WESTAS

Westas Group's stakeholder magazine 2/2020



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Westas is Westas Group's magazine for forest owners, customers and other stakeholder groups. It is published twice a year.

Westas Group produces high-quality spruce and pine sawn timber for the domestic market and for global export markets. The Group is one of Finland's largest private wood-processing companies. Its current mills are located in Koski and in Pori.

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EDITORIAL



WESTAS IS AN EXCELLENT PARTNER FOR FOREST OWNERS

as reliable trades have by

estas and its predecessors have long traditions as a regional log buyer and partner for forest owners. This makes perfect sense,

as reliable trades have been taking place for decades and in many cases the partnerships have continued from trade to trade and from one generation to the next.

A sawmill seeks its income from global markets at the best possible price. In order to maximise the income gained from a single log, the timber sawn from it may end up in several countries in the form of different products for different end uses. It is a reflection of the Westas sales department's professional skills, which have been cultivated over a long period of time. These revenue streams from sales end up for the most part in Finland with forest owners, forestry and transport contractors, employees and with the company itself, for its development through, for example, domestic production equipment. Often, the great net benefit sawmills bring to society remains unnoticed and unmentioned.

Westas's co-operation with forest owners has been given an excellent framework over the past year. We have focussed our efforts on developing our co-operation with forest owners, for instance, by producing high-quality forestry services and by establishing, for example, the Westas Log Account (Tukkitili), through which forest owners can gain a good return after a log sale and indirectly

participate in the company's development. The quite well-established use of the Log Account reflects forest owners' trust in and commitment to the cooperation.

Success does not come about on its own. Nowadays, it calls for a rather in-depth understanding of customer needs and taking those needs to production and wood procurement. It also demands continuous investments in production efficiency; at Pihlava, for example, the sawmill's feed equipment was entirely renewed and will be inaugurated in the autumn. The company also has a drawer full of other development plans that will be implemented one step at a time.

2020 has been full of surprises. We carefully analysed our operating environment and the market over the summer. In the near future, we will make further investments in spruce sawn timber production. Spruce timber cut and tailored directly for the customer appears to be growing steadily in demand and is, from our perspective, an attractive product to manufacture for years to come. Pine continues to be an important and wanted tree species for us, but the profitability of producing pine sawn timber is hampered by long-term oversupply in the main markets.

This magazine is distributed to more than 10,000 forest owner households in our operating area, many of whom have become our regular cooperation partners. Thank you for that!

PEKKA KOPRA

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THE FOREST GIVES AND THE FOREST TAKES AWAY

I have become attached to the forest.

Krapi, who has also served on the board of a local forestry management association, recalls planting trees for the first time as a ten-year-old. Now, the first thinnings have already been carried out in these same forests, and this makes him pensive.

– In these forests, I can concretely see how forests grow and evolve, he says.

Krapi says forestry is a natural part of agriculture. Ultimately, in fields and forests alike, it is about taking care of and making diverse use of nature. He is referring to the criticism levelled at felling.

 I definitely don't feel an ache in my heart when trees are harvested. It is done because a well-managed forest is healthier and gives new growth a chance, he stresses.

Krapi's forests have been felled and sold consistently according to the market situation. The aim is to do something every year. Regeneration felling is not carried out every year, of course, and although forest profits are greater in some trade years, harvesting and the subsequent soil preparation and planting also bring higher costs.

 In recent years, we have put a lot of money back into the forest, as we have improved kilometres of forest roads, he says.

FAVOUR LEANS TOWARDS THE SAWMILL

Forest management work is partly done in-house, partly outsourced.

 Although I would love to do the forestry work myself, planting thousands of saplings in the middle of the busy spring farming season is kind of a bad idea, says Krapi with a laugh.

At the end of July, a first thinning was carried out on 3.7 hectares of a roughly 40-year-old forest. The plan is to carry out a second thinning in about 15 years, and then a regeneration felling when the time comes. Westas carried out the first thinning.

— I had teased Ville a little and said that they should buy wood from thinnings sometimes too, in addition to regeneration fellings. This was the second stand that Westas thinned for us. The first, a second thinning on seven hectares, was carried out at the start of the year.

The forest owner exudes satisfaction. The outcome of the work was excellent and the log percentage was high for a thinning. Alongside a tidy harvesting site, Krapi cites trust as the key factor in successful co-operation.

 When you stick to what's been agreed on, it makes it that much nicer to meet face to face, he says.

Westas's Procurement Supervisor Ville Ojansuu is a familiar sight in Krapi's forests. He made his first deals with Pauli's parents in the name of his previous employer. Now the men have been engaging in co-operation for more than a decade, although the company buying the wood has changed in the meantime.

For sure, my sympathies lie more with the sawmill. The sawmill's interests
are the same as the forest owner's, and our goals come together in log harvesting,
concludes Krapi.

AT THE TABLE



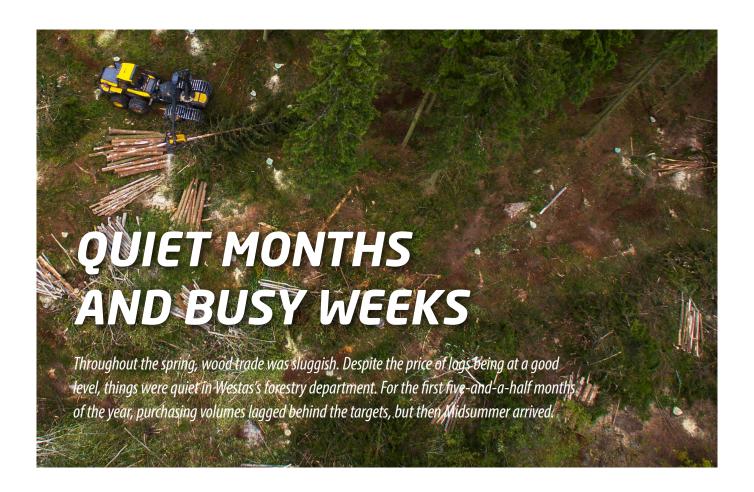
Ville Ojansuu, who graduated in 2002 with an engineering degree in forestry (UAS), was driving in his moving van from the town where he was studying to his home when his phone rang.

