

Valtra Team

CUSTOMER MAGAZINE 2 | 2013

+ Valtra supports
**Zero Grazing
Demands
Reliability**

page 10

+ Tier 4 Final technology
**Less emissions,
better fuel
economy**

page 12

+ Direct 2.0 models
**Satisfied
customers
throughout Europe**

page 16



NEW S SERIES

MORE POWER AND FEATURES

page 6

EDITORIAL



As we draw towards the beginning of 2014 I am pleased to announce several new additions to the Valtra line-up. The new S Series now runs from the S274 at 270 hp right up to the S374 at 400 hp including power boost. The new A Series now goes down to the A53 at 50 hp and this range also includes narrow and orchard machines. Add to this a comprehensive N and T Series and there is something for everyone in the Valtra stable.

A recent major introduction has been the N103.4 with a 4.4 litre four cylinder engine at 111 hp, an ideal loader tractor with excellent manoeuvrability plus the power to handle a wide variety of field operations. We have added Versu and Direct transmissions to N123 machines.

Full details of new models can be found on the following pages.

Valtra (as Valmet) was the first manufacturer to introduce a choice of colours and the company has been at the forefront of tailor made machines. Following an introductory period this aspect has been further developed and is now available to UK and Irish customers. Should a customer require a special colour, gold for example, or a special seat for personal or perhaps medical reasons, Valtra is now able to do this at the factory prior to delivery. Making customisation changes during the manufacturing process is generally highly cost effective and the range of equipment available from the Valtra Unlimited Studio is limited only by imagination – provided they comply with traffic and type approval regulations.

Mark Broom
NATIONAL SALES MANAGER



04 New alternatives in N-series



IN THIS ISSUE:

- | | | | |
|-----------|--|-----------|---|
| 03 | Fuse – precision farming technologies | 15 | Northern Ireland contractor relies on his Valtra T Series |
| 04 | News | 16 | European owners satisfied with their Direct 2.0 tractors |
| 05 | Cornish Dairy Farmer relies on Valtra | 19 | Sigma Power milestones |
| 06 | New look and more power for the S Series | 20 | Farming Advocate runs Valtra |
| 10 | Zero Grazing Demands Reliability | 22 | Max Schulman represents European farmers |
| 12 | Tier 4 Final technology means less emissions and better fuel economy | 23 | Valtra Collection |
| 14 | Unlimited Studio grows internationally | 24 | Valtra models |

06



AutoGuide 3000 and telemetry – FUSE



CONNECTED BY
FUSE
TECHNOLOGIES



FUSE

trademark for precision farming technologies

Fuse is the new AGCO trademark for its precision farming technologies. For Valtra the trademark covers the Auto-Guide 3000 automated steering assist system and the AgCommand telemetry system, for example. For other AGCO brands, Fuse includes applications for harvesting, planning and storage.

For customers, Fuse means that these technologies work together even better. Since few customers have

tractors, implements, harvesters and grain handling equipment from a single manufacturer, it is important that different systems can communicate using the same language.

With Fuse, AGCO is investing considerably in the development of precision farming technologies and related customer support.

www.valtra.co.uk



Small A Series tractors are available both with narrow and wider gauge and can have an open cabin, cabin with removable roof or a closed cabin.

A Series expands

Six new models in under-100 horsepower class

The Valtra A Series has been expanded with the introduction of new smaller models. These agile three-cylinder tractors are ideal as general purpose farm tractors, as well as for fruit farming and property maintenance, for example. The Valtra model line-up now extends from 50 horsepower to 400 horsepower.

The A Series model line-up now includes Compact and Orchard tractors. The A63 and A73 Compact models are available with or without a cab, while the A53 Compact model and all Orchard models have open cabs. Orchard tractors are as narrow as 1.6 metres, making them ideal for fruit farms, for example.

The smallest model is the A53, which offers 50 horsepower. The A63 model has an intercooled turbo engine that produces 68 horsepower. The biggest

model is the A73, which offers 78 horsepower. All of the tractors come with Valtra's reliable 12+12R transmission with synchronised shuttle and creeper gear. The PTO has two speeds, and the linkage is operated mechanically.

All models are four-wheel-drive. There are two hydraulic blocks. The open cab can be specified with a removable roof. The closed cab version is based on the traditional Valtra A Series cab and offers an ergonomic and optionally air-conditioned workspace that can be accessed easily from either side of the tractor. •

NEW SMALL A SERIES MODELS

	Standard max hp/kW/Nm
A53	50/37/196
A63	68/50/285
A73	78/58/310

1-2-3 FOR VALTRA AT EUROPEAN TRACTOR PULLING CHAMPIONSHIPS

Valtra tractors claimed the top 3 positions at the European Tractor Pulling Championships in Zele, Belgium, on 15 September.

Matti Herlevi driving Caesar was crowned European Champion in the Pro Stock category, while **Jurian Duijn** from the Netherlands took silver with Next Sensation and **Johanna Herlevi** third with Gangnam Style.

This is the fifth time that Valtra tractors have made a clean sweep of the European Championships, although it has been several years since the last time. Matti Herlevi has now won the European Championships six times, while his father **Pekka** has won it four times and sister Johanna two times.

NEW ALTERNATIVES IN N-SERIES

Valtra has expanded the N Series with the introduction of new models. The N103.4 brings a four-cylinder alternative to the lower end of the model line-up alongside the N103 model. N103.4 has an AGCO Power 4.4-litre SCR engine offering excellent low-end torque and fuel economy, as well as a front PTO option. Power and torque are practically the same in both three-cylinder and four-cylinder models.

The N103.4 is available with a three-step or a five-step HiTech 5 transmission.

The HiTrol turbine clutch, which makes continuous start/stop operations extremely smooth, is now available on the N123, N113, N103.4, N103 and N93.

The selection of Versu and Direct models has been expanded to include lower horsepower models in the N Series with the introduction of the N123V and N123D. The N123 Versu and Direct models can be specified with the same equipment and features as larger N Series tractors.

Read more: valtra.co.uk



The Hemmings' N91 is on the go year round, clocking up 1,000 hours annually.

