Ferrous Sulphate Application

Mixing Ferrous Sulphate (Soluble Iron or Iron Sulphate)

You should always apply iron sulphate products to the whole lawn rather than selective areas. The sulphate content slightly acidifies the soil and you will cause local acidity variations across your lawn if you don't have a uniform application. This can cause problems over time.

You can apply by watering can with a weedkiller sprinkle bar (not very easy with a rose) or by sprayer; preferably a knapsack sprayer.

Weighing or Measuring Ferrous Sulphate Powder

You can weigh your product but a quicker method is to buy cheap plastic measuring jugs from the supermarket. I suggest a small one at 100 or 200ml and a one litre one. For ease you can then use 1 litre is a little shy of 1 kilo

How much mixture do you need?

Regardless of whether you are after a green-up or turf hardening the amount of water in the mixture will remain the same, only the amount of dry ferrous sulphate powder will change:

- 0.5 to 1g per square meter for green-up (50 to 100g for 100 square metres)
- 1.5 to 2g per square metre for turf hardening (150 to 200g for 100 metres)
- 4 to 5g per square metre for blackening (400 to 500g for 100 metres)

The safe limit is 5g per square metre in cool damp conditions. Blackening of moss will start to occur above 2g per square metre.

If applying at the highest rates for the first time or if in doubt we suggest 'heavy' applications of 4 to 5g/m^2 be applied in two lots of 2.5g/m^2 concentrations a few days or a week apart for improved grass safety.

Quantities for Watering Can with Weedkiller Sprinkle Bar

The bag states to mix your product in 25 to 50 litres of water for 100m^2 of lawn. If you use a watering can with a rose you may be best off using 50 litres of water. If you use a sprinkle bar you should be able to get away with less.

Try a test run first with just water to see how much you need. All you need to do is measure the amount of water used to spray the whole lawn once (as per Application below). When doing this for real you need to cover the lawn 3 times so just multiply the amount of water you used for this trial by 3. You should end up with a number between 25 and 50 litres. I use about 36 litres for 100m^2.

Now use the directions on the bag of product to work out how much product to use. This is worked out by the area of your lawn NOT how much water you need.

Example; for lawn of 200m^2 with 5g product per metre
200 x 5 = 1000 grams needed = 1 kilo product

A WATERING CAN normally holds 10 litres water and I would need 72 litres (36 for 100m^2 so twice the amount) which is a little over 7 CANS of water

I now need to divide my product into 7 CANS also. This means:
1000grams ÷ 7 = 145 grams per CAN of 10 litres of water. To measure this quickly if you don't have scales use a measuring jug with about 150 to 160 mls of product per watering can.

Quantities for Knapsack Sprayer

For use with our recommended nozzles only.

A sprayer, because of the finer droplets requires less water for the same result compared to a watering can. This saves a lot of time.

The bag states to mix your fertiliser in 8 to 12 litres of water for 100m^2 of lawn.

The amount of water is a guide. Try a test run on your lawn first with just water to see how much you need. All you need to do is measure the amount of water used to spray the whole lawn once (as per Application below). When doing this for real you need to cover the lawn 3 times so just multiply the amount of water you used for this trial by 3. You should end up with a number between about 8 and 14 litres for every 100m^2 of lawn. I use about 9 litres for 100m^2.

Now use the directions on the bag of product to work out how much product to use. This is worked out by the area of your lawn NOT how much water you need.

Example; for a lawn of 400m^2 with 5g product per metre
400 x 5 = 2000 grams needed = 2 kilos product

Our Knapsack Sprayer holds 16 litres and I would need a total of 36 litres water (9 litres for 100m^2 so 4 times the amount). I would therefore put 12 litres in my knapsack and fill up 2 more times.

I now need to divide my product into 3 fills also. This means:
2000grams ÷ 3 = 670 grams per knapsack of 13 litres of water. To measure this quickly if you don't have scales use a measuring jug with about 700 mls of product per knapsack fill.