— It was someone from the Finnish Forest Centre, asking if I would like to go to the Pirkanmaa office to draw up forest management plans. That's where I spent the first five years of my career, and it was in connection with that work that I first met the Krapi family, he recounts.

For the next ten years, Ojansuu worked as a wood buyer for Metsä Group, and in 2017, he joined Westas. Each of the municipalities in Ojansuu's current procurement area is different. Sastamala is a particularly forested area, Huittinen is more field-dominated, and in his most recent area of Säkylä, Pyhäjärvi Lake and the military zone take up most of the municipality's surface area.

— I was taping off a plot in Pieskanmaa, Sastamala, when the farmer ahead of me stepped on a wasp nest. The wasps attacked me, and even though I ran so fast that Usain Bolt would have been left at the starting line, I managed to get stung half a dozen times on my neck. By evening, it felt as though I had been smacked on the back with a log, Ojansuu recalls.

This forest professional who enjoys hunting in his leisure time appreciates the freedom he has in his work, as well as the opportunity it gives him to be in the forest and interact with people. Of course, when the coronavirus hit, there were not many visits with forest owners. Deals were made online, and when visiting forests, people observed wide physical distances.



– It's anyone's guess why things were stagnant in the spring. Perhaps it had to do with the exceptional situation caused by the coronavirus and a shift in priorities. People were mostly concerned with their own basic needs and safety, which understandably take precedence over selling wood, reckons **Juha Mäki**, Westas's Director of Forestry.

But then came June. A minor price adjustment caused a real flood of trade on both sides of Midsummer and put the situation back on track. The current stock situation is set for nearly five months ahead.

CULTURAL SHIFT IN WESTERN FINLAND'S WOOD TRADE

After the summer holiday period, sales activity hit a brick wall again. Mäki says that in some years, July has been a good trade month, but not this year.

– July and August were both unusually quiet, and who knows why. There was no supply of wood, even though prices were higher than they were in May and demand was sufficient. Fortunately, a lot of trade took place in June, however, as sawmills ran normally and the monthly consumption of raw material came in at just under 100,000 cubic metres, explains Mäki.

The director of forestry believes that, over the years, wood trade in western Finland has shifted towards the end

of the year. Whereas before, the year was over sometime around October, nowadays trade is still taking place in November and even December.

 People in Finland are increasingly taking their summer holidays later, closer to autumn, and wood trades are also taking place later in the year, says Mäki.

He says that forest owners have been interested in Westas's forest management services, which were launched a year ago. The related enquiries have grown steadily, and different levels of regeneration packages are increasingly being agreed on in connection with transactions.

 We have proceeded in line with our plans, and the level of the service agreements that have been concluded is good, he says.

FINGERS CROSSED FOR AN ACTIVE END OF YEAR

With the exceptionally dry summer, felling has gone without a hitch, and even the winter reserves that were left standing for a month and half due to the poor winter were harvested, including those in swamps and mires. The dry and warm weather also has its downside: the spruce bark beetle population grew particularly in southern Finland. Strong spruce log sales, however, helped limit their spread, as the trees were felled before major damage could occur.

Expectations for the rest of the year are high. Demand in the sawmilling industry appears to be good, especially for spruce, and production is running as planned for both tree species.

I predict a brisk level of purchasing in autumn.
 At least we plan to close a lot of deals, says Mäki. X

"Forest owners have been interested in Westas's forest management services."

– Juha Mäki

A MOVING PIECE OF ART

You don't need to go to a gallery to see art — if you're lucky, you might spot some on the road. Since autumn of last year, you may have seen a timber truck painted to reflect the old lumberjack tradition.

uha Holm and Westas came up with the idea to jointly acquire a truck after Westas's open house event in summer 2019. The event, held at the Westas Raunio sawmill, featured not only Holm's forest machinery, but also a timber truck painted by an airbrush artist.

 At that time, the order for a new Volvo FH16 had already been placed, but there were no plans to paint it.
 The truck at the open house garnered a lot of interest, and it wasn't long before we decided on a Westas-themed design for our truck, recalls Holm.

TRUSTED ARTIST ON THE CASE

Besides being part of his job, heavy machinery has also always been a hobby for Holm. His trucks have been present at many truck shows in both Finland and other European countries.

— On one of my trucks, my daughter and her horse have been immortalised, on another there is a small landscape and on a third, a gliding eagle carrying logs. We also have scorpion and panther trucks, Holm lists. of a brainstorming session involving Holm, Westas and the advertising agency Avidly, with the final work implemented by Maskubased airbrush artist **Jussi Säteri**.

Säteri has painted my trucks before,
 and I trust his vision 100%. The artist arrived
 to the hall once again with his coffee maker
 and equipment in hand, and within two weeks,
 the painting was ready.

Soon after that, in August 2019, ownership of Puunkorjuu Juha Holm Oy's timber trucks was transferred to Puuhaukat Oy. In addition to Holm, the company is now run by two solid industry professionals — Mika Ojala and Antti Virolainen — the latter of whom is an especially avid truck show enthusiast.

 Antti was excited about this truck right from the start, and I believe that it won't be the last painting project for the company, says Holm.



