



## Elmia Wood = lots of new iron

The Elmia Wood show in June proved to be a success, despite industry uncertainties. True to past shows, many equipment manufacturers continue to use the Elmia show as the launching pad for new iron.

By Den Storey

The Elmia Wood 2009 show held in Jönköping, Sweden in early June was seen by some observers as a sign of growing strength for the forest industry, which has been hit hard by the global economic downturn.

And, as always, Elmia Wood itself continues to be the meeting place for forestry professionals from around the world.

“It’s been the best Elmia Wood so far,” says Erling Lindberg, sales manager for equipment manufacturer Eco Log. “It feels like the economy is starting to pick up again.”

His belief was shared by Benny Sondell, CEO of Ponsse AB in Sweden. He has exhibited at Elmia since 1972, the year the fair first moved out to the forest.

“Never before have we had so many non-Swedish visitors to our stand. This has been a really good fair for Ponsse,” he says. Show attendees came from a large variety of countries, with representation, of course, from Canada.

The show impressed foreign visitors. Dr Ute Seeling is the director of the German research institute KWF. “Despite the recession and the bad weather, the fair was a success,” she says.

Walking around the exhibition site looking for trends, Seeling noticed more machinery and other technology for bioenergy, which she believes is the next development stage for the forest industry. Bioenergy was seen as one reason behind the great interest in Elmia Wood 2009. Despite the economic crisis, there is an increasing need for biofuel. Less felling means there is less forest residue available. The biofuel must be extracted in other ways, and they require new equipment.

Following is a snapshot of some of the equipment on display at Elmia Wood.

### **ABAB Allan Bruks AB**

ABAB took the opportunity at Elmia to display their answer to the need for a lightweight but large capacity felling/accumulating head for bio-energy harvesting, cleanings or pre-commercial thinnings.

The ABAB Energy Harvester has a purpose-designed cutting knife to ensure a high degree of utilization. The knife’s durability is reported to be considerably higher than chain saws and brush cutters in similar conditions.

The Model 251 weighs in at a light 490 kg, with a maximum cutting diameter of 250 mm (pine), and has a height of only 1.1 metre. The model 350 weighs in at 980 kg, with a maximum cutting diameter of 350 mm (pine) and has a height of only 1.93 metres. [www.allanbruks.se](http://www.allanbruks.se)



## **Caterpillar**

Caterpillar took the opportunity to introduce their newest forwarder models. The Cat 584 is rated at 18 tonnes capacity and the Cat 584HD is rated at a 20 tonne capacity. Powered by the Cat C7 Tier III compliant engine delivering 204kw of gross power at 1800 rpm, the new engine is said to provide excellent torque in the critical 1400 to 1600 rpm range, and with increased fuel efficiency.

The operator's environment features a totally new design and provides a very comfortable, spacious work area featuring automatic temperature controls on the heater/AC, low effort ergonomic joystick controls, easy entry and exit, storage compartments and superb visibility. Side windows extend below the seat level, which allows excellent ground visibility close to the cab and around all wheels.

All major components and systems are easily accessible for servicing through the forward tilting engine canopy and hydraulic tilt cab. The boom grease lines can be serviced safely standing on the ground.

This model fills out the Caterpillar forwarder line-up previously offering only the 564 and 574 models. [www.cat.com](http://www.cat.com)

## **Dutch Dragon**

Answering the market demand for systems to handle bio-mass (thinnings, tree tops, brush and branches) economically, the latest offering from Dutch Dragon was at Elmia.

The PC48 Press Collector attachment--for collecting, compressing and carrying bio-mass-- is a weldment suitable for installation on most mid-size forwarders. The hydraulically operated sides compress the load to ensure the load bearing capacity of the forwarder is maximized, as is the volume of biomass removed on each trip to the roadside.  
[www.dutchdragon.nl](http://www.dutchdragon.nl)

## **Gremo**

An exciting concept developed years ago, the driverless/wireless-controlled harvester has now been introduced into production by Gremo. The Besten RH106 features a 6WD bogie system, a Gremo 10A crane with 10 metre reach and a 274 hp Deere 6.8l engine.

