

## High Speed, High Rate Liquid Fertilizer Application

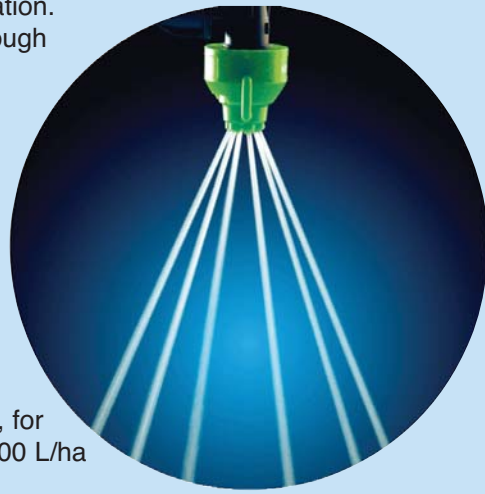
Applying fertilizer as a liquid through the farm sprayer can increase spring work rates significantly, especially when operating at higher speeds with wider booms. However, it is important to use a pump that can cope with the high application rates that are often required.

The Hypro 3" 9306C-3U centrifugal pump is ideal for high volume application. Fitted on a 36 m sprayer it can easily generate 650 litres per minute, enough to apply up to 1000 L/ha.



Hypro 9306 centrifugal pumps

Hypro's FastCap® ESI nozzles have 6 solid streams, for very even distribution of fertilizer. They are also the most compact liquid fertilizer nozzle available, so are less likely to suffer accidental damage when travelling or folding the boom. ESI nozzles are available in 9 nozzle sizes from 015 up to 15, for application rates from 20 to 1000 L/ha when applied at 1-4 bar.



Hypro ESI liquid fertilizer nozzle

Order a **FREE 2010 Hypro Crop Spraying Pocket Guide** for your chance to win a **ProClean™** container wash nozzle



The 2010 version of this Guide has all the latest information to help you select the best Hypro nozzle for the job. It also has useful sections on nozzle care, calibration and explains how to check spray patternation in practice.

To order your copy please complete the form at [www.hypro-eu.com/en-gb/Contact+us](http://www.hypro-eu.com/en-gb/Contact+us) or call 01954 262333 and ask for a **2010 Pocket Guide** to be sent. All farmers who request one before the end of May will automatically be entered into a prize draw and 5 winners will each receive a free Hypro ProClean™ Container Wash Nozzle. The draw will be made at Cereals 2010.

**ProClean™**  
CONTAINER WASH NOZZLE

reaches the parts that others don't



**100% clean, 50% faster, 50% less water\***

- Faster washing prevents container flooding
- Fits most common chemical induction systems

\* Hypro tests using 5L container



HYPRO®

precision fluid delivery technology

For more information visit our website [www.hypro-eu.com](http://www.hypro-eu.com)  
Tel: 01954 262333 or  
email: [info@hypro-eu.com](mailto:info@hypro-eu.com)

# Spring Spraying Update



Guardian AIR™

FINER AIR-INCLUSION NOZZLES

The best Air-Inclusion nozzle

- Best plant coverage
- Proven at lower rates
- 75% drift reduction when you need it



GuardianAIR™ nozzles are ideal for the application of fungicides, insecticides, PGRs and spring herbicides including glyphosate and wild oat killers to combinable crops - a much wider range than existing air inclusion nozzles. They have uniquely fine droplets and a lab designed rearward spray incline to get the spray where it is needed. GuardianAIR™ nozzles have excelled in field trials and on farm where they are now the UK's market leading Air-Inclusion nozzle. Make GuardianAIR™ the core nozzle for your spring spraying workload.



HYPRO®



For more information visit our website [www.hypro-eu.com](http://www.hypro-eu.com)  
Tel: 01954 262333 or e-mail: [info@hypro-eu.com](mailto:info@hypro-eu.com)

Win a **ProClean™** Container Wash Nozzle 5 to be won

Choose your nozzle wisely

GuardianAIR™ nozzles receive JKI stamp of approval

High Speed, High Rate Liquid Fertilizer Application

**Special Offer**

Buy five  
**Guardian Air™**  
nozzles for the  
price of four

Cut out this voucher, fill in your details and give it to a participating distributor together with your order.

Name: \_\_\_\_\_

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For a list of participating distributors please see [www.hypro-eu.com](http://www.hypro-eu.com) or call 01954 260097  
Offer ends 31st July 2010



# ProClean™ Container Wash – First user comments

The ProClean™ Container Wash nozzle was designed specifically to clean agrochemical residues from dirty containers. It distributes strong cleaning jets to all corners and the container neck so that no 'blind spots' escape.

According to Product Manager Roger James:

“Good container cleaning is not an option any more as empty containers can no longer be disposed of on farm. Recyclers insist on a ‘triple rinse’ standard consistent with good agricultural practice and our objective was to achieve this in the fastest and most efficient way for the farmer. In our tests ProClean™ nozzles worked well on all container sizes and reduced the cleaning time for empty containers by up to 50% compared to the alternative nozzles that are available”.



