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## Foliar fertilization

### AVOCADO

1-2 l/ha to 500-1000 l of water depending from local temperatures. Spray at leaf development (BBCH 13-19), beginning of stem growth (BBCH 31-33), development of buds and inflorescence (BBCH 51-55) or at the beginning of fruit development (BBCH 71-73) Re-apply later, if there's severe visible metal deficiency, or if the plant metal contents are too low.

### BARLEY (spring crop)

1 - 1,5 l/ha to 200-400 l of water depending from local temperatures. Spray at tillering (BBCH 13-22), beginning of stem elongation (BBCH 30-32) or at flag leaf stage (BBCH 39-49). Re-apply later, if there's severe visible metal deficiency, or if the plant metal contents are too low.

### BARLEY (winter crop)

1 - 1,5 l/ha to 200-400 l of water depending from local temperatures. At autumn spray until beginning of tillering. At spring spray at tillering (BBCH 13-22), beginning of stem elongation (BBCH 30-32) or at flag leaf stage (BBCH 39-49). Re-apply later, if there's severe visible metal deficiency, or if the plant metal contents are too low.

### CITRUS

1 - 2 l/ha to 500-1000 l of water depending from local temperatures. Spray when over 5 leaves visible (BBCH 15), until the end of inflorescence development (BBCH 56-59) or at the beginning of fruit development (BBCH 71-72). Re-apply later, if there's severe visible metal deficiency, or if the plant metal contents are too low.

### CORN

1 - 1,5 l/ha to 200-400 l of water depending from local temperatures. Spray at 2-6 leaf stage (optimum is 4 leaves, BBCH 12-16), 7-8 leaf stage (BBCH 17-18) or at stem elongation (until beginning of tassel formation, BBCH 31-51). Spraying can be done as long as the plants are not too high for the spraying equipment. Re-apply later, if there's severe visible metal deficiency, or if the plant metal contents are too low.

### COTTON

1 - 2 l/ha to 400-600 l of water depending from local temperatures. Spray when 4-6 leaves have unfolded (BBCH 14-16), when 30-50 % of plants meet between rows (BBCH 33-35), when inflorescence emergence begins (BBCH 51-52) or when boll development starts (BBCH 71-72). Re-apply later, if there's severe visible metal deficiency, or if the plant metal contents are too low.

### GRASS (pasture)

1 - 1,5 l/ha to 200-400 l of water depending from local temperatures. Can be used for all growing period. A 10 day interval between application and grazing is needed, so that the fertilizer has time to become absorbed to the plant structure before animal feeding. Re-apply later, if there's severe visible metal deficiency, or if the plant metal contents are too low.

### GRASS (silage/hay)

1 - 1,5 l/ha to 200-400 l of water depending from local temperatures. Can be used for all growing period. Re-apply later, if there's severe visible metal deficiency, or if the plant metal contents are too low.

### OATS

1 - 1,5 l/ha to 200-400 l of water depending from local temperatures. Spray until beginning of tillering (BBCH 13-22) or until flag leaf stage (BBCH 30-39). Re-apply later, if there's severe visible metal deficiency, or if the plant metal contents are too low.

### POTATO

1 - 1,5 l/ha to 200-400 l of water depending from local temperatures. Spray when 3-6 leaves unfolded (BBCH 13-16), at beginning of tuber development (BBCH 40-41), or when tubers reach 20-30 % of their typical weight (BBCH 42-43). Re-apply later, if there's severe visible metal deficiency, or if the plant metal contents are too low.

### SOYBEAN

1 - 1,5 l/ha to 200-400 l of water depending from local temperatures. Spray at first trifoliolate leaf development (BBCH 12-19), at the beginning of flower bud development (BBCH 51-59), or at beginning of pod and seed development (BBCH 69-79). Re-apply later, if there's severe visible metal deficiency, or if the plant metal contents are too low.

### SUGAR BEET

1 - 1,5 l/ha to 200-400 l of water depending from local temperatures. Spray when 4-6 leaves have unfolded (BBCH 14-16), when 8 leaves have unfolded (until beginning of crop cover, BBCH 18-31) or when leaves cover 20-50 % of the ground. Re-apply later, if there's severe visible metal deficiency, or if the plant metal contents are too low.

### SUNFLOWER

1 - 1,5 l/ha to 200-400 l of water depending from local temperatures. Spray at leaf development (BBCH 16-18) or at stem elongation (BBCH 30-35). Re-apply later, if there's severe visible metal deficiency, or if the plant metal contents are too low.

### TOMATO

1 - 2 l/ha to 400-600 l of water depending from local temperatures. Spray when 5-9 leaves have unfolded (BBCH 15-19) or when some inflorescences are visible (BBCH 51-53). Re-apply later, if there's severe visible metal deficiency, or if the plant metal contents are too low.

### WHEAT (spring crop)

1 - 1,5 l/ha to 200-400 l of water depending from local temperatures. Spray at tillering (BBCH 13-22), stem elongation (BBCH 30-38) or at heading (until early maturity of grains). Re-apply later, if there's severe visible metal deficiency, or if the plant metal contents are too low.

### WHEAT (winter crop)

1 - 1,5 l/ha to 200-400 l of water depending from local temperatures. At autumn spray at 3-4 leaf stage. At spring spray at tillering (BBCH 13-22), stem elongation (BBCH 30-38) or at heading (until early maturity of grains). Re-apply later, if there's severe visible metal deficiency, or if the plant metal contents are too low.

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## Seed coating

Use 300 - 400 ml l of Zimaco-PRO™ per 100 kg of seed.

If you wish to mix Zimaco-PRO™ with other coating chemicals like fungicides, mix these products and water in such a ratio, that no more than 0,5 l of ready solution shall be used per 100 kg of seed to avoid the early germination of the seeds.

Example: 4 l of Zimaco-PRO™ and 0,67 l of fungicide are used per 1 t of seeds. In this case maximum of 0,33 l of water can be added to the mixture, so that the end volume remains at 5 l/t or lower value. Water addition is not mandatory but is possible to be done.

## Fertigation

Use 0,8 - 1,6 l of Zimaco-PRO™ to the concentrated nutrient solution tank, where the NPK-fertilizer components reside.

Tracegrow can provide you a simple calculator, with which you can calculate the correct application rate to the concentrated nutrient solution for different plants.

To use the calculator, you need to know the recommended micronutrient dosage for the plant you're growing (micronutrient content in mg/l in irrigation water), and then add it to the calculator.

Then add 1 part of the ready concentrated nutrient solution to 100 parts of irrigation water and apply to the irrigation system.

## NPK granule coating

Apply Zimaco-PRO™ by spraying it as fine mist on the fertilizer granule surface. Conveyor belt for fertilizer granule transportation at spraying phase is recommended for achieving optimum spreading.

Apply maximum of 5 l of Zimaco-PRO™ per 1 ton of fertilizer granules to avoid the possibility of clumping of the granules.

## Mixing to UAN solutions

If making a storage solution, mix maximum of 6 % (v/v) of Zimaco-PRO™ to UAN solution. Using excess of this can cause crystal formation.

If the UAN solution contains ammonium thiosulphate, reduce the dosage to 4 % (v/v).

If making a solution that shall be applied to the field straightaway onsite, 10 % mixture can be used, because crystal formation is a slow process, and does not happen immediately.