



# Liquid Fertiliser Product Guide



# WELCOME

The Agrii Contracting Liquid fertiliser range offers a safe, secure and simple solution. With a range of nitrogen sulphur products available which suit individual crop and soil requirements, our experienced agronomist support is on hand to help create a bespoke liquid solution for your farming system.



## LIQUID FERTILISER CONTACTS

### NORTH OF SCOTLAND

John Watt 07796 335737

### CENTRAL SCOTLAND

Colin Rennie 07769 936750

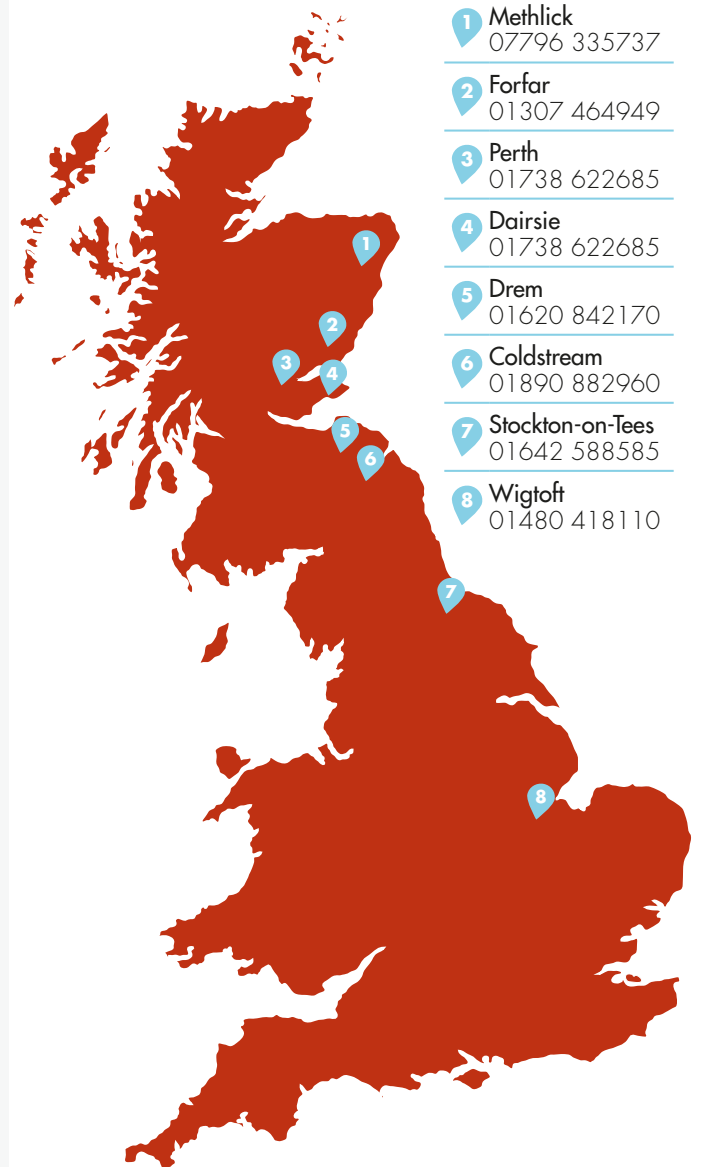
### LOTHIAN & BORDERS

Greig Baird 07786 678433

### NORTHERN ENGLAND

John Charlton 07469 284165

## AGRII CONTRACTING SITES



- 1 Methlick  
07796 335737
- 2 Forfar  
01307 464949
- 3 Perth  
01738 622685
- 4 Dairsie  
01738 622685
- 5 Drem  
01620 842170
- 6 Coldstream  
01890 882960
- 7 Stockton-on-Tees  
01642 588585
- 8 Wigtoft  
01480 418110

**Agrii**<sup>TM</sup>  
Liquid 

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# BENEFITS OF LIQUID FERTILISER



There are a number of reasons why more and more farmers are choosing liquid fertiliser. All points of delivery, storage and application of liquid fertilisers are designed to be as safe, secure and simple as possible. Requiring less machinery, human contact and environmental exposure, it's easy to see why more and more growers are choosing liquid fertiliser.