Mixing Tip

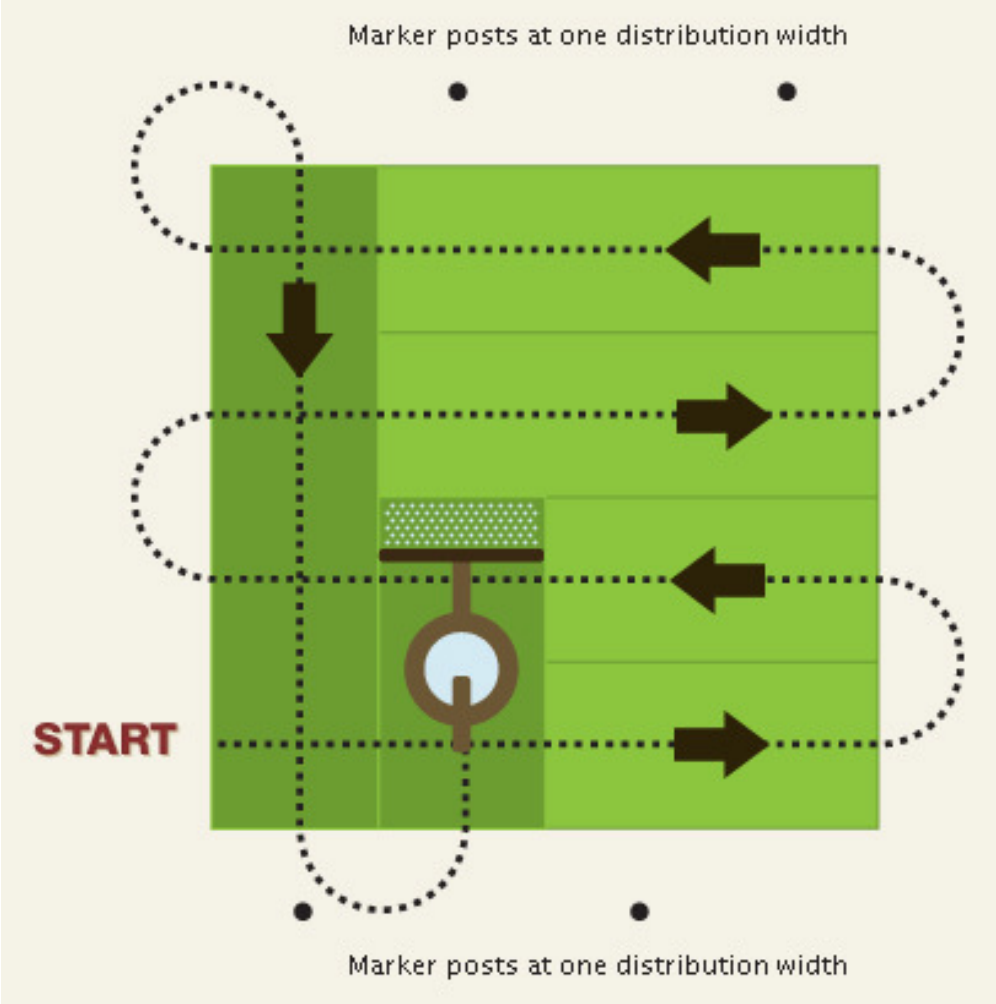
Sometimes it can be difficult to dissolve the last little bit of soluble fertiliser, ferrous sulphate included. This means the very few particles that remain can clog fine spray nozzles, watering can sprinkle bars or roses. Here are a few tips to help you get the most out of the product:

- Wear rubber or **nitrile gloves*** to prevent staining to hands
- For ease of weighing/measuring you can treat one litre equal to one kilo
- Mix in a different container to the one you are going to use to apply the product
- Mixing with warm (not hot) water will help dissolve the product better
- After mixing, thoroughly stir and allow to settle for a minute
- Now pour your mixture into your watering can or sprayer leaving the last cupful of dregs in the bottom
- This cupful contains the particles that didn't dissolve the first time and may cause clogging
- If you need to mix more than one lot, keep the dregs as some will dissolve with the next mixing

***Nitrile gloves, sprinkle bars** and other spray accessories are available on-line in the 'Sprayers & Accessories' section of the Lawnsmith Shop at http://www.lawnsmith.co.uk/shop/sprayers-accessories/

Application

The manufacturer's instructions give enough total mixture to cover the planned lawn area 3 or 4 times over. This is necessary to thoroughly wet the lawn. This means that by the time you have gone over the whole lawn once you will only be about a third of the way through your total number of CANS or FILLS.



When you have covered the whole lawn once, just return the way you came back down the lawn and repeat watering the whole lawn. Alternatively you could also go the opposite direction across the lawn as illustrated if the lawn shape permits. Putting marker pegs or posts at the ends of the lawn can help in keeping in a straight line.

You will find it impossible to finish your last CAN or FILL without running out before the end of the lawn or with a little mixture left in the can or sprayer. So, just keep walking until it's all gone – no harm will be done.

Having a pretty close idea of your lawn area IS a good idea. If you're unsure of your lawn area it's worth taking a bit of time to measure your lawn and find out by going to **How to Measure a Lawn**. You'll only need to do it once and you can order and apply all your lawn products accurately from then on.

In addition, the speed at which you walk will affect the amount you put on. A steady normal walk of 2.5 to 3 mph is best. If you think you are a fast or slow walker look at our **Pace Guide**.

Both documents can be found at http://www.lawnsmith.co.uk/enthusiast/technical-lawn-help/measuring-testing

NB All iron products stain hard surfaces so be careful where you spray and clean up dry product after application

Timing

As mentioned earlier moisture is required anytime you apply ferrous sulphate. The stronger the concentration the more moisture and less heat is required.

For a green-up, soil moisture is required with a dewy morning being ideal. As long as strong sun is not expected then this is a great treatment from spring through to autumn.

If you are applying at the turf hardening rates then autumn through to spring is your time. If you are ever concerned about moisture availability why not give the lawn a light sprinkling from the hose beforehand. Alternatively apply straight after a shower of rain.

If you are applying at the highest rates then cool and wet conditions must prevail otherwise you will cause temporary damage to the grass. At this rate you will severely blacken moss – nice!

In summary, I would not go above 1g per metre in warm (not hot) wet weather. At 1.5g to 2g per metre requires cool and ground moisture available. At 3g to 4g I'd want wet and cool. In all instances avoid frost and freezing conditions.

Spray Nozzles

There is a whole plethora of different nozzles for fitting to your sprayer. They offer different spray patterns, flow rates and spray areas. For turf we generally only use deflector nozzles that give a wide flat spray area ideal for spraying and walking at a steady pace. I recommend you stick to either green or blue.

The Green Deflector Nozzle has a large opening and delivers about 3 litres mixture every minute with continuous heavy pumping. The Blue Deflector Nozzle has a smaller opening and only delivers about 2 litres a minute. If you use the Green Nozzle you will run out of mixture after spraying the area twice but you will have to pump a lot. Try the nozzle with just water to make sure you have enough 'pump' in you. If this pumping is too much for you switch to the Blue Nozzle. This means less pumping but you will more than likely spray the area three times rather than twice.

The nozzles are available here: http://www.lawnsmith.co.uk/shop/sprayers-accessories/sprayers-accessories/sprayer-deflector-nozzles/