

Analysis

Summer 2020

Keeping you up-to-date on the largest independent suspension and liquid fertiliser manufacturer in the UK



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**Assessing
your crops
needs**

**YEN
award winner
uses liquid
fertiliser to
boost yield
and quality**

**Avadex
Excel plus
fertiliser in
one pass**

**Liquid
fertiliser
eases workload
pressure and
boosts yields**

INSIDE



Max Winkler
Managing Director

WELCOME TO THE SUMMER 2020 EDITION OF OMEX ANALYSIS

Agriculture is certainly a moving feast these days! At OMEX we continue to focus our business plans on adaptability and longer-term resilience to make sure we are always here for our customers. The continued uncertainty of what the future holds only reinforces our model.

We're passionate about sustainable food production and determined to do our bit to make sure UK Agriculture is successful on the global stage. The R&D team continues to collaborate with the international teams on product developments and is also working hard locally at our new Heckington trial site in partnership with Barworth Research to test new formulations to bring to the UK market. Over the last 44 years we have leveraged our global footprint to bring local farmers the best crop nutrient products available.

A product that is undoubtedly benefiting UK growers is Nitroflo liquid nitrogen plus sulphur. In a highly competitive market with the challenges we all face in agriculture it is the marginal gains that make the difference. On the next page, you'll see an article on Mark Stubbs, who was the 2019 UK YEN cereal Gold Award winner, discussing the benefits that can be achieved with a liquid system.

To make your farming operation as efficient and productive as possible we are very aware of the importance of not only providing quality products, but also an excellent service. Our Soil and SAP services are essential if you want the best economic and environmental returns, as outlined on pages 4 and 5.

From a production and logistics perspective the teams are currently focused on improvements across all our sites to ensure a safe and reliable supply chain during the autumn season ahead so that you receive your products exactly when you need them. Timing is key.

Recent memories of the extreme weather conditions, both wet and dry, are a reminder of the importance of getting autumn suspensions on early so please speak to your OMEX contact as soon as possible for any advice on autumn application or soil sampling. Wishing you all a healthy and successful harvest and autumn campaign ahead.

HOT OFF THE PRESS

Recently published work by AHDB shows promising results, looking at alternative potato haulm desiccation products. Still some way to go to know how Saltex can be authorised for use but extremely promising results for what is a natural pesticide-free solution. Staying on the publishing front, Nottingham University Sutton Bonington recently produced a white paper, summarising part of a BBSRC-LINK grant with six industrial partners, showing an average 30% increased rooting following foliar phosphite application (including OMEX Kickstart) on cereals and OSR with more pronounced effects in dry conditions. We're likely to see more use of Kickstart as we continue to experience dry spring conditions.

Go Liquid

The benefits of liquid fertilisers

Available with a wide range of sulphur ratios

- ◆ Fast Acting
- ◆ Uniform Application
- ◆ Improved crop response
- ◆ Convenience
- ◆ Accurate application - even in bad weather
- ◆ Apply right up to the field margin
- ◆ Using Didin with Liquid N means full application in one pass



NEW STARTERS

We're pleased to announce some new colleagues joining the team. Ben Langdon has joined as UK Chief Operating Officer and Daniel Barley has taken up a new role as Head of Distribution, along with Steve Gorvett as Head of Maintenance. At King's Lynn, our specialist horticultural product team now includes Dr Neil Holmes and Nicholas Aldrich joins the growing foliar and specialist product support team. We've appreciated the extra support from Kerri Ely throughout the spring and welcome Deividas Apelsinavicius as Specialities Operations Supervisor for our foliar range.

We wish them all a long and successful career, growing with OMEX.

YEN AWARD WINNER USES LIQUID FERTILISER TO BOOST YIELD AND QUALITY

Applying liquid fertiliser at the correct time has helped Lincolnshire arable farmer Mark Stubbs increase winter wheat yields by 3.6t/ha and hit milling quality targets.

Replacing a worn out 24m granular spreader with a new 36m sprayer has also significantly increased capacity, giving the business an opportunity to expand a contracting business.

Beaconsfield Farm, near Marsh Chapel in North East Lincolnshire extends to 700ha of mostly chalky clay soils supporting a combinable rotation, based on oilseed rape, winter wheat and spring crops including barley and oilseed rape.

Average wheat yield under a granular fertiliser regime was 12.7t/ha. Since switching over to OMEX liquid nitrogen plus sulphur, yields have increased up to 16.3t/ha and oilseed rape to 6.77t/ha.

