

PROBLEM MANAGEMENT

by Balakrishna Rao, Ph.D.

Oak iron deficiency

Problem: *I would like to treat a number of large red oaks showing iron deficiency. Can we effectively manage the problem by foliar application of iron-containing products? Are there any good products in the market for this purpose? (Texas)*

Solution: No, the foliar application of iron will not correct the problem completely. Our experience has shown that chlorotic red oak leaves do not absorb an adequate amount of iron to correct the problem satisfactorily. To avoid wound injury, soil application of iron product is recommended. However, this alone may not correct the situation satisfactorily, particularly if the trees are suffering severely from iron deficiency.

Therefore, first provide ferric ammonium citrate through trunk injections for quick recovery. This should then be supplemented and followed by soil application of chelated iron to maintain the iron requirement of plants. Trees smaller than three to four inches in diameter should not be trunk injected because of the potential for injury. Soil treatment of iron is recommended in this situation. Water the treated area to move the iron product to the root zone for better uptake. Avoid treating when trees are under moisture stress in order to avoid any phytotoxicity problems.

Treating crabgrass

Problem: *We have been using either Betasan or Dacthal in our early spring applications for crabgrass control. This year we have experienced a large number of calls from our clients. What are we doing wrong? What is your opinion on using a post-emergent? Is it possible to skip the pre-emergent application completely and use only the post-emergent in our second treatment around May to June? (New York)*

Solution: The use of pre-emergence herbicides like the ones you have mentioned is the best approach to managing crabgrass problems in established turf areas. To determine why you are experiencing too many crabgrass calls, make a survey of several treated and untreated areas and inspect the lawns. This would help analyze the reasons for poor crabgrass control.

According to the manufacturers' guidelines, one can at best expect about 80 to 85 percent control of crabgrass when using pre-emergence herbicides. Compare the treated lawns with untreated sites like parks, etc. to determine how well the product has provided control and how environmental conditions were this year for crabgrass growth. Reports indicate that this year many people have had poor crabgrass control.

Several factors either individually or cumulatively contributed to the crabgrass problem. Remember that these herbicides provide a thin chemical barrier which is toxic to germinating crabgrass seedlings. Results will vary if this chemical barrier is affected by raking, traffic, insect activ-

ity, heat and/or photodegradation of the active ingredient.

Generally, opportunistic weeds like crabgrass appear in thin areas, resulting from poor nutrition, insect and disease activity, or drought. In many situations, the labelled products have out-performed manufactured suggested percent of control. However, quite often when clients find a few plants in their lawns it becomes quite objectionable, which is a common problem in our industry. Educating the clients as to product performance and the state of the art in crabgrass control might be very helpful.

Success in managing crabgrass using post-emergence materials like DSMA, MSMA or Acclaim! depends upon proper timing of the application. For best results, the materials should be applied onto juvenile seedlings (two-leaf stage). This would require proper monitoring and identification of the plant materials. Depending upon the number of seeds carried over from the previous years, the results may vary.

In many situations, the crabgrass problem is recognized when the plants have matured. Reports suggest that variable results can be expected when post emergence materials are being applied onto mature plants.

In some situations, if the plants begin to produce more than one tiller, the management is difficult. At this stage of development, the major objective is to arrest the growth of crabgrass and prevent seedhead formation for which these materials can be very effective. However, these chemical products may temporarily discolor the turf for two weeks following the application. Therefore, read and follow label specifications for best results, and also let your clients know the advantages and disadvantages of these post-emergence crabgrass treatments.

Regarding your question concerning using post-emergence materials in place of pre-emergence materials, I feel that theoretically it should work fine. However, in practice, to achieve good results, the post-emergence products should be applied at the proper time. If this is feasible, try to apply the materials to a few lawns in order to understand more about the product performance and service practices. If the lawns appear to be thin after removing the crabgrass, you may have to overseed the area with compatible turfgrass cultivars and provide a balanced fertilization and pest management program as needed to maintain turf density and quality.



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Questions should be mailed to Problem Management, Landscape Management, 7500 Old Oak Boulevard, Cleveland, OH 44130. Please allow 2-3 months for an answer to appear in the magazine.