



MICRONUTRIENTS

Specialists in plant health

# Amix<sup>®</sup> Range

High performance micronutrition



## Amix® Range

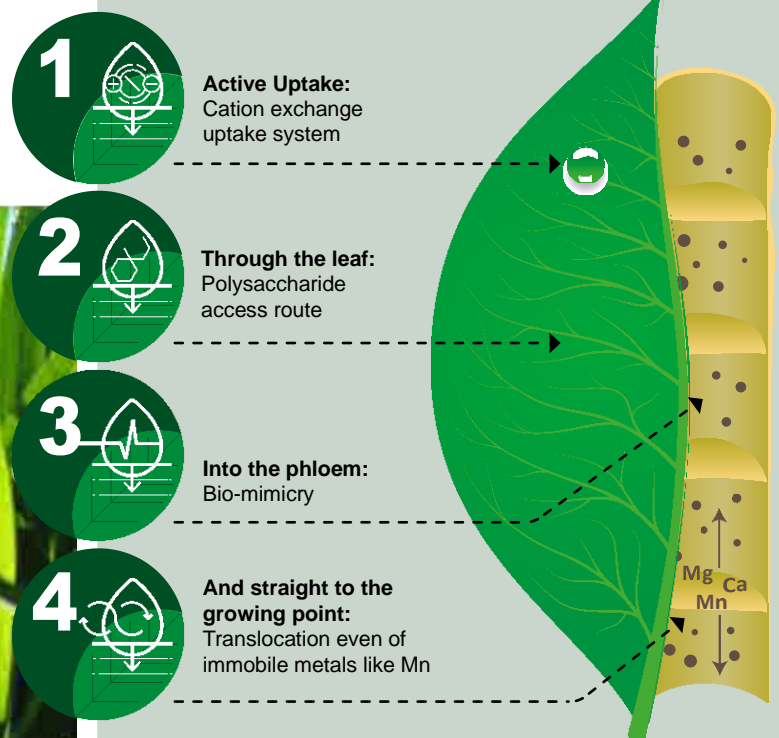
The AMIX Range is composed of unique micronutrient formulations with biostimulant properties. These micronutrients, formulated with Micromix's proprietary AMIX Active Uptake Complex, typically have a lower application rate than many comparative micronutrient formulations due to their ability to achieve active uptake at the leaf surface and in addition their ability to translocate to the growing point where it is really needed.

### Features:

- Produces yield responses in the absence of elemental deficiency.
- Absorption into the leaf within minutes by active uptake; not passive diffusion.
- Lower application rates compared to less sophisticated products.
- Improved translocation of lower mobility elements (e.g. Manganese).
- Benefit other tank-mix partners improving performance; fungicides etc. through plant strengthening
- Effective at lower temperatures.
- Excellent compatibility in tank-mix.
- Enhancement of tank-mix partners is consistent and can facilitate reduced pesticide usage.
- Crop safe - reduced leaf scorch.

### How does the AMIX Active Uptake Complex work?

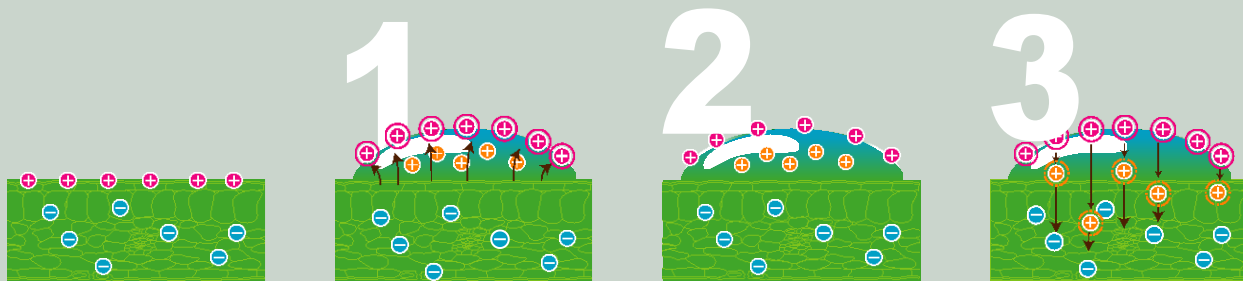
Micromix's proprietary AMIX Active Uptake Complex is based on Humic and Fulvic acids with lignin salts uniquely formulated to produce a low pH formulation that does not compromise the solubility of the Humic content. The AMIX Complex works with all divalent metallic cations to generate active uptake at the leaf surface (as opposed to passive) and has proven to consistently generate yield responses even in the absence of any measurable deficiency.





## An active cation uptake system

The AMIX Complex creates an electrical gradient that moves the positive charge on the leaf surface to the top of the droplet, increasing the electrical potential difference. The positively charged metal ions in the product are repelled by the stronger ones at the top of the droplet and strongly attracted by the negative ones into the leaf.