The operator takes control of the harvester from the cab of his forwarder and operates the harvester remotely. The stems are processed directly into the bunk of the forwarder.

The unit works with two forwarders in a three machine/two man system. For maximum production, the forwarders are equipped with rotating and tilting forwarder bunks to optimize angle of the bunk when the stems are loaded.

As one loaded forwarder starts his journey to the roadside, the next forwarder arrives, and that operator takes control of the harvester and the cycle starts again. A study indicates the concept is highly competitive in final felling.

[www.gremo.com](http://www.gremo.com)



## **John Deere**

Deere introduced its hybrid electric drive train concept designed for the equipment division's use in the future. This is the latest step in Deere's quest to meet its customers' needs through products and services that conserve natural resources, adhere to regulatory developments and promote eco-friendly use of land, including the use of clean energy sources.

Instead of the conventional way of powering the axles through a torque converter, John Deere's hybrid electric drivetrain concept is based on a smaller than normal diesel engine which drives a generator, then a motor, followed by a two-speed gearbox. A traditional mechanical transmission is eliminated because the variable speed electric motor takes the function of a continuously variable transmission. Despite a reduction in diesel engine power, the system is fully capable of accomplishing the same work as a conventional drivetrain.

Depending on the application, electrification can enhance fuel efficiency by up to 15 to 25 per cent, as the engine runs at constant speeds and maximum efficiency. Faster cycle times during operation enable improvements in machine productivity.

[www.johndeere.com](http://www.johndeere.com)

## **Komatsu Forest AB**

More machine in a smaller package. That's what logging contractors want-- and that's what Valmet and Komatsu Forest supplied at Elmia Wood.

The major newcomer was the Valmet 931 harvester, which Komatsu presented as being in a class of its own. This flexible machine can handle both sparse and thick forests and has low weight relative to its capacity. It is one size category below Valmet's largest final felling harvester, the 941, and has a boom almost as large as that of its big brother. The lifting torque is 220 kNm. "The Valmet 931 weighs four tonnes less than the 941," says Tobias Ettemo of Komatsu Forest.

Valmet also presented two new machine models with a TX designation added to the model number. TX stands for Thinning Expert. Together, the models form a machinery system consisting of the 901TX harvester and the 840TX forwarder.

The system has been adapted for thinning in several ways. The harvester has an extremely high ground clearance and extra large wheels for better accessibility and lower ground pressure. The boom, which is up to 11 metres long, is said to be the strongest in its category.

Valmet's concept of a cab that swings with the boom also contributes to good thinning abilities.

The other half of the concept, the Valmet 840TX forwarder, has a significantly shorter nose than its predecessors. To put it another way, it has a smaller cab and can carry a greater load in relation to the machine's length. New bogies with wider tires and high ground clearance generate better accessibility and low ground pressure.

Komatsu Forest also presented two new harvester heads. The Valmet 365 is a flexible and highly productive head, with lower weight than the 360 model and functions that make it suitable for handling both round stems and slash. The Valmet 378 is a robust head that is also suitable for excavators.

[www.komatsuforest.com](http://www.komatsuforest.com)



## **Morooka**

In response to a need for forwarding capacity in very soft ground, an old answer (rubber tired track carrier) is packaged anew in the Morooka MST1500VDL forwarder.

The unit weighs in at 9,890 kg with a listed maximum payload of 5,800kg. The HST transmission is driven by the Mitsubishi 6D16 engine at a maximum power of 165kw. Options include loading crane, fully enclosed all-weather cabin and recovery winch.

The unit has a light .19 kg/cm<sup>2</sup> ground pressure when empty, and with the rubber track design is very ground and root friendly. [www.morookausa.com](http://www.morookausa.com)

## **Moisio Forest OY**

A new lightweight, feeding and accumulating bioenergy head grapple by Moisio was introduced at the show. This attachment was purposely designed for forwarders and the bioenergy market.