HIGHLY PHOTOGRAPHED AT TRUCK STOPS

The painting on the side of this truck is a nod to the lumberjacks of a bygone era: raging rapids with what has been called Finland's most beautiful sawmill, Westas Pihlava, in the background. The chrome bullbar that was commissioned for the front of the truck is adorned with the sawmilling company's logo, including the blades of a circular saw.

The truck's artwork and accessories were mostly done by hand, and even though the lights and chrome components were installed in-house, the project cost more than 10,000 euros. Holm is nevertheless very pleased with the end result. Despite all of this summer's truck shows being cancelled due to the coronavirus and not being able to officially present the truck, it has garnered a good deal of attention on the road.

— This is definitely good advertising. A painted truck always gets people's attention, but it seems like this one is especially intriguing. It's fun to sit inside a truck stop drinking my coffee while watching people take photos of the truck and then sharing them on social media, says a pleased Holm. ×







When you've been doing something since you were little, you eventually learn which jobs you want to keep doing yourself and which ones you want to hand over, for example, to Westas to take care of.

or a farm along the Lankoski rapids in Merikarvia, western Finland, it was business as usual in spring and summer, despite the global turmoil caused by the coronavirus pandemic.

 First it was dry, then it was wet, which caused second shoots. So soon we will have to thresh, and at Christmas we will have to thresh, laughs the Tarkkio farm's current caretaker, **Anne-Mari Tarkkio**.

Grass hay, however, did well, and the hay harvest was great. The hay to be threshed also grew second shoots, but they managed to harvest it to be used as feed. Anne-Mari has been getting help from the farm's previous caretaker, her father Aarno, who arranges the hay in a windrow and continues the baling started by Anne-Mari while she bundles it and transports it from the field to the barn.

 Hay baling is one of the first jobs I was allowed to do as a child. I guess that's why I still enjoy doing it, she says.

In addition to hay, which is sold in small bales to animal farms and horse stables, the Tarkkio farm grows oat, rye and barley. The grain also attracts unwelcome guests, which is why, much to the chagrin of the property's older cats, two kittens became the farm's newest residents in the summer.

— The goal is to have more cats than rats in the house, says Anne-Mari as she strokes the kittens playing with the baling twine.

The autumn's threshing started with rye.

 Threshing is nice, as you literally get to reap what you sow and you can concretely see the work progress.
 But my favourite work is still ploughing. You can do field art when ploughing, and it can be done in the rain, says
 Anne-Mari.

Doing a good ploughing job is precise work and something in which Aarno has even competed. It is a skill that has also been instilled in his daughter.

– The old man taught me. Or rather, he told me where things went wrong and what shouldn't have been done, Anne-Mari says with a wry smile.

ISLAND FELLING

In the second week of July, during the hottest summer days, felling began in Tarkkio's forests. A sprucedominated, four-hectare forest on an island grew robust trees that were saved by both Aarno and his father before him.

 Anne-Mari came here for the first time when she was still inside her mother's belly and her sister was in a carry-cot, Aarno recounts.

The place is unusual in that there is no road to the plot; instead, the machines had to ride through the forest and wade across a marshland for a brief part of the journey. The terrain in Merikarvia is typically quite rocky. The trees were nevertheless harvested smoothly, and Anne-Mari was pleased with the condition the contractor left the land in.

 With all timber grades together, the total amount harvested was 1,758 cubic metres, and logs alone accounted for roughly 1,200 cubic metres, says Anne-Mari.

There was a clear rhythm to the work: the harvester came in the morning, the forwarder in the evening.

The branches were removed within a week. In order to contribute to biodiversity, and in line with the Finnish Sawmills Environmental Forestry Programme, several artificial stumps were made in the clearing, a few groups of aspen were left in the middle of the land, and a wide border zone was left on the shore side. Proper game thickets were not left behind, but the plot in any case borders a game field that offers food for the area's fauna.

 Moose and several herds of roe deer can be found here. Based on the footprints, we were also visited by a wolf once, but for some reason, it left the herd alone and continued on its way, says Aarno.

PROCUREMENT AND STANDING SALE

Before winter arrives, soil preparation is taken care of, and in the spring, spruce is planted. In connection with the timber trade, Anne-Mari agreed on a reforestation package with Westas, so this time neither she nor her father will be spending time on the plot with a planting tool in hand.

— That's good. Planting is not one of my top three favourite forest work activities. I'm happy to spend that time doing other work around the farm. Thinning out big trees, however, suits me well, and I also like transporting logs. You get to be on the tractor and lift logs on board. I like getting to see the results of my work right away, maybe that's why I also enjoy forest clearing, says Anne-Mari.

When winter comes, depending on the snow situation, it is time to thin the forests. When it comes to regeneration felling, Anne-Mari has always conducted standing sales, but the first and second stage thinnings have been handled as a sale at delivery price.

 It makes sense to take care of the thinnings ourselves. We have the tools and at the same time, we get wood chips for our boiler. My dad also used to carry out regeneration fellings according to the sale at delivery price method, she says.

Anne-Mari points out that thinning gives trees more room to grow and helps them bind more carbon dioxide. Forest owners who carry out thinning operations themselves learn about the forest and how it grows. When choosing which trees go and which ones stay, they make decisions that affect the stand's final outcome.

- You can then check your bank account statement to see how you fared after the regeneration felling, says Anne-Mari with a grin. \times



ENVIRONMENTAL FORESTRY PROGRAMME TRAINING COMPLETED

t the start of the year, the Finnish Sawmills Association published the Environmental Forestry Programme, the aim of which is to incorporate measures to support and increase forest biodiversity in log felling and trade. In addition to the material offered to forest owners, an online course on the various measures and their practical implementation was created for the employees of sawmills' forestry departments and subcontractors. **Janne Lehti**, Purchasing Manager with Westas Group, has been following Westas's participation in the training, and he says that by summer both the forestry department and all employees of subcontractors – altogether roughly 120 people – had completed the training.