## A polysaccharide access route to the heart of the leaf

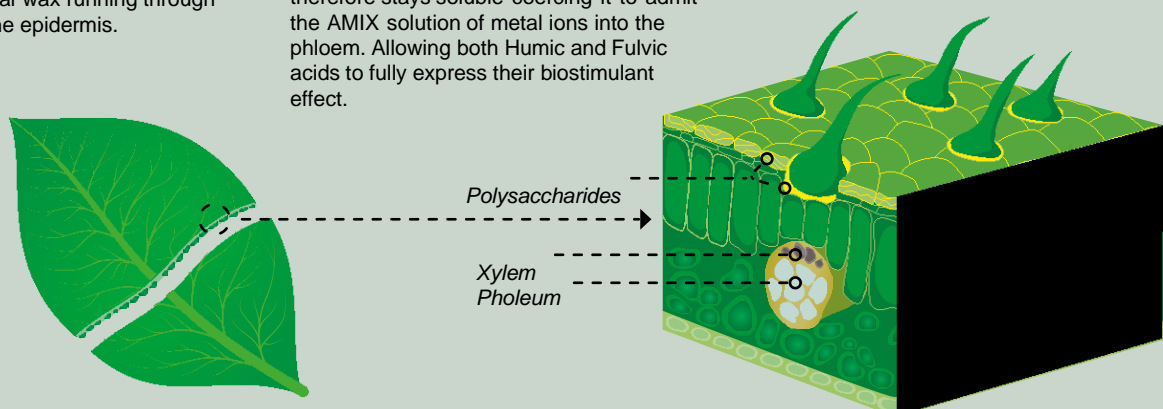
The AMIX Complex utilises the polysaccharide route into the leaf. This polysaccharide is found both in the beds which anchor the trichomes sited to protect areas where the phloem is loading and in striations in the leaf wax running through the surface into the epidermis.

## Using bio-mimicry to fool the plant

The AMIX Complex is formulated with natural Leonardite-derived Humic and Fulvic biostimulants, complexed with lignin salts in a unique way that does not compromise the solubility of the Humic content at lower pH's. The humic content therefore stays soluble coercing it to admit the AMIX solution of metal ions into the phloem. Allowing both Humic and Fulvic acids to fully express their biostimulant effect.

## Active translocation and mobility

With the AMIX Complex, we obtain an optimal molecular weight, that optimises an efficient movement of the product into the phloem taking the elements to wherever the growth is taking place, even immobile elements like Manganese.



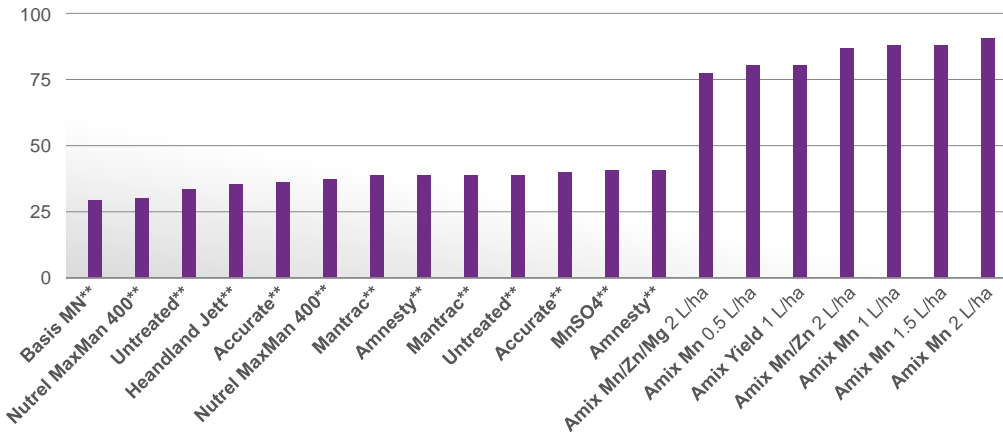


## How to use the AMIX Range of micronutrients?

- 1 As an efficient micronutrient or biostimulant for foliar application: Typically, AMIX rate of use at 0.5 to 1.0L/ha is lower than the 3.0 to 4.0 L/ha of market alternatives.

The high efficiency of the formulation enhancing translocation of elements as well as efficient uptake, allows lower application rates than any comparable formulation type, yet still generates the highest tissue elemental content and translocation even with immobile nutrients like manganese.

### Manganese petiole analysis ppm after 2 hours\*



\* Trial carried out in 2005 by Levington Laboratories on healthy tomato plants  
 \*\* All trademarks duly acknowledged.

### Application rate should be proportional to crop biomass, typically:

Seedling to young plant	0.5 L/ha
Late vegetative stage	0.75 L/ha
From stem elongation/ reproductive stage	0.75 to 1.0 L/ha
Mature High-biomass crops and root crops	1.5 to 2.0 L/ha

In the event of severe elemental deficiency, a programme of repeated 1.0 L/ha treatments is more effective than a single higher dose. Avoid use of additional surfactants as this reduces the positive benefits of AMIX.