## WHY GO LIQUID?

- + Environmental
- + Agronomic
- + Economic
- + Performance
- + Optimisation

## Benefits of Contract Applied Product

- + Helps to ensure that you comply with application legislation.
- + No capital tied up with a sprayer and reduced fixed costs.
- + No need for training and certification of farm staff.
- + Frees up labour at peak times.
- + Option for variable rate application.
- + GPS section control and steering.
- + Range of nozzles to accommodate wide range of application rates.
- + Wide range of application widths: 24/28/30/32/36m.
- + LERAPs and other stewardship requirements made easy.
- + No disposal of unused chemicals or containers required.
- + No chemical store required.



# Why should you choose **liquid**?



## ENVIRONMENTAL

- + Liquid fertiliser applications provide precise placement to the crop edge protecting the environment and field margins.
- + The Agrii Tank Scheme removes the need for bag disposal and reduces plastic waste.



## AGRONOMIC

- + Liquid fertiliser contains three forms of Nitrogen. Liquid can be fast acting in dry conditions improving Nitrogen Use Efficiency (NUE).
- + Liquid fertiliser applications create a uniform crop, to the field margin, resulting in reduced weed competition.
- + Less overlap avoiding crop lodging through over application of fertiliser.



## ECONOMIC

- + Less space and labour needed for storing and handling.
- + Flexible purchase options matched to cashflow throughout the season.
- + Liquid fertiliser increases crop yield through even application to field margins.



## OPTIMISATION

- + Liquid fertiliser provides flexible solutions for sprayer implementation.
- + Optimises machinery and labour resources.



## PERFORMANCE

- + Enables accurate application across all tram-line widths.
- + Suits variable rate systems.
- + Sprayers have the lowest CV (Co-Efficient of Variation) resulting in highly accurate nutrient delivery from liquid.
- + Wider application windows.

## WHY AGRII?

- + Efficient delivery throughout the season ensuring consistent supply.
- + Agrii provides a premium product, using highest standard 80 mesh (yellow) filtration.
- + A range of nitrogen sulphur products are available to suit individual crop and soil requirements.
- + Agrii conducts extensive R&D projects which demonstrate and explain the best use of liquids.
- + Experienced agronomist support available to create a bespoke liquid solution for your farming system.
- + Products such as Liqui-Safe (Nitrification and Urease Inhibitor) enable more flexible solutions for liquid.

# AGRII LIQUID FERTILISER RANGE

THE AGRII CONTRACTING LIQUID FERTILISER RANGE INCLUDES:

## Sulf11

With the decrease in acid rain there is a lower level of sulphur in the soil. Sulphur is a necessity for crop health, chlorophyll production and nitrification. The sulphur is in the form of sulphate which is immediately available to the plant and will not acidify the soil. The nitrogen is in ammonical form and is used more efficiently than nitrate forms. This can be used on all crops, with a particular additional benefit in reducing scab in potato crops.

## N23S

Ideal for top-dressing to ensure strong, rapid plant metabolism. Also extremely useful for sulphur responsive crops during periods of intensive growth. The sulphur source is sulphate, so for deficient areas and crops with a high demand for sulphur, such as OSR, this is an optimal product. Commonly used on most crops including grassland.

## N29S

This is a comparative product to N23S, with a higher concentration of nitrogen but a lower level of sulphur.