Mr Stubbs, who was the UK 2019 YEN Gold cereal award winner and Bronze oilseed rape winner, has an ambitious plan to increase the arable area farmed to 2500ha. He says the new sprayer has around 4000ha extra capacity, possibly more with night lights, and a second sprayer is a consideration if it would mean not letting his contract customers down.

"I'm a big believer in getting the application timing right because it can lead to reduced costs and higher yields," he says.

In farming terms, 2019 was an exceptional year and Mr Stubbs makes no pretence that the significant yield increase was solely down to switching to liquids. Nevertheless, applying nutrients on demand coupled with improved accuracy and product quality has had a major impact. Yields are now consistent across the whole field.

"We prefer drilling late on this farm because of the blackgrass problem and so KWS Siskin suits our situation well," he says. "Our aim is for high yielding feed but last year we surpassed expectation and hit milling too."

Top dressing starts in late February with the first of three equal splits of Nitroflo 22+S, applying 69kg N/ha and 31kgSO₃/ha, replacing granular fertiliser 21N:60SO₃ applied in February. The second and third liquid applications are applied in late March and April.

The new sprayer is a 36m, Bateman RB55 with auto nozzle shut-off, covering around 7300ha/annum.

"Applying the granular sulphur fertiliser in one hit meant a risk of losing much of the sulphur to leaching," explains



Mark Stubbs

Mr Stubbs. "But, when applying sulphur along with the nitrogen in smaller doses and more frequently both elements are taken up more efficiently by the plant. We are putting on half of the sulphur that we used to and getting higher yields.

"Our observations are that a regular application approach results in the crop taking up the nitrogen and sulphur immediately whereas granular fertiliser just stays on the ground and relies on moisture. We are conscious of scorch risk so we try to avoid extreme temperatures, preferring to go for the dull and overcast days if possible."

On the granular system he says poorer accuracy meant there were always in-field overlaps as well as valuable nutrients being lost into the field margins and hedgerows.

"In order not to contravene NVZ regulations we would always have to under-apply granular fertiliser because of the risk of application variability," points out Mr Stubbs. "On liquids we can apply with complete accuracy and not pay for fertiliser we don't need."

Mr Stubbs used to have to buy his granular fertiliser in June and then store it undercover, while leaving the application kit outside. Having switched to liquid fertiliser it is now the machines that are undercover and the fertiliser is stored in four 50t bunded tanks in the yard. Another 50t tank is positioned at a different location 10 miles away near to outlying land.

"Applying granular fertiliser always used to be a three-man operation and there was also the hassle of getting rid of used bags afterwards. We still have two men on the liquid operation because we choose to run a 10,000 litre bowser, but the system is far more efficient."

ASSESSING THE CROPS NEEDS

The old adage *if you don't measure it, you can't manage it* couldn't be more appropriate when planning crop nutrition and trying to get the best return from inputs. Best in terms of economics and Best for the environment.

Testing starts with analysing the nutrients available in the soil and any recycled nutrient sources applied. This allows an accurate and informed recommendation to be made for any additional fertiliser inputs. Following this up with a SAP analysis of the crop during growth will measure what the crop has extracted from the field and is the basis for making an accurate recommendation for additional fertiliser inputs for the crop.

SOIL TESTING

Fields should be sampled at least once every 3-5 years, with soil results tabulated and reviewed for trends. Anomalies should be considered against long term trends; laboratories analyse just a teaspoon of soil from a field, so occasionally things go wrong and having previous results for the field helps. Being able to provide historical soil analysis results for growers renting land is also a valuable tool for farmers considering renting the land out, as the renting farmers generally have no experience or history of the field. Farm Assurance audits increasingly require evidence of testing and record keeping, to demonstrate a proactive approach to nutrient management.

Laboratories providing soil analysis should be benchmarked against other providers to ensure results are accurate and consistent and additional tests for micronutrients and secondary nutrients should be considered for sensitive crops.

Soil sampling and analysis is a free service from OMEX, when carried out as part of the tailor-made suspension fertiliser system. Samples are generally collected by a network of ATV samplers, following the industry standard

soil sampling procedures. The OMEX soil laboratories are members of the national Professional Agricultural Analysis Group (PAAG), ensuring results are consistent with other independent UK laboratories. The OMEX labs analyse in the region of 10,000 soil samples per year and results are presented with ppm and a visual depiction of the result within the context of the Defra soil index system and are delivered by email.