From Cornwall to New Zealand Cornish dairy farmer and his daughter overseas choose Valtra

Robert Hemmings and his wife Elizabeth farm 250 mostly grass acres in the Cornish hills near St Austell and milk 80 British Friesian and Montbeliarde cows. All progeny is kept on the farm, either as replacement stock or finished as beef. Some stores are brought in depending on the over winter fodder situation; a mixture of wrapped bale and clamped silage and a total of around 100 beasts are finished annually.

The Hemmings cut around 160 acres of first cut silage and 70 acres of second cut.

"The third cut depends on the weather," comments Robert Hemmings wryly.

"In past years we have made some maize into silage, but this year we're trying whole crop."

A few years ago Robert and Elizabeth purchased their first Valtra, a six-cylinder 8050, to handle most of the slurry tankering plus some other work.

"We haul trailers for the contractor when making silage and we haul our

own bales. When that machine reached 12,000 hours we swapped it for a newer used model, one with only 4,000 hours on the clock. Valtras last well, particularly their engines," Robert confirms.

In 2006 the Hemmings purchased a second Valtra, a four-cylinder N91 with loader that clocks up around 1,000 hours annually.

"With the loader it's a handy, compact tractor that is on the go all the time year round," Robert tells us.

Robert and Elizabeth Hemmings' daughter, who lives on a farm in New Zealand, is also loyal to Valtra, although hers comes from Brazil.

Green credentials

Considering the trouble-free history of his own N91, Robert is seriously considering trading it in for a new Valtra N Series, either an N93 or N103.

"There's a natural tendency to up the power a little when tractors are replaced," but Robert questions if that is really necessary. •



Robert and Elizabeth Hemmings and their Valtra tree.

Whatever model is chosen there will be a reminder of that N91 in the Hemmings' garden. Seven years ago, to celebrate its green credentials and to promote its Eco models, Valtra gave customers a pine tree seedling with every new tractor.

"This furry twig arrived in the post just after the tractor was delivered," remembers Elizabeth Hemmings.

"I planted it in the garden and we now have a quite presentable six-foot tree."

Valtra has always been proud of its ecological credentials. The factory is located in the middle of a large forest with a wood-fired system that heats the assembly buildings and offices. Excess heat is also piped to the neighbouring village of Suolahti. Ecology is considered seriously when designing and manufacturing tractor components, as is fuel consumption and engine emissions. Valtra was the first company to approve vegetable oil-based fuel for their engines. •

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Publisher Valtra Oy Ab, Valmetinkatu 2, 44200 Suolahti. **Coordination** Medita Communication Oy

Translations and editing Crockford Communications Oy **Layout** Juha Puikkonen, INNOVerkko

Printed by Kopijvä Oy 2013 **Photo** Valtra archive is not otherwise mentioned

Valtra Team



Valtra is a worldwide brand of AGCO



New style and more power

S SERIES INTRODUCES THE 4G LOOK

The reliable S Series has been updated with a new look, increased power and new features. The S Series is the first tractor to feature Valtra's new 4G look.

TEXT TOMMI PITENIUS PHOTO VALTRA ARCHIVE



The driver can select from two driving modes to optimise work productivity and fuel consumption.

The updated S Series is powered by an AGCO Power 8.4-litre engine that complies with the Stage 4 Final emissions standard yet produces up to 400 horsepower and 1,600 Nm of torque with boost. The extra power is available when loading the hydraulics or PTO and when driving fast.

The engine has twin turbos, one of which has an electronically adjustable wastegate. Thanks to the new turbos, the engine offers superb torque at low rpm. At the same time the temperature of the exhaust gases is reduced, which further improves

engine reliability and lowers emissions. The fuel injection pressure has been increased to 2,000 bar, while the cooling power has been increased from 235 to 315 kilowatts. Featuring selective catalytic reduction (SCR) and the Sisu Tronic engine management system, the engine is very fuel efficient. Exhaust gas recirculation (EGR) is also utilised to ensure compliance with the Stage 4 Final emissions standard, but the AGCO Power solution does not require additional particulate filters. The emissions are cleaned by a combination of urea and catalytic converters, so the system is maintenance free.

Market-leading engine and transmission

The new S Series combines market-leading transmission and engine technology that are designed to take on the toughest tasks. The stepless AGCO variable transmission (AVT) is very reliable and is controlled ergonomically from the Valtra ARM driver's armrest. The driver can select from two driving modes to optimise work productivity and fuel consumption. The linkages are integrated with the frame and can carry 12 tonnes of implements at the rear and 5 tonnes at the front. The hydraulics produce 175 litres per minute through a maximum of six valves. The fuel efficient engine and powerful hydraulics can generate savings worth tens of thousands of euros per year.

The features and equipment on the S Series have been further developed together with customers. Valtra's TwinTrac reverse-drive system enables efficient working in reverse, for example for mowing, mulching and chipping. Working in reverse is generally very efficient thanks to the excellent visibility, more powerful rear linkage and enhanced agility. For example, mowing in reverse consumes around 10 percent less fuel than working in the forward direction, and it also reduces the amount of stressful neck and back twisting. The comfort of the S Series is crowned by AutoComfort cab suspension, which automatically adjusts the suspension according to the conditions.

Precision farming technology

Valtra's new S Series can naturally be specified with state-of-the-art precision farming technology, such as the AutoGuide 3000 steering assist system and AgCommand telemetry. The U-Pilot headland management system and Isobus readiness for implements come as standard. There is also a new colour screen with much higher resolution than before.

The reliability of Valtra tractors is backed up by the services offered by both Valtra and its dealers, such as



The market-leading transmission and engine technology that are designed to take on the toughest tasks.

a fast spare parts service, expert maintenance, competitive financing and even remote monitoring as enabled by AgCommand. With the support of our parent company AGCO, AGCO Parts, AGCO Academy, AGCO Finance and local Valtra dealers help ensure that all S Series tractors operate reliably around the clock, every day of the year, even in the toughest conditions. The Valtra S Series is available in Europe, South America, Africa and Russia. •

Valtra's new S Series can naturally be specified with state-of-the-art precision farming technology



VALTRA'S NEW S SERIES

	STANDARD MAX HP/BOOST HP • STANDARD NM/BOOST NM
S274	270/300 • 1220/1300
S294	295/325 • 1300/1390
S324	320/350 • 1390/1500
S354	350/380 • 1530/1590
S374	370/400 • 1540/1600

The most powerful model in the S Series produces up to 400 horsepower and 1,600 Nm of torque with boost. The engine has twin turbos and an electronically adjustable wastegate.

