

# Valtra Team

Valtra Customer Magazine • 2/2008

## DIRECT & VERSU

– the most modern tractor models on the market

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Valtra team support the Air Ambulance

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**Power and comfort**  
– brand-new **S Series**

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# POWER *of* CHOICE

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With farm incomes improving I suppose it was inevitable that hard pressed farmers would, very quickly, be hit with increases in input costs. This has certainly been the case with fuel and oil based products such as fertilisers and while the cost of a barrel of crude oil may be dropping back a bit, the incentive is still there to look carefully at operating practices and fuel economy. Knocking 10% and more of any farm's fuel bill has got to be worthwhile.

So what can be done?

First there is a very simple step; make sure your fuel is stored properly. Most people tend to start looking for savings from the tractor but, if you're putting contaminated fuel into the tank then all your good intentions will be wasted. Keeping machinery regularly serviced is another cost effective move. Not just the scheduled service intervals for oil and filter changes but the little things. It really is worthwhile making sure pre-cleaners are clean and not choked with chaff or dust. The same goes for radiators and coolers - keep them clean. Cooling efficiency drops quickly if chaff gets caught in the fins and once the fan kicks in, it too consumes energy in the form of expensive fuel. And remember, if you're not using it turn it off. How many tractors and trucks are left ticking over with no one in the cab or the driver on the phone?

Then there is air conditioning; make up your mind, do you want open windows? It's no good trying to reverse global warming by running air con with the windows open. You won't win and it simply uses more fuel, adding to your costs.

Is the tractor properly set up for the job in hand? You may have required all that ballast for ploughing and cultivating but do you need it now for fertilizer spreading or putting out silage for livestock? Half a tonne of unnecessary ballast takes energy to move even if it is bolted to the front of the tractor. Is the implement set correctly? A cultivator causing the tractor to crab, even a little, will gobble fuel unnecessarily. Time taken to set up machinery prop-

erly it time well spent and it will reduce wear and tear too. Are tyre pressures correct for the job in hand? A pressure gauge is not the most expensive piece of kit and its not just tractors that have tyres. When was the last time you checked trailer tyre pressures – do you know what they should be? Soft tyres increase rolling resistance and consume fuel. Over inflate and the footprint reduces, causing the tyre to sink, again increasing rolling resistance or accelerating wear. And talking of trailers, are the brakes effective? Not just for safety, if they're binding or don't come on or off efficiently then its more fuel wasted.

Many of these are minor niggles and some will say we're talking about saving only an egg cup of fuel here and there. Yes, each individual change in habit may only save a few litres but they all add up, and by the time the year is over, careful operation of just one tractor will have saved a worthwhile amount. And how many engine driven machines do you have?

Then there is the type of tractor you drive. Valtra (and Valmet before them) have a reputation for fuel economy. However, in recent years we've taken this one leap further with the introduction of the six cylinder T151e and four cylinder N111e. These tractors with selectable EcoPower really will help you save fuel as operators willingly attest. In EcoPower mode, maximum power is produced at just 1,800 engine rpm (instead of the more usual 2,200rpm) and maximum torque comes in several hundred revs lower. Standard laboratory tests show a fuel saving of 10% but we all know that in practice lab tests are only a guide. Operators tell us they are saving between 10 and 50% depending on the operation. Additionally EcoPower tractors offer a bonus of extended periods between services – cutting costs further – while reduced noise reduces driving fatigue.

Valtra EcoPower really is the sensible way forward; give us or your Valtra dealer a call to arrange a demonstration.

## Valtra Team

Valtra Customer Magazine

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On pictures: All Valtra dealers in the Western Region took part in the appeal.



# Valtra team support the Air Ambulance **Ride For Life**



The Valtra team hand over a cheque for £5,180.00 – and there was more to come. Left to right Paula Hichens, General Manager of the Cornwall Air Ambulance Trust, Alan Sanderson, Glenn Northcott, Dave Jefferson, Paramedic Mick McLacghlan and Gareth Jones.





**Last summer Glenn Northcott, a salesman at Valtra dealer Christian Smith of Liskeard, Cornwall had very good reason to be thankful for the Cornwall Air Ambulance service following a particularly bad motor accident.**

A year on Glenn Northcott is still recovering and Valtra Western Area Manager, Alan Sanderson, decided it would be good to do something to support the organisation that saved Glenn's life. Although paramedics are supplied by the ambulance service the helicopters used as air ambulances are kept flying thanks to voluntary donations. Valtra dealers operate mostly in country areas, far from hospitals and no matter how careful one is accidents of all types are a distinct possibility, there's always outside influences over which we have no control. Most certainly a major factor in saving Glenn's life so why not make the air ambulance the beneficiary of a fund raising exercise.

After a bit of a brain-storming the western area team, Alan, realised a run round all Western Region dealers would be exactly 999 miles – 999 being the phone number of all emergency services in the UK. Alan, Dave Jefferson and Gareth Jones approached their 20 dealers to raise funds and in July Alan, a keen motorcyclist commenced his ride which included



**Alan's route – exactly 999 miles**

AGCO's European HQ on his BMW 650 cc Dakar bike. Starting in the South near Alan's home in Wiltshire the route, roughly triangular, moved north up to Cheshire and then South and West finishing up at Christian Smith's premises in Cornwall before going on to the Air Ambulance base at St Mawgan for the presentation of a cheque for over £5,000.00.

■ Roger Thomas



**At AGCO HQ Alan receives a cheque from Andy Miller.**



## European agriculture needs:

# Innovations, investments, competitiveness

## An interview with Giacomo Ballari, President of the European

**According to Giacomo Ballari, an Italian agricultural entrepreneur and President of the European Council of Young Farmers (CEJA), increasing the amount of interaction between consumers and producers is vital for the future of the industry. He believes that producers should pay more attention to marketing their products and focus on the consumer at the other end of the chain.**

He also believes that European agriculture needs more innovations and specialisation. He would like the EU to reform its common agricultural policy (CAP) and system of subsidies. In particular, he wants to see them support innovation-based agriculture instead of production-based agriculture. Building the future is impossible if young farmers are forced to start up by buying their own right of production.

### **How do you see the future of European agriculture?**

It is becoming increasingly obvious that agriculture is vital for the future development of a sustainable economy and society. The food crisis, the necessity to fight climate change, the development of renewable energy and sustainability are key issues for European society. Agriculture is one of the most important partners for these challenges. Developing a young, innovative, sustainable and competitive agricultural sector is

becoming a strong objective for Europe and elsewhere.

European agriculture and farmers have more opportunities now to develop and create stronger competitiveness on the condition that they invest more in innovation and the diversification of their activities and production. It will also depend on their capacity to develop a strong strategy to sell their products on the market and the capacity of the European institutions to develop a policy that is able to support competitiveness, innovation and transparency in the internal and global market.

### **What concrete actions do you feel young European farmers must take in order to develop their profession, the agricultural business and European agricultural on the whole?**

First of all, it is very important to provide them with more opportunities to receive training and

expertise in order to develop a real entrepreneurial culture. Secondly, in terms of innovation, it is very important to strengthen the link between agriculture and research. Research results should be made more available for young farmers.

I also feel that it is important to offer young farmers from all over Europe a set of tools to help them develop their business plan, including start-up and innovation support, tax breaks during the start-up period, advisory services and financial instruments.

At CEJA we strongly believe that reforming European agriculture will not be possible without a completely new and innovation-oriented CAP. We cannot invest in the future when direct payments are linked to production. It is certainly not possible to invest in the future with a system where the young farmer needs to invest more money for buying his or her right of production.