Product	Analysis w/w		Specific Gravity (SG)	Approximate Analysis w/v		
	N	SO <sup>3</sup>		N	SO <sup>3</sup>	
Sulf11	8.0%	22.5%	1.22	9.8%	27.5%	N 98kg, SO <sup>3</sup> 275kg/1000 litres
N23S	18.3%	12.7%	1.26	23.0%	16.0%	N 230kg, SO <sup>3</sup> 160kg/1000 litres
N29S	22.7%	8.6%	1.28	29.0%	11.0%	N 290kg, SO <sup>3</sup> 110kg/1000 litres



# APPLICATION CHARTS

## Agrii Contracting Liquid Fertiliser Range

### Sulf11: 9.8% N + 27.5% SO<sup>3</sup> (W/V)

l/ha	kg/ha N	kg/ha SO <sup>3</sup>	Units/ Acre N	Units/ Acre SO <sup>3</sup>	Liqui-Safe (l/ha)
300	29.4	82.7	23.5	66.2	1.5
600	58.8	165.4	47.0	132.3	3.0
1000	98.0	275.6	78.4	220.5	5.0

### N23S: 23% N + 16% SO<sup>3</sup> (W/V)

l/ha	kg/ha N	kg/ha SO <sup>3</sup>	Units/ Acre N	Units/ Acre SO <sup>3</sup>	Liqui-Safe (l/ha)
150	34.5	24.0	27.6	19.2	0.8
300	69.0	48.0	55.2	38.4	1.5
500	115.0	80.0	92.0	64.0	2.5

### N29S: 29% N + 11% SO<sup>3</sup> (W/V)

l/ha	kg/ha N	kg/ha SO <sup>3</sup>	Units/ Acre N	Units/ Acre SO <sup>3</sup>	Liqui-Safe (l/ha)
150	43.5	16.5	34.8	13.2	0.8
300	87.0	33.0	69.6	26.4	1.5
500	145.0	55.0	116.0	44.0	2.5



# AGRII-START LIQUI-SAFE

Powered by  
Nutrisphere-NL



## The opportunity to increase yield while benefiting soil biology

### WHAT IS LIQUI-SAFE?

Liqui-Safe is a unique nitrification and urease inhibitor for liquid fertilisers. Liqui-Safe is a highly water-soluble organic compound primarily created from fermentation of maize.

### HOW LIQUI-SAFE WORKS

- + The technology reduces the 3 sources of N loss by using its high cation exchange capacity designed to sequester elements involved in the nitrogen cycle.
- + Liqui-Safe degrades in the soil to leave only carbon, hydrogen and oxygen.
- + This is how the technology achieves the Nutrient Use Efficiency (NUE) benefits.

NutriSphere NL is a registered trademark of Verdersian Life Sciences LLC



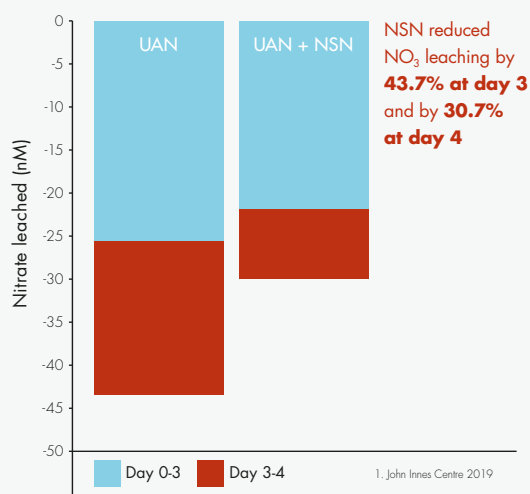
## LIQUI-SAFE TRIALS WORK

Unique Urease and Nitrification Inhibitor that's kind to the Environment...

### ENVIRONMENTAL BENEFITS OF LIQUI-SAFE

- + Liqui-Safe improves N use efficiency from UAN by 15%.
- + Liqui-Safe keeps the fertiliser where it is needed for longer, increasing nitrogen efficiency, yield and crop quality.
- + Liqui-Safe has demonstrated a beneficial effect on soil biome.
- + Studies have demonstrated significant reductions in Nitrous Oxide and Ammonia losses from field applications of Liqui-Safe.

1 Nitrate leaching – at 40% soil moisture (Liqui-Safe)



Product	Ammonia loss (Volatilisation)	De Nitrification Losses	Reduction in Leaching
Liqui-Safe	Up to 86%	Up to 61%	Up to 43%

**Fertiliser applications after the 31st March 2024, in England** must be made with a urease inhibitor.

**Liqui-Safe is recognised by Red Tractor** as being a fully compliant urease inhibitor.



## REDUCED IMPACT ON THE ENVIRONMENT – THE RESULTS



**NutriSphere-N** presents no long-term effect on the rate of mortality, reproduction or biomass inhibition of earthworms.

