



agrichem



Broadacre Chemical Compatibility Directory

*Broadacre Pesticides
Broadacre Seed Dressing
Broadacre Fertilisers*



March 2009



INNOVATING IN CROP NUTRITION

25^{years}

1800 654 758
www.agrichem.com.au



Innovation

For 25-years Agrichem has been recognised as the pioneering market leader in the field of fluid-fertilisers, specialty crop-protection products and nutrition application technologies.

Agrichem's enduring commitment to fundamental research in the area of nutritional plant-physiology has consistently rewarded Agrichem with significant scientific breakthroughs. These technological advances combined with Agrichem's dedication to conducting intensive international field-trials allows Agrichem to frequently launch a range of innovative products.

Our Promise

- to provide a range of quality, innovative and cost-effective products to global agribusiness.
- to enlighten all our stakeholders on the importance of efficient nutrition application
- to continue to invest in the knowledge of the communities we operate in.
- to maximise the sustainability of our operations and those of our stakeholders.

Seal of Quality

In 2006 Agrichem was the first in the industry to achieve ISO9000 quality accreditation for its manufacturing facilities, further formalising Agrichem's commitment to quality. Agrichem's team of chemists in Australia and internationally oversee the manufacturing of every batch of product, conducting a series of quality tests, including the following 10 tests.

1. pH - testing of final formulation
2. Rheology - testing of formulation flowability
3. Clarity - testing formulation for contaminants
4. Shelf life - testing for formulation stability
5. Particle sizing - analysis of final formulation
6. Dispersion - analysis of formulation
7. Pantone colour - profile adjustment
8. Odour - analysis of final formulation
9. Centrifuge - analysis of sedimentation
10. Certificate of Analysis following the manufacturing process, each batch of products is subjected to a series of Quality-Assurance tests. Only once the analysis is confirmed to be consistent with specification, is the Certificate of Analysis issued.



CONTENTS

	PAGE NUMBER
Broadacre Pesticides	3 - 4
Broadacre Seed Dressing	5 - 5
Broadacre Fertilisers	6 - 6

Important Information about Tank Mixing

DISCLAIMER

TANK MIX

This spreadsheet relates to tank mixing Agrichem products with common agricultural chemicals. All tests have been conducted under strict laboratory conditions.

Tank mixtures are used by farmers/spray operators for convenience. As the water used in tank mixtures may differ in quality from the water used in the laboratory (Brisbane potable water supply) some variation in results may occur which Agrichem is unable to predict. Agrichem makes provides no guarantees or assurances of chemical or biological efficacy or crop safety.

Compatibility Key

C	-	Compatible: products mix to form a stable tank mix
CA	-	Compatible with agitation: products mix but require strong agitation
NC	-	Not Compatible: products do not mix
Blank Box		Products not tested

Tests are conducted using a ratio of 1:1:50 (Agrichem product to agricultural product to water), which may be different from the manufacturers recommended rates.

ON-FARM TANK MIX TESTING

As agricultural chemical manufacturers may change product formulations or usage rates from time to time and as water quality may also be variable, compatibility problems may still be encountered. For these reasons, it is suggested that on-farm testing be conducted, even when this document states that products are tank mixable. To test product combinations on-farm, the following jar test procedure should be adhered to:

A: Add one litre of water (same water source as normally used to fill spray rig) to a clear jar

B: Add agricultural chemical to the jar at label rate per litre of water

C: Add Agrichem product to the jar at label rate (including surfactants)

D: Let mixture stand for 10 minutes

E: If the liquid is unaffected, i.e. no rapid settling out of particles or precipitate formed and no colour change, then the products are likely to be tank mixable.

Note: Some mixtures may settle out over time. This would be considered NC, that is, an incompatible tank mix. However, if on re-agitation the mixture is fully re-suspended in the water and maintains dispersion without the formation of larger particles, it can be considered CA, that is, compatible with agitation. Should there be any doubt as to the compatibility of the mixture, apply each product separately.

Product End-Users or their advisers who ignore any of these conditions, do so entirely at their own risk.

This information replaces all earlier information supplied by Agrichem. Whilst every effort will be made to keep customers advised of amendments and changes, it is the customer's responsibility to ensure that the information they are using is current. Agrichem cannot accept any responsibility for changes in formulation, specification or recommendations of products from other agricultural chemical manufacturers occurring since the completion of laboratory tests. Whilst all care has been taken to ensure the accuracy of the information contained in this document, Agrichem cannot be held liable for the performance of other company products in mixtures with Agrichem products or the subsequent performance of any mixed product. Furthermore Agrichem cannot accept responsibility for any physical or property damage or economic loss (whether due to negligence or otherwise) arising as a result of this information. If Agrichem is found responsible and where allowed pursuant to trade practices or other legislation, Agrichem limits any remedy (at its option) to the replacement or payment of replacement cost of the Agrichem products supplied. Always follow label instructions for all chemicals to be mixed.

