

LOUISIANA HOME LAWN SERIES

A guide to maintaining a healthy Louisiana lawn



Iron

Iron (Fe) is a micronutrient, meaning it is required in lower concentrations by the turfgrass relative to macronutrients, but iron is essential for turfgrass growth. Managing iron can be accomplished through routine soil testing. However, iron is also applied periodically to achieve a short-term greening of the turfgrass without major flushes of growth. Understanding the role of iron in turfgrass growth is important for developing a sound fertility plan for your home lawn.

Iron uptake: Iron is available for plant uptake in the forms of Fe^{2+} and Fe^{3+} . Iron is important in several proteins and enzymes — most notably in chlorophyll, which is necessary for photosynthesis. Depending on the soil type, iron may be abundant in soils but not available for turfgrass uptake. Iron is more available as Fe^{2+} and Fe^{3+} at lower soil pH (pH lower than 7). High levels of other nutrients, such as high levels of phosphorus, can form a complex with iron as the soil becomes more basic (a pH greater than 7), thus making iron unavailable for plant uptake. Other factors that affect iron availability are soil aeration, soil temperature and soil organic matter. In general, acidic soils that are waterlogged and have higher organic matter can have increased levels of available iron.

Iron deficiency: Iron deficiency occurs as yellowing between the veins of younger leaves followed by increased yellowing over time. Turfgrass can appear mottled and exhibit reduced growth. Iron deficiency tends to occur on more basic soils and soils with low organic matter. For warm-season turfgrass species, iron deficiency can occur during cool, wet springs. High concentration of phosphorus or metals can form a complex with iron to reduce availability. Iron deficiency can be corrected through fertilizer application. It is important to take a soil test to determine iron fertility because other deficient nutrients can also cause stunted growth and leaf yellowing.

When to apply: Always have your soil tested and follow the recommendations before applying fertilizer. Adjusting soil pH can affect iron availability. Iron should be applied when the turfgrass is actively growing. Iron can be used periodically to enhance turfgrass color for a short period, but be careful to follow the proper rates because iron in excessive levels can be toxic to the plant. Also, overapplication of iron can affect availability of other nutrients, such as phosphorus and manganese.

January	February	March	April	May	June	July	August	September	October	November	December
Turfgrass dormant		Turfgrass active growth season							Turfgrass dormant		

Fertilizer sources: Listed in the adjacent table are some common sources of iron. Release times may vary depending on product source and environmental conditions during time of application. Read the manufacturer's label for more information before applying any product.

Source
Ferrous sulfate
Ferric sulfate
Ferrous ammonium phosphate
Ferrous ammonium sulfate
Iron chelates (natural and synthetic)

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Pub. 3624-WW (Online Only) 5/19

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