



agrichem



ACTIVIST RED[®]

A 50% flowable copper formulation for the correction of copper deficiencies and growth maintenance in all crops



BENEFITS OF ACTIVIST RED[®]

- ✓ Provides a high level of copper
- ✓ Activist formulation provides very effective, rapid uptake as well as sustained release characteristics
- ✓ Activist-type particle size ensures high plant availability
- ✓ Typical Activist excellent flow and pourability characteristics
- ✓ Good compatibility
- ✓ Compatible with UAN for down-the-tube applications
- ✓ Can be applied with other agricultural chemicals, reducing the number of spray applications required

THE ROLE OF COPPER

Copper is involved in several enzyme systems where it cannot be replaced by any other metal ion. It is involved in cell wall formation, in electron transport and oxidation reactions. Copper also affects the formation and chemical composition of cell walls, which in turn affects lignification and the physical strength of shoots and stems.

Copper is taken up by the plant in only very small quantities since the copper concentration in most plant species is low. The uptake of copper is largely independent of competitive effects, apart from zinc, and relates primarily to the levels of available copper in the soil.

Copper is not readily mobile in the plant, although it can be translocated from older to younger leaves and from vegetative plant parts to seeds - as was found for vetch during pod filling (Caballero et al (1996)). The movement of copper within the plant is strongly dependent on the copper status of the plant. In wheat plants well supplied with copper, movement from the leaves to grains can take place, but in deficient plants copper is relatively immobile.



Copper deficiency in wheat

DEFICIENCY SYMPTOMS - COPPER

Copper is essential in the 'setting' of fruit and grain, and also plays an important role in the regulation of photosynthesis through the synthesis of co-enzymes.

In addition to poor fruit or grain set, copper deficient plants generally exhibit poor stem structure as a result of inhibited lignification.

SYMPTOMS

- Maize - patchy, low yielding crops, weather-tipped young leaves, death of shoots
- Lettuce - leaves are chlorotic, elongated and cupped
- Carrots - youngest leaves are dark green and fail to unfold
- Horticultural Crops - wilted plants, lack of firmness, leaf rolling, bending and crinkling
- Cereals - wilted leaf tips, white heads, no grain
- Onions - young leaves turn white at the tips and then spiral or bend at angles

Product Characteristics

Specific Gravity: 1.71 Colour: Brown-red suspension


Analysis	Australia (w/v%)	International (w/w%)
Copper (Cu)	50.0	33.2
Nitrogen (N)	6.9	4.6

Directions for use

Agitate contents well before dilution. Suitable for application by:

 Aerial Spray	 Foliar	 Down the Tube
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CROP	RATE / ha	MIN DILUTION*	COMMENTS
BEANS	150 – 375 ml	1 : 200	Spray 10 – 14 days after planting or emergence
BRASSICAS	150 – 375 ml	1 : 200	Spray 10 – 14 days after planting or emergence
CANOLA	150 – 525 ml	1 : 50	Apply at 4 weeks and again if necessary at the onset of stem elongation
CEREALS Barley, oats, wheat -foliar -down-the-tube	150 – 525 ml 75 – 150 ml	1 : 50	Spray at stem extension and again at booting
CORN, MAIZE	345 - 525 ml	1 : 50	Apply at 6 leaf stage
CITRUS	225 – 375 ml	1 : 200	Apply post harvest to copper deficient trees, not during budding or fruit development
CUCURBITS Cucumbers, melons, pumpkins, zucchini	150 – 375 ml	1 : 200	Spray 10 – 14 days after planting or emergence
LETTUCE, SPINACH AND OTHER LEAFY VEGETABLES	150 – 375 ml	1 : 200	Spray 10 – 14 days after planting or emergence
LUCERNE	150 - 375 ml	1 : 100	For grazing or seed production: Apply early in the season, after 1st cut Apply at bud formation
ONIONS	225 - 375 ml	1 : 200	Apply when sufficient leaf area
POTATOES, ROOT, BULB OR TUBER CROPS	150 - 375 ml	1 : 100	Spray 10 – 14 days after planting or emergence
SOLANACEOUS CROPS Chillies, eggplant, peppers, tomatoes	150 - 375 ml	1 : 100	Spray 10 – 14 days after planting or emergence
SUGAR CANE	525 - 600 ml	1 : 100	Can be applied as a billet application or as a spray 10 – 14 days after crop emergence
TREE CROPS	225 – 1500 ml	1 : 100	Apply in spring and autumn

 **MINIMUM DILUTION:** A dilution of 1 : 100 means 1 part product : 100 parts water.
In hot weather, use higher dilution rates

WARNING: DO NOT apply Activist Red in tank mix with acidic formulations. Care should also be taken when applying acidic products over the top of copper residues on plants, as burn may occur

Care should also be taken when applications are made with certain pesticides and herbicides. If the combination has not been used before, ensure a small area of crop is tested prior to widespread usage

NOTE: The suggested rates of application are designed for typical Australian conditions and such should be used as a guide only. Each farmer's climatic conditions, water quality, soil types, application processes and practices may differ and therefore necessitate corrections to ensure optimum results. Good agricultural practice requires that application be avoided under extreme weather conditions such as temperatures over 28°C, high humidity, frost, rain etc. 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 the total spray. Where possible, it is recommended that regular leaf (sap) tests are conducted to determine actual plant nutrient availability during each growth cycle. Soil tests at least once per year are essential.



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