Agrichem seeks to acknowledge that certain agricultural chemicals mentioned in this document may be protected by various Australian and International Intellectual Property Laws, including patents and registered trademarks of the respective owners and Agrichem Provides no authority (express or implied) to use any of these trademarks without the prior written consent of the respective owner of each trademark. March 2009

See inside last page for Compatibility Testing Procedure

AGRICHEM BROADACRE COMPATIBILITY CHART: OTHER FERTILISERS (10/03/09)

COMMON NAME	Activist Mag-Flo	Activist Max	Activist Red	Activist Zinc	Agri-K 415	Balance 3ZBM	Balance ZMC	Balance ZN	Big Red	Broadacre 30-30	Broadacre Zinc	Complete ZMC	Groflow 42H	Groflow 44H	Groflow 45H	Groflow 47H	Injecta-phos	Kelpak	King Zinc 100	Maxi Mang	Nitro Humus 323	Nitro Iron	Pirotechnica	Polyphos	Reaction	Stand SKH	Supa Humus 26	Supa K 30	Supa Moly	Supa Trace Advance	Thirty Thirty	Triple 7	Tropical K	Ultratain	Zip		
AMMONIUM SULPHATE NEAT		NC		NC																																	
AMMONIUM SULPHATE 1:1:50					C																																
FLEX N (UAN) NEAT		NC		CA					NC	NC	NC	NC								NC	NC																
FLEX N (UAN) 1:1:10		CA	CA	CA					CA	NC	NC	NC	CA							CA	CA																C
FLEX N (UAN) 1:1:50				CA																																	
PHOSPHORIC ACID 1:1:50				NC					NC	NC	NC	NC								NC	NC																
UREA																																					C

C= COMPATIBLE

NC = NOT COMPATIBLE

CA = COMPATIBLE WITH AGITATION

THIS COMPATIBILITY CHART SHOULD BE USED AS A GUIDE ONLY. EACH FARMER'S CLIMATIC CONDITIONS, APPLICATION PROCESSES AND PRACTICES MAY DIFFER.

IT IS RECOMMENDED THAT WHEN APPLYING TO A CROP OR AREA FOR THE FIRST TIME, OR IN COMBINATION WITH OTHER CHEMICALS, A SMALL TEST AREA SHOULD BE SPRAYED AND OBSERVED PRIOR TO FULL APPLICATION.

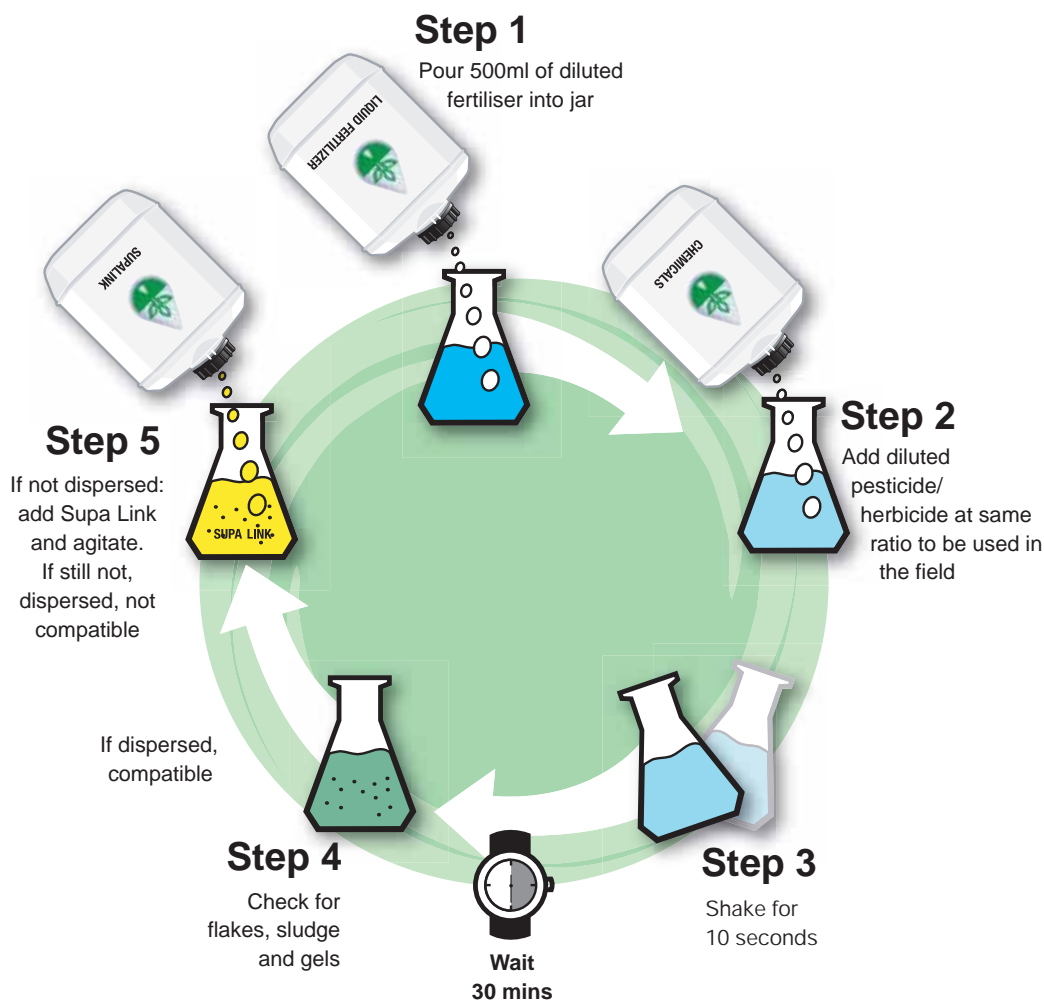
Compatibility Testing Procedure

Many liquid fertilisers can also be combined in tank mixes with commonly used plant protection products, thus reducing the number of applications required. However this should not be considered a given for every fertiliser, chemical or application method.

