

Problem: Iron Chlorosis on Strawberries and Annual Herbaceous Plants



Plants Affected: Strawberries, Blueberries, Annual Flowers, Vegetables

Description: Affected leaves turn a yellowish color while the leaf veins remain a dark green. Iron chlorosis is caused by the plant not being able to obtain the iron it needs. Iron is needed for the production of chlorophyll and therefore, a lack of iron results in a loss of the green color in the leaves. In severe cases, leaf color may change from yellow to white to brown.

Recommendations: Though there is usually plenty of mineral iron in our Kansas soils, it becomes progressively more unavailable for plant use as the pH rises above neutral. If the pH of your soil is above 7.0, use sulfur to acidify it and bring the pH down. However, as long as solid lime is present in the soil, it is not economically possible to decrease the pH because all the calcium carbonate must be neutralized by sulfur before the pH changes. If there is a fizz either seen or heard when adding a drop of vinegar to soil, there is solid lime present and lowering the pH will likely be impractical. In such soils, consider using raised beds and bringing in good topsoil.

Treat soil with sulfur during the fall or early spring with the fall being preferred so that the sulfur has the winter to react and lower the soil pH. Powdered (wetable) sulfur is the most common acidifying agent. Pelletized wettable sulfur is easier to apply than the dust. It should be thoroughly incorporated into the soil to a depth of 6 inches. The quantity of sulfur needed depends on initial pH and soil type. A sandy soil usually requires about 2/3 lbs sulfur per 100 square feet (300 lbs/treated acre) to lower the soil pH by one unit (i.e. 7.0 to 6.0). In contrast, a medium textured soil such as a silt loam requires about 1-1/8 lbs sulfur per 100 square feet (500 lbs/treated acre), while a heavy clay-type soil requires about 1-3/4 lbs sulfur per 100 square feet (750 lbs/treated acre) to lower soil pH by one unit.

Foliar or drench applications of chelated iron to the garden plants themselves can also be an option. Plants absorb the iron through the leaves or through the roots. However, high pH soils may prevent most iron chelates from working. For any soil with a pH above 7.2, use an iron chelate with EDDHA. Such products include Sequestar 6%, Sprint 138 and Millers FerriPlus.

References:

1. [Iron Chlorosis in Trees](#), Kansas Forest Service Publication MF-718
2. [Iron Chlorosis in Berries](#), Utah State University Extension, Horticulture/Fruit/2009-02pr

Last Update: 11/1/2023

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