evening, on the beach in Lanzarote, we came up with the idea of creating a positive alternative to the environmentally unfriendly flip-flop.

That's how it all started, with the thought of making something that people actually need to use instead of creating just another unnecessary thing.

You wanted to create a sustainable flip-flop from the very beginning. How did you go about it?

We worked closely with sustainability experts to find the most sustainable material. Different options were scrutinized – algae, recycled rubber, natural rubber – but we landed on the latter, since it is far better than recycled rubber, which usually only contains a small amount of recycled material in each sandal; the rest is just plastic.



Sleepers

Why did you decide on Fair Rubber?

We did not only care about the eco-friendly aspect, but also the workers' rights, wages, facilities, and general conditions. Searching for the best natural rubber producers, we worked closely with the Fair Rubber Association to find certified suppliers meeting their high standards.

It was quite a complicated process to gather all the information, but eventually, we ended up in Sri Lanka. The plantations we currently work with are FSC and Fair Rubber certified.

You recently visited the plantations in Sri Lanka. What did you experience?

We went as a family to visit the Kelani Valley Plantations, supplier of our Fairly Traded natural rubber. We experienced a great atmosphere and people working under good conditions. For example, they have a school for the children of factory workers that is paid for by the Fair Rubber Premiums, which is funded by licensees such as our company. I think it is great that the people there know that their kids are getting an education. The working hours are also fair and people seemed happy from what we observed. ■



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