— Training has, of course, been arranged before, but this time it includes not only harvester operators, but also forwarder and forest residue harvester operators, says Lehti.

Feedback on the course has been positive, and some of the training has also been adopted in timber trade. The various measures under the Environmental Forestry Programme — making artificial stumps, increasing mixed forest stands, and preserving game thickets, low-producing sites, peatland borders and decaying wood — are now included in the timber sales contract, and from there they are transferred to work guidelines and implementation where applicable. X



MARKET'S BEST INTEREST RATE ON LOG SALE PROFITS

ukkitili, or Log Account in English, has been in operation for two years now and has established its place as part of the service package Westas offers forest owners. A high number of deposits have been made, and more than half of the account holders have concluded a longer, 24-month, agreement. The average deposit has been €27,000.

Westas's Development Specialist **Pietari Niemi** says besides the flexible contractual terms, the Log Account users have praised the 3.5% fixed interest rate, which is the best in the market

— The Log Account has been tried and tested and found to be worthwhile. Customers have been so pleased with the Log Account that some have even asked for the possibility to extend their agreement after it has expired, says Niemi. X

The average deposit:

*€27,*000

The best fixed interest rate on the market:

3,5%

A PROACTIVE APPROACH KEEPS THE WORK INTERESTING

Olli Aarnio is like the sawmill's own superhero or doctor. When problems arise, he and his co-workers arrive on the scene and do what they can to make the work a little better.

fter graduating as an agricultural mechanic from Salo Region Vocational College in 1987, Olli Aarnio marched straight to the Santio sawmill, where he began his 34-year-long career in sawmilling. Santio's operations came to an end at the turn of the millennium, and at the same time, so did Aarnio's work as a setup man. He went to work at another sawmill and took on a new task.

A SKILLED TEAM

For the past 20 years, Aarnio has worked in maintenance, serving Raunio sawmill's mill services. The work includes servicing, maintaining and repairing machinery and equipment. All mill service employees are also part of the mill's fire brigade. The work is carried out in three shifts such that within a six-week period, there are two weekend shifts, during which time the required preventive maintenance measures are carried out. The team includes electricians and machinists, among others, and nearly all of the maintenance and repair work is carried out by the mill's own personnel. Only the logic programming is taken care of by the manufacturer.

— We have a very talented team and everything runs like clockwork. As the mill's machinery is quite old, we have replaced every part inside every machine at least once. We are now familiar with the teething problems of the machines, says Aarnio.

When shifts change at the mill, the workers exchange information on the day's events, like they do in hospitals. In the weekly Monday meeting, the team is joined by the mill manager and packaging foreman in taking stock of the overall situation. Otherwise, Aarnio says he has a lot of freedom in his work.

— The work is mobile, and I can independently plan my days. When there is a problem on the line, they call for us on a two-way radio or by phone, he says.



PROACTIVE AND THINKING OUTSIDE THE BOX

When walking around the sawmill, maintenance personnel observe their surroundings and constantly think about new improvement areas. Aarnio cites as an example the board-processing line, in which turning the boards smoothly the right way sped up the feed conveyors.

 We constantly think about how we can get more cubic metres or save time, or whether something needs to be fixed. I believe that if we were to run the sawmill at full capacity, our fine-tuning would show in the overall cubic metre volume, reckons Aarnio. He says that showing initiative and being proactive are shared traits of everyone who works in mill services. According to him, being interested in his work and willing to improve it makes the day-to-day toil enjoyable.

— In this work, you can't go around with a devilmay-care attitude. If something is not done or if it is done carelessly, it will always lead to a pile of problems down the road. When things go smoothly, it makes everyone's work more enjoyable, Aarnio sums up. ×

"Being interested in his work and willing to improve it makes the day-to-day toil enjoyable."

– Olli Aarnio



long with the investment, equipment that is in poor condition and which has required continuous repairs will be entirely replaced. The project was kicked off in June with earthworks and will be completed by the end of October, with the new equipment expected to be up and running in the first week of November.

— The goal is for the constant interruptions and incessant repairs, which have even affected the sawmill's capacity, to be a thing of the past, says Westas Production Manager **Sakari Virtanen**.

CHALLENGING CONSTRUCTION SITE

Ulvila-based Maanrakennus Mykrä Oy, which has worked on similar projects, is responsible for the earthworks. The company started out in the early 1970s with a single excavator but today has an extensive fleet of around 50 machines, including excavators, bulldozers and road graders. Maanrakennus Mykrä serves both industrial companies and the public sector.

 We have earned a reputation as an expert in challenging sites. For Westas, we have previously carried out, for instance, field projects, hall foundations and pipe repairs, says the company's Managing Director Juha Mykrä.

The current project includes the base structures and reinforced concrete for the infeed deck. The construction site measures 20 x 30 metres, and the current infeed deck is fixed at the construction site, which brings its own challenges.

In this project, ensuring safety is a top priority.
 An extra steel structure has been added to the infeed deck to prevent logs from falling on the workers. Traffic arrangements have also been carefully thought out, says Mykrä.

The project's initial meeting was held in May, and formwork and rebar installation for the support wall, as well as the installation of insulation sheets under the infeed deck took place in August. The infeed deck ramp will be built before the end of September and before the machines are installed.

"We have earned a reputation as an expert in challenging sites."

– Juha Mykrä



FINNISH WORK AND EXPERTISE

Passimo Oy, a family company based in Lappajärvi, is manufacturing the new machinery. The company has delivered machinery, above all, for the needs of mechanical wood processing since the 1970s. Over the years, the project machine shop's operations have increasingly shifted from further processing to sawmilling. Today, roughly 80 per cent of the company's work orders come from the sawmilling industry.

