

## Press Release

Elmia AB  
November 2012



World premiere at Elmia Wood 2013:

## Small machine with a big attachment – the solution to mechanical clearing?

There's long been talk about doing mechanised clearing in the forest but so far little has actually been achieved. At Elmia Wood 2013 one solution to this impasse will be presented: a large clearing head on a small base machine.

"The worse the conditions, the better the concept works," says its design engineer Johan Dagman, who will prove his point at the fair.



Dagman is responsible for creating the remote-controlled Ebeaver, which was presented at SkogsElmia 2011. He is himself a forest contractor and originally developed the machine to harvest energy forest, the job his company was doing at the time.

"At the fair I was asked many times if the machine could also be used for clearing," Johan says. He decided that developing the Ebeaver to also function as a remote-controlled clearing machine was a good homework assignment.

The prototype is now operating in the forest outside Karlsborg in central Sweden. Externally the Ebeaver looks the same as before but at the end of the crane is a well-proven clearing head from Mense in Finland. This head normally sits on bigger harvesters.

### Big gains possible

"A 15-tonne base machine can't be used in boggy patches to clear dense vegetation. But those areas are exactly where mechanisation can provide big gains," Johan explains.

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He says it takes five to six times longer to clear this type of ground manually compared with clearing on firm ground. In good conditions, workers with hand-held brushcutters are still more efficient than machines.

The solution, then, should be a lightweight base machine with sufficiently powerful hydraulics to operate a larger clearing head. That's why the development work is focused on fine-tuning the hydraulics of the Ebeaver and doing the same thing with the clearing head in order to reduce the power losses.

### **Powerful hydraulics**

"We now have a hydraulic pump which gives 240 bars of pressure and 96 litres a minute," Johan reveals.

Also important is that the machine must be easy to move. The new Ebeaver with the clearing head has a total weight of 2,400 kg and is transported on a trailer pulled by a Japanese pickup truck, the preferred vehicle of forest contractors.

Some development work still remains to be done before the clearing Ebeaver makes its world debut at Elmia Wood in the beginning of June 2013. But Johan and his colleagues are so far along that the prototype is already being tested with good results.

The project is being followed with great interest by the big owners of the Swedish electricity supply network: Eon, Vattenfall, Fortum and Svenska Kraftnät. They see a way to save time and money on their regular clearing of power line corridors.

"It should also be possible to cut the cost of doing strip clearing in forests," Johan adds.

### **Better working environment**

In his own operations as a contractor, though, Johan believes another effect is even more important: the working environment. Clearing boggy ground is physically demanding and time consuming. With an Ebeaver to do the most demanding clearing, operators get a better working environment and can alternate between manual clearing and operating the machine.

"We must mechanise the work to keep people healthy and attract new workers," Johan says.

That's why he'll be at Elmia Wood 5–8 June 2013 to present one possible solution to the clearing problem.

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## Pictures and captions:



*rojning\_ebeaver\_1.jpg*

The small, radio-controlled Ebeaver base machine with fine-tuned hydraulics can handle a clearing head designed for harvesters.



*rojning\_ebeaver\_2.jpg*

“The big benefit is mechanising the clearing of boggy patches and other difficult spots,” says Johan Dagman.



*rojning\_ebeaver\_3.jpg*

When thin stems grow as tightly packed as reeds, mechanised clearing is the far superior method.

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*rojning\_ebeaver\_4.jpg*

The machine, crane and clearing head are radio controlled. Without an operator on board, the machine can cross softer ground.

### **Elmia Wood 5 – 8 June 2013**

Elmia Wood – The world's largest in-woods International Forestry Fair

Full-scale forestry operations are Elmia Wood's hallmark and it is this live action that draws crowds from around the world. Exhibitors at Elmia Wood demonstrate technology and know-how for the entire forest lifecycle. Next event 5-8 June 2013. [www.elmiawood.com](http://www.elmiawood.com)

### **Elmia's forestry fairs**

Elmia Wood	5–8 June 2013
SkogsElmia	4–6 June 2015
Elmia Wood	7–10 June 2017

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