### **As President of the European Council of Young Farmers you are helping to build European agriculture. What visions do young farmers have for developing the industry?**

Tremendous efforts were made throughout 2006 by Young Farmer organisations across Europe to construct a vision of what a successful model of farming could look like after 2013. The results of this intensive grassroots consultation were presented to the European Commissioner for Agriculture and Rural Development Mariann Fischer Boel on European Young Farmer's Day on 17 April 2007. In general, the survey results show that all issues that were raised in the consultation are important for young farmers, so it is difficult to indicate clear preferences. However, some of the issues seemed especially important, such as competitiveness in local markets linked to quality production. At the same time, we can see that the need to achieve competitiveness in global markets is increasingly becoming a priority.



# ess and sustainable development

## Council of Young Farmers

Innovation and the development of new products are also among the issues young farmers care most about. Furthermore, there is a strong need to retain the concept of multi-functionality in farming after 2013. Environmental protection, the preservation of biodiversity and professional management of rural areas also play an important role in the European model of agriculture chosen by young farmers.

When asked to identify the tools they consider necessary in order to arrive at a well-functioning European model of agriculture after 2013, young farmers consider start-up aid and investment in their long-term business projects to be vitally important. Equally important are risk management tools. A strong focus is also placed on training and advisory services, including exchange programmes for young farmers. Support for diversification as well as payment for environmental services is ranked between very important and important. In this context, even though young farmers still see themselves mainly as producers of food, the idea of a farmer as a provider of public goods and services is becoming increasingly important.

**The EU currently has 27 Member States, and the EU's common agricultural policy applies to many different climate conditions. The members of CEJA include**

### **young farmers from both Northern and Southern Europe. What solutions can you offer for such climatic challenges?**

The situation regarding climate change is very different from one part of Europe to the other. For young farmers in the North it is perceived more as a positive phenomenon due to the anticipated increase in production yields, while in the South the situation is more worrying, mainly due to water issues.

Once again I think more investments in innovation and more research for adaptation to the new climatic situations are part of the solution. However, there are some situations where new technologies and appropriate farming practices cannot solve all the problems. Young farmers are calling for a European framework for risk management and risk insurance to protect their business.

Finally, at CEJA we consider agriculture and young farmers as part of the solution to fight climate change. The carbon capture through their activities, the production and use of agro-energies, encouraging the consumption local products and avoiding transports over long distances are some of the roles young farmers want to play to address the new climatic challenges.

■ Ville Porkola



**Giacomo Ballari, President of the European Council of Young Farmers**

Giacomo Ballari is President of the European Council of Young Farmers (Le Conseil Européen des Jeunes Agriculteurs – CEJA). He was appointed to this position for his second two-year term in April 2007. CEJA was founded fifty years ago and includes 27 organisations from 21 EU Member States. In total, CEJA represents more than one million young farmers in Europe.

Giacomo Ballari has been an agricultural entrepreneur since 1998. His farm is situated in Cuneo in Northern Italy. In recent years he has developed his farming operations considerably. The farm has been diversified and expanded, and its main product now is honey. The farm has over 400 beehives. In addition, some of the farm's fields have switched from grain production to fruits and vegetables. Giacomo Ballari has also focused on marketing his produce. He has helped developed a regional direct sales organisation that now includes over 100 agricultural entrepreneurs. The aim of this co-operation has been to bring the needs of consumers and agricultural entrepreneurs closer together.

### **CEJA – the European Council of Young Farmers**

The European Council of Young Farmers (Le Conseil Européen des Jeunes Agriculteurs – CEJA) was founded in Rome fifty years ago as a training and information organisation for young farmers and future agricultural leaders and to promote the development of agriculture and rural regions in Europe.

CEJA maintains active contact with EU institutions and European decision-makers. The most visible form of CEJA's activities is

the organisation of annual seminars in which the future outlook and challenges for young farmers are discussed. At these seminars representatives of associations of young farmers have the opportunity to discuss the development of the EU's agricultural policy and other issues directly with representatives of the European Commission and European Parliament. These seminars also allow young farmers to network and share experiences.

# Fuel consumption cut with Valtra

**Just off the A9 between Perth and Inverness is the Alvie Estate. Owned by the Williamson family, this 13,000 acre highly diversified holding includes some conventional farming, grouse moors and deer stalking, a fish farm, soft fruit, commercial forestry with saw mill, quad bike trails, an equestrian centre, a quarry producing pink granite and a caravan site. The farm which carries 110 suckler cows plus a small pedigree shorthorn herd and getting on for 1,000 head of Scottish Blackface Sheep is run by Victor Watson**

Grazing for the cattle and sheep is a mixture of moorland and improved pasture with the latter providing silage and perhaps a little hay for winter feed. Converted to Valtra by dealer Alistair Young several years ago – not a move I regret – Victor Watson and tractor driver Fraser Christie undertake some of the silage work such as mowing themselves but the bulk of the job is undertaken by a contractor – also a Valtra user. Fraser also sees to the reseed-ing of pastures, fertiliser spreading and other grassland maintenance work himself. The tractor is also used for a number of operations out on the moors and in winter loads, mixes and distributed fodder through a diet feeder.

The farm's first Valtra was a 6300.  
– It was a good reliable machine but when we added supplying wood chips to various organisations for heating to our list of enterprises the 6300 struggled with the chipper.

Today Alvie Estates supplies chips to a number of organisations for central heating fuel.

– Our customers include Schools, homes for the elderly, Scottish National Heritage buildings and of course the main Alvie Estate house at Kinraig near Kingussie. The house used to consume 57,000 litres of oil which today would have cost over £35,000. Wood chips at 30 % moisture have cost us £9,868 for the twelve months ending August this year – a saving of £25,472.00.

And its not just heating that is reducing Alvie Estate's fuel bills. Since September 2007 Victor Watson has been running a Valtra N111e.

– The 6300 had clocked up quite a few hours so we looked for alternatives – the four cylinder N111e looked like a good bet – following the excellent reliability of the 6300 we wanted to stay with Valtra – we get good service from Alistair Young Engineering.

At 124 hp the N111e handles the chipper and other farm equipment easily and since the arrival of the N111e fuel use has dropped to below 8.8 litres/hr across the board.



**Alvie Estate's Farm Manager Victor Watson, driver Fraser Christie and Valtra dealer Alistair Young are all pleased with the N111e reliability and low fuel use.**

– Since being delivered 11 months ago its clocked up 1,300 hours which is a lot for this type of farm – its difficult to be specific what we use where, because changes in the weather will mean a change in operation.

The exception to this has been delivery of chips to a school some distance away.

– We know that in power mode with a large trailer at 50 km/hr consumption is a little under 9.5 litres/hr which given the terrain is good.

Further down the Spey Valley near Nethy Bridge contractor John Kirk, another convert to Valtra, has seven four cylinder models in his fleet. John's operations are mostly limited to farms along the river valley.

– There's not much up on the top except moorland, and few roads cross over into the next valley.

As a result road work takes up much of the time and John's latest tractors have been specified with 50 km/h transmissions and front suspension.

– With the 6550 we used to work on 4½ miles to the gallon with a heavily loaded trailer. Since we've been using N Series tractors consumption has dropped and its now around 6 miles per gallon.