Even loaded the zero grazing rig does very little damage.



Valtra supports

ZERO GRAZING DEMANDS RELIABILITY

TEXT AND PHOTOS ROGER THOMAS

Milburn Farms, East of Penrith, Cumbria is 800 acres of fairly free draining sandy loam. Initially a livestock farm, in 2001 Foot and Mouth struck, stock was culled. Something farm manager **David Johnston** and his staff never want to experience again. However, this disaster allowed the establishment of a new farm plan, new cattle sheds were erected with a 50 point rotary milking parlour. Early in 2003 500 Friesians began arriving.

Today Milburn Farms carries a closed herd of 500 cows plus some 350 followers. All heifer calves are taken through as herd replacements with excess stock sold. "We chose

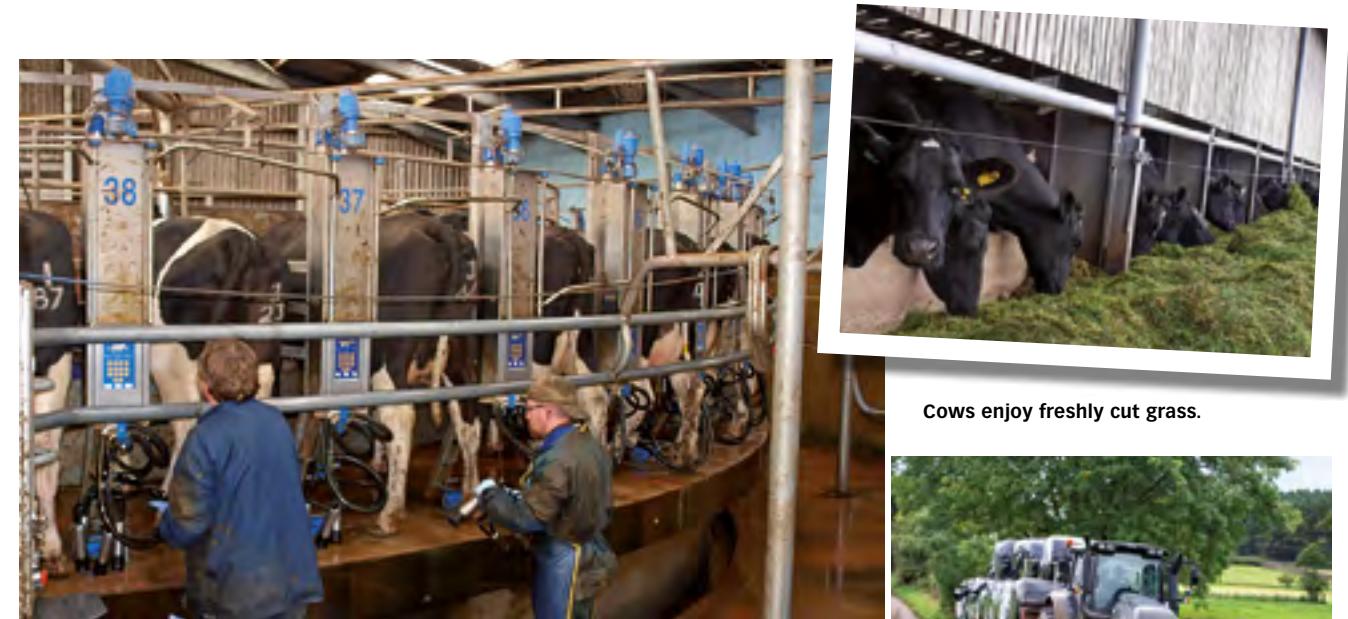
Friesians for their good quality and quantity of milk and an ability to do this over many lactations without problems – legs, that sort of thing," says David Johnston. "Indeed, the usual herd life is seven or eight lactations, sometimes ten."

Milburn Farms has a 3 million litre quota, a herd average around 7,000 litres per lactation and a calving index of 373 days. Milk goes for liquid sales through Paynes Dairies of North Yorkshire, chosen for realistic prices. It is perhaps fair to say that, at 4.24 butterfat and 3.34 protein Milburn Farms' milk is more suitable for cheese manufacture; if the price was right.

Calving is year round with cows

spending six to eight weeks dry. New calves suckle for a couple of days before the cow returns to the herd. Youngsters are then reared in age related batches on a milk replacement with ad-lib hay. Once on solid food heifers are moved into training cubicles before being put to the bull at about 15 months. "Young stock become accustomed to cubicles long before they enter the herd, essentially from the day they leave their mother."

Milburn Farms winter system is a familiar one; silage and brewer's grains fed via a feeding wagon with concentrate top-ups in the parlour according to yield. Come late April, provided ground and weather conditions are right, cows are out during the day



Milking is through a 50 point rotary parlour.

to graze. Where Milburn Farms differ is in their grazing regime. "We keep the herd in at night throughout the year and feed grass on a zero graze system." There are several reasons this system is adopted: Near-by fields last longer with grass for the afternoon feed brought in from distant pastures. (Just think how long it would take to gather up 500 cows and bring them in for morning milking). Another important reason is poaching. Milburn Farms has fairly easy draining soil but does receive around 750 mm rain annually. Even in the damp a couple of thousand hoofs clearly make a mess; 30 % of grass can be lost. Zero grazing costs are easily balanced by the value of the rescued grass. Why not turn grass into silage? "Grass is cheaper to feed and the cows seem to love it, trotting out from milking to feed. Let out to graze the pace is a slow amble." The in at night, out during the day system continues until around the end of September depending on weather, grass quality and quantity. "We keep the cows in during summer days if the weather turns bad. Machinery collecting grass makes an insignificant impact on a sward compared with 500 cows," says David. "It's a daily management thing. The cows

are happier too; who wants to stand out in summer rain? They congregate around the gate waiting to be brought back in to shelter – milk yields drop."

