

One in four now apply liquid fertilisers

One in four farmers are now using liquid fertilizer, according to a survey conducted at the Cereals Event.

LMG Field Marketing interviewed over 100 farmers growing an average of 663 Ha of crops and also found that 23% of users applied their liquid fertiliser with Hypro's FastCap® ESI nozzle, making it one of the most popular spray delivery methods.

According to Roger James Product Manager at Hypro, who sponsored the survey:

"Sales of the ESI liquid fertilizer nozzle have gone from strength to strength in the UK and overseas markets. It is popular for 2 main reasons; firstly ESI's have six jets for even distribution to the soil ensuring each plant gets its fair share. Secondly, it's very practical to use being compact and fitting onto standard nozzle bodies. We have added three new smaller sizes this year so there is an ESI nozzle that can cope with rates from 20 right up to 1000 l/ha."

Stable spray gives more flexibility

The TAG Applications Unit at Silsoe carried out work last year to look at the stability of the spray of different liquid fertilizer nozzles last year. The ESI nozzle was found to produce a very stable spray jet that did not break up into smaller droplets as spraying pressure and boom heights were altered.

According to Silsoe Director, Paul Miller, whose team carried out the work:

"An important finding from our study was the flexibility of the Hypro ESI nozzle in delivering consistent physical characteristics over a wide range of operating pressures (and hence flow rates) and distances from the nozzle. This finding has important implications making it practical to operate over a wide range of speeds and making variable rate applications."



Hypro's FastCap® ESI nozzles

ESI nozzle features

- Even distribution
- Compact
- Stable jet pattern
- 20-1000 litres

"It is widely agreed that retention of drops of liquid fertilizer within the crop canopy will provide an indicator of scorch risk. We used fluorescent

tracer dye added to liquid fertiliser to assess this spray deposition. All the application methods we studied aimed to produce large droplets or streams, and all of them tended to shatter when they were intercepted by a crop canopy. We found evidence that it is these secondary droplets that are retained on the leaves. So there does not seem to be a guaranteed 'scorch free' application method."

Compact and durable in use

Two seasons after its introduction the ESI nozzle has proven itself in practice for one committed ESI nozzle user, Cleveland based Contractor David Garbutt:

"I put a lot of liquid fertilizer through my two Chafer Rogators. This coming season I will use four different ESI nozzle sizes fitted on each of my machines - applying rates from 200 to 800 l/ha. The nozzles are permanently fitted to a multiple nozzle holder so I can easily change application rates. They don't block easily and I like the compactness of the ESI, as it doesn't protrude and get caught on obstacles. They are also pretty tough and I have not had to replace any of the ESI nozzles so far despite two seasons of use".

For full details on the ESI range including application tables, go to www.hypro-eu.com.

Getting the best from FastCap® ESI nozzles

- Choose the nozzle size that delivers the required rate at chosen pressure.
- Correct the application rate for the specific gravity of the liquid fertilizer.
- Adjust boom height for even application. The optimum for FastCap® ESI nozzles is 50cm above crop.
- Follow liquid fertilizer good application guidelines avoiding application to stressed crops.



Hypro's FastCap® ESI nozzles in action

HYPRO®

precision fluid delivery technology

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Guardian Air™ nozzles – first user experiences

High performance spraying from new centrifugal pump

Containers cleaner with ProClean™

More and more farmers use liquid fertilizer

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Guardian Air™ - First user experience

With a 3-star LERAP drift classification and better spray coverage than traditional air-inclusion nozzles, Guardian Air™ has rapidly become established as the air-inclusion nozzle to beat. Guardian Air™ nozzles are suitable for applying fungicides to cereals, oilseed rape and peas, insecticides, pre-em and post-em herbicides for larger broad-leaved weeds including wild oat herbicides and for glyphosate. Three users share their experience as first time users of the new technology.



Andrew Myatt

- Farms 1500 hectares of combinable crops on Cotswold brash near Cheltenham, Gloucester
- Sprayer: Bateman 24m RB16 fitted with 2 spray lines; 03 blue and 035 red brown Guardian Air™ nozzles
- Nozzle supplier: Kellands Agriculture, Gloucester

Mr Myatt, a former Sprayer Operator of the Year finalist, used Guardian Air™ for all his fungicide applications and sees spray quality as critical to getting the best out of the sprays he applies:

"I use 100 l/ha to maximise my work rate and my main consideration is to choose a nozzle that offers good spray coverage at this volume. I am very pleased with the results that I have had with Guardian Air™ nozzles. Generally I travel at 16 km/ha with an 035 Guardian Air™ but on steeper slopes where I have to slow to 12-14 km/ha I switch to the second spray line with an 03 Guardian Air™. By changing the nozzle size, I keep spray quality and coverage at the optimum all the time because each size is tailored to forward speed."

Teddy Maufe

- Farms 400 Ha of combinable crops and sugar beet at Wells-next-sea, Norfolk
- Sprayer: Chafer T2500 24 m trailed using 025 lilac Guardian Air™ nozzles
- Nozzle supplier: Acare, Walsingham, Norfolk

As a malting barley producer and LEAF farmer, Mr Maufe believes that it is critical to get chemical to its target, so application is one of the areas that gets his full attention:

"Agrochemical placement is everything for both economic and environmental reasons. I'm at 200 feet above sea level so I need to manage spray drift, dropping to 2 bar with Guardian Air™ gives LERAP 2 star drift reduction without affecting the spray pattern or product performance. On sensitive headlands the spray can be coarsened up by dropping down to 1 to 1.5 bar which gets a 3 star LERAP. Wild oats are one of our main weed problems and I need to get really good spray coverage. Using Guardian Air™ at 125 l/ha has done an excellent job. Guardian Air™ is recommended for far more spray jobs than the Lo-Drift that I used previously and I used it for everything but blackgrass control last year."