Collaborators in the PAAG submit almost 200,000 soil results to the group annually for compilation and trend review and currently less than a third of samples show on-target P or K indices and less than 10% of samples show both P&K to be on target. 90% of results show a need for adjustment of the indices. The OMEX database currently holds details of around 68,000 fields and stores the soil analysis records of all fields tested. Results can be exported in various file formats to allow import into farm management software.

SAP TESTING

Crop testing is a valuable tool to help identify nutritional imbalances in crops and offer scope for correcting deficiencies and improve crop health. Conventional tissue analysis involves drying plant material and analysing for individual nutrients, according to where a problem is believed to lie. The nutrient content is "diluted" by the quantity of starch, cellulose, sugars, proteins and structural content of the tissue. As the level of these materials changes throughout the season, the content of nutrients, when extracted by tissue analysis, alters. By analysing the plant sap, this variability is greatly reduced, offering greater



precision in interpreting the results. Tissue analysis therefore tends to represent an historic view of nutrient uptake since emergence whilst the SAP process involves extracting and analysing the plant sap to measure the available nutrients, akin to taking a blood sample. As only the plant sap is analysed this gives an accurate representation of the nutrient supply available to the crop following testing. As this method is so topical it is a more effective method of accurately predicting nutrient deficiencies and antagonisms.

Many laboratories have facilities capable of analysing sap samples from plants but the key to utilising the analysis results is effective interpretation.

The UK commercial application of SAP testing was started by OMEX in the early 1990's when samples were analysed and interpreted in Sweden using a database dating back to 1947. The OMEX SAP laboratory opened in the UK in 1996 and many thousands of samples have been analysed and interpreted since, building on the detailed database covering over 70 cropping years and a wide range of crop species.



HOW IT WORKS

To get a SAP analysis of your crop, simply request a SAP pack, which includes sampling instructions and a prepaid sample envelope to return the sample to the SAP laboratory. On receipt, the sample is frozen overnight and the sap is then extracted, filtered and subjected to plasma analysis for 17 parameters, including the full range of plant, macro and micronutrients. The results are then compared to a database and a result is emailed back, detailing the level of each nutrient, compared to normal levels. The cost, including all carriage charges, is just £17+VAT per sample.

SAP testing trends for 2020 so far have shown restricted nitrogen uptake due to dry conditions and the benefit of foliar application of Bio20 in terms of a generally improved nutritional status.

- ◆ Plant growth stimulant, and stress buster
- ◆ Use on all crops for rapid results
- ◆ Use as part of an IPM system for improved plant health

LIQUID FERTILISER EASES WORKLOAD PRESSURE AND BOOSTS YIELDS

Liquid fertiliser was introduced to the arable farming business of Scott Campbell, Kirkton of Kinellar in Aberdeenshire in 2015, as an alternative to the granular system inherited from generations of family before him and has had a significant beneficial impact on crop performance and ease of management.

“Switching the nutrition application system is one of the biggest changes a farmer is likely to make in the tenure of the land,” says Scott who farms in partnership with his father Iain and uncle Neil. “My family was reluctant to change initially and so was I to be honest based on the investment needed to change, crop scorch concerns and negative impact on yield and quality always being cited as risks too big to take.”

But in the four years that Kirkton Farms has been using an OMEX liquid fertiliser system, there have only been cost savings, alongside yield and environmental benefits experienced by the business.

Fourth generation farmer Scott runs a 415ha arable farming operation spread over three farms, plus a contract farm on another 60-70ha all within 25 miles of the home farm.

The soils and climate support a cereal rotation that averages 7t/ha of low nitrogen malting barley, 3.85t/ha of oilseed rape grown for biofuel and 10t/ha feed wheat. Oats have been grown for the first time since 1986 to replace some oilseed rape.

In 2014 to help ease workload pressure on the existing sprayer the farm bought a Bateman RB35 28m, 4000 litre self-propelled machine, which covers about 4000ha/annum.

Scott started using liquid fertiliser in spring 2015 with three IBC's of NS fertiliser specifically for use on the headlands, so he could evaluate the performance over granular fertiliser used across the rest of the field. “Visually there was an obvious difference. The IBC test convinced me that liquid fertiliser application was the future.”

Scotland sales manager, Mhairi Robertson, says that there has been strong growth in liquid fertiliser use in Scotland in recent years. A significant factor is the purpose-built facility at the Port of Dundee, which opened in spring 2018, plus a continuing level of investment by OMEX supporting a strong ongoing commitment to Scottish growers.

“There is also a desire for farmers to improve headland management to increase yield averages,” she says. “The headland area can constitute a large proportion of fields, in some cases as much as 30% of the farm, so its vitally important that growers are maximising the yield coming off this area every time.