Milburn Farms' grass falls into the permanent pasture category and is only ploughed when necessary; about 10 % a year. Five hundred cows and three hundred followers produce a lot of slurry and this plus artificial fertiliser, mostly nitrogen, that is applied immediately after a sward has been cut or grazed. A further cut is usually available around 25 days later. Grazing finishes at the end of September, the cows moving on to a silage based diet but, while Milburn farms has turned its back on sheep, in early October several flocks do arrive. "They come on a bed and breakfast basis, managed by their shepherds and are gone by the end of February. Sheep are great at tidying up fields, consuming grass around cow pats that cows won't touch and clearing up corners, weeds etc."

A fleet of Valtras: A T190 spends the summer coupled to a 2.6m front mounted disc mower and a 45 cu m forage wagon. A later T202 handles much of the other work including hauling silage bales and straw,



Cows enjoy freshly cut grass.

Both T Series tractors feature 50 kph transmissions, air brakes and front suspension.

tankering slurry and muck spreading, both are fitted with front linkage and suspension. There is also 1995 two-wheel drive Valmet 465, used for slurry scraping. Much of the field work is undertaken by contractor Thomas Schug, also with a fleet of Valtras. "We had 460 acres of first cut silage which Thomas's team cut and wilted. Once ready they had the lot into the clamp and sheeted in 24 hours." Thomas Schug also handles wrapped round bale silage plus umbilical slurry spreading, spraying and reseeding. It may seem that Milburn Farms, their contractors are Valtra fans. David Johnston will tell you it is simply that they are reliable and, if anything does go wrong they are supported by an excellent dealer, D W Toppin Ltd of Langwathby.

Would David Johnston change anything? The system has been modified a little since its inception but only by tinkering at the edges. David believes the structure is right and a healthy high yielding herd with good fat and protein stats back up his contention. •

Tier 4 Final emissions standard

ENGINES RUN CLEANER WITH LESS FUEL

The first emission standards for off-road engines producing more than 130 kilowatts came into force in 1996 in Europe and North America. Prior to that, there were no restrictions on the emissions of tractors and harvesters, for example.

TEXT TOMMI PITENIUS PHOTO 3DOLLI

In 1996, the amount of nitrogen oxides in exhaust gases had to be reduced by 30 percent and the amount of particles by 10 percent. Since then, emissions have been reduced incrementally.

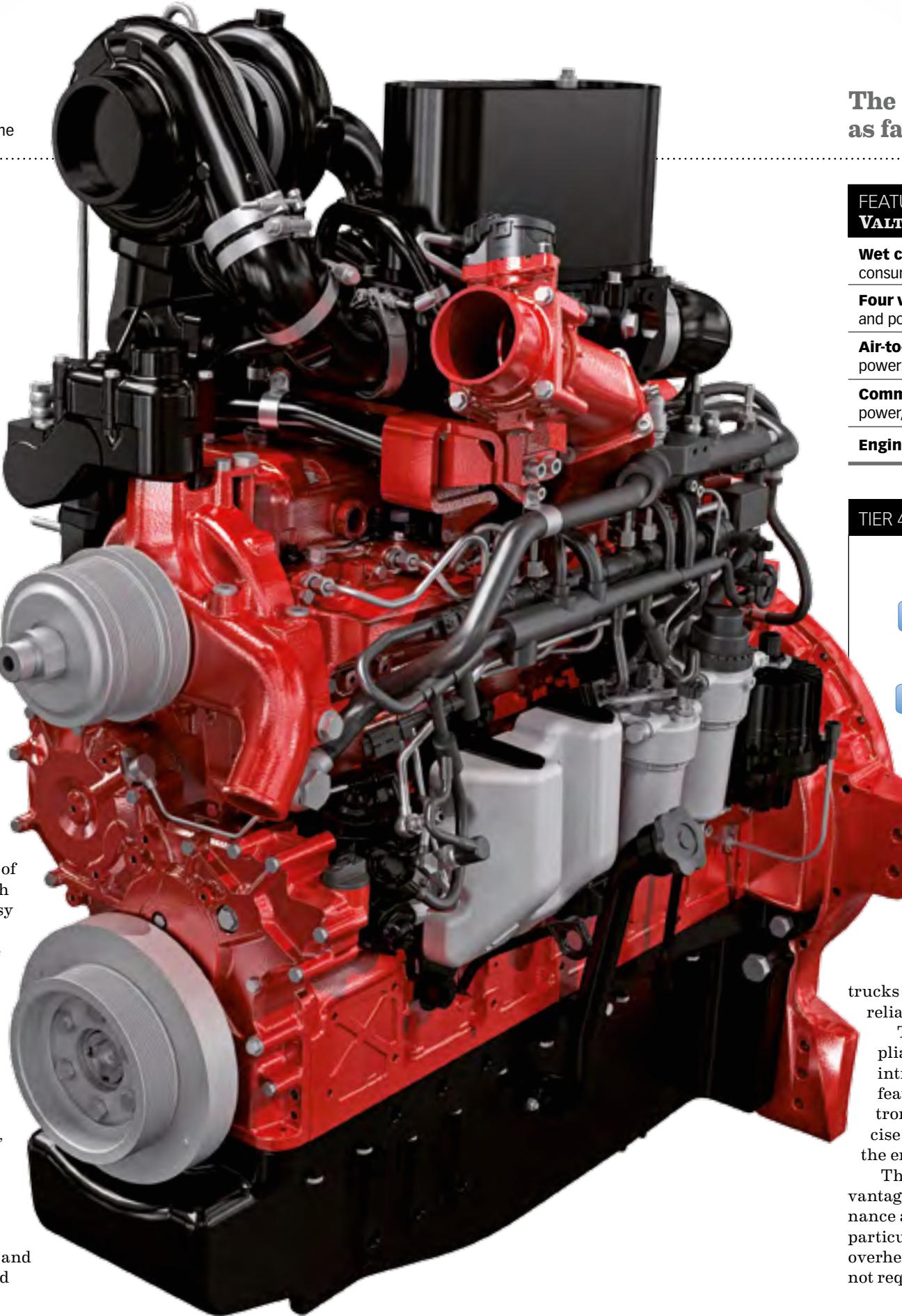
In 2014 emissions standards will reach their probable culmination with the introduction of Tier 4 Final. As a result, engines will emit 97 percent less nitrogen oxides and particles than they did in 1995. Essentially, these emissions have been eliminated altogether.