**Alvie Estates provide chips to cost conscious customers along the Spey Valley.**



## Farmers interested in farm management

# From sitting behind the wheel of a tractor to sitting behind a desk



**Farm management is all about setting goals and working towards them. Farmers today often spend more time behind their computer than behind the wheel of their tractor.**

***The manager of a growing farm is not necessarily at his most productive when shovelling manure. He can achieve a lot more by making wise purchasing decisions, leasing fields, selecting good contractors, training farmhands, negotiating prices and planning the long-term future of the farm. Although few farms grow so large that the farmer can transfer full time to a desk job, administrative work takes time away from practical work on nearly all farms.***

– The big difference is whether the farm should produce bulk products or specialise. For bulk production, the focus should be on expanding production and cutting costs. Specialised farms, on the other hand, should focus on improving quality and increasing the degree of added value while seeking out savings through further

**John Sumelius, Professor of Production Economics and Farm Management.**



specialisation, says John Sumelius, Professor of Production Economics and Farm Management at the University of Helsinki.

Farm management is all about setting goals and making decisions. First the farmer must decide the direction in which he wants his farm to develop. Is it preferable to expand, diversify, specialise, change production direction, maintain the existing one or perhaps even end operations in a controlled manner? He should then set realistic goals regarding his resources, customer wishes, his own expertise and anticipated social changes.

Once the goals have been set, there has to be ways of measuring them. Traditionally farms have been good at measuring finances and production amounts, but other factors, such as customer satisfaction, expertise and environmental considerations, are often overlooked.

– The importance of environmental issues and animal welfare is growing all the time. Naturally, machinery and other costs also have to be measured. Perhaps the hardest thing is assessing agricultural policies and producer prices, Sumelius admits.

Having decided upon a direction, the farmer has to stick to it. Achieving the goal might mean making investments and undergoing training, for example. It is also important to stay focused on the goal when making all the small daily decisions. Other considerations include the form of incorporation for the business and whether the financial management is precise enough in relation to the scope of operations.

At the same time, it is important to remain flexible, as conditions can change fast. In particular, weather is a factor that farmers cannot influence, although they can prepare in advance.

Farms are often family companies, so long-term planning involves special considerations, such as inheritance and transferring the farm to the next generation. Since family farms are so dependent on the wellbeing of family members, time must also be devoted to recreation, health and financial risks. If the farm has hired help, leadership skills should also be developed and improved.

■ Tommi Pitenius

### **From a family farm to a farming company**

- Set clear goals for the farm
- Consider ways of achieving these goals
- Monitor your progress
- Focus on financial management, accounting and financing
- Be decisive in achieving your goals
- Constantly reassess the situation
- Change your methods or goals as needed

## Up-to-date silviculture in the private forests of Bavaria

# Bavarian Silviculture Centre attracts students among forest owners

**Private forests in Bavaria comprise 54 percent of the total forest area. Bavaria's private forests are generally small and cared for by their owners.**

Forest owners are supported by a forestry union, which can help market small quantities of wood, for example. Membership is voluntary. Private forests also receive support from the Bavarian Forestry Administration, which promotes private forests in the interest of public welfare by providing forest owners with free consultation, educating them and funding certain projects. This motto for this state support is "helping you to help yourself".

### Working with nature

The aim is to develop a comprehensive way of managing forests that is in tune with nature. Forest owners utilise naturally occurring processes and only intervene as and when they deem it necessary to achieve their operation goals.

All this is to ensure sustainably managed, stable forests comprising tree species suited to the site. Natural regeneration wherever possible is considered important. Planting is only recommended in the event of a disaster or a change in tree species. Up-to-date maintenance and thinning relative to the tree species, as well as long-term regeneration procedures without deforestation, are also focused on.

Protecting both human welfare and the environment is also important. Great emphasis is also placed on complying with recognised occupational health and safety standards when working with forests. Guidelines on the protection of nature and the ground must also be adhered to, for example by establishing tracks for transporting timber.

These standards can also be found in the PEFC forest certification regulations. At present, three quarters of Bavaria's forests are certified to PEFC standards.

### Further training for forest owners

The Bavarian Silviculture Centre in Kelheim, Germany uses training opportunities to promote the aforementioned principles among forest owners. The centre is unique in Germany, as the Bavarian Forestry Administration, forest owner associations and silviculture unions all manage the training facility in unison on behalf of all forest owners in Bavaria.

The silviculture courses teach the main skills required for managing forests. The various needs of individual tree species and their appropriate management are of considerable importance in light of climate change.

The more technical forestry courses teach skills necessary for practical forest work, such as the proper and safe handling of the machinery, devices and tools most commonly used in private forests. The main focus is on



**Chainsaws, tractors and hoisting winches are the most important pieces of equipment in private forests.**

handling chainsaws, tractors, hoisting winches and increasingly also logging trailers.

### A school where everyone enjoys learning

The number of participants has more than doubled over the last four years, rising from 750 to 1800. These figures prove that the Bavarian Silviculture Centre has indeed received the forest owners' seal of approval.

Source: Bavarian Silviculture Centre in Kelheim, Germany

■ Astrid Zollikofer

## Valtra tractors ideal for forest work


Approximately 10 percent of Valtra tractors registered in Germany are equipped for forest use, and they are used to perform a wide variety of tasks. Some are equipped with cranes or logging trailers and hoisting winch combinations, making them the ideal choice for forestry work. Tractors equipped to pull entire trees are also common.

Valtra tractors are particularly well suited to forestry work. The robust front axle and chassis, plus the smooth underside, make them the best choice for heavy-duty forestry work. Many special forest options are available directly from the factory, including a forest cab, TwinTrac reverse drive system and forest tyres. The optional factory-fitted Jake frame enables the extensive use of three-point hydraulics at the rear without having to install the crane. The well-known general reliability and easy maintenance of Valtra tractors are key factors that steer customers towards choosing them for forestry work.

■ Astrid Zollikofer

**Valtra Vertriebs GmbH supports the Bavarian Silviculture Centre in its quest for further education. On 26 May 2008 company representatives delivered a new forest tractor to be used on loan during the training courses. From left to right: Franz Lechner, Josef Wiedemann, Robert Thees, Sepp Spann, Manfred Schwarzfischer, Andreas Meister.**





*Jump in and drive. Controlling the high-performance and versatile transmission has been made easier than ever.*

# State-of-the-art transmission technology that is simple to use

## Direct and Versu models added to the N and T Series

*Valtra is introducing the most modern transmissions on the market in the N and T Series. The new Direct models feature a continuously variable transmission, while the Versu models feature a multi-step transmission with powershift. The new models expand the already comprehensive line-up of N and T Series tractors.*

Valtra's Versu and Direct models illustrate how state-of-the-art technology can also be sim-

ple to use. There is no gear lever in the already spacious cab. Gears are shifted on the intelligent multi-step powershift transmission using three buttons ergonomically situated on the driver's armrest. With the CVT transmission, the driver selects the speed range using a lever, the speed using the gas pedal and the direction using his or her left arm. Driving a tractor does not get any easier than this!