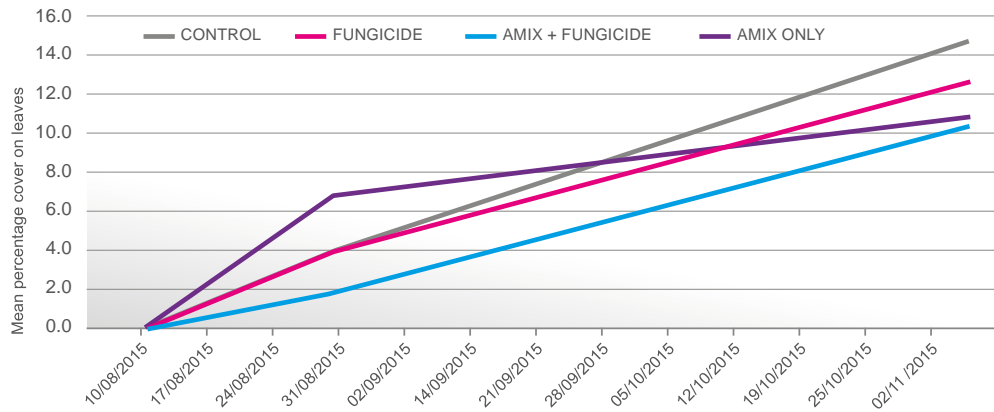


## 2

As a safening tank mix partner using its plant strengthening and adjuvant effect with most pesticides

AMIX formulations have been proven to measurably enhance the activity level of the pesticide when tank-mixed with fungicides, insecticides and PGR's.

**Timeline of Mildew disease progression in barley\***



### APPLIED AT GS22

FLAMENCO 1.5 L

FLAMENCO + AMIX MN

AMIX MN (1L/ha)

### APPLIED AT GS30/31

ACANTO PRIMA 1.5 L

ACANTO PRIMA + AMIX YIELD

AMIX YIELD (Mn Cu 1L/ha)

\*Horizon 2020 Funded Proof-of-Concept Trial

\*\*All trademarks duly acknowledged.

## 3

As an effective delivery mechanism additive for foliar nutrition products to improve intake and translocation by up to 25%

AMIX Activator was designed to transfer to a wide range of foliar nutrition products the unique AMIX Active Uptake Com-plex delivery system at a rate of 0.01 to 0.10 L / per L of foliar nutrition product mix.

## AMIX formulations:

	N	K <sub>2</sub> O	SO <sub>3</sub>	MgO	CaO	Cu	Fe	Mn	Mo	Zn	SiO <sub>2</sub>	Co	Se	I	AA
	g/L	g/L	g/L	g/L	g/L	g/L	g/L	g/L	g/L	g/L	g/L	g/L	g/L	g/L	g/L
<b>Amix Magnesium</b>	50	-	-	166.6	-	-	-	-	-	-	-	-	-	-	-
<b>Amix Manganese</b>	-	-	232	3.9	-	-	-	146.6	-	-	-	-	-	-	-
<b>Amix Zinc</b>	-	-	60	-	-	-	-	-	-	120	-	-	-	-	-
<b>Amix Grasslands</b>	-	-	-	-	-	10	-	-	-	50	-	0.8	0.46	3	-
<b>Amix Calcium</b>	-	-	-	-	140	-	-	-	-	-	-	-	-	-	-
<b>Amix Iron</b>	-	-	-	-	-	-	50	-	-	-	-	-	-	-	-
<b>Amix Molly</b>	-	-	-	-	-	-	-	-	56	-	-	-	-	-	-
<b>*Amix Yield</b>	-	-	186	-	-	21	-	105	-	-	-	-	-	-	-
<b>Amix Triple</b>	-	-	-	-	-	10	-	40	-	60	-	-	-	-	-
<b>Amix 4x4</b>	-	-	-	25	-	12.5	-	25	-	50	-	-	-	-	-
<b>Amix SilK</b>	-	100	-	-	-	-	-	-	-	-	147	-	-	-	-
<b>Amix Trimix</b>	-	-	-	-	-	26	-	112	-	26	-	-	-	-	-
<b>Amix Essential</b>	-	-	-	-	-	10	-	-	-	50	-	0.8	0.46	3	-
<b>*Amix Activator</b>	60	-	170	-	-	-	-	-	-	-	-	-	-	-	-
<b>Amix BioMan</b>	-	-	224	3.9	-	-	-	150	-	-	-	-	-	-	20
<b>Amix BioMag</b>	-	-	-	105	-	-	-	-	-	-	-	-	-	-	25
<b>Amix Bio3</b>	-	-	-	-	-	10	-	40	-	40	-	-	-	-	22

\*Products superseded

