



DOVE
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Information Iron Chelates

Vytel Iron 14 / Libel Fe-Lo

Contains chelated iron as Fe EDTA equivalent to 13.2% Fe.

For treatment on acid soils, pH under 6.5 and for foliar application to crops where iron deficiency is diagnosed or suspected.

(For soil treatment of alkaline soils where pH is over 6.5 use EDDHA product).

FOLIAR APPLICATION

Arable Crops

1kg per hectare (11b per acre). Apply in a volume of water which gives adequate cover of the crop.

Fruit Trees, Bushes, Canes, Rose, Ornamentals and other Horticultural crops

1kg per hectare (11b per acre). Apply in 500-1200 litres of water per hectare (60-100 gallons per acre). Where small areas are to be treated it is not always practicable to convert to hectares. In these cases use 1 gram per litre of spray solution. Avoid spraying to run off.

SOIL APPLICATION

Arable Crops

Where the soil pH is under 6.5 use 4kg per hectare (4lb per acre). Apply pre-drilling or planting to bare soil in convenient volume of water and cultivate in after spraying.

Fruit Trees, Bushes and Canes

Soil pH under 6.5

| Plant Size | Rate per tree or bush | |
|-------------------|---------------------------|--------------------------|
| | Slight Deficiency | Severe Deficiency |
| Fruit Bushes | 10g ($\frac{2}{5}$ oz) | 20g ($\frac{4}{5}$ oz) |
| Small Fruit Trees | 20g ($\frac{4}{5}$ oz) | 40g (1 $\frac{1}{2}$ oz) |
| Large Fruit Trees | 100g (3 $\frac{1}{2}$ oz) | 200g (7oz) |

Apply in solution, in a minimum of 10 litres of water per tree (2 gallons) to the area beneath the branch spread.

| Crop | Slight Deficiency | Severe Deficiency |
|--------------------------------------------------------------------------|-----------------------------------|-----------------------------------|
| Blackberry, loganberry, strawberry and closely planted bush fruit | 4kg per hectare (4lb per acre) | 8kg per hectare (9lb per acre) |

Apply as a spray to the soil between the rows and cultivate immediately after spraying.

Read the label before you buy – use pesticides safely

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Timing

The best time for soil applications is towards the end of the dormant season, but early enough to allow winter rains to wash it down to the roots.

Nutrient Film Technique (NFT)

Iron is an essential ingredient of the nutrient solution. Fe EDTA has been widely used for addition to NFT nutrient solutions. The recommended concentrations of iron in the nutrient solutions for tomatoes are:

Fe 1.5mg/l minimum, 3mg/l optimum, 6mg/l maximum.

3 mg/l of Fe are given by adding 21.4g of EDTA to 1,000 litres of circulating solution. For tomatoes, concentrations of iron near to the maximum are beneficial from the early stages of growth until the first fruits are picked. Thereafter concentrations should be allowed to fall to the optimum level of 3 mg/l (3 ppm).

Soil Irrigation/Liquid Feeding

Where the pH is below 6.5 it may be convenient to supply it through soil irrigation or feeding systems. If deficiency symptoms are apparent the aim should be to supply 6 mg/l (6 ppm) Fe until symptoms abate. The rate should then be reduced to 3 mg/l (3 ppm) Fe to control further deficiency.

The amount of EDTA to be added to the stock solutions to give the required final concentration is dependent on the dilution rate used.

| Final Conc. | Amount in stock solution | |
|-------------|--------------------------|----------------------------------------------------|
| 6 mg/l Fe | Dilution 1:100 | 43g per 10 l (1oz/gal) |
| | Dilution 1:200 | 86g per 10 l (2oz/gal) |
| 3 mg/l Fe | Dilution 1:100 | 22g per 10 l (¹ / ₂ oz/gal) |
| | Dilution 1:200 | 43g per 10 l (1oz/gal) |

Mixing

These products are readily soluble in water. Add the weighed amount of the powder to the bulk of the water and stir or agitate until dissolved.

APPLICATION DETAILS

Foliar sprays of trace elements are most effective in the early morning or late evening. Do not apply in bright sunshine or when the temperature is over 24°C.

DO NOT MIX EDTA with other pesticide sprays.

DO NOT ADD extra wetting agents.

Where EDTA is used within a crop protection programme it should not be applied within 14 days of other pesticides nor should other products be applied within 14 days of EDTA application.

Extreme climatic conditions may increase the risk of crop scorch. Do not apply immediately after, during or where these conditions are expected.

Because the wide range of species which can be treated precluded specific recommendations, a small area should be treated on a test basis to establish whether or not there is any adverse reaction.

Where applications are made by knapsack or hand held sprayers care should be taken to avoid application rates in excess of those recommended.

Fan assisted sprayers are not suitable for the application of Chelates as the low water volumes used preclude the use of correct spray concentrations.

PRECAUTIONS

WASH HANDS before meals and after work.

STORE IN ORIGINAL CONTAINER, tightly closed in a safe place.

STORE AWAY FROM CHILDREN, PETS, LIVESTOCK AND FOODSTUFFS.

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Vytel Iron 6 – LibFer SP

Contains chelated Iron as Fe EDDHA equivalent to 6% Fe.