This target has been reached above all thanks to selective catalytic reduction (SCR), which allows the combustion in the engine to be optimised as far as possible with current technology. Exhaust gases are treated in the exhaust pipe by

spraying them with a mixture of urea and water (AdBlue), which is completely harmless and easy to use.

With the introduction of the Tier 4 Final emission standard, exhaust gas recirculation (EGR) is also employed. With this technology, some of the exhaust gases are cooled and fed back into the engine.

Valtra tractors use AGCO Power engines. AGCO Power is a pioneer in SCR technology, setting the standard for the entire industry. Valtra and AGCO Power introduced the technology to tractors back in 2008 with the S Series. The technology has also been tried and tested in industrial engines and



The combustion in the engine to be optimised as far as possible with current technology.

FEATURES AND ADVANTAGES OF VALTRA TRACTORS AND AGCO POWER ENGINES

Wet cylinder liners Enhanced engine life, precision, economy, reliability, oil consumption and emissions

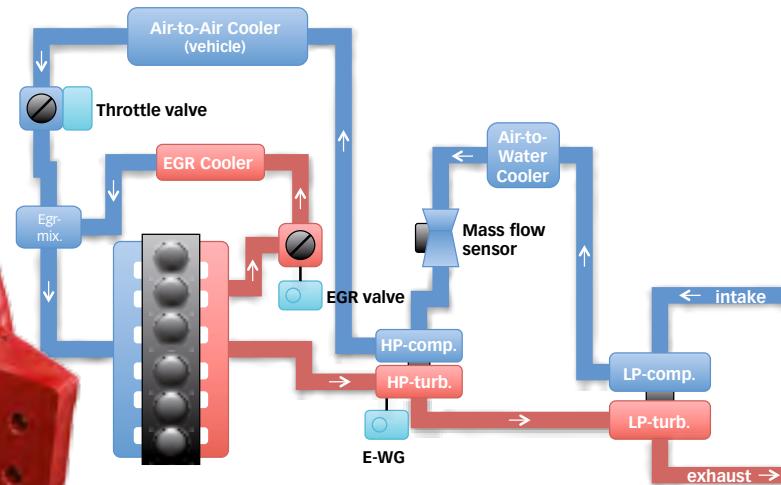
Four valves with central injection Enhanced combustion, gas exchange and power

Air-to-air intercooling from 160 to 55 degrees Enhanced fuel economy, power and emissions

Common rail injection and Sisu Tronic engine management Enhanced power, emissions, special functions and engine protection in case of malfunctions

Engine range from 3.3 to 16.8 litres 50–800 horsepower

TIER 4 FINAL SCR+EGR ENGINE



trucks for decades and been proven reliable.

The latest Tier 4 Final-compliant engines are also being introduced on the S Series. They feature twin turbos with an electronic wastegate, allowing precise amounts of air to be fed into the engine in all conditions.

The new engines offer the advantages of reliability, low maintenance and fuel efficiency. Expensive particulate filters that can cause overheating and become clogged are not required. Since the engines run

cooler, they also last longer. Combustion is further improved by precision injection with up to 2000 bar pressure.

The new emissions standard will be introduced in stages for smaller engines. Valtra and AGCO Power already have the technology required for all horsepower categories and purposes. Although the technological details vary, the customer always gets the most environmentally friendly, long lasting, reliable and fuel efficient engine available. •



A wide range of additional lights and rotating warning lights can be fitted by the Unlimited Studio.

Unlimited Studio

GROWS INTERNATIONALLY

TEXT TOMMI PITENIUS PHOTO VALTRAN ARKISTO

Valtra has been manufacturing tailor-made tractors for customers for the past 25 years already, and now we are taking customising to the next level. The Unlimited Studio at the Suolahti factory in Finland pledges to fulfil all the wishes that customers may have for their new tractors so long as they are feasible. The Unlimited Studio has been serving customers in Finland since last year, and now it is expanding its services to international customers. The response from customers has been very positive, and over a hundred specially equipped Unlimited tractors have already been delivered.

"In practice most of our orders are related to the intended tasks to be performed by the customer's tractor, such as auxiliary hydraulics, reversing cameras, forest equipment, central lubrication systems, flashing lights and so on. A good example is a customer who always has his dog up in the cab when working. We modified the steps to make it easier

for his dog to climb up," says **Petri Loukiala**, Project Manager at the Unlimited Studio.

"The Unlimited Studio is part of the Valtra factory, so the customer can order everything through the same salesperson cost efficiently and rapidly. All the work we do is covered by the same warranty as the tractor.



Over a hundred specially equipped Unlimited tractors have already been delivered to customers.

We can rely on the support of all the expertise here at the factory, from engineering to purchasing. The chassis number on our tractors also indicates all the parts fitted at the Unlimited Studio, making it simple to order spare parts in the future," adds Loukiala.

As its name suggests, the Unlimited Studio can fit any equipment that the customer orders as long as they work and that they comply with all traffic regulations and requirements for type approval. The pricelist already includes the most popular equipment. In addition, all Unlimited tractors come automatically with Unlimited floor mats, seat covers, steering wheel logo and front badge.

Customers can order Unlimited options directly from their dealer, so neither the customer nor the salesperson has to transport the tractor back and forth. In principle, everything from the initial order to warranty matters are handled on a one-stop-shop basis. •



The Valtra T170 is used for chipping and in conjunction with a timber trailer for extraction, its clean underbelly and front suspension making it ideal for forestry and road operations.