ProClean™ container wash nozzle

One of the first farmers to get practical experience of the new nozzle is Richard Hinchliffe who jointly manages the 480 Ha family farm in Rawcliffe Bridge near Goole in East Yorkshire. Having tried two of the alternative nozzles in the induction hopper on his Househam AR2500 in the last 3 years, Mr Hinchliffe was not satisfied with the results.



Wayne Rose who farms 1,000 arable hectares in Gloucestershire, reckons that he gets through his fair share of containers during the season. Container washing is time consuming, however he says that the new ProClean™ makes a significant difference.

He uses a Bateman sprayer and while the recommend washing pressure is 2-3 bar he finds that the nozzle is very effective when used at up to 4 bar.

“The filling operation is the most stressful part of spraying. I want container rinsing to be as simple as possible to allow me to concentrate on safely and accurately filling the sprayer. I have had a chance to use the ProClean™ nozzle with fungicides and PGRs in the last week or so and I am delighted to finally find a nozzle that gives me a reliably clean container in 15-20 seconds with no need to spin or shake water out of the cans.”

“No single design of wash nozzle will do every container type but I am very impressed with ProClean™. It is particularly effective with containers that have held thicker chemicals, which were always more difficult to clean and as a result take more time.”



Richard Hinchliffe



Wayne Rose

In addition to the time saved, ProClean™ will also reduce the clean water requirement on a sprayer. In Hypro tests a 5L container was cleaned in just 7.5 seconds compared to 15 seconds for the comparison nozzles and using just half the quantity of water. 20 seconds and 6 litres of water was saved when cleaning a 20 litre container.

The ProClean™ nozzle retails at £30.42 and can be seen in action at the Hypro stands at Lamma and Cereals this year.

# Choosing the right nozzle

Whatever the flow rate and pattern that a nozzle promises, it is vital that it actually delivers in practice. If it doesn't, then the considerable investment made in both chemicals and sprayer may not give the return that is aimed for.

...So how do you make sure that the nozzle delivers?



Die Sinking technology

Firstly, choice of nozzle brand can make a difference. With over 60 years manufacturing nozzles in the UK, Hypro has all the expertise needed to design and manufacture high precision polymer nozzles. Mould Tool making is critical to this capability. The 2 parts of the tool that makes the nozzle exit must fit together very precisely as they are subject to 25 tonnes of pressure.

Hypro's tool making staff each have more than 20 years experience of high precision tool making, more than half of it at Hypro. They have access to the very latest technology including Die Sinking machinery, capable of modifying a mould tool to within just 0.005 mm.

During their development, Hypro nozzles are constantly tested and re-tested against specification using high precision measurement, individual droplet analysis and a boom patternator to check spray patterns of multiple nozzles are evenly distributed.

Most Hypro nozzles then undergo testing by a range of European organisations, such as the UK's Silsoe Spray Applications Unit, France's Cemagraf and the German JKI (formerly BBA) to secure local approvals. Hypro are fortunate to be able to work with a number of UK farmer



Spray patternator

volunteers who are willing to check out nozzles in the field and provide feedback before they are generally available. This confirms that they will perform well in a real world environment.



Droplet analyser

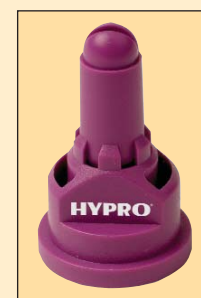
It is also important for spray operators to check their own nozzles on a regular basis and replace them when

they become worn and start to over-deliver on the recommended rate. Nozzle condition remains one of the most frequent reasons that sprayers fail their NSTS assessment. The cost of both sprayer testing and replacing worn nozzles can be quickly recovered in savings on agrochemicals and improved efficacy.

# GuardianAIR™ nozzles receive stamp of approval



The full GuardianAIR™ range is expected to have received final approval from one of the toughest testers in the world, the German JKI, in time for spring spraying. To receive this approval a nozzle must demonstrate that it delivers performance, durability and practicality. Nozzles undergo testing both in the JKI laboratory and in farm trials for at least one season of use. The JKI also conduct drift reduction assessments, GuardianAIR™ passed these with 75% reduction of drift compared to a standard and, at the time of writing, formal approval is expected shortly.



GuardianAIR™ nozzles have been proven to give a perfect balance between spray coverage and drift reduction. They are ideal for most spring combinable spray operations including foliar fungicides, insecticides, PGRs, Wild Oat herbicides and glyphosate. Most of the work to prove them in the field has been done at 3 bar, so that is the optimum pressure, but dropping to 1.5 bar achieves the 75% LERAP 3 star drift reduction standard – useful on sensitive headlands or to help complete spraying if the weather breaks.

The excellent spray coverage of the GuardianAIR™ nozzle also means that it works well at lower water pressures, so saving considerable spraying time and helping with the spring spraying workload.