In addition to manufacturing machinery, Passimo handles machinery transfers and rebuilds. Some one fifth of the company's two million euros in net sales comes from after-sales marketing, i.e. spare parts and servicing.

 Alongside solid expertise in the sawmilling process, a customer-focussed approach is one of the cornerstones of our operations. We engage in continuous, consultative dialogue with customers during and after projects, not to mention in between projects, says the company's Managing Director **Timo Myllyaho**.

The company has around 20 employees. The labour force crunch in the industry has also been felt by Passimo, which has trained new employees in the trade over the years.

 The manpower situation is challenging. Fortunately, we now have competent professionals, some of whom have had previous contact with the sawmill and the sawmilling process, says Myllyaho.

THE SAWMILL GROUNDS SET THE RULES

The manufacture of the machinery and equipment began at the start of summer. Myllyaho says meetings related to the project have been held with both Westas and Mykrä. Manufacturing basic sawmilling lines is routine for Passimo, but the log deck with side infeed being built for Pihlava is an exceptional solution.

 We arrived at this solution due to space issues, and finding the optimal end result has required some changes.



The log deck with side infeed being built for Pihlava is an exceptional solution. Timo Myllyaho (left) and Jesse Myllyaho.

Replacement investments are not new to us, and we are used to working alongside a sawmill that is in operation, says Myllyaho.

The project has been delayed by a component arriving from Italy, but the machinery will nevertheless be ready on schedule

 It would be good to do a test run of the step dispenser a few weeks before starting up production. We have to see what the schedule allows, says the company's Project Manager Jesse Myllyaho.

The full installation, which comprises log storage decks, a step dispenser, an infeed conveyor, as well as a bark discharger and conveyor to be installed under the deck, weighs altogether approximately 50,000 kilograms. The intention is to move it from Lappajärvi to Pori in pieces that are as big as possible and install it nearly to completion before connecting it to the sawmill. Besides safety — strong safety equipment and double systems — special attention was paid to energy efficiency.

— Every SEW motor has an inverter that can be used to adjust, among other things, energy consumption, revolutions and power output. The system that controls them directly pinpoints possible failures in a specific motor, says Myllyaho.

The main engineer on the project has been Jari Pulli of JP Plan, and many of the components, such as the Lapua chains, are made in Finland. The Managing Director is grateful to Westas for starting up the investment despite the uncertain times.

—This has been an important project for us, as several projects have been postponed due to the coronavirus epidemic. On the other hand, we have been making the rounds this summer repairing, for instance, machinery from Italy, as their servicing personnel have not been able to travel to Finland. That's one good example of why companies should favour domestic suppliers, stresses Myllyaho. ×





Finnish company CH-Bioforce is attempting to do what no one else in the world has so far been able to do: convert biomass into high-value products in a profitable way.

n a pilot facility built in an old starch factory in Raisio, a three-cubic-metre reactor separates wood raw material fractions mainly using pressurised hot water and lye. The manufacturing process developed by the Finnish company comprises several patented phases: first hemicellulose and then lignin are extracted from the biomass, resulting in dissolving pulp, which has a higher processing value than regular cellulose. No sulphur is used in the process, which means both the process and the end products are odour-free.

The manufactured batches are delivered worldwide to potential customers seeking end uses and applications for the fractions. At its best, the innovation will not only give rise to a new industry, it can replace oil-based chemicals.

—This topic has been researched for a century already, but no one has been able to separate hemicellulose, cellulose and lignin from polymers in such a pure form, says CH-Bioforce's Senior Advisor **Björn Lax**.

SIGNIFICANT FINANCIAL VALUE

Right now, roughly half of the biomass used by the forest industry is combusted, and only cellulose is recovered. Considerable added value can be achieved if, instead of combustion, new applications for lignin and hemicellulose are developed.



 $\,$ - This is a significant matter, including for the national economy, Lax points out.

In the pilot-phase trials, birch was used as the main raw material, but other agricultural and forestry waste, such as softwood and straw, have also been tested.

— We are currently involved in a major project with a large global company that involves processing their waste flows, says Lax.

The potential applications for biopolymers are medicine, sweeteners, textiles, packaging, adhesives, paints and cosmetics, to name a few. CH-Bioforce has received funding to commercialise the fractions from the EU's Horizon 2020 programme, which only grants funding to a handful of companies.

FACILITIES NEAR RAW MATERIAL STREAMS

The next phase of the project involves building a demo plant in southern Finland. An investment decision is expected already this autumn, and the facility is due for completion by the end of 2022.

 In two years' time, the goal is to process roughly 45,000 tonnes of wood chips annually in the new facility.
 That volume will result in approximately 10,000 tonnes of hemicellulose alone, says Lax.

The company's future goal is to sell manufacturing licences, which will enable the construction of local facilities near the raw material sources. According to Lax, a facility with a capacity of 100,000 tonnes is enough to achieve an extremely profitable business.

 Once completed, our facility will be the world's first 100% biorefinery. The ultimate goal is to raise the processing value of Finland's largest raw material reserves, i.e. wood and other biomass, Lax sums up.



INCREASING THE USE OF WOOD IN CONSTRUCTION

Measures aimed at promoting wood construction were written into the Government Programme for the first time in 2016. The project that was kicked off as a result started with mapping out the industry's regulations and bottlenecks.



n a study conducted just under five years ago, five bottlenecks were identified: regulatory, attitude, competence, political and economic. In order to open up these bottlenecks, a Wood Building Programme was created. It focussed on increasing the use of wood in urban development, promoting the use of wood in public buildings, increasing the building of large wood constructions, promoting exports and strengthening regional skills bases.