Eddie Farrow (Farms spray operator) and Trevor Johnson (ACare)



Colin Brown

- Cropcare Spray Contractor, Shepton Mallet, Somerset
- Sprayers: 2 x Kellands Agribuggy 2000 & 2500 24m using 5 different sizes of Guardian Air™ nozzles
- Nozzle supplier: Kellands Agriculture, Gloucester

Mr Brown used Guardian Air™ nozzles exclusively for his arable and grassland contract spraying last year:

"I first looked at them because it was claimed that they combined drift reduction - which keeps me spraying, with good spray coverage - which makes sure that my clients are happy with the results. My experience has been very positive. The spray coverage is very good. It does not become too coarse at lower pressures. The spray pattern holds up well, you can see this clearly looking across the boom when spraying in a field."

"I prefer to use the 025 Guardian Air™ at 100 l/ha but depending on the water rates that my clients specify I have to adjust this. Spray quality is the same for all sizes, so I know I will get a consistent result. I have used Drift Beta nozzles in the past, and think I got the right balance between spray quality and drift reduction at 5 bar. With Guardian Air™ I can achieve this at lower pressures."

High performance centrifugal pump

Hypro have introduced a new gear-driven 9890027 Centrifugal Pump with a maximum flow rate of 800 lpm. The pump will fill a 5000L sprayer tank in just 7 minutes saving 14 minutes on each turnaround compared to a 250 l/min pump. The flow capacity is also ideal for spraying high volumes, for example of liquid fertilizer, without having to compromise forward speed.

The 9890027



Using the tractor PTO drive to drive the pump avoids the need to match the pump to the hydraulic output of an individual tractor. It is suitable where tractors do not have enough hydraulic output or for trailed sprayers that will be used with different tractor models.

The new pump complements Hypro's extensive range of hydraulically-driven models which work at their best on self propelled sprayers and when matched with the hydraulic output of the host tractor.

The 9890027 is manufactured from durable cast-iron and comes fitted with a smooth running oil-lubricated gear drive. It has a 2" NPT inlet and 1 1/2" NPT outlet and maximum pressure of 9 bar and easily connects to the PTO shaft of most tractors, running at up to 540 rpm.

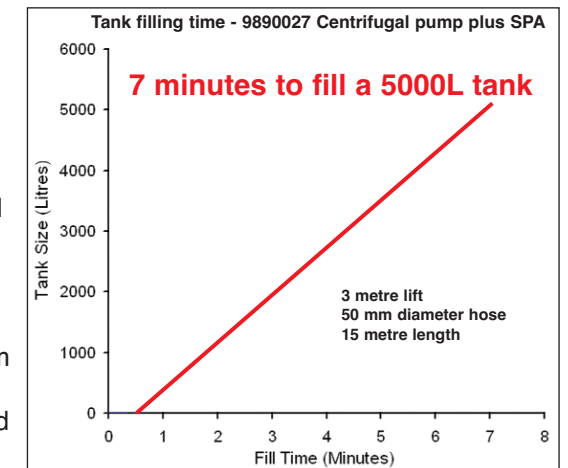
It is fitted with Lifeguard® premium silicon carbide seals that resist abrasion and run cooler making seals less likely to fail if the pump runs dry.

For fast self-priming, the 9890027 pump can be connected to Hypro's Self-Priming Adaptor, a winner of this years EIMA Technical Innovation competition,



Hypro's Self-Priming Adaptor

which creates a simple priming circuit to quickly develop initial pump suction. This pumping system is ideal for wide boomed, high volume trailed crop sprayers, because of the high flow performance that can be achieved and because its small size and light weight make it easy to fit where space is limited. It is also very reliable and easy to maintain, which helps to minimise down time and keep sprayers working.



Clean containers faster with ProClean™ nozzles



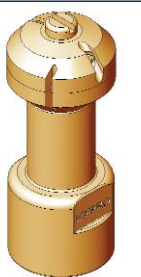
Rinsing a container with ProClean™

Hypro's new ProClean™ container cleaning nozzles promises to deliver a strong, targeted cleaning jet for superior cleaning performance.

The new ProClean™ nozzle uses fluid-driven jets which rotate slowly to ensure penetration of even thick chemical residues. In Hypro tests ProClean™ cleaned a 10L container 40-50% quicker than the comparison nozzles, overcoming the common problem and frustration of containers filling up with water before they are completely clean. The result is that container washing is faster and more efficient for quicker turnaround between loads.

The nozzle is very compact and has a 1/2 inch parallel female thread designed to fit existing induction hoppers fixtures.

ProClean™ is part of Hypro's new 'Pro' sprayer component range which also includes a constant pressure push-valve for operating the ProClean™ container wash jet, a ProClean™ tank wash nozzle, 1, 3 and 5 way ProFlo™ nozzle bodies with optional ProStop™ air-actuated nozzle control valve and a range of ProCap™ tank lids.



The ProClean™ bottlewash nozzle
Part Number PC1/2F-36075