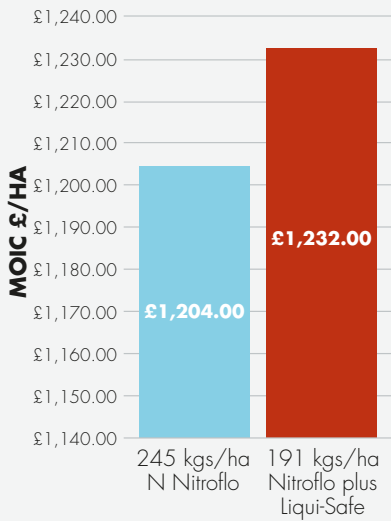
**NutriSphere-N** treated urea by Athens University reported a **74% increase** in Mycorrhizal colonisation compared with untreated urea.

Acute and chronic studies performed with **NutriSphere-N** at up to **10 times** the agronomic dose determined there was no long-term effect on the mobility of Daphnia.

Acute study performed with **NutriSphere-N** at up to **10 times** the agronomic dose determined there was no effect on fish mortality.

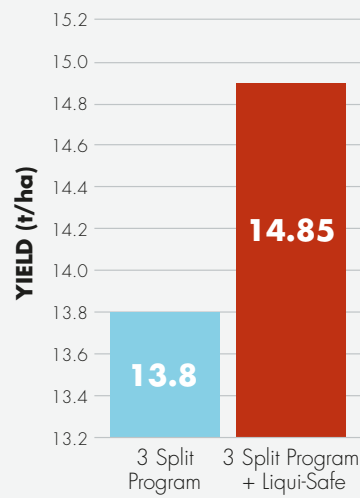
Trialled in EU, TR and UK with **NutriSphere-NL** over a 3 year period covering a total of 6 different crops the use of the **technology** produced an average **3.7% yield increase**.

**2** Trial highlighting how Liqui-Safe can be used as a tool to reduce N rates and increasing NUE.  
 Liqui-Safe reduced the carbon footprint of the crop by 120 kgs CO<sub>2</sub>e (54 kgs/ha N Reduction) and maintained yield.



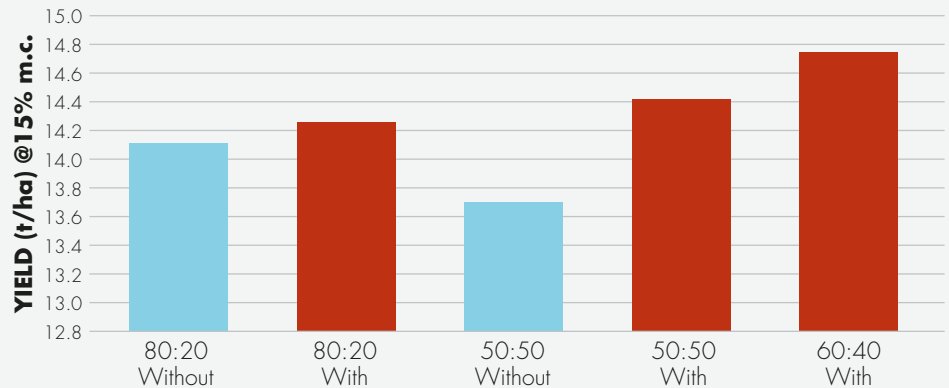
**3** Liqui-Safe NUE Trial

N SPLIT 1	N SPLIT 2	N SPLIT 3
70 kgs/ha N	86 kgs/ha N	80 kgs/ha N



**4** Trial highlighting how Liqui-Safe improves NUE in tailored N situations.  
 Liqui-Safe was found to:

- + In all scenarios, produce an increase in yield and protein.
- + Average yield increase: 0.4 tonnes per ha.
- + Average protein increase: 0.1%.