What was originally intended as a two-year project was extended with additional funding granted in 2018. Thanks to the additional funding, the programme was expanded and the Aid Scheme for Growth and Development from Wood, which promotes selected themes within the industry, was established. The themes were wood construction and digitalisation, wood construction and user-based solutions, wood construction and the circular economy and developing industrial wood construction in networks. The objectives were to spark discussion, expand the knowledge pool, promote a change in attitudes and provide financial support to development projects.

MORE CONSTRUCTION PROJECTS NEEDED

One of the project's indicators is considered to be the number of flats in wooden apartment buildings that are more than two storeys high. The number of flats has increased at a steady pace, but new housing starts are still needed. In recent years, several public buildings, particularly schools and day-care centres, have also been built from wood. The construction of large buildings has given rise to new knowhow.

— Building skills are learnt by building, and completed construction projects increase the knowledge pool. More emphasis should be placed, however, particularly on the construction of sports arenas, bridges and office buildings. Stora Enso's and Varma's future office buildings are impressive examples of this, says **Petri Heino**, Programme Manager with Finland's Ministry of the Environment.

According to Heino, municipalities are hesitant to include wood in city planning. The hesitation clouds players' market prospects and puts the brakes on new investments and product development.

— In municipalities, apparently the belief is still held that wooden structures should not be included in city planning. A supreme court decision exists on the matter, however. Municipalities should learn from, in particular, Helsinki and Tampere, which have set themselves apart from other cities in this respect, Heino points out.

The Ministry of the Environment hopes to see the national goals and goal levels of public wood construction that were published at the start of September adopted by municipalities as a tool for guiding city planning.

RESPECT AND NEW PRODUCTS

In summer 2020, the project received additional funding of five million euros and an extension until the end of 2022. The additional funds will be used for corporate development projects, educational institutions' training needs and public-sector development projects. The measures aim to improve the conditions for building with wood.

Finland currently has some thirty wood element suppliers, and it is clear that a range of solution and component suppliers as well as additional capacity will be needed when wood construction really takes off. Heino hopes to see a great deal of new and innovative wood products in the future, as well as broad growth in the use of wood in various applications — including in the wood products industry's own construction projects. Besides innovations, there is still work to be done in terms of attitudes.

 The mechanical wood products industry should be given more respect. In addition, the industry's funding and along with it investments, product development and growth must be activated.

Wood construction is about more than simply fabricating elements, but new products cannot be created without the basic mechanical industry. The entire wood construction industry relies on it, Heino sums up. X

CLIMATE-SMART SAWMILLING INDUSTRY

In summer 2020, the Finnish Sawmills Association, in co-operation with Natural Resources Institute Finland, published a low-carbon roadmap based on guidelines issued by Finland's Ministry of Economic Affairs and Employment. The roadmap demonstrates that the sawmilling industry plays a key role in building a low-carbon society.

awmilling, with its nearly closed material cycles, is already a low-emissions industry: the processes make efficient use of the raw material, and the carbon that is bound to the forest during the period of growth continues its cycle in the finished sawn timber product, at its best, for hundreds of years. The combined annual sawn timber production of Finnish sawmills, i.e. 12–13 million cubic metres, binds 9 million tonnes of carbon dioxide, which is more than 20 times more than the emissions caused by its production.

In general, the sawmilling industry's carbon handprint, i.e. sawn timber's positive climate impact, is considerable. Replacing fossil-based material that has a negative climate impact with carbon-binding sawn timber, for instance in construction, reduces the building's carbon footprint and enables a reduction in emissions. Sawn timber also has value at the end of its life cycle, when it can be used, for instance, in energy production plants.

CARBON FOOTPRINT OF SAWMILLING

TWO SCENARIOS

Background information for the roadmap drawn up in early 2020 was collected from three Finnish sawmills, one of which was Westas Raunio. The results indicate that well over half of the carbon footprint of finished sawn timber arises already before the raw material reaches the sawmill's gates: Forest management, felling and moving logs, i.e. local transportation, generate approximately 50% of the carbon footprint. Less than one fifth arises from transporting the raw material to the sawmill, and the remaining 34% comes from sawn timber production.

Inside the sawmill's gates, the majority of emissions is caused by front loaders and forklifts, which account for 11% of the entire carbon footprint. The electricity used for sawmilling (7%) and planing (9%), as well as the electricity, heating and material load of other processes make up the rest of the emissions.

Based on these findings, two scenarios examining the development of the carbon footprint until 2040 were drawn up. In the basic scenario, sawmills continue to operate as they

do today. The scenario looks at external factors, such as the specific emissions of the power grid's production, the energy consumption of heavy transports, the bio-share of diesel and the emissions from forest management and felling. With a reduction in these emissions and an improvement in energy efficiency, the estimated reduction in the carbon footprint of sawn timber production during the period in question is 35%.

The second scenario, i.e. the low-carbon scenario, assesses the impact of measures taken inside the sawmill's gates on the carbon footprint. With technology investments and switching to bio-based fuels and electric front loaders and forklifts, the carbon footprint in this scenario decreases by 82% by 2040. This would, however, require switching to emission-free electricity production. Lowering the industrial electricity tax to the EU's minimum level and abandoning emission-trading compensation would speed up the transition

— To use a worn-out cliché, wood is in a unique position to be part of the solution instead of part of the problem, thanks to being renewable. I believe the three most important goals are reducing energy consumption, which would save renewable fuels and electricity for use elsewhere in society, as well as transitioning to low-emission transports throughout the production chain and carrying out forest management and felling in a way that preserves carbon sinks and protects biodiversity, says the head of the carbon roadmap working group, Marja Jallinoja, of Natural Resources Institute Finland.