For treatment on alkaline soils where iron deficiency is diagnosed or suspected.

(For soil treatment of acid soils where pH is under 6.5, use EDTA).

APPLICATION RATES

Soil Application – Arable Crops

5kg per hectare (5lb per acre).

Apply, pre-planting or pre-drilling, to bare soil in a convenient volume of water and cultivate in immediately after spraying.

Soil Application – Fruit Trees, Bushes and Canes

| Plant size | Rate per tree or bush | |
|-------------------|------------------------|---------------------------|
| | Slight Deficiency | Severe Deficiency |
| Fruit Bushes | 5g ($\frac{1}{5}$ oz) | 25g (1oz) |
| Small fruit trees | 25g (1oz) | 100g ($3\frac{1}{2}$ oz) |
| Large fruit trees | 50g (2oz) | 200g (7oz) |

Apply in solution, in a minimum of 10 litres of water per tree (2 gallons) to the area beneath the branch spread.

| Crop | Slight Deficiency | Severe Deficiency |
|-----------------------------------------------------------------|--------------------------------|----------------------------------|
| Blackberry, strawberry, loganberry & closely planted bush fruit | 5kg per hectare (5lb per acre) | 10kg per hectare (10lb per acre) |

Apply as a spray to the soil between rows, and cultivate in immediately after spraying.

Timing

The best time for soil application is towards the end of the dormant season, but early enough to allow winter rains to wash it down to the roots.

Soil Application – Ornamentals, Roses and Calcifuge Plants

| | Rate per bush, plant or pot | |
|-------------------------------------------------|-----------------------------|-------------------------|
| | Slight Deficiency | Severe Deficiency |
| Alpines, heathers and herbaceous flowers | 2.5g ($\frac{1}{10}$ oz) | 5g ($\frac{1}{5}$ oz) |
| Shrubs and roses | 5g ($\frac{1}{5}$ oz) | 10g ($\frac{2}{5}$ oz) |
| Azaleas, camellias, magnolias and rhododendrons | 10g ($\frac{2}{5}$ oz) | 25g (1oz) |

Use the lower rate for newly planted stock.

Dissolve the required amount of EDDHA in a minimum of 5 litres (1 gallon) of water and water round the base of the plant. Water again or irrigate after treatment to wash the it down to the roots.

Timing

The best time for application is in the early part of the growing season, but application can be made at any time during the growing season.

Soil Application – Container grown nursery stock

Container grown nursery stock can be very susceptible to iron deficiency, which is often induced by factors such as poor watering, lack of control of pH and high manganese levels, particularly in bark based composts.

Successful control of deficiency on a wide range of subjects, including ericaceous species, has been achieved by applying an early spring spray at 8 grams of EDDHA per square metre of bed. It should be mixed with water and sprayed over the area. Following treatment, irrigate from overhead to ensure that the Iron 6 is washed off the foliage and into the growing medium.

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Alternatively use in the compost at a rate of 60g per cubic metre before potting up.

Soil Irrigation/Liquid Feeding

Where the soil pH is above 6.5 it may be convenient to supply EDDHA through soil irrigation or feeding systems. If deficiency symptoms are apparent the aim should be to supply 6mg/I (6 ppm) Fe until symptoms abate. The rate should then be reduced to 3mg/I (3 ppm) Fe to control further deficiency.

The amount of EDDHA to be added to the stock solution to give the required final concentration is dependent on the dilution rate used.

| Final conc. | Amount in stock solution | |
|-------------|--------------------------|-------------------------|
| 6mg/I Fe | Dilution 1:100 | 100g per 10 I (2oz/gal) |
| | Dilution 1:200 | 200g per 10 I (4oz/gal) |
| 3mg/I Fe | Dilution 1:100 | 50g per 10 I (1oz/gal) |
| | Dilution 1:200 | 100g per 10 I (2oz/gal) |

Repeat Applications

On perennial crops, especially fruit trees, it may take more than one year of soil application at the higher rate to remedy serious longstanding deficiencies. After several years of treatment with iron chelate, chlorosis may start to develop in the older leaves as a consequence of induced manganese in a combined programme.

Nutrient Film Technique (NFT)

Iron is an essential ingredient of the nutrient solution. EDDHA may be used but the most economical treatment is Fe EDTA.

Mixing

EDDHA is soluble in water. Add the weighted amount of the powder SLOWLY to the bulk of the water and stir or agitate until dissolved.

APPLICATION DETAILS

Foliar sprays of iron chelate alleviate the symptoms of deficiency in the year of application. Foliar sprays combined with soil treatments will speed the recovery of severely affected trees. For foliar application the most suitable chelate is Fe EDTA.

Foliar sprays of trace elements are most effective in the early morning or late evening. Do not apply in bright sunshine or when the temperature is over 20°C.

DO NOT MIX EDDHA with pesticide sprays as scorch may occur.

DO NOT ADD extra wetting agents.

Where applications are made by knapsack or hand held sprayers care should be taken to avoid application rates in excess of those recommended.

Fan assisted sprayers are not suitable for the application of Chelates as the low water volumes used precludes the use of correct spray concentrations.

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