

Magnesium: highly important nutrient

Magnesium is essential mainly for chlorophyll synthesis as it forms the core of the chlorophyll structure. Magnesium regulates the uptake of other plant nutrients and is necessary for sugar formation. In addition it can act as a carrier of phosphorus in the plant. Other functions include translocation of starches and the formation of oils and fats.

Excessive magnesium can limit proper uptake of potassium, create poor water relationship in plants and cause tie-up of other nutrients such as phosphorus.



Solubility comparison table:

Magnesium fertiliser	Solubility		
	10°C	20°C	30°C
Magnisal® (10.8-0-0 + 9.6 Mg, Magnesium Nitrate)	2200	2400	2700
Magnesium sulphate (0-0-0 + 9.5 Mg)	620	710	810

Magnisal®

Magnisal® is based on Magnesium Nitrate, which is fully soluble in water, ideal for foliar and fertigation contains 100% plant nutrients and flaked for convenient handling.

Foliar applications of Magnesium in Australia:

Area: Swan Hill, North West Victoria

Variety: Rhine Riesling

Management: 2 applications (0.5% foliar concentration) at beginning of fruit swell and then two weeks later.

Spray Volume: 450L/ha

Results

	Control	Magnisal®
Yield (kg/row)	1318	1342
Yield (MT/ha)	17.134	17.446
pH	3.07	3.24
Titrateable acid	5.9	6.3
Baume	11.9	12.13

Magnisal® application by foliar:

Crop	When to Apply	Spray conc. (%)
Apple	1 st application at blooming 3-4 applications at 14 days intervals	0.8-1.5
Barley	Start of shooting	0.5
Citrus	When spring flush leaves are about 2/3 of final size and not yet hardened. 1 – 4 applications.	1-1.5
Cucumber	At the beginning of fruiting	0.5
Deciduous fruit - trees	3-4 applications at 14-day intervals, starting at blooming.	0.5
Grapes	To prevent Dry Stalk: 1-3 applications at 10-day intervals, starting after bunches have formed.	0.5
	To prevent and cure chlorosis: 1-3 applications at 10-day intervals, starting after berry setting.	0.5
Mango	1 - 2 applications	0.7-1.5
Olive	- One week before anthesis - Three weeks after bloom	1-2
Potatoes	- At bud formation - At flowering	0.7-1.5
Tomatoes	At the beginning of fruiting	0.7-1.5
Winter wheat	- Start of stem elongation - Node formation - Flag leaf sheet opening - Anthesis complete	0.5



Dry Stalk



Chlorosis

Magnisal® application by Nutrigation:

Soilless: concentration of 70ppm Mg is usually required. Take into account the magnesium concentration in the irrigation water.

Soil: Determine Mg requirements according to soil and water analyses.

If additional magnesium is required, apply 0.1-0.3 grams Magnisal® per litre of irrigation water every fourth irrigation.