This year, the Finnish Sawmills Association's environmental declaration, which includes eight sawmills, will also be completed. The declaration will give sawmills detailed information on their own environmental impacts, as well as tools for reducing them. X

Read the full carbon roadmap at: sahateollisuus.com/ilmastoviisas-sahateollisuus (in Finnish)

Electricity for kiln drying 9 % Electricity for sawing 7 % Electricity for planing 2 % Packaging materials 2 % Production waste 1 % Lubricants 1 % Transportation of row materials 16 % Transpo

A YEAR OF UNEXPECTED TURNS

In terms of sawn timber trade, we will probably exceed the expectations set for this year, although they were not very high to begin with, especially for the first six months.

Despite the positive sentiment, we will fall short of our original targets.

ear 2020 will go down in history as a very exceptional year, including for the sawmilling industry. After the turn of the year, sawmills stopped working due to strikes, and when a labour market agreement was finally reached, a global pandemic struck. As we head towards the end of the year, demand has picked up, but the delivery and production disturbances and imbalance in supply and demand from the first half of the year will nevertheless cast a shadow over the full year. Even with a moderate outlook, we will no longer be able to reach the figures of 2019.

DISRUPTION SHORTER THAN EXPECTED

The strikes early in the year and the lock-down situation that followed in March were like taking a ride on an amusement park's malfunctioning ghost train: the ride started out bumpy, then there was a plummet into the unknown and finally a sudden halt. In some markets, deliveries ceased altogether and no new trade took place at all. For example, in Europe's largest markets – Germany, France and the UK – the situation was dire for quite some time

– Companies closed their doors and there wasn't always someone to unload deliveries. Some customers cancelled deliveries that had already been agreed on, and it didn't take long for that to show in the sawmill's yard, recounts Westas Sales Manager **Arttu Jalas.**

Amid the early confusion and uncertainty, a shortage of containers presented challenges of its own. When deliveries of goods from China to Europe decreased significantly, it caused a momentary container imbalance in Europe. After the initial shock, the situation gradually began to clear up. In the end, the setback was quite short-lived, and after a new start, deliveries returned to the normal level, particularly in Europe.

— At the start of the pandemic, we were quite sure that the uncertainty of the situation would result in decreased demand for end products made of sawn timber, which in turn would cause sawn timber prices and demand to fall. Amazingly enough, that didn't happen. It was a relief to see that things began to sort themselves out rather quickly, and the price level didn't even fall, says Jalas.

DEMAND FOR SPRUCE, LESS FOR PINE

As the end of 2020 nears, the situation for spruce looks good, and demand exists for all kinds of products. In Europe, trade carries on as usual, although the final Brexit to take place at the turn of the year raises concerns about the trade-policy situation.

 There is still uncertainty surrounding the future framework for trade and the value of the British pound against the euro, says Jalas.

Trade got off to a rough start in China in 2020. The Chinese New Year in January, the strikes in Finland that immediately followed it and finally the global pandemic completely disrupted trade. People stayed home due to restrictions, consumption fell and many producers of end products, such as furniture, for domestic markets fell on hard times. With the arrival of summer, China's trade once again picked up and has nearly returned to its normal course.

The pine market, however, plods on. In northern Africa, Egypt in particular has experienced great fluctuations in demand. Shipments have continued at a steady pace, but the low global market price of oil and gas has affected the sale of various pine products. Japan's pine laminate trade has also run into difficulties, partly due to the decline in the country's construction activity.





MOTIVATED BY CUSTOMER SATISFACTION

Even if one person has worked in sawn timber sales for half a decade and another for half a century, they still share the same goal: a happy customer who tells others about the good product and service they received.

rkki Koskelo graduated as a sawmill technician from the former Kotka College of Forestry and Wood Technology's sawmilling technology department in spring of 1983. After that summer, he started working at the Humppila sawmill as a foreman. Four years later, the position of sales manager was established at the sawmill, and Koskelo stepped into the role. He joined the Raunio sawmill in 1989, mainly handling domestic sales at first. Over the next decades, Raunio grew significantly. The initial annual sawmilling volume of 45,000 cubic metres increased fivefold, and Koskelo's responsibilities grew. In the course of his 48-yearlong career in sawmilling, the pace has also increased and the equipment has changed. Land lines have been replaced by mobile phones and graph paper notebooks by computers.

— I remember once when I took a week-long sales trip to the Netherlands. During that whole time, I called the office once from the hotel's land line. Calling was so expensive that we couldn't afford to engage in rambling conversations back then, says **Erkki Koskelo** with a laugh. He currently works as Westas's Sales Director.

The story behind his long career follows a familiar pattern. As a 15-year-old boy, he followed in his big brothers' footsteps by taking a summer job at the Jokioinen sawmill, and when the time came to decide on his future, he focussed his studies on the sawmilling industry.

— I have never regretted a single day. At some point, people were calling this a sunset industry, but it has actually been other industries and companies whose sun has set. The sawmill motivates me in my work, and I like the fast pace of it. The work varies, and even after close to 50 years, I still don't feel like I know everything.

Spruce is the main product purchased by Koskelo's customers, whom he has convinced of western Finland's excellent raw material and the high quality of the end product.

 A customer seeking higher quality and cut-tolength products can get them from us. The grapevine has been effective in that sense, and information about our products has spread, he says.

Koskelo feels he has succeeded when he sees that his customers are satisfied with both the service and product. He gives a recent example from Germany:

 We gained a new customer from Germany at the start of the year. The co-operation started out small, but it has quickly grown into something bigger, thanks in particular to our service, flexibility and accurate deliveries. "I try to find solutions that best suit the customer's situation, and I hope that they remember me as someone who gets everything done as agreed." -Jari Rajakallio



A NEW GENERATION IN SALES

Jari Rajakallio, who hails from Kankaanpää, started working at Westas in sales in 2015, having recently graduated from Lahti University of Applied Sciences as a wood technology engineer. The industry runs in the family and wood has been a constant presence in his life, with his parents running a small sawmill and planing mill.