Michael Large, a practical man, demands reliability from his men and machines.



Much of the machinery sold by M Large is used by them in other divisions of the business.

M Large Tree Services

40 YEARS OF EXPANSION

TEXT AND PHOTOS ROGER THOMAS

Around forty years ago **Michael Large** watched men felling trees and thought, Could tree work be a future business? He borrowed money, invested in a chainsaw and from this beginning M Large tree surgery business evolved. Initially a part time operation fitting around a full time job Michael walked or used borrowed vans to get to jobs. In the 80s Michael moved into the timber business full time based at Newtownabbey, County Antrim. A go-ahead operation, Michael sent staff for training to Merrist Wood college in Surrey, a continuing practice alongside NPTC training.

Success, Michael says, results from being practical and being prepared to utilise machinery to make life easier; he was an early user of pedestrian operated stump grinders and brushwood chippers. In 1981 he purchased a Junkkari chipper, a rarity then. Ten years later Large Tree Services were the first Arboricultural Association Approved contractor in Ireland. Today the business has diversified considerably incorporating tree services, plant & machinery sales and hire, planning, landscaping, establishing and maintaining woodland mostly in urban and often community based conservation areas.

A Valtra T170 tractor has an important place alongside a fleet of trucks. "We purchased the Valtra because of its heritage. It has a good, clean ground clearance, excellent for woodland operations. The reversible seat is ideal with a forestry crane and trailer or a linkage mounted chipper." M Large Tree

Services uses just about everything it cuts: green material is composted, bark is shredded and small wood chipped for fuel. As timber gets larger it is processed into logs or for sawing or manufactured into garden products. Over the years the business has tried and tested a number of timber related machines. Today the best of these are sold by the company through dealers in the UK and throughout Ireland.

Whether M Large Tree Services is helping rejuvenate neglected woodland or develop a new forest in Northern Ireland or the Republic, the demands of customers is for a high quality, reliable operation and in turn, M Large Tree Services demand equipment capable of helping deliver that high quality service. The Valtra has proved reliable. •



The latest version of Valtra's stepless transmission has won praise from owners around the world.

The new Direct 2.0 is even easier to use, more powerful, quieter, more comfortable and more fuel efficient than previous versions. For example, cab noise levels on the T163 EcoPower model have been reduced to just 68.5 decibels.

The Direct 2.0 transmission is available with the N123, N143, N163, T163e, T183 and T203 models.

TEXT TOMMI PITENIUS PHOTO ARCHIVE VALTRA



European owners satisfied with their

DIRECT 2.0 TRACTORS POWERFUL AND EASY TO USE



Jerome Bagland.

Jerome Bagland

Indre et Loire, France

Jerome Bagland farms 600 hectares in Central France. His livestock includes poultry and Charolais cattle. He has four Valtra T Series tractors, one Valtra N Series and one new S Series on its way. His newest tractor is a T203 Direct.

"Valtra tractors are strong and reliable. My local dealer **Max Berny** also offers excellent service and support. I use my T203 Direct for such tasks as soil preparation and slurry spreading. It is quiet and good on the road thanks to its front axle and cab suspension," Jerome reports.



Martijn Voorbraak.

Martijn Voorbraak

West Brabant, Netherlands

Martin Voorbraak farms 100 hectares in the Netherlands, where he grows food potatoes, seed potatoes, grass seeds, and endive. His tractor fleet includes an 8100, an 8050, an N141 and a T203 Direct. He uses the T203 Direct for such tasks as sowing, planting, ploughing and cultivating.

"The stepless transmission is great on the potato fields, since I can adjust the speed infinitely, and on the road the engine needs very low revs. The T203 Direct is quiet, comfortable thanks to the suspension, easy to use and really powerful," Martijn reports.



Markus Renner.

Markus Renner

Reuth, Germany

Markus Renner has a 110-hectare dairy farm with 90 cows in Reuth, Germany. He uses a T203 Direct to harvest corn and grass silage using a 9-metre mowing combination and to spread slurry with a 18-cubic-metre wagon.

"The stepless transmission is really excellent when driving through villages and in traffic, as it is really easy to start and stop. The weight distribution is also extremely balanced, so the front axle pulls well. The T203 Direct is so comfortable that it's almost a disappointment when the workday ends and I have to climb out! I'd love to just keep on driving," reports Markus.



"The T203 Direct is so comfortable that it's almost a disappointment when the workday ends and I have to climb out!"



Markku Ruuska.



Ahti Mansikka.

Markku Ruuska Äänekoski, Finland

Markku Ruuska has a 68-hectare dairy farm with 25 cows in Central Finland. His main tractor is an N163 Direct, which he uses around 800 hours a year. The farm has had Valtra/Valmet tractors since the 1960s. His previous tractor was a N143 Direct.

"The fuel economy of the N163 Direct with its stepless transmission was a positive surprise. The tractor needs just 1,300 to 1,600 revs. The average annual fuel consumption is 8 litres per hour. When spraying and

rolling, the fuel consumption is just 6 litres per hour. With a four-furrow plough the fuel consumption is 9 to 10 litres per hour, and with an 8-metre levelling harrow the fuel consumption is 20 litres per hour. The AdBlue consumption is next to nothing in wintertime, and in summertime it has to be topped up every fourth or fifth time that I tank up with diesel. The four-cylinder tractor is lighter and more agile than the six-cylinder tractor, and it has better visibility from the cab. The transmission is smooth, and the level of automation really helps the driver's work," Markku reports.

Ahti Mansikka Loppi, Finland

Ahti Mansikka farms 120 hectares in Loppi, Southern Finland. He has an N163 Direct to cultivate grain. Ahti uses his Valtra as much as 2,500 to 2,700 hours per year.

"I spend a lot of time in the cab. In wintertime I also use the tractor for snow ploughing and preparing skating rinks. In summertime I use it on the road, for contracting, transporting irrigation water and of course for cultivating. My N163

Direct has front axle suspension, an air-conditioned Evolution driver's seat, a five-pillar SVC cab, all the possible wheel weights, two rotating warning lights on the roof, a front loader and even Bluetooth. The tractor is really quiet thanks to the low revs needed by the stepless transmission. The cruise control feature is excellent, and the cab is ergonomic with all the main controls on the right. Driving with the pedal is easy, and the tractor is really agile in built-up areas," Ahti reports. •



In 2013 German DLV named Valtra Sigma Power an influential milestone of agricultural technology.



