

Water for Profit

FERTIGATION



Fertigation is the technique of supplying dissolved fertiliser to crops through an irrigation system.

Introduction

When combined with an efficient irrigation system both nutrients and water can be manipulated and managed to obtain the maximum possible yield of marketable production from a given quantity of these inputs.

Continuous small applications of soluble nutrients overcome many fertiliser application problems, save labour, reduce compaction in the field, improve the placement of the fertiliser into the plant root zone and allow for rapid uptake of nutrients by the plant.

To capitalise on these benefits, particular care should be taken in selecting fertilisers and injection equipment as well as in the management and maintenance of the system.

Fertilisers

The fertiliser requirements will depend on crop requirements with the type of fertilisers you choose dictated by price and the results of the analysis of your soils and irrigation water. The fertiliser products which can be used for fertigation are limited to those that are readily soluble. Many of the formulations used are prepared for specific crops or combinations can be used depending on the crop cycle. They have the advantage of being stable and highly soluble, providing a balance of nutrients so only one product is handled. However, they are generally more expensive per unit of nutrient than standard fertilisers.

The information contained on this sheet was obtained from the New South Wales Department of Agriculture Agnote 100-9 and is gratefully acknowledged.

For more details contact Growcom on 07 3620 3844.

Solubility, pH and other characteristics

Product	Max. amount (kg) dissolved in 100L	Time to dissolve (min)	pH of the solution	Insolubles (%)	Comments
Urea	105	20	9.5	negligible	Solution cools as urea dissolves.
Ammonium nitrate [Nitram® NH ₄ NO ₃]	195	20	5.62		Corrosive to galvanised iron and brass. Solution cools as product dissolves.
Sulfate of ammonia [(NH ₄) ₂ SO ₄]	43	15	4.5	0.5	Corrosive to mild steel.
Mono-ammonium phosphate [MAP]	40	20	4.5	11	Corrosive to carbon steel.
Di-ammonium phosphate [DAP]	60	20	7.6	15	Corrosive to carbon steel.
Muriate of potash [KCl]	34	5	7.0–9.0	0.5	Corrosive to brass and mild steel.
Sulfate of potash [K ₂ SO ₄]	11	5	8.5–9.5	0.4–4	Corrosive to mild steel concrete.
K-spray [K ₂ SO ₄]	11	1	8.5–9.5	0.4–4	Corrosive to mild steel concrete.
Potassium nitrate [KNO ₃]	31	3	10.8	0.1	Solution cools as product dissolves. Corrosive to metals.

Disclaimer: This information is provided as a reference tool only. Seek professional advice for irrigation specifics.

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