Valtra's traditional features have also been further refined and many additional features add-





## Unique features on the new Versu and Direct models

- Same speed and efficiency whether working forwards or in reverse
- Transmission and hydraulics can withstand extreme cold conditions
- Ground speed PTO for heavy forest, peat, limestone and transport work
- Hydraulic output up to 151 l/min even on the smallest models
- Fuel-efficient T162e Versu model with EcoPower engine
- Hydraulics assistant increases output, for example in front-loader work
- Extremely high levels of torque from low rpm; creeper gears also available
- Hydraulic and transmission oils separate – prevents oil from getting dirty



*The cabs on the Versu and Direct models are extremely spacious, as there are no gear levers. The rear side window can also be opened*

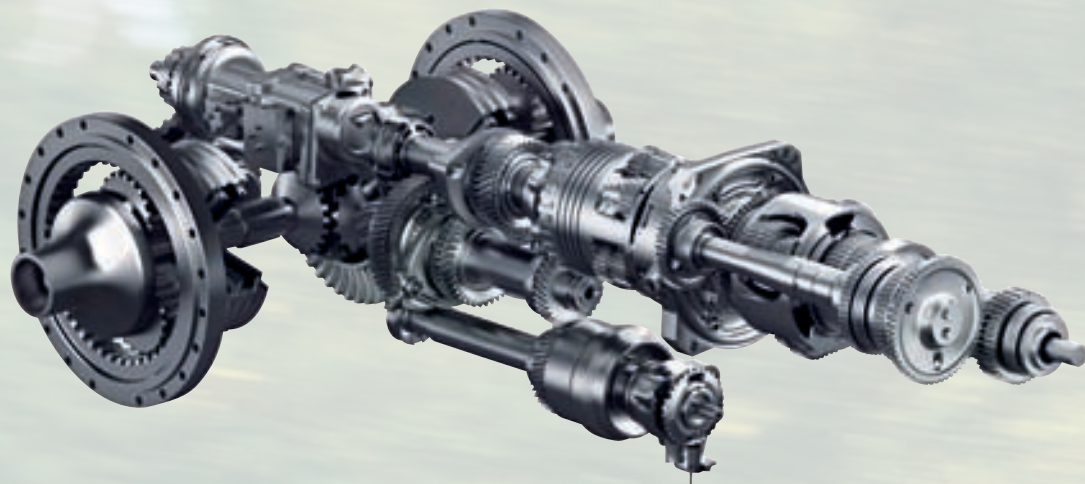
ed on the new tractor models. Both Versu and Direct models are as fast working in reverse using their TwinTrac reverse-drive systems as they are working forwards. The Versu and Direct models can also be operated in extreme cold conditions, since their transmissions are fully disengaged from the engine during start-up, and a heat exchange has been added between the hydraulic and transmission oils.

Both new models are available with ground speed PTO, which opens up new opportunities for forestry, peat, lime and transport contractors. The Versu model also offers creeper speeds for when maximum pulling speed is required at low speeds. A 50-km/h transmission and fuel-conserving EcoSpeed function are naturally still available.

### **More power and especially torque**

The N122 model is powered by a AGCO Sisu Power (earlier Sisu Diesel) 44 CWA engine, the N142 model by a 49 CWA-4V engine, T132–T172 models by 66 CTA-4V engines and T182–T202 models by 74 CTA-4V engines. All these models have slightly more power and 5 to 17 percent more torque than their previous corresponding models. Torque rising has been increased considerably compared to the previous models. All Versu models are also available with transport boost for additional power on roads, while the biggest models have Sigma Power for heavy PTO work. The T162e Versu is a fuel-efficient EcoPower low-rpm model.

# DIRECT & VERSU



**The new transmissions were developed in-house by Valtra and are unique within the industry. The shuttle and rear axle feature tried and tested Valtra components. Servicing the hydrostatic unit is made easy by a panel on the side of the transmission.**

Valtra and Sisu Diesel have co-operated for over 50 years in developing transmissions and engines, which ensures that the main components work perfectly together.

The new tractors come with load-sensing hydraulics as standard, as on Valtra's Advance models. The normal output is 115 l/min, but a 151 l/min pump is available for demanding implement combinations. The hydraulic and transmission oils are separate to prevent dirty oil from damaging the hydrostatic unit. A heat exchange is located between the oils, allowing the transmission oil to heat up the cold hydraulic oil, which in turn cools the hot transmission oil.

Heavy-duty linkages and an industrial front axle with brakes are available for demanding

tasks. The HD linkages have a lifting capacity of 85 kN and are available on T182 and T202 models. The industrial front axle can be specified on both the N and T Series, and on the T Series it features two brake disks per side. The T Series is available with either a 50 kN front linkage or a 35 kN linkage. Either linkage can be fitted together with Aires front axle suspension, and the 35 kN linkage can also be fitted together with a front loader. When using a front loader, a hydraulics assistant automatically increases rpm to help loading work.

### **New generation of the T and N Series**

The new T and N Series Versu and Direct models can be most easily identified by their new engine covers and rear mudguards. The

new T Series also has a cast-iron frame and separate fuel tank, unlike the previous generation. The number 2 at the end of the model number refers to the second generation of the N and T Series.

The changes to the exterior are not just cosmetic. The new air vents improve engine cooling, while the new rear mudguards keep the entrance to the cab clean even in the muddiest conditions.

The upgraded cab allows drivers to work long days safely and comfortably. Without gear levers the cab is noticeably more spacious than before. The upper and lower side panels have also been redesigned to make them even more user friendly. Despite the efficient automatic air conditioning system, it is now possible to open also the side window.

### **An even wider range of tractors**

The new Versu and Direct models expand Valtra's range of tractor models. The N and T Series can still be specified as HiTech models with three powershift gears. The new transmission options offer customers the possibility to customise their tractors even more according to their specific needs.

Production of the new Versu models will be phased in during the first half of 2009, while production of Direct models will begin in the middle of 2009.

### **Versu and Direct models**

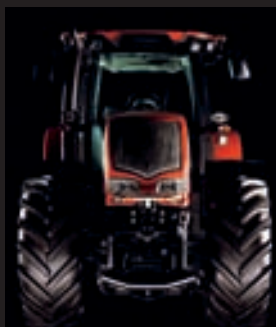
Model	Max. power hp (ISO 14396)	Max. torque Nm (ISO 14396)
<b>N122</b>	137	560
<b>N142</b>	152	600
<b>T132</b>	141	580
<b>T152</b>	156	630
<b>T162e</b>	159	675 (790 in ECO)
<b>T172</b>	177	715
<b>T182</b>	186	750
<b>T202</b>	200	800 Versu / 750 Direct

Valtra launches brand-new S Series

# Power and *comfort*



*Valtra is introducing a brand-new line of large S Series tractors offering contractors and professional farmers more power and comfort than any other tractor series. The new S Series offers five new cost-efficient models ranging from 270 to 370 horsepower.*



**The new S Series offers up to 370 horsepower, 1540 newton metres of torque and 17,500 kilos of pulling power, making it easy to control even the biggest and most complex implements.**



The new tractor series has been developed in close co-operation with Valtra's parent company AGCO. The heart and backbone of the new S Series are AGCO Sisu Power's (earlier Sisu Diesel) 8.4CTA-4V engine and AVT transmission (AGCO Variable Transmission).

The new S Series introduces advanced Selective Catalytic Reduction (SCR) engine technology for the first time to the agricultural machinery sector. SCR is a system originally developed for trucks whereby nitrogen oxide emissions are reduced by spraying the urea-based AdBlue additive into the exhaust gas stream.

By introducing this technology to its tractors, Valtra reinforces its position as a leader in environmental protection. The new S Series already complies with the Tier/Stage 3B emissions norms for 2011. The AdBlue consumption is approximately 3 percent of fuel consumption, so the 51-litre AdBlue container has to be filled every other time that the fuel tank is filled.

SCR technology offers many benefits to tractor users. It reduces fuel consumption by approximately 5 percent, allows power to be increased without a corresponding increase in the heat load, prolongs the life of lubrication oil and improves reliability. SCR technology is standard on the S352 model and optional on other S Series models, except for the S232 model.