“The accuracy of application of liquid means applying right up to the field margin but not beyond, helping from an environmental compliance point of view whilst maximising yield.”

Farm trials set up in 2016 at Kirkton comparing granular fertiliser (Extran S) against OMEX liquid equivalent (Nitroflo 24+7.5SO₃) gave Scott food for thought. Two 20 acre plots of spring barley were treated on the same day, in the middle of a field so the results would not be affected by headland yield variation from the solid. The trial was repeated in 2018 but not in 2017 because of the dry weather conditions throughout the main growing period.

“The results spoke for themselves and gave me the reassurance that I had made the right decision to switch,” he says. “The liquid treated plots averaged 0.3t/ha more at harvest and you could see the line down the middle of the two plots as clear as day. Grain nitrogen levels were the same at 1.6%N.

“We used spring barley in the trial so we could take a nitrogen sample,” says Scott. “A concern of mine has always been that we must produce a low nitrogen sample, less than 1.65% N for our local Scottish malting barley market. It's a fine line between driving yield and hitting the nitrogen requirement. So far it hasn't been a problem, I'm pleased to say.”

“Uptake of nitrogen by the crop in a liquid fertiliser system is far quicker than with granular system and this is particularly noticeable at tillering,” he explains. “Without moisture granules just sit on the ground, but when it is taken up it goes straight to the ear rather than the tiller, which can affect grain nitrogen.”

“My reluctance to use liquids in the past was due to scorch and increased workload concerns, and reluctance from the family to change. But, the higher capacity sprayer we bought took out workload issues and allowed us to be more selective on spray days and therefore significantly reduced scorch risk.”

Additionally, he says that going liquid has freed up significant shed space that would otherwise be used for storage of bagged fertiliser but can now be used to store grain and the fertiliser operation is now a one-man operation.

“We were only able to grow one variety of malting barley in the past because of lack of storage space, but now we can grow three varieties and keep them all separate in the shed,” explains Scott.



Scott Campbell

SUSPENSION FERTILISER COMBINES TAILOR-MADE NUTRITION WITH CONVENIENCE FOR MORE EFFICIENT BLACKGRASS CONTROL

Fram Farmers member Plant Larter Farms derives significant financial, efficacy and labour-saving benefits from using OMEX autumn suspension fertilisers to apply maintenance levels of P and K with Avadex Excel 15G to help stay on top of blackgrass.

“We're always looking to operate more effectively,” states 35-year-old Ben Larter, who farms with his father and mother, John and Julie, at Framlingham in Suffolk. BASIS and FACTS qualified, he adds: “With just myself, my father, two full-time and one part-time employees we must work efficiently - the main reason for applying Avadex in suspension fertiliser.

“Blackgrass is something we're very mindful of, and with the loss of actives and the lower efficacy of remaining products we must ensure we do not sacrifice percentage control by poor timing. Three years ago we began to apply more Avadex, but putting it on behind rolls requires dry weather and doing so during sowing would have meant buying applicators for all three drills, made more work for the operator and reduced output.

“We operate 36m tramlines, so didn't want to apply Avadex at anything less as it would cause unnecessary damage to soils and crops if the weather turned wet. A 36m boom spreader would have been very expensive and we wanted to remain with liquid nitrogen. I considered adapting our 36m Amazone Pantera sprayer to apply Avadex at the same time, but the cost was significant and output would be compromised.

“Mark Riches from OMEX suggested incorporating Avadex in PK suspension fertiliser in the autumn. We had used suspensions on our sugar beet so we tried it on the wheat and it worked well so we're now in our third season of use”

MOST EFFICIENT SYSTEM

Combining Avadex granules with OMEX liquid suspension fertilisers offers a single-pass application of a highly-effective blackgrass control product and autumn fertiliser. Suspension fertilisers ensure that the high concentration of nutrients remains homogeneous and the Avadex granules are distributed evenly on the field. Being held on the soil clods maintains 100% soil cover and they are activated by moisture in the fertiliser. Avadex can only be mixed with OMEX suspension fertilisers due to the nature of the product and the long-history with Gowan and Monsanto.

“The beauty of the OMEX system is that Avadex is applied when it is best for the crop along with a base dressing of 60kg/ha P₂O₅ and 60kg/ha K₂O to maintain our indices, which are 2 or 2+,” Ben states. “OMEX take care of everything, so it requires only limited involvement on our



Ben Larter

part. Once Mark and I have agreed a plan in May, the next thing is that a tanker containing the fertiliser is dropped off in the autumn. We simply take the Avadex to our OMEX contractor, Rob Cannell; he does everything else and each season applies 665kg/ha of 0-9-9 suspension fertiliser tank-mixed with Avadex across 650-700 hectares of wheat and barley, about 65-70% of our cereal area.