 I never really thought I would end up in sales, but when I graduated and started looking for a job, Westas looked the most interesting, he says.

Rajakallio says no two days are the same – there are good surprises and sometimes not so good ones. Along with interacting with customers, the sales manager enjoys, above all, fine-tuning the processes. He describes himself as a consistent performer, but Koskelo also has something good to say about him:

- Jari is determined, direct and gets things done.

Rajakallio is responsible for customers in Finland, China and the traditional pine markets. He says he has found his own way of working, and the common thread for him is that the co-operation must be fruitful for all parties.

 I try to find solutions that best suit the customer's situation, and I hope that they remember me as someone who gets everything done as agreed, he says. The organisation of Westas's sales is atypical, with no division into traditional geographical or market areas. Everyone is responsible for certain customer accounts or products, of course, but when everyone takes care of everything, everyone also knows what is going on in which market.

— I admit that this is not the typical way of operating, but it works for us. When we were looking for a new sales manager, we were particularly looking for an inexperienced person who didn't already have a set way of working learned from somewhere else. We wanted someone we could train in the Westas way of working, and Jari was just that kind of person, says Koskelo.

Sales work is challenging due to the strong volatility of the markets. As prices fall, it becomes increasingly difficult to produce a positive result. The two insist that they have never lost a night's sleep on account of a work matter.

You always have to accept matters as they come.
 There are many factors we can't influence ourselves, so we just have to find the best moments and situations where we can move forward, Rajakallio sums up.

BIG ENOUGH AND SUITABLY AGILE

A company doesn't have to be big to succeed. It just has to find its place and be good at what it does. That is the philosophy that has kept Lopen Rakennuspuu Oy going strong for more than 70 years.

he family company Lopen Rakennuspuu started out in field sawmilling in 1946, but moved to its current location along main road 54 in Loppi in 1974. From that point on, it has focussed on sawmilling, planing and further processing wood. The company, which has annual net sales of approximately two million euros and roughly 15 employees, mainly uses spruce and pine in its products.

— I put the industry's players in one of four categories: The big players are in category A, and categories C and D are made up of various one-to-two-man operators. We lie somewhere in between, in category B, which not only gives us credibility but also allows us to be flexible like a smaller company, explains Lopen Rakennuspuu's Head of Sales, **Pasi Tschokkinen**.

FROM THE NORTHERNMOST MUNICIPALITY IN FINLAND ALL THE WAY TO MILAN

Sawmilling at the company focuses exclusively on pine butt logs, which are sawn and dried into raw material for the company's own production of panel, moulding, floor and joinery blanks. The finished sawn timber is planed and processed according to the end product. The coating line is broadly suited for all kinds of water-based coatings.

Some half of the planed products are standard products, and half are made to order for specific projects. When the volumes are sufficiently large, it is also possible to implement entirely one-of-a-kind customer designs.

- We are basically a product manufacturer and we do not offer design services, says Tschokkinen.
- Of course, we work together with our clients and help, for example, our consumer-customers create simple designs, he adds.



Of the company's customer base, a quarter are made up of private customers who make their purchases in the yard on a cash-and-carry basis. The other three quarters consist equally of construction businesses, export wholesalers and the joinery industry. Exports account for a third of the company's net sales, with customers being Italian and German wholesalers who import window blanks and mouldings manufactured in Loppi.

Our area of operation stretches from Utsjoki to
 Milan. Logistics in Finland has advanced in such big leaps

that we can easily operate throughout the country – and beyond, Tschokkinen points out.

He lists the company's strengths as controlling the entire production chain, good location in relation to Helsinki, Tampere, Turku and Lahti, and long-standing employee relationships.

 We conveniently operate within the grid of these cities. We operate flexibly and our employees are highly experienced professionals who know not only wood but also our customers, says Tschokkinen.



HIGH QUALITY REQUIREMENTS EVERY DAY

In recent years, wood as a construction and decorative material has experienced a renaissance, which has also been reflected in Lopen Rakennuspuu's order book. Since 2018, production has been running at full capacity and the outlook is stable. Private consumption is at a good level, numerous projects are under way, and there are even new ones currently in the offer stage.

— Fortunately, we haven't had to fight for orders for a few years. There has been enough work for everyone, says Tschokkinen.

Raw material is purchased from a few Finnish suppliers to supplement the company's own sawmilling operations. Westas is one such supplier.

— Sometimes a salesperson will mistakenly take on a project for which we don't have enough of our own raw materials, or our products are not right for that particular project. That's when we turn to our partners, explains Tschokkinen.

Besides being located nearby, the co-operation has been solidified by the good availability and quality of the products. Other requirements set on suppliers in general are a sufficiently broad product range and reliability.

Customers today demand a high rate of chain-of-custody certification of the raw material. To take one example, for the Turku University of Applied Sciences' Campus 1 project in Kupittaa, for which we delivered planed batten, the requirement was PEFC90, and Westas met the requirement, recounts Tschokkinen.

At the end of 2018, Helsinki's Central Library Oodi, the result of an international architectural competition, was completed, and the library was inaugurated in December. Lopen Rakennuspuu supplied the grooved, fine-sawn and fire-protected interior cladding panels used in the ceilings of the first floor of Oodi, which has a wood frame and wood facades. The extent of the delivery was 25,000 metres of wood products.

— Oodi is a good example of an impressive site made from Westas's sawn timber. The designer's quality requirements for low-knot spruce and for the surface in general were very high, and we were prepared to order double the amount of raw material. The quality of the wood, however, was so excellent that in the end, the amount of waste material was only around 10 per cent. That was a very pleasant surprise, says Tschokkinen with a smile. ×



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