

Q: What is SO4?

A: SO4 is finely ground gypsum mixed with a binder to form a pellet. SO4 has 21% calcium, 17.5% sulfur (in sulfate form) and is 95% pure dihydrate gypsum. Dihydrate gypsum is soluble, whereas anhydrite is not soluble in the soil. If you are looking for a gypsum product for fields or turf, you are looking for dihydrate gypsum or SO4.

Q: How much SO4 do I need to use?

A: We normally recommend using 300# per application unless we are addressing a high sodium problem, and then the upper rate could be as high as 900# per acre.

Q: How often should I apply SO4?

A: We recommend a yearly application until the problems you are trying to alleviate have been addressed. At that time, it can either be reduced in quantity or frequency depending on the problems being addressed.

Q: Can I put on too much SO4?

A: As SO4 is basically a do-no-harm product, over application should not hurt either the soil or crop.

Q: Can I apply SO4 with other products?

A: As long as the other products are granular, SO4 can be mixed and applied at the same time and with the same equipment. We do not recommend application with liquid compounds unless they are suitable for impregnation on fertilizer, and then they may be impregnated on the SO4 also. This is applicable for most micronutrients also.

Q: How long will SO4 last?

A: The lifespan of results is determined on what you are trying to accomplish. Normal recommendation is to use annually until the desired affect is accomplished. Dropping or reducing a high pH will be accomplished by the addition of an acidifying compound WITH the application of SO4, and then it will still be a long process with monitoring needed. Addition of needed nutrients such as C and S in the sulfate form will be needed on either an annual basis or every other year, depending on the amount required.

Q: Do I need to incorporate SO4?

A: No. SO4 works best applied to the soil surface after any mechanical tillage is done. If it is fall applied, the normal seed bed preparation will not affect gypsum's activity.

Q: Can I use SO4 in my deep placement program?

A: We do not recommend deep application of gypsum unless it is being used strictly as a sulfur source. The best benefits of gypsum are realized by surface application.

Q: Can I band SO4?

A: Yes. It is OK to band SO4 either in a "T" band method or directly in the furrow. Keep in mind that the effects of the gypsum application will be limited to the area to which it is applied. If the problem is field-wide, broadcasting gypsum is indicated.

Q: Will in furrow application of SO4 hurt the seed?

A: No. Since again, SO4 is basically a do-no-harm product, it will not have any effect on the germination of seed.

Q: I want to deep till. Should I apply SO4 before or after that tillage?

A: Wherever possible, we recommend that tillage be performed first and then apply SO4 to the surface. Incorporating SO4 can reduce its overall performance on the top soil structure.

Q: Will SO4 help in a high pH soil?

A: Yes. It will allow the calcium to come away from the compound and be a free agent, available to the crop while other calcium will be tied up due to the high pH. It can help in reducing the pH if it is introduced with an acid-forming compound such as ammonium sulfate. SO4 will not reduce the soil pH, but will create a more friendly environment for the plant to grow. It also provides calcium in a soluble form. Your soil test will probably indicate that there is plenty of calcium already in the high pH soil, but that calcium is tied up by the pH. Also, SO4 has sulfur in the sulfate form, the form that plants can use.

Q: I have high salt levels. Will SO4 take care of that?

A: In most cases, yes. First, it needs to be determined by the soil sample if it is sodium salt and then, regular applications of SO4 should reduce the sodium as long as there is a way for the soil to drain properly (tile or naturally occurring drainage).

Q: I have a water source that is high in salt. Will SO4 address that?

A: If that source of sodium salt is your primary source of water, it will become a case of "shoveling sand" as the removal must exceed the source. Only in cases where you can use a clean source of water will you be able to contain the buildup of salts in the soil. Also, it must be noted that good drainage is needed to remove the precipitated sodium.

Q: I have side hill seeps that are high in salt. Can I use SO4 to solve that?

A: The success of this depends on whether you can address the source of the salt first, and then address the areas most affected. This usually comes down to trying an area to see if there will be any easement of the problem.

Q: I have lots of tile, but still get 'ponding.'

A: This is due primarily to poor soil penetration by water. Regular applications of SO4, along with tillage, should alleviate this problem. SO4 will allow the passage of both water and air by changing the soil structure to allow it to pass and also for the soil to retain more water in the changed soil structure.

Q: I have a 'hard pan.' Will SO4 take care of that?

A: A good program using gypsum and deep tillage should take care of that. SO4 by itself can alleviate that, but it will be a long-term project.

Q: My soil turns white to gray and cracks as soon as it's dry.

A: First, a good soil sample should be taken to see if that could be caused by either salt or an imbalance of your calcium and magnesium. In either case, recommending a regular application of SO4 should alleviate either condition.

Q: My soybeans show IDC. Will SO4 help that?

A: Application of gypsum will, in most cases, reduce or eliminate the signs of iron deficiency. Also, note that other diseases will be reduced as the plants are now vigorous and able to withstand many other soybean diseases that can cause problems if the plant is under stress. Research has also shown that gypsum will help reduce the effects of white mold in fields that exhibit a tendency toward that problem.

Q: What about using SO4 on alfalfa?

A: SO4 is an excellent way to get the required calcium to a legume. Since SO4 is soluble, it has a better chance for plant uptake. The addition of sulfur to alfalfa normally causes a jump in the feed value of the forage, so you now have more and better alfalfa. It should be noted that changing the pH on an established crop is difficult at best. Once the crop is to be changed or rotated, pH issues may be addressed at that point.

Q: Can I use SO4 for a sulfur source?

A: SO4 makes a great sulfur source as the sulfur is in the sulfate form (which plants can use), and is available to the plant immediately. 200 bu. corn will use 32 lbs. sulfur, 80 bu. beans will use 36 lbs. sulfur. With SO4 you also get calcium and 200 bu. corn requires 42 lbs. calcium, 80 bu. beans require 136 lbs. calcium.