The Agco Variable Transmission (AVT) represents proven technology that offers tractor users many ways to make their work more efficient. The driving speed and rpm can be adjusted using the gas pedal, a hand lever or advanced automation.

The S Series' pulling power, hydraulics and linkages makes it easy to control even the biggest and most complex implements. The rear linkage has a maximum lifting capacity of 11 tonnes and 7,5 tonnes at link ends over the entire length of travel. The front linkage has a lifting capacity of 5 tonnes and is also available with front axle suspension. The hydraulics offer an output of 175 l/min, 6 hydraulic blocks and a direct power beyond coupling. The tractor weighs 10,300 kilos, which can be increased to 14,320 kilos using additional weights or 17,640 kilos with double wheels.

Driving conditions in the completely new cab are superb. Visibility is excellent in all directions. The TwinTrac reverse-drive controls can be adjusted laterally, making working in reverse even more efficient. Cab suspension on all four corners softens bumps together with the front axle suspension. The controls are extremely straightforward and easy to use in true Valtra fashion. For example, the shut-

tle and handbrake are familiar from other Valtra models.

Adjustable QuickSteer power steering makes driving easy. Xenon working lights to the front, rear and sides also facilitate working in low light. A refrigerated compartment keeps snacks cold, and passengers sit comfortably and safely in a proper seat with a seatback.

Naturally, a wide range of options are available on the new S Series, including Isobus implement control, Auto-Guide automatic steering and even an air-conditioned driver's seat. Buyers get exactly the tractor they want.

Valtra's brand-new S Series replaces the old S Series. Production of the new S Series will begin in 2009.

### New S Series

	Max. power hp (ISO 14396)	Max. torque Nm (ISO 14396)
<b>S232</b>	270	1185
<b>S262</b>	295	1295
<b>S292</b>	320	1400
<b>S322</b>	350	1492
<b>S352</b>	370	1540



## Unique features on the new S Series

- Fuel-efficient and environmentally friendly SCR engine
- Four-point cab suspension and four-pillar cab
- Advanced and proven AVT transmission
- AGCO Sisu Power 8.4CTA-4V engine offering record levels of power and torque
- TwinTrac reverse-drive system
- Adjustable QuickSteer power steering

***Ari Eteläniemi, who runs an 80-hectare farm in Nivala, is not a typical farmer in that part of Western Finland. Ari cultivates his fields organically, without concentrated fertilisers or chemical pesticides. In addition to running his own farm, Ari also does a wide range of contracting work with his own machinery.***



# Organic success

Ari's farm is much bigger than the average 37 hectares in Finland. The average size of Finnish organic farms is also less than 40 hectares. He also finds times for other responsibilities. At the beginning of this year Ari Eteläniemi was appointed chairman of the regional organic farmers' association.

## **Keeping the machinery in good working order**

The machinery on Ari Eteläniemi's farm is in great shape. His exceptionally modern and efficient tractors and implements enable him to carry out his contracting work.

– The way I see it, even though contracting does not make much money, it allows me to keep my tractors in good working order, which in turn allows me to run my own farm efficiently. I only buy tractors for the needs of my own farm, but I use the same machinery for contracting. This system of carrying out all the tractor work on my own farm and other farms guarantees that my skills and working knowledge are kept up to scratch, Ari explains.

The main contracting tasks include ploughing, drilling, mulching, furrowing, harvesting and drying. Ari's tractors include a Valtra T120 from 2004 that has 3,000 hours on the clock, plus a 1985 Valmet 705 in great working condition that has worked 11,000 hours in the fields.

Last spring Ari acquired a three-metre Kongskilde seed drill, which has proven to be a good purchase, especially for contracting. Based on his two years of experience, Ari admits that he probably would have bought a less expensive seed drill for the needs of his organic farm alone.

Together the Kongskilde seed drill and Valtra T120 are a productive combination. The tractor has plenty of power and other properties for the seed drill, and the fuel efficiency is very good.

Ari has also recently purchased a 5.1-metre Sampo 3065 harvester. His other

machinery includes an Överum plough, a 4.5-metre Potila furrower, and a Danish KvikUp harrow.

## **Success in his own hands**

Organic farming relies on crop rotation. The Eteläniemi farm has a six-year rotation that begins with rye and rape, continues with two years of oats, and ends with two years of green manure. Around 1,500 cubic metres of manure is sourced from local cattle farms. Up to five tonnes of oats per hectare grow during the best seasons, evidence of Ari's expertise

***The "Valtra Team" of the Eteläniemi family (from left to right): Aarne, Niko, Juhani, Pekka, Urho and Ari himself harvesting winter rape.***







**Organic farmer Ari Eteläniemi also works on other farms. With the income he earns from contracting he can purchase large and modern machinery that can be used also on his own farm. Despite the varying seasons, the Eteläniemi farm has managed to harvest a good crop of winter rape.**

and the success of rotating crops despite the northerly location of the farm.

Although winter rape is usually grown further south, the Eteläniemi farm has had good success with this plant, harvesting over 1.5 tonnes. In 2006 a field of just over two hectares produced a record yield of 2,300 kilos.

Ari has built his own machine to plant the winter rape. He attached an old seed drill to a frame of his own design in order to seed more efficiently.

### Working together

Ari Eteläniemi is also participating in a national organic farm project that he hopes will develop into a forum for sharing knowledge, expertise and experience among organic farmers.

– Organic farming can only move forward if we openly discuss issues affecting us. It's important to remember that discussing good results does not mean bragging, and discussing bad results is not complaining. It's all about sharing information, Ari emphasises.

■ Visa Vilkkuna

# Organic products popular among responsible consumers

Organic farming has always been practised in the world. Only in the past hundred years have artificial fertilisers and various chemicals designed to fight diseases, weeds and pests created the split in agriculture that we now know.

These days we talk about regular farming, which involves chemicals and artificial fertilisers in the production process, and organic farming, which uses only natural substances and strives to recycle nutrients as efficiently as possible.

In a simplified way we can say that regular farming nurtures and fertilises plants. Organic farming is based on maintaining the condition of the soil and rotating crops. Plants can grow strong and healthy if soil that has been looked after.

The popularity of organic products has increased rapidly in recent years throughout the world. Nevertheless, even within Europe there are considerable differences between countries. For example, organic food accounts for around 10 percent of diets in Denmark, the leading organic country in Europe. In Finland, even though the popularity of organic food has increased by around 10 percent each year, it still represented just one percent of the Finnish diet in 2007.

There are also considerable differences between the popularity of organic foods among different food types. Grain and plant oil products are most popular, whereas poultry meat is at the other extreme. There is a natural explanation for this. The rules for organically farming plants and crops are simpler than those for animals. In addition, the difference in production costs between regularly farmed and organically farmed plants is not as high as for poultry. Even if organic farming was otherwise more attractive, the high cost is still a significant factor for farmers when making their decisions.

Research has shown that the reasons for purchasing organic food vary considerably between countries. Consumers of organic products in France prefer the better taste and cleanliness of the food. In Germany the wellbeing of animals and the ethical nature of the entire production chain also play a big role.

These differences are nuances, however, as the primary motive of consumers who buy organic products is to respect nature and supported sustainable farming practices.