Chairman of DLG Philip von Bussche awards Valtra's CEO Jouko Tukiainen with a gold medal at Agritechnica 1997.

Sigma Power **MILESTONES**

In February 1988 Valmet's chief design engineer **Hannu Niskanen** met his childhood friend, **Heikki Eskola**, a livestock farmer and contractor in Nivala, Finland. Auto-control had just been introduced, and Hannu praised the advantages of electronics in such tasks as ploughing, for example. Heikki replied, "I can manage my ploughing in a couple of days, but I have to run a forage harvester the entire summer. What would be great is extra power from the PTO."

This got me thinking, and an idea occurred to me a few days later. The engine is the power source for three different functions: for the transmission to the wheels, for hydraulic power, and for the mechanical PTO. If a certain amount of power is transferred through the wheels, it would be possible to run more engine power through the PTO. A patent was duly applied for, and the idea was tested

by the Norwegian ITF research institute with positive results. **Pekka Huuskonen** completed the design.

In 1992–1993, the global tractor industry was in crisis, Valmet included. Just one sector was growing: peat for energy. In response, Valmet introduced its "Peat Special" – an 8400 with a turbocharged 6.6-litre Valmet engine producing 140 horsepower, a three-speed Delta Powershift and a heavy-duty 1,000 rpm PTO transmission using a large diameter 45 mm PTO shaft. This model proved to be a success among customers.

The introduction of a new long-stroke 7.4-litre Valmet engine together with the reinforced transmission and heavy-duty PTO meant that all the pieces were in place for Sigma Power. The Mega 50 Series was duly launched in France in the spring of 1996. The flagship was the Valmet Mega 8750 Sigma Power that had a

nominal output of 160 horsepower when only the driving transmission was used. However, when the torque exceeded 250 Nm, the injection pump increased the maximum power to 190 horsepower. The control system was based on the torsion of the long shaft between the engine and PTO mechanism.

In 1997, Sigma Power was awarded the Gold Medal at the Agritechnica fair. Since then, more than 10,000 Valmet/Valtra tractors have been manufactured utilising the Sigma Power principle. With the introduction of electronically controlled common rail technology, it became easier to manipulate the power and torque curves, and new terms appeared such as transport boost and PTO boost. But Sigma Power was the pioneer.

Today, Sigma Power PTO boost is available on all new S Series models, as well as on the T213, T203, T183 and N163 models. •



Part of the McClelland farm with barley in the foreground and short-term willow in the centre background.



Yellowhammer, one of several birds now increasing in numbers on the farm. Photo: RSPB

Feed the birds

TIM MCCLELLAND FARMS WITH THE WILDLIFE IN MIND

Tim McClelland is a participant in the Countryside Management Scheme and farms 285 acres near Tandragee, County Armagh, in Northern Ireland. The farm has grown over the past years and now comprises four blocks, all within a 10-mile radius of his home.

TEXT AND PHOTOS ROGER THOMAS AND RSPB

Tim focuses on arable crops that usually comprise around 50 acres of wheat, 80 acres oats, 35 acres barley and 30 acres oilseed rape. There are 32 acres of grass from which Tim McClelland makes baled silage for sale or will have cattle on the farm under a bed and breakfast agreement. There are also around

15 acres in short rotation willow. Tim, a Nuffield Scholar, feels strongly that farming is all too often misrepresented in the public arena and that many farmers have not taken their local ecology seriously enough.

To numerous people, farmers are seen as those people who live over the hedge, and amongst a host of often perceived negative behav-

iour, they rape the countryside and bring tractors onto the road simply to make others late for work! In fact nothing could be further from the truth as around 70 % of British farms are now in Agri-environment schemes," he tells us.

Tim feels strongly these factors are ignored. "Why don't we as an industry shout this form the roof tops?"

You can't do green if you're in the red

Tim's attitude has led him to farm with wildlife very much in mind. An early project was to join with the Royal Society for the Protection of Birds (RSPB) and other farmers in a yellowhammer recovery project. This scheme ran between 2006 and 2011 and led to a 79 % recovery in the yellowhammers on the participating farms.

In 2011 Tim also won a Farming and Wildlife Advisory Group NI Silver Lapwing Award, and earlier this year he entered and won the Northern Ireland regional final of the RSPB's Nature of Farming Award, of which he is justifiably proud. At the end of September the RSPB announced that Tim had been awarded a silver medal in the national final.

Tim is also a focus farmer in the environmental sector where the ability to demonstrate how crop and environmental management can be integrated is crucial. Despite, or possibly because of his environmental leanings, Tim McClelland still has his boots firmly in the soil. First and foremost he is an arable farmer, and his farm is profitable. As Tim says, "you can't do green if you're in the red!"

He is also adamant that he is not a machinery nerd. Much of the work, such as ploughing, cultivating, planting and harvesting, is undertaken by contractors.

"I have a tractor, a Valtra T131 with front axle suspension, that is about six years old and which at certain times I keep very busy. I do however have other agriculture-related sources of income from which I could not benefit if I were stuck in a tractor cab; it's all about balancing costs and income."

As a speaker, Tim is compelling and undertakes training for a number of agencies both off and on the farm where he has developed a meeting room for such eventualities.

Valtra was the right choice

Why did he choose a Valtra tractor? According to Tim, it was a simple commercial decision, the combina-

tion of a good reputation, a suitable specification, a respected local dealer – T H Troughton of Poyntzpass – and, importantly, the right price. Six years on Tim will also admit he made the correct decision.

"I've had no problems with the Valtra; it's comfortable and reliable."

So what has Tim done on his land that has attracted the attention of the RSPB? "It was obvious that crops in the shadow of tall hedges and woodland do not do well, so why invest in seed and fertiliser that is not going to create a decent return?"

