

GIVE YOUR SPRAY TANK THE ALL CLEAR

Incorrect spray tank decontamination and cleaning can lead to some devastating damage to your crops, yield and equipment. Sprayer contamination is problematic in highly diversified cropping systems and occurs when herbicide deposits form during previous applications that are removed when later applications are made to sensitive crops.



Decontamination is a time consuming, but necessary operation and the importance is often overlooked for this reason. All Clear

Left side washed Right side cleaned with All Clear DS.

DS can be used to minimise time consumed and use of a number of products to clean and decontaminate tanks, spray lines, transfer pumps and pre mixing tanks. Cleaning should be carried out when switching from one herbicide to another, from herbicide to fungicide, fertiliser or insecticide and at the end of season sprayer clean up.

All Clear DS has a three way action to remove all residues and replaces the need of a number of common tank cleaning products such as ammonia, laundry detergent and chlorine bleach. All Clear DS contains:

- Surfactants: To physically remove residues and stop re-sticking
- Detergents: To solubilise and break down residues
- Sequestrants: To lock up molecules and improve rinse out

It has a number of features and benefits including single dilution rate (250mL All Clear DS per 100L of tank capacity) to make cleaning simple and convenient, non-corrosive so there is no equipment damage, low foam to make emptying the tank easy, not classed as a dangerous good so handling and mixing is safe as well as a long shelf life to allow carryover from season to season. All Clear DS has been proven to outperform other tank cleaners on the widest range of products.

Correct cleaning method to be followed (NOTE: Always read the label prior to use):

- 1. Immediately after spraying, drain all equipment. Any product contamination on the outer surfaces should be removed by washing with a solution of All Clear DS and water at the label rate.
- 2. Rinse or pressure-clean the inside of all equipment with at least 1/10 of tank capacity of clean water. Visible residues should be removed from tank, then

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boom, lines and nozzles flushed. Drain all equipment completely and follow Rinsate Disposal instructions.

- 3. Tanks without internal sprinklers: Half fill the tank with clean water and add All Clear DS at the label rate for the total tank volume (e.g. for a 2,000L tank, add 5L of All Clear DS). Start agitation and flush all equipment for a few seconds, with boom-end valves open and/or bungs removed. Close boom-end valves and/or replace bungs, then stop flow to boom and completely fill tank with water. Allow to stand for at least 15 minutes with the boom closed and agitation running, then flush all of the solution out of the spray tank via the boom, lines and nozzles and follow Rinsate Disposal instructions.
- 4. Large tanks with internal sprinklers or washing nozzles that clean all internal surfaces: It is not necessary to completely fill the tank. Determine the "flush volume" (the amount of water required to spray through the nozzles for 30 minutes); this should not be less than 2.000L. Fill tank with half the flush volume of clean water and add All Clear DS at the label rate for the full flush volume. Start agitation and flush all equipment for a few seconds, with boom-end valves open and/or bungs removed. Close boom-end valves and/or replace bungs then stop flow to boom and add the other half of the flush volume of clean water to the tank. Run the agitation and internal sprinklers/tank nozzles for at least 15 minutes, then flush all of the solution out of the spray tank via the boom, lines and nozzles and follow Rinsate Disposal instructions.
- 5. Nozzles, non-drip diaphragms, screens and filters should be cleaned separately with a fresh solution of All Clear DS and water at the rate of 25mL in 10L.
- 6. After following the All Clear DS cleaning process above, the tank should be rinsed with clean water and the boom, lines and nozzles flushed. The tank should be drained completely. Follow the Rinsate Disposal instructions.
- 7. A susceptible plant should be treated with a sample of the final Rinsate to determine whether residues remain.







IN-CROP NITROGEN – FOLIAR APPLIED N MAKES A LOT OF SENSE

With the recent rain events, 2016 may prove to be a good year to ensure crop nitrogen levels are maintained in order to capitalise on yield potential. It may also be a season where we will be juggling rain events, wet paddocks, narrow application windows and availability of spreaders to apply urea.

This is where foliar liquid nitrogen can be very useful. Liquid nitrogen products such as Ranger[®] (24% N) and Sulsa[®] (26.7, 6.8%S) can be an effective nitrogen choice for the following reasons:

1. Quick: When the crop needs N, foliar N can be applied and will be taken up into the plant the same day. No need to wait for a spreader to be available or for urea to mineralise and become available to the crop, (which can take 10 days). Using foliar applied nitrogen, up to 20 units of N can be confidently supplied to the crop when you choose.

2. Accurate: As liquid N is applied via boom-spray, the accuracy across the paddock is greater than ground spread urea. Work performed by the Fertiliser Society showed that a 20% variance across the paddock of spread urea (which is common) can mean a 50kg/ha loss in yield. Boom-spray's, as we know, are close to 100% accurate, so the crop receives the same units of N from one side to the other.

3. Efficient: Around 80% of foliar 'amine' nitrogen (such as Ranger[®]) is reliably taken up and used by the plant. Ground-spread urea N efficiently by contrast varies widely (~30-80%), depending on moisture, temperature, soil pH etc.

4. Economical: The price of foliar nitrogen per hectare is comparative to spread urea when assessed per kg of effective nitrogen (i.e. the amount of N the plant actually takes up once you account for all the potential losses, (based on a 50% efficiency for urea).

5. Critical trace elements can be co-applied with foliar N:

Zinc, copper, boron and molybdenum are known as 'nitrogen helper elements' and can dramatically improve nitrogen-useefficiency in the plant. These trace elements are nearly always either low or clinically deficient in most crops. Applying them at the same time as nitrogen is a great way to help nitrogen work more efficiently in the plant and increase yield.