## LIQUI-SAFE BEST USE POINTERS

### EARLY FEB N APPLICATIONS:

To reduce leaching and slow down N conversion from ammonium to nitrate.

(See graph 1 – page 8)

### TO IMPROVE NUE:

Apply Liqui-Safe in every pass. Potential to reduce N rates (subject to optimal N).

(See graph 2 and 3 above)

### WITH VR NITROGEN:

Apply in two splits with different nitrogen loadings.

(See graph 4 above)

# AGRII-START RELEASE



Agrii-Start Release is a unique and ground-breaking soil complexing agent which works in the soil to prevent both lock-up and to release phosphate and other essential nutrients for uptake by the roots.

## AGRII-START RELEASE TANK MIX COMPATIBILITY

Agrii-Start Release can be added to various tank mixtures and applied pre-emergence of the intended crop.

Post-emergence applications of Agrii-Start Release can be made but on its own without any ag chem or fertiliser products.

### TANK MIX GUIDANCE TABLE

Product	Guidance	Notes
Release	Pre and post emergence	See label guidance for growth stages
Release + Ag Chem Products	Pre-emergence only	See approved tank mix table
Release + Liquid Fertilisers	Pre-emergence only	Not approved post emergence

To view our best practice guide and manufacturer approved tank mix compatibility chart, scan the QR code:



Crop	Timing	Agrii-Start Release Rate (L/ha)	Water Volume (L/ha)
Winter cereals	Pre-drilling – GS29 (end of tillering). Do not apply in frost or to cold soils.	4.0	150-200
Spring cereals	Pre-drilling – GS29 (end of tillering). Do not apply after soils begin to dry.	4.0	150-200
Potatoes (at planting)	Apply within the potato ridges. Low to medium calcareous soil types – 2.0 L/ha. Apply without SPO58. High calcareous soil situations – 4.0 L/ha. Apply without SPO58.	4.0	200-400
Potatoes (over ridges)	At planting to GS07 (beginning of stem formation). Apply to beds with SPO58 at 0.05% v/v.	4.0	200
Oilseed rape	Pre-drilling to GS14 (4 leaves unfolded).	4.0	150-200
Maize	Pre-drilling to GS13 (3 leaves unfolded).	4.0	200
Sugar beet	Pre-drilling to GS14.	4.0	200
Leaf vegetables	Pre-drilling to GS14 (4th true leaf unfolded).	4.0	200
Root vegetables	Pre-drilling to GS14 (4th true leaf unfolded).	4.0	200

# APPLICATION BARS AND NOZZLES

## SPRAYING SYSTEMS (TEEJET) STREAM JET

A 5-stream jet which produces a 'rain-effect' pattern across the boom. A recent change is that the jet body is now integral with metering disc, so different coloured bodies are used for different rates; no need to change metering discs.



Spraying Systems (TeeJet) Stream Jet

Hypro Fastcap® ESI



## HYPRO FASTCAP® ESI

6-stream cap, with streams directed down onto crop, claimed to produce a low atomisation stream of nitrogen. Supplied as nozzle+metering orifice with two nozzles required to cover most application rates. Supplied in a box of 6 nozzles.



AccuRate Dribblebar

## ACCURATE DRIBBLEBAR

Precision rate control with stainless steel regulator. Applies for 90-2200 l/ha with minimal setting. Minimal drip when switched off. Ideal for use on second spray line.



OMEX Streambar

## OMEX STREAMBAR

The OMEX Streambar produces four vertical streams from each bar, ensuring even coverage across the full boom regardless of the bar's height above the ground. Each stream is fed individually to ensure the output from all four streams are identical even with the bar tilted. A wide range of application rates can be achieved and are changed using the built in slider.



For further information please speak to your usual Agrii contact or get in touch with our Customer Service Team:

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 [www.agrii.co.uk/why-choose-liquid-fertiliser](http://www.agrii.co.uk/why-choose-liquid-fertiliser)

Scan the QR code to visit the liquid fertiliser page on our website.