■ Visa Vilkkuna

**Ari Eteläniemi finds the Valtra T120 to be the perfect general-purpose tractor for his organic farm. He uses it to efficiently handle both light and heavy work. Ari Eteläniemi is satisfied with Valtra tractors, as well as Valtra as a company.**



**Contractor Geoff Henwood specialises in hedge and verge maintenance and mulching of forestry brush, gorse, bracken and grass and his customers range over the spectrum from local authorities through farmers, building contractors to major and minor charities. To be competitive yet remain profitable he has to know what his machines cost to run and a couple of minutes spent in his company confirms that he does indeed know – exactly.**

Geoff Henwood currently runs a pair of Valtra 111e tractors with TwinTrac reverse drive.

– I wouldn't have entertained Valtra a few years ago. There were not many around and were a bit of an unknown quantity.

However, when Geoff's father Harvey developed a problem with his left leg, operating a mechanical clutch became difficult – and there's a lot of clutching when hedge and verge trimming.

– We had to find a suitable tractor with a very light clutch or Father would have to retire. Geoff looked around and came across Valtra HiTech machines with electronically controlled clutches.

– Valtra also seemed to be building a reputation for toughness and reliability. We had a demonstration and decided to buy a 6550 with TwinTrac.

After a rather dodgy start Harvey grew to appreciate the Valtra 6550 with its TwinTrac system.

– It was difficult at the beginning, he recalls.

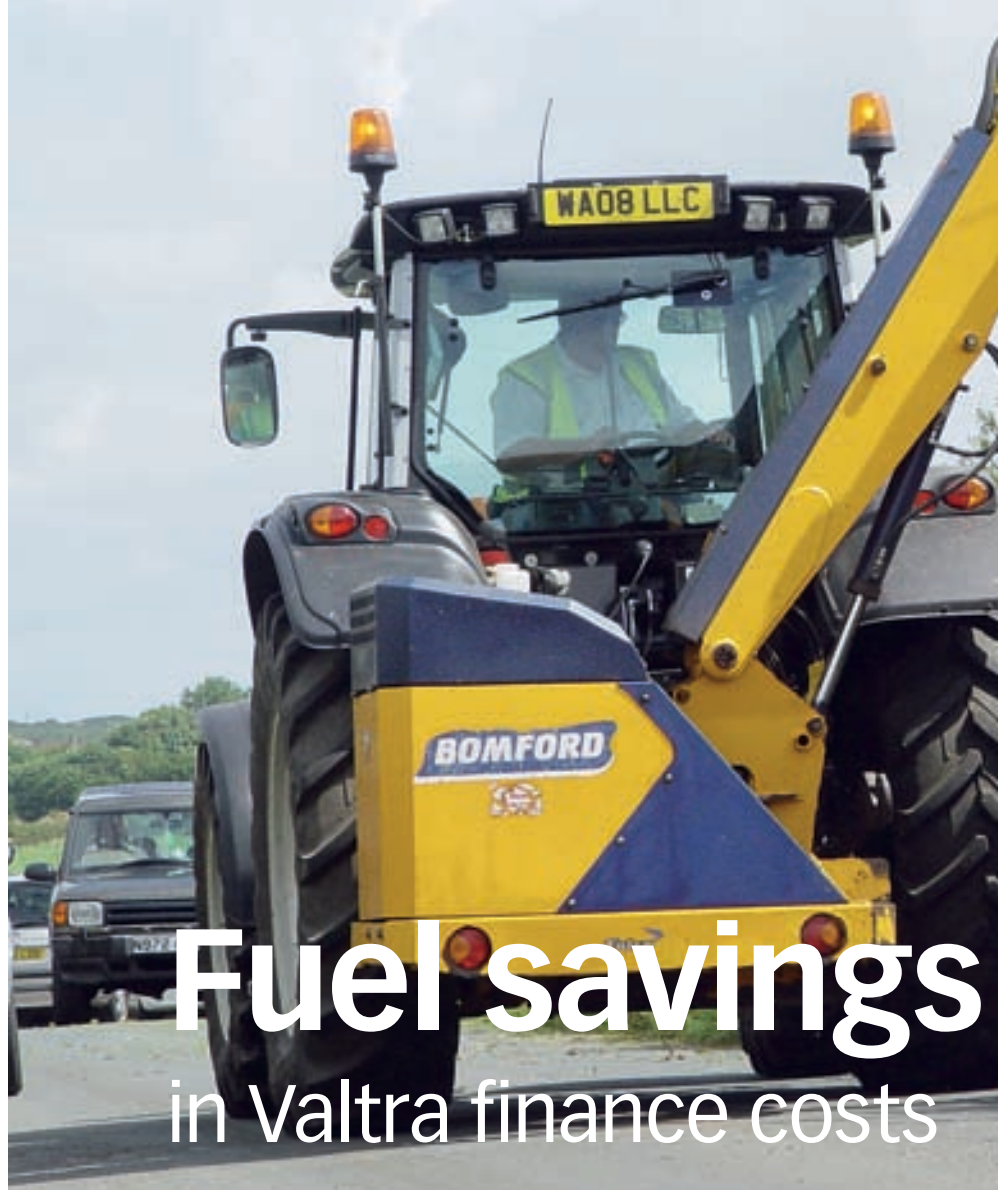
– But my son insisted I stay with it, saying the penny would drop – and he was right. One day it all fell into place and now I wouldn't go back to a standard tractor for hedge cutting or brush mulching. Working with TwinTrac is simply so much easier.

That was nearly four years ago and that tractor clocked up 5,500 hours over the three years it was in the business.

– Apart from scheduled servicing there was very little needed attention in that time – unlike the machine I was driving.

Clearly, it was time for Geoff to rethink his tractor policy.

After a demonstration earlier this year Geoff finally decided it was prudent to swap his two machines for a pair of Valtra N111e tractors. In Eco mode these produce 124 hp at just 1,800 rpm and 570 Nm of torque at



# Fuel savings in Valtra finance costs

1,200 rpm. Switch to power mode for speed and including transport boost output power increases to 133 hp at the more conventional 2,200 rpm with 540 Nm of torque.

– With Valtra's system of ordering we could spec the tractor up to what we wanted to produce the ideal tractor for the type of work we do.

**The EcoPower tractors have been with Geoff for several months now. How is he getting on?**

- Fabulous, is his answer.
- Dad's old 6550 and my previous tractor were using 10 litres of fuel per hour verge and hedge

**Geoff Henwood runs a large mulcher for forestry work and this model for operating in less demanding conditions. Operating with Valtra TwinTrac is comfortable and economical.**





*The compact N111 is ideal for narrow Cornish lanes busy with holiday traffic. Fuel consumption has been cut by up to 50 % on light jobs – 10 % on heavier work.*

# make a dent



**A filter on the tank is Geoff Henwood's starting point for fuel economy.**

trimming. Now, because the torque is so good we run at 1,100 engine rpm with a 1,000 rpm shaft and we've reduced fuel consumption to 5½ litres/hour.

And if you're sceptical just ask to see Geoff and Harvey's diaries.

– We log all our work details; what we're doing, where and who for, how many hours travelling and how many hours working, fuel, problems, servicing – everything. As a result it's very easy to calculate what the tractors and implements are costing and what we should be charging. With the two Valtras our costs have come down considerably – fuel consumption is down by 10 % on heavy jobs. On light work even more – up to a 50 % reduction, Geoff claims. And as a check monthly fuel orders and invoices are down, despite the work schedule remaining more or less constant.

– At the current work rate it's almost a buy-one-get-one-free scenario. The saving in fuel costs on the two tractors is about covering the finance repayments on one of the N111e tractors, Geoff reports.

