CHELATED IRON TESTS

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The article, New Relief for Iron Chlorosis, in the December 1, 1953 issue of this bulletin introduced the reader to chelated iron. Since that time, numerous tests have been run at the University and in commercial greenhouses throughout the state. The results of some of these tests are as follows:

Hydrangeas - The variety Southland has a decided tendency to become chlorotic when other varieties, grown under the same conditions, usually remain green. Plants in the University greenhouse were allowed to become almost 100 percent chlorotic before chelated iron was applied to the soil on March 15. Flower buds were the size of a dime or smaller at this time. Treated plants greened up about 90 percent within 10 days and made much sturdier plants. They bloomed on schedule, had large flower heads and a true, rich pink flower color, indicating that pink flower color is not adversely affected by chelated iron under the conditions of this tests. Untreated check plants were smaller, remained yellow and produced small (one-half the size of those on treated plants) flower heads. Flowers failed to develop normal color and appeared faded or "washed out" from the very beginning. Flowers on treated plants become the same faded color only after they had been in bloom for four to six weeks.

An additional test, conducted in a commercial greenhouse, where the chelated iron was applied when the flower buds were the size of a half dollar produced similar results. Flower color was excellent.

Good results were also obtained on other popular varieties including Merveille, Drape's Pink, Hamburg and Strafford, according to reports from numerous growers.

Iron sulfate was slower acting and no more than one-half as effective when applied at the rate of one ounce per gallon of water.

Azaleas - Numerous growers reported complete greening of chlorotic azalea plants within six to eight weeks. Coral Bell and numerous other varieties were included in the tests.

Gardenias - Large plants in tubs which were yellow for almost a year, despite applications of iron sulfate, responded favorably to an application of chelated iron. The plants started to turn green within six weeks and eventually became completely green.

Roses - Greenhouse roses, especially varieties such as Talisman, often have a tendency to become chlorotic during the winter. Chlorotic plants in two commercial greenhouses responded very favorably.

Lobelia - A grower in the Red River Valley reported that plants as yellow as paper greened up within a week after the application of chelated iron.

Caution

Results of additional tests point out once again that chelated iron is excellent for the treatment of iron chlorosis, but it should not be considered a cure-all. If plant chlorosis is due to excessive nutrient levels, over-watering or some similar factor, the source of trouble should be corrected. In some instances the application of iron may help the plant recover more quickly, once conditions are corrected, but in several of our tests, no visible benefit was obtained from the application of the chelated iron.

Rate of application in these tests ranged from one ounce of 12 percent material to 20 gallons, to one ounce to 25 gallons of water applied to 100 square feet of bench area (pot plants and cut flowers). Application rate for outdoor crops is usually doubled. Recent releases also indicate that stronger rates of application may be employed, but if the above concentrations prove effective, it may be wise to play safe. We have succeeded in killing both hydrangeas and Coral Bell azaleas with excessive quantities, just as it is possible to kill plants with excessive quantities of fertilizers.