Tim's solution is to leave a grass margin followed by strip of wild bird cover consisting of cereals, kale and quinoa. "This makes an ideal habitat for both birds and mammals."

If necessary a further half-metre strip is left fallow to prevent cereals in the bird cover from cross pollinating with cereals grown for seed. Tim has also sown a pollen and nectar mix as an alternative to the wild bird cover, a mix that contains legumes including red clover and aims to supply butterflies, bees and other insects with food during the spring and summer.

This is not simply a scheme to increase the number of insects, although it does just that. Importantly the increase in insect population provides insectivorous birds with a well stocked larder. Tim's cropping



Tim's Valtra T131 equipped for spraying on narrow wheels. There is also a set of wide wheels for top work.

regime also helps provide winter foods for seed eating birds.

"Areas of stubble are retained over winter until mid-February, a good time for establishing spring crops. By this time other sources of food are becoming available, and in any case the birds will have cleared residual crop and weed seeds."

But it's not all about birds. The farm also supports other forms of wildlife including mammals like the Irish hare and several species of bats. Tim has also established some 500 metres of new hedge that will provide a useful commuting route for birds and bats generally and a nesting habitat for birds including the bullfinch.

While costs are slightly higher for Tim's method of farming, it's not all paying out. Of the 220 acres of grain, around 80 acres of oats are Conservation Grade for which a premium price is paid. The grain is transported just two miles to the local Speedicook facility from where it goes on to Jordans for their inclusion in their cereals and cereal bars.

"Such a short journey keeps food miles down and reduces our carbon footprint," Tim points out.

"I'm not a top drawer ornithologist by any stretch of the imagination, but it's great to see a vibrant and varied bird population on the farm – and the kids love it! Remember, once these birds are gone they're gone. That's it and who knows where that will lead or what it will eventually cost us if the countryside ecology is allowed to collapse!" •



Tim McClelland with two of his children, Cameron and Rachel.

"The biggest risks to farming are the weather, the markets and politicians."

Max Schulman

REPRESENTS EUROPEAN FARMERS

TEXT TOMMI PITENIUS PHOTO MTK

Max Schulman from Finland serves as Chairman of the Cereals Working Party at Copa-Cogeca, an organisation that represents 15 million farmers and cooperatives in the European Union.

What is the current state of European farming?

"Farmers face a lot of challenges, just like all entrepreneurs, but we are moving in the right direction. The biggest risks that farmers are facing are the weather, the markets and politicians. Political changes are the hardest of these to control, as changes to the weather and market conditions can be anticipated through insurance policies, futures and other means, but there is no insurance policy against political change. At Copa-Cogeca we work to influence the preparation of legislation, subsidy policies, trade policies and co-operation throughout the industry."

How did you become Chairman of the Cereals Working Party at Copa-Cogeca?

"Finland is by no means the biggest agricultural producer in

Europe, but we are considered neutral in many issues. Our deputy chairmen are from Germany and Great Britain. On a personal level I have always tried to work well together with all parties."

You are also Secretary for Cereals at the Central Union of Agricultural Producers and Forest Owners (MTK) in Finland, plus you run your family farm. How do you combine all three jobs?

"It requires long working hours sometimes. My position at MTK is my main job for which I am paid a salary. My position at Copa-Cogeca is an honorary one that counts as working hours at MTK. Farming comes on top. For example, in summertime I went out at four in the morning to spray the crops, then flew to Brussels for a meeting at ten and then returned to continue spraying before midnight."

How does the future of European farming look?

"European farming has traditionally been the most efficient in the world, and we have excellent know-how, machinery, yields, markets and so



on, but now other regions – such as North and South America and Australia – have caught up with us. In emerging economies, such as China and India, agriculture is seen as an important opportunity, source of raw materials, employer, energy source and enabler of food self sufficiency. In Europe some politicians have considered agriculture to be a sunset industry and forgotten that we all need to eat every day. At Copa-Cogeca we are trying to change this way of thinking." •

MAX SCHULMAN

- 1983–1985 Works in the grain trade in the USA
- 1986 → Farms 100-hectare family farm in Lohja, Finland (continues)
- 1989 Does agricultural work in New Zealand
- 1991–1994 Works at Foreign Trade Unit of the Finnish State Granary
- 2001–2003 Works in the agricultural machinery trade
- 2003–2008 Works at Valtra, including as Product Manager
- 2008 → Secretary for Cereals at the Central Union of Agricultural Producers and Forest Owners (MTK)

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Double Zipper Overall and Bib and Brace Overall.



Knitted beanie.



Valtra Parking Only keychain.



Thermo bottle with two cups.



Softshell jacket for ladies and gents.



Technical T-shirt for ladies and gents.



Fleece jacket for ladies and gents.



Rugbyshirt for ladies and gents.

See us online: valtra.co.uk

Valtra Models



A SERIES

MODEL	MAX. HP/NM
A53	50/196
A63	68/285
A73	78/310
A83 HiTech	88/325
A93 HiTech	101/370



S SERIES

MODEL	MAX. HP/NM
S274	270/1220
S294	295/1300
S324	320/1390
S354	350/1530
S374	370/1540



N SERIES

MODEL	MAX. HP/NM
N93 HiTech	99/430
N103 HiTech	111/465
N103.4 HiTech	111/460
N113 HiTech	124/510
N123 HiTech	135/540
N143 HiTech	152/600
N93 HiTech 5	99/430
N103 HiTech 5	111/465
N103.4 HiTech 5	111/460
N113 HiTech 5	124/510
N123 HiTech 5	135/540
N123 Versu	135/540
N143 Versu	152/600
N163 Versu	163/650
N123 Direct	135/560
N143 Direct	152/600
N163 Direct	163/650

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T SERIES

MODEL	MAX. HP/NM
T133 HiTech	141/580
T153 HiTech	155/640
T173 HiTech	180/660
T193 HiTech	190/680
T153 Versu	155/640
T163e Versu	166/740
T183 Versu	187/770
T213 Versu	215/850
T153 Direct	155/640
T163e Direct	166/740
T183 Direct	187/770
T203 Direct	204/800