■ Roger Thomas

## Valtra dealer best in Scotland

Valtra Dealer voted Scottish Farm Machinery Dealer of the Year by Scottish Farmer readers. Alistair Young Engineering Ltd, based at Dunphail to the south east of Inverness, is run by Alistair Young, son of the founder and is the Valtra dealership for a large tract of Northern Scotland. The sandy soil along the Moray Firth is home to farmers growing malting barley for the whisky distilling industry with other enterprises including cattle, sheep and, interestingly, pigs. Beyond the coastal strip and some of the fertile river valleys large estates with grouse shooting, deer stalking and forestry predominate.

It has always been the family's contention that selling high quality, reliable equipment supported by first class after-sales service, both at fair prices is the route to success in such a diversified rural region. After several years in business this simple formula has proved correct with a large number of the area's farms and estates running Valtra tractors. The Young's quality of service can be judged quite simply by customer reaction – farmers replace Valtra with Valtra. A second indicator comes from readers of the Scottish Farmer, it invites readers to nominate machinery dealers worth the accolade Farm Machinery Dealer of the Year. Alistair Young Engineering Ltd made it into the first three and then lifted the award at this year's Royal Highland Show.

– The first we knew what was going on was shortly before the presentation – it's a great boost for everyone that works here and we're proud of it – and thanks to our customers who thought enough of us to take the time and complete the nomination forms – and our staff who provide such a great service, comments Alistair Young.



**From left to right: Robert Logie, Scott Fraser, Fiona McLennan, Steve Ligertood, Alistair Young, Kevin Anderson, Steven Young**



*Ejvind Jensen has been in the Christmas tree business for many years, and in 2007 he and his employees harvested close to 80,000 trees. All of them are exported, primarily to France.*

# Christmas trees all year round

Christmas lasts a long time, and this is especially true to a forest contractor like Ejvind Jensen

*The landscape is rolling a little south of Limfjorden around 6 miles east of Skive in the northern part of Jutland in Denmark. Most people would describe the scenery as beautiful, and Ejvind Jensen, who has worked here for 27 years, nods yes when asked if likes being here. Together with his wife Inger Jensen he runs Wedelsborg, a farm with 10 hectares plus 10 hectares of rented land. Every hectare is planted with Christmas trees totalling approximately 130,000. Nevertheless, this is not enough to make them a decent living, so he also carries out forest contracting on the land of his 10 to 20 customers.*

– I have to have good machinery that can handle the tasks we have right from clearing the land to loading the trees onto the trucks that transport them around Europe, he explains.

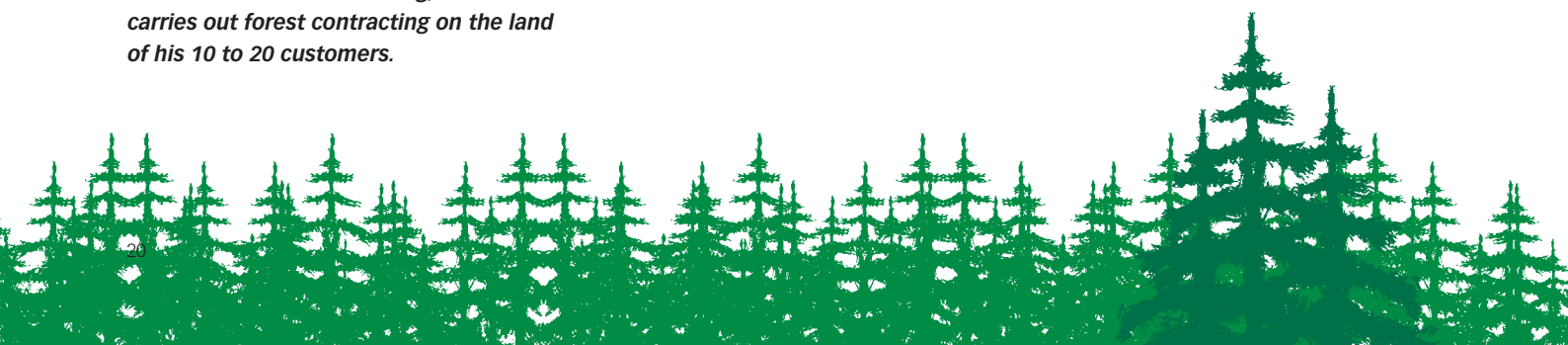
Although Christmas trees are harvested from the end of October to the middle of December, there is work to be done throughout the year. Two-thirds of Ejvind Jensen's working hours are spent working with the Christmas trees on his own land and those of his customers. He is assisted by one fulltime

employee and, in the high season, another 7 to 8 men.

## **Pleased with his new Valtra**

In June 2007, after careful research Ejvind Jensen decided to buy a brand new Valtra N141 Advance fitted with the TwinTrac reverse-drive system.

– It is absolutely important to me that I can ride in each direction in my tractor without doing more than just turning the drivers seat, he says.



Equipped with TwinTrac the Valtra has two permanent steering wheels and two sets of pedals in the cab for driving forward or backward. From the right armrest the driver can control the hydraulics and the transmission, making it very easy to change driving direction. It suits Ejvind Jensen perfectly that the Valtra has an engine from Sisu Diesel.

Ejvind is also very impressed by the torque of the engine. This counts a lot when there is hard work to be done, for example clearing up the soil in a former forest before planting Christmas trees.

### Made to his needs

When Ejvind Jensen chose to buy a Valtra N141 Advance a number of personal needs were discussed in advance with the local dealer Grundvad Maskinhandel.

– I ordered a transmission with creeper speeds, front PTO, front linkage, air compressor, suspended front axle and suspended cab, Ejvind Jensen tells.

The air compressor is used for cleaning the tractor and the implements, for pumping tires if a puncture occurs while working and other useful purposes.

– As the tractor is equipped with very hard tyres made for use in the forest, it is fantastic to have a suspended cab and front axle, he finds.

He also thinks that the operating of the tractor is close to perfect.

– Stepless transmissions are gaining market share, but I prefer the kind of transmission

that my new Valtra is fitted with. It fulfils my needs, he says.

### Christmas trees must have quality

Ejvind and Inger Jensen have been in the business for so many years that they are known to the professional growers.

– We have plenty of work to do from the moment we are phoned by a customer until we have cleared his land and until the day six to nine years later when we harvest and load his Christmas trees, Ejvind Jensen explains.

The two-year-old plants are bought by the customers themselves, and therefore they also decide the variety. Three main conditions play a role in the quality of Christmas trees. The first is the variety that is used, the second is the soil in which they are grown, and the third is the weather during the lifetime of the trees.

– This year we have been hit by late frost and drought. Both can in the worst case kill the trees, and this has in fact happened in some places here in 2008, Ejvind Jensen tells. In the springtime, when the trees have baby shoots, they are extremely sensitive to frosty weather.

In general quality is a bit hard to define for Christmas trees.

– Most producers do produce trees that are cut to look very uniform. But we don't do that because we think that a Christmas tree is a product of nature. Our purchaser also wants a natural product, and therefore we simply

avoid that the trees touch one another, which destroys them, Ejvind Jensen says.

### 80,000 trees packed in 2007

Denmark has around 22,000 hectares planted with Christmas trees out of a total of 2.7 million hectares of agricultural land. That makes an export of approximately 10 million trees a year.

Denmark has an excellent climate and soil for the production of quality trees and is therefore a rather important country in the international production of Christmas trees.

– We export to a large number of mainly European countries, and Eastern Europe looks like a new market for us, Ejvind Jensen points out.

Most of his trees are sold in France by his purchaser. Germany is another big and rather important market for the Danish trees.

Ejvind Jensen and his employees packed nearly 80,000 trees in 2007.