“Last year I compared the cost of applying Avadex and P and K separately against mixing Avadex in the suspension. There was little difference, but huge advantages to the tank-mix because we don't have to store product, risk it being damaged, have any waste or have a man, tractor and loader tied up applying P and K at a busy time. It's also massively more convenient and flexible from a management point of view, and distribution of product to 36m is far more accurate than with a granular product applied with a spinner.

OMEX work around our requirements and do what they say they will, when they say they will do it, which allows us to plan our work accurately. We are only charged for what is applied and have full traceability because OMEX supply a plan of work before any product goes on; when it has, we receive confirmation with the invoice. Unless there is a reason for us to stop using Avadex, I see no reason why we will not continue to operate this system.”

Boost your crops blight defences with **Zynergy**[®]

- ◆ Corrects nutrient deficiencies
- ◆ Builds resistance to abiotic stress
- ◆ Improves crop health

ADD SOME ZYNERGY TO YOUR BLIGHT PROGRAMMES



FAMILY AND LOYAL STAFF PIVOTAL TO TRANSPORT COMPANY SUCCESS

As part of our series of articles on our national team of application and haulage contractors, we talked to Hugh Jackson, from Jacksons Transport.

Since its inception some 30 years ago, Jacksons Transport of Swindon Wiltshire, owned and operated by husband and wife duo Hugh and Cynthia, has an ever-expanding team of long-standing staff plus 2nd and 3rd generation family members.

Youngest son, Bradley and grandchildren Charles, Lewis, Josh and Ella together with drivers Des and Rob – are all keen enthusiasts of the Jacksons Transport brand and it's origins. Eldest son Roger was involved in the setting up of the company with Hugh, although in recent years he has branched out and is now operating his own successful transport business alongside his sons George and Jake.

Nurturing relationships with customers is a huge factor in the on-going success of Jacksons Transport with many customer relationships spanning back to the 1980s in the days of Fertiliquids based in Hungerford, where Hugh managed all transport and Health & Safety operations, providing then as he does now, a hands on personal service – a key factor in the successful delivery of product to farms.

“When I started on my own after being made redundant by Dalgety (who had acquired Fertiliquids) I ran one vehicle delivering about 2000 tonnes per annum,” says Hugh. “I found customers chose to migrate with me, many of which switched from granular to liquid due to supply issues.”

“My relationship with OMEX was formed when I initially met with sales director David Brakes and then later with chairman Olof Winkler and managing director David Featherstone”

Later, in the spring of 2002 a working agreement was forged between Jacksons Transport and OMEX which saw OMEX expand deliveries of liquid fertiliser to farms in the South West.

Jacksons Transport vehicles can be seen sporting their eye-catching green, blue and white livery of recently delivered new MAN units pulling OMEX branded liquid tankers along the M4 corridor, the M25, the M40 and into Cornwall, West Wales and further north to Herefordshire and beyond. The supply points that are mainly used are OMEX's Portbury and Dauntsey facilities, the latter of which was developed with the support of Jacksons Transport.

The dedicated Jacksons team turn orders around quickly and professionally, enhancing customer relationships that are key to the business and its first class reputation.

Jacksons Transport are accredited by the Fertiliser Industry Assurance Scheme which enhances its ethos and mission to provide the most effective transport solutions by tailoring its services to the needs and requirements of customers, maximizing safety, staff welfare and efficiency whilst minimizing environmental impact.

Your local OMEX contact

Sales Manager Scotland

Mhairi Robertson
M 07850 475012
E mhairir@omex.com

Commercial Director

Rob Burton
M 07970 577903
E robertb@omex.com

District Sales Manager

Dean Waddingham
M 07850 475019
E deanw@omex.com

District Sales Manager

Steve Ebbage
M 07850 475014
E stevee@omex.com

District Sales Manager

Chris Pacey
M 07702 640830
E chrisp@omex.com

District Sales Manager

Mark Southwell
M 07826 915270
E marks@omex.com

District Sales Manager

Ben Blom
M 07850 475035
E benb@omex.com

Commercial Director

Andrew Butler
M 07970 621396
E andrewb@omex.com

Sales Manager South

Mark Riches
M 07557 765576
E markr@omex.com

District Sales Manager

Scott Baker
M 07850 475018
E scottb@omex.com