GAIA2112 has developed a product specifically for this job called Intelli-AMP[™] marketed exclusively through AgriWest.

Intelli-AMP Kicks a \$72/ha Profit Goal

In 2015 local Narromine/Tullamore grower Rob Carter compared strip applications at tillering stage in his wheat of Intelli-AMP at 600mls/ha across the paddock to the control (no Intelli-AMP). The results were very encouraging.

Intelli-AMP supplies the key 'nitrogen helper' trace elements to the crop in the correct proportions. Zinc, copper, boron and moly all play a critically important role in plant nitrogen metabolism, and are more often than not low or deficient in the crop, compromising the conversion of nitrogen into yield and protein. Intelli-AMP also contains plant growth stimulants that promote the metabolism of the plant and ability to set higher yield potential.

Grain samples were taken and compared and Rob commented that the grain quality difference between the treated and untreated was "very obvious". His results are as follows:

Wheat treated with and without Intelli-AMP

TREATMENT	Grade	Protein	Screenings	Price per tonne Ex Narromine June 2016
Control	AUH2	11.5%	10%	\$233.75
Intelli-AMP	APH1	15%	<5%	\$258.75

ECONOMICS					
AUH2 vs. APH1, Price per T difference	\$25.00				
Average Yield of paddock T/Ha	3.2				
Increase gross profit = 3.2 T/Ha x \$25	\$80.00				
Cost of Intelli-AMP @ 600ml/Ha	\$7.80				
Increased Net Profit/Ha	\$72.20				

This trial highlights the significant importance of the trace elements zinc, copper, boron and moly to nitrogen metabolism and subsequent final yield.

Intelli-AMP is designed to be used by itself or co-applied with Ranger or Sulsa liquid Nitrogen products in order to amplify the crop nitrogen response and increase subsequent yield and protein outcomes.

STOP IT, BEFORE IT STARTS!

Good nutrition and careful management are the keys to avoiding pregnancy toxaemia. Lambing ewes require feed on offer of more than 1,500kg per hectare during lambing. If this is not available, provide a supplementary source of energy such as good quality hay and grain. However, avoid making sudden changes to their feed or causing short sudden periods of starvation such as during yarding.

If extreme weather conditions cause ewes to stop eating or become stressed, provide supplementary feed. Take care to avoid grain poisoning by introducing grain slowly.

It is recommended to identify twin mothers using pregnancy scanning and then to separate and preferentially feed them to minimise the development of pregnancy toxaemia.

Also avoid getting ewes too fat (i.e. fat score greater than 3.5-4) or too thin (i.e. fat score less than 2-2.5) in late pregnancy.

PREG TOX - WHAT NOW?

Ketol aids in the treatment of acetonaemia (ketosis) in cattle and pregnancy toxaemia in sheep. Ketol is an oral solution containing propylene glycol, choline and cobalt sulphate.

Propylene glycol acts as a glucose precursor, triggering the production of more glucose from the liver. This will help elevate blood glucose level, assist removal of ketones and accelerate general metabolic function. Choline enhances fat transport from the liver to assist in fatty acid metabolism. Cobalt sulfate ensures Vitamin B12 production is maintained for carbohydrate, protein and fat metabolism and maintenance of appetite.

An injectable 4in1 such as Flopak, Minject or Minbal should also be used in conjunction with Ketol. The injectable 4in1 contains calcium and magnesium solution with Phosphorus and glucose. This can be used for the treatment of Milk Fever (hypocalcemia), Grass Tetany (hypomagnesemia) and also aids in the treatment of pregnancy toxaemia as it provides an injectable form of glucose and helps to increase calcium stores that are commonly depleted in late pregnancy/ early lactation.









GREAT LACTATION = GREAT LAMBS

Lambs are rapidly hitting the ground, but ensuring that they grow and thrive to be quality weaners can sometimes be difficult. Understanding the nutritional requirements of the ewe before, and during lactation is critical to your success.

The first essential, non-negotiable requirement of a lamb's survival, is colostrum. Colostrum is a vital cocktail – full of minerals, vitamins, fats, energy, and antibodies for immunity. However, it is important to note that not all colostrum is created equal, and the quality of which, is entirely dependent on the ewe's health and nutrition leading into its production. Ewe's with low immunity – or those who have not been administered with pre-lamb clostridials (6in1), will pass on less passive immunity via colostrum to their lamb – of which they rely on until the lamb has had their first vaccination at marking time. The quality of the fats, energy, vitamins and minerals in colostrum are ultimately determined by the diet of the ewe leading into lambing. Ewes that are fed high starch diets, i.e. supplemented with grains such as barley or wheat, will have higher levels of energy and feed conversion. Also, having access to a high quality, pre-lamb specific mineral and vitamin supplement is essential, depositing high levels of nutrition into the colostrum.

Once the ewe has lambed, the volume of milk, and its quality in terms of nutrient levels, is ultimately determined by the ewe's diet. For ewes to efficiently produce milk, diets high in starch promote rumen feed conversion efficiency – meaning ewes consume less feed to produce more milk. Not only does this benefit the lamb for strong growth and development, but is also advantageous to your bottom line, making this a profitable exercise. To further this, providing ewes with a high quality mineral and vitamin supplement during lactation, ensures that the ewe is not losing vital nutrients through milk production, but also passing these on to the lamb via the milk.

The correct management of this critical phase will allow you to strike a balance between raising strong, fast growing lambs and ewes that maintain good condition throughout the lactation period.



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