– Our packing machines ran at maximum capacity, he recalls. As he expects to do more trees here in 2008, he will buy a third packing machine for next season.

– This also means that our Valtra N141 Advance will become even more busy. I am looking forward to harvesting a lot of nice Christmas trees, Ejvind Jensen concludes.

■ Kim Pedersen

*Ejvind Jensen is very pleased with the interior and comfort of his new Valtra N141 Advance fitted with TwinTrac. There are two steering wheels in the cab – one in the front and one in the rear. Inger and Ejvind Jensen in front of their Valtra that was delivered in December 2007 just after the harvest season.*

*– After the short hectic period of harvesting, when I work approximately 100 hours a week, Inger and I go for a holiday in a country where people know how to relax, like India, Ejvind Jensen says.*



...from page 8.

– John’s team makes between 15,000 and 18,000 bales of silage annually much of it with a Fusion baler. I charge £3.50 to bale and wrap which I consider a fair price. This year I know the cost of fuel for each wrapped bale worked out at 22 p. On top of that there is the cost of plastic, machine, tractor, wages and of course, a little profit.

The newer tractors in this hard working team clock up some 1,500 tractor hours annually, easing off just a little as they become older. They’re changed at around 10,000 hours – that’s between eight and ten years.

– Valtra don’t get very fat from us, we do the regular servicing on schedule but that’s it – nothing much goes wrong with them otherwise.

This reliability factor is good from a work point of view – we’re not caught out by brake-downs and also for costing and billing – no nasty surprises.

A recent addition to John’s fleet is an N111e and Andrew the driver is very impressed.

– Lots of torque and quiet.

The torque is ideal for muck spreading. John runs a large custom built machine that weighs in at 15 tonne and comes complete with air brakes.

– After a road journey the load tends to bed down and starting up takes quite a bit of oomf from any tractor but the Valtra handles it with ease.

Quiet is something that may well be appreciated by local residents. Alongside normal farming operations; ploughing and reseed-ing, muck spreading, silage operations John undertakes just about anything else that is sensibly offered. This includes snow clearance



**Colin Petrie and driver Christopher know fuel use has dropped since the Valtra EcoPower tractors arrived.**

in supermarket car parks – early in the morning before customers arrive. Another contract involves bush clearing on local RSPB reserves. Both have residents that don’t take too kindly to a noisy awakening.

At the bottom end of the Spey Valley is farmer Colin Petrie whose holding extends to 600 acres of mostly sandy soil with a few acres of heavier loam. The farm grows spring malting barley, and peas and oats for feed – there is a beef suckler herd of 25 cows and 80 Scottish Blackface ewes. Colin also bed and breakfasts between 800 and 1,000 pigs on contract, the straw and muck a worthwhile addition to his light land.

Colin runs a couple of Valtras, a four cylinder N111e and a six cylinder T151. Recording the information from the T151s fuel meter has resulted in some interesting figures. Buckraking with an 8 ft push-off rake on the front linkage uses 12 litres/hr while rolling the pit, consumption is cut to half at 6 litres/hr. Both these jobs Colin does for neighbours.

– Its useful to know exactly what the machine is using – then I know what I should be charging and how much money I’m making.

Other regular operations include ploughing where fuel consumption varies considerably – 8.4 l/hr on light land up to 14 l/hr in the heavier fields.

– I do use a rather heavy Dowdeswell 4 furrow reversible plough – but it’s strong so there’s no down time.

Using the combination 4 m power harrow and drill, fuel consumption varies between 14 and 26 l/hr depending on land type. With the cost of fuel constantly rising over past months fuels bills have not reduced but Colin is convinced running his pair of EcoPower Valtras has reduced consumption. Certainly this is the case when the T151 is operated in Eco Mode for mowing. The high torque allows the 10 ft mower to run off a 540 PTO, even in a heavy crop and consumption is around 14 l/hr. Dung spreading is another operation where EcoPower comes into its own, the high torque making short work of the heavy loads at around 10 l/hr when spreading from a heap in the field. The N111e is a few years older and the specification does not include a meter but the engine’s high torque is often put to the test.

– Christopher uses the tractor loader to fill the wagon and then hitches up for mixing and feeding – previous tractors would not have coped.

So what does the T151 cost to run? In truth at ten months it’s too early to tell but it’s had no problems this far. And the tractor it replaced?

– That was an 8050 which we sold at six years with 7,500 hours on the clock – we only sold it to get a front linkage for the single pass system. In the six years we ran the tractor we never had a repair bill. When you get that kind of service from the tractor why change manufacturer?

■ Roger Thomas



**Contractor John Kirk runs seven four cylinder Valtras including an N111e. Drivers Gordon and Andrew appreciate the comfort during long hours.**

# Valmet's continuously variable H800

***The continuously variable VPS transmission is not the first of its kind in Valtra's history. Already in 1966 the Valmet 565 was introduced with a hydrostatic creeper gear that was later introduced on the Valmet 702 and 702S models in the mid-1970s. Creeping speeds were useful particularly on peat bogs. The first model to come with a complete hydrostatic transmission was the Valmet H800.***

In the mid-1980s Valmet's Tractor Group established a special project team to begin work on introducing a tractor concept that had been sourced from outside the company to serial production. This tractor was very interesting. It was articulated in the middle, and all four wheels were the same size. The cab was situated in the front half along with the engine.

Remarkably, the steering wheel, pedals and seat formed a pulpit that could be rotated 180-degrees from within the cab. This allowed the tractor to be driven just as easily in both directions. Accordingly, the loader was situ-

ated in the rear half, allowing the tractor to be used just like a wheel loader, since the chassis was articulated and visibility to the loader excellent.

The H800 was powered by a Valmet 411 DS turbocharged four-cylinder 4.4-litre engine that produced 110 horsepower (DIN). The transmission was fully hydrostatic. At the time, suppliers of hydraulic components began offering rotary piston engines situated at the wheel hub. The engine's displacement could also be varied. At low driving speeds a large displacement was used for each rotation of the wheel, whereas at high speeds the displacement was reduced, thus controlling the amounts of oil flow. There were three hydraulically selectable speed ranges, and the forward-reverse shuttle occurred by switching the direction of the flow. Naturally, the speed could be adjusted steplessly.

The H800 had separate pumps for both the front and rear axles. There were no mechanical transmission components between the engine and the wheels. Further

reinforcing the revolutionary nature of this tractor, it featured load-sensing hydraulics whose variable displacement pump had an output of 140 l/min. Four external hydraulic valves were standard.

The Valmet H800 was unveiled as a concept tractor at the SIMA exhibition in Paris in spring 1987 and received a lot of attention. Subsequently work continued on introducing it into serial production. Since most of the design work had been done by an outside project team, the documentation was incompatible with the factory's own methods, which caused difficulties. When the entire global tractor industry was hit by the depression in the early 1990s, Valmet was forced to abandon the H800 programme.

A single H800 has nevertheless carried out yard work outside the Suolahti factory for the past twenty years – proof that the concept does indeed work.

■ Hannu Niskanen



***The Valmet H800 was a truly advanced tractor. It produced 110 horsepower and its hydrostatic transmission had three speed ranges: 0–11, 0–17 and 0–30 km/h. The standard tyre size was 16.9-34. There was no mechanical PTO, but a hydraulic powered 540 or 1000 rpm PTO was optionally available at both the front and back. The tractor weighed 4,400 kilos, it had a wheelbase of 2,500 mm and its turning circle was 4,100 mm.***

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# VALTRA

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# Collection

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