In addition water quality and pH vary considerably across Australia and can have a dramatic impact on the results of compatibilities conducted at head office.

If in doubt, compatibility of an intended mixture can be ascertained by performing a “jar test”. Typically this is done as follows:

- Select a clean volumetric flask (eg a 1L glass beaker), and add the correct ratio of water used per hectare or acre as per label directions.
- Add to the water each intended fertiliser or chemical, starting with the least soluble products such as dry flowable granules, powders, suspensions or flowable liquids, and ending with the clear soluble liquids.
- If an immediate reaction is observed do not proceed with the mixture. Such reactions include the immediate formation of a precipitate (fall out), extreme heat or bubbling, or curdling of the mixture. If no such reactions occur, the mixture is considered physically compatible.
- Some mixtures may appear to fall out over time but remain in suspension if agitated. This is referred to as physically compatible with agitation. It is quite possible such mixtures may be used but should be treated with caution.
- Physical compatibility or compatible with agitation is not always a guarantee the mixture is safe to apply to a plant with regards to phytotoxicity. Therefore it is recommended a small test area be sprayed and observed over a 24 hour period before proceeding with the intended mixture over a large area.
- Agrichem’s unique stabilising product Supa Link is often used to mix otherwise incompatible chemicals. To test compatibility before use, perform a jar test following the procedure below.



Australia

2-4 Chetwynd St, Loganholme,
Qld, Australia 4129
Phone: +61 7 3801 9000
Fax: +61 7 3801 4296
www.agrichem.com.au
enquiries@agrichem.com.au

Asia Pacific

Sales & Technical Support
Simon Hales
Mobile: +61 427 766 012
Phone: +61 7 3801 9000
Fax: +61 7 3801 4296
www.agrichem.com.au
simonh@agrichem.com.au

Middle East & Africa

Kefallinias St, No.3
Agios Athanasios,
4107 Limassol, Cyprus
Phone: +357 2582 3330
Fax: +357 2582 3331
www.fluence.com.au
arik@fluence.com.au

South America, Brazil & Mexico

Agrichem do Brasil
Rua Uruguai, No 1876
Parque Industrial Quito Junqueira
Ribeirão Preto - SP 14.075-330 Brasil
Phone: +55 16 3969 9122
Fax: +55 16 3965 1992
agrichem@agrichem.com.br
www.agrichem.com.br

North America & Europe

Sales & Technical Support
Erin Conza
Mobile: +61 412 751 429
Phone: +61 7 3801 9000
Fax: +61 7 3801 4296
www.agrichem.com.au
erinc@agrichem.com.au

Agrichem India

#102, 8-2-268/2/C,
Road No. 3, Banjara Hills,
Hyderabad -500 034, India
Phone: +91 40 2354 4637
Fax: +91 40 2354 4837
www.agrichem.com.au
enquiries@agrichem.com.au

The Universal Compatibility Agent from agrichem...

SUPA LINK



Water conditioning and Compatibility Agent

Benefits of Supa Link™

- ✓ Enables successful tank mixing of many fertilisers which are usually reactive and precipitate when mixed together
- ✓ May also enable successful tank mixing of pesticides and fertilisers which often react with each other
- ✓ Pre-conditions high alkalinity water for fertigation to enhance compatibility
- ✓ Re-solubilises precipitation (salt build-up) caused by irrigation and bore water
- ✓ Can be mixed with a wide range of agricultural chemicals
- ✓ A totally safe, organic product

HOW DOES SUPA LINK WORK?

1. Some trace elements such as zinc, iron, manganese, magnesium, calcium, copper and boron react antagonistically with other elements to form insoluble salts. For example, zinc and phosphorus will form insoluble zinc phosphate. Supa Link separates the individual elements through a process which disassociates the ions making them soluble and available.
2. Supa Link may also be beneficial when pesticide and fertilisers are mixed together and react. Generally this is an inorganic reaction where Supa Link can assist in compatibility.
3. Supa Link is an effective treatment for precipitate build up (e.g. calcium or iron build up) in trickle lines by pre-conditioning hard water and high alkalinity water to minimise precipitation and/or deposition.



HEAD OFFICE: 2-4 Chetwynd Street, Loganholme Qld 4129, Australia
Ph: 61 7 3801 9000 • Fax: 617 3209 9687 • Free call: 1800 65 47 58
Email: enquiries@agrichem.com.au • Web: www.agrichem.com.au