The base version Moipu 250L features a standard shear for felling. At 365 kg (less rotator) it features a maximum cutting diameter of 25 cm. and loads a forwarder quite easily. The model 250 head can be upgraded to the E and ES versions with accumulation arms and feed wheels for delimiting and processing. This configuration weighs in at 475 kg (without rotator) and has the ability to delimit up to 30 cm. [www.moisioforest.com](http://www.moisioforest.com)

## **Olofsfors**

The EX-Wide track, the newest addition to the Olofsfors track line-up, was shown at Elmia.

According to Garet Robinson, Tracks Product Manager for Olofsfors Inc., the cross member thickness on the EX-Wide is 20 mm and is suitable for large forwarders and six wheel skidders. This new type of track is said to achieve excellent traction and good flotation with the curved cross member ends. The curved ends also minimize ground disturbance when turning.

The EX-Wide will be available in both 26 mm and 30 mm linkage systems for tire sizes 700/710 and up.

The EX-Wide will be available in North America in the early fall of 2009. [www.olofsfors.com](http://www.olofsfors.com)

## **Ponsse**

Responding to current growing harvesting challenges, Ponsse is launching a whole new type of thinning harvester. The Ponsse Fox harvester is primarily designed for thinning but can also do final felling. The eight-wheeled machine weighs 18 tonnes and has a long crane to be effective when thinning from strip roads.

The all new C22 crane features an 11 metre reach, two slewing motors and a hydraulic tracking feature, all key to this unit's ease of control and thinning capabilities. The crane was also placed close to the cabin to improve visibility.



The Fox takes its power from the feisty four-cylinder, 197 hp Mercedes-Benz engine and single-circuit hydraulics operating with a 145 cubic centimeter working pump.

The 8WD machine is stable and enables comfortable working condition in sloping terrain. The ground pressure generated by the 8WD unit is very low, making the new harvester excellent for felling sites where the soil is soft.

Increased accessibility for the harvester places more demands on its working partner, the forwarder. Ponsse has therefore developed a “wetland version” of its well-known 12-tonne forwarder, Wisent. A third pair of wheels has been added to the rear unit, which also gives a slightly longer load space.

Ponsse also exhibited the production version of its bioharvester, a forwarder that has been specially adapted for slash handling. The bioharvester was previously shown as a concept two years ago and has now been put into production. [www.ponsse.com](http://www.ponsse.com)

### **Rotochopper**

Rotochopper’s first Elmia display was their proven B-66 grinder.

The B-66 is said to be ideal for high volume grind and color applications as well as bark processing, pallet grinding, slab wood grinding and grinding of any industrial wood waste that will fit through a 32” high by 66” wide feed opening. The machine was equipped with the new Hot Saw Rotor, specially designed for biomass production in round wood, stumps and brush material. Road legal with plenty of muscle from a 700 hp Cat C-18 Tier III engine, the B-66 will grind, color and load a 100 yard truck in as little as 40 minutes, or in 15 minutes when processing bark. [www.rotachopper.com](http://www.rotachopper.com)

### **Rottne**

Elmia was the site for the true world release of the new Rottne H-10 harvester.

The H10 is a thinning harvester in a slightly larger format. The unit was released with a two axle format, but was reported to be available with a six axle format. The H10 has an 11-metre boom and the head is a Rottne EGS405, the same as that used with the Rottne H8.

The company’s project manager, Anders Börjesson, says there is a gap in the range of thinning harvesters that are presently available. Rottne’s in-stand harvester, the H8, has been a big success, but it is not suitable for thinning operations done from a strip road. That requires a more powerful machine with the weight and power to balance a long boom. That’s exactly what the new Rottne H10 offers.

On the forwarder side, Rottne has literally expanded the width and height. The Rottne F18 is expanding the most. The load area has stepless expansion from 5.4 to 8.5 square metres by expanding the load bunks from just under 3 metres to 4.6 metres. The side supports are also telescopic and therefore do not get in the way of the boom when the forwarder has a small load.



The third innovation from Rottne is a harvester head for multi-stem processing with a cutting unit instead of a saw chain. The new head can accumulate four trees with a diameter of 10 cm. It is basically the same head as the Rottne EGS 405, but this biofuel version is considerably simpler, lighter and cheaper. [www.rottne.com](http://www.rottne.com)

### **SP Maskiner**

New from SP Maskiner is the 401EH felling and accumulating attachment specially designed for professional harvesting of biofuel. Thanks to an efficient accumulating function and double set of accumulating and grab arms, this head can cut and accumulate a wide swath of small bio-fuel stems. Equipped with a hydraulic automatic  $\frac{3}{4}$ " Supercut 100 saw unit, it has a very fast cycle time.

The 401 EH head weighs only 1520 lb., including rotator, and requires only 185 litre/minute pump capacity.

The 411EH version can be fitted with feeding rolls and upper delimiting knives in order to take out an assortment of pulpwood as well as sawlogs. [www.spmaskiner.se](http://www.spmaskiner.se)

### **Tigercat**

Tigercat displayed a 635D skidder with a Bracke M31A scarification attachment at the Elmia show. The drawbar pull with the 635D's 260 hp, 6.7L Cummins QSB6.7 Tier III engine through the proven hydrostatic drive train and new all new HD Tigercat bogies has resulted in a reported well-accepted customer package.

The 635D also features the new series swing seat operator cabin to allow increased operator comfort. This cabin is now being released in all Tigercat skidders with the D series designation.

The rest of the Tigercat site showcased their CTL product offerings including the full line 1045B, 1055B and 1075B forwarders. The H09 wheeled harvester and LH845C track harvester with Kesla harvesting attachment on display illustrated how customers can have both a wheeled and track alternative for the world's different harvesting markets. [www.tigercat.com](http://www.tigercat.com)

### **Timbear**

The Elmia Show saw the introduction of the new Timbear Lightlogg C crawler combi machine designed for minimal site impact forwarding in the worst of soft ground conditions.

According to Lennart Jansson, Managing Director of Timbear AB, the new combi machine can go from professional thinning harvester to professional forwarder in approximately 30 minutes.

The forwarder version of the Lightlogg C has two separate load carriers, each with a 2.2 cubic metre load area with recommended capacity of 5 tonnes. In total, this is equivalent to a conventional 10 tonne forwarder with a 4.4 cubic metre load area.



To achieve a large, stable ground contact surface, the Lightlogg C has driven tracks with a generous 23.5” width. All the bogies have the same design with separate hydraulic operation. [www.timbear.se](http://www.timbear.se)

### **Vimek**

Vimek took the opportunity of the 2009 Elmia Show to introduce their new Vimek 160 harvesting head, which is used for the extraction, loading and unloading of biofuel. The head can also be fitted with an accumulator for multi-stem processing and a weigh system for direct, reliable weighing of the biofuel. It was mounted on the Vimek 606 BioCombi.

The Vimek 606 TT can thin out forest without needing any branch roads since it is only 180 cm wide. With its modest width, a ground clearance of 400 mm and weighing just 2860 kg including the crane, the 606 is a highly flexible yet gentle machine which leaves minimum marks, even in difficult terrain.

The 606 TT is a lightweight machine for heavyweight jobs. In relation to its own weight, it can transport as much as three tons. The 4.5 m long crane has a wide range of uses. Moreover, it can be fitted with a radio-controlled hydraulic winch, making it the perfect machine when the wood is hard to get at. [www.vimek.com](http://www.vimek.com)

### **Waratah**

The new Waratah H414 harvesting head, specially designed for mid-sized wheeled harvesters and track machines, was shown for the first time this year. At only 2,205 lb., it features an excellent power to weight ratio and a compact size. This makes it highly maneuverable even in dense thinning stands as well as in early regeneration.

Features include four wheel drive feed with four hydraulic feed motors, four moving and two fixed delimiting arms, new feed roller arms with more durable bearings, built-in feed guard rollers and well protected hose routings.

A SuperCut 100 saw unit allows a maximum felling diameter of 24.4” and results in superb performance from early thinnings to early regeneration felling. The automatic chain lubrication and tensioning improves the H4514’s cutting performance and reduces maintenance time. [www.waratah.net](http://www.waratah.net)

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