LAWN CARE CUSTOMER WANTS DON'T MATCH NEEDS

BY CHARLES DARRAH

Managing turf fertility programs in commercial lawn care presents a unique set of problems. The strategies for fertility management developed by the lawn care agronomist must operate under various constraints. In addition, research to date in turf fertility has not adequately explored the options which are often necessary to use in lawn care programs.

Much of the past fertility research, for example, has defined the optimum nitrogen source to use under defined environmental and management programs, while lawn care agronomists are confronted with diverse management programs on home and commercial lawns. Past research has also defined relatively narrow time frames for fertilizer applications. Rates of application have been defined to produce optimum agronomic results.

The first constraint faced by lawn care agronomists is the expectations of the customer. If we don't satisfy the needs and wants of our customers we cannot sell our service. Customers demand a dark-green, dense, pest-free lawn. They want this dark green color in the spring and summer, times which go against agronomic optimums when it comes to fertility programs for cool-season turf.

The customer also expects to see something for his money; and unfortunately, nutrients like phosphorus and potassium generally don't produce visual effects or other responses the homeowner can readily observe. Likewise, applications of lime and sulfur to correct soil deficiencies usually produce negative visual effects.

Lawn care agronomists must also function under special operational considerations. There is a large capital investment in a lawn care business. The employment of a workforce and a commitment to a payroll must be considered. Capital and payroll commitments demand productivity from the workforce, at least on a seasonal basis. The eight-week round, very common in lawn care programs, probably evolved as a balance between the fertility needs of turfgrasses and production loads that produce adequate returns on capital and payroll investments. Certainly we can provide other services when no fertility round is dictated by agronomics, such as insect control.

More specific to fertility programming, the lawn care agronomist has a contraint on materials selection. Each source of plant nutrient has its advantages and disadvantages in producing the agronomic optimum results. Material selection is most often based on the efficacy of the material. However, at certain times the most efficaceous material cannot be used because it's not in the form (liquid or dry) that would be most compatible with equipment or other operational considerations, including cost. Agronomists often put cost at the bottom of the list. However, our operational people will put cost at the top of the list, especially in material selection. We must keep lawn care affordable.

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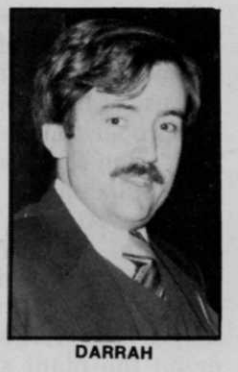
A good example of some of these trade-offs exist in selecting a liming material. Granular limestone has operational advantages because of its ease of spreading. However, in most cases it is not the optimum form of lime to use from an agronomic viewpoint. The other alternative, fine-ground limestone, is difficult to spread on a large number of lawns. Pelletized limestone is a compromise even though it costs three to four times as much as granular or fine-ground limestone. We've tried fluid limestone, but there are storage problems.

It is the programmed use of fertilizer nutrients that give the lawn care agronomist the most difficulty in trying to achieve agronomic optimum results. In nitrogen programming, there must be a balance between agronomic optimums and customer expectations. Nitrogen effects the color and density of turf to a dramatic degree. The agronomist is under pressure to give customers the dark-green dense lawn they want at all times. A balance between agronomic optimums and customer expectations is necessary.

Timing of nitrogen applications within an eight-week round often falls short of agronomic optimums. On the other hand, fall fertility programs on cool-season turfgrasses often don't meet customer expectations during the spring and summer months.



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Another consideration in nitrogen programming are the commercially available nitrogen sources. Several new sources have evolved principally to serve the liquid lawn care market. Many of these materials are similar to the more traditional materials in dry form. Additional research is needed to determine the performance of these materials.

Programming phosphorus and potassium also presents some difficulties. Better calibration of soil test results and soil test recommendations are needed to provide lawn care customers with adequate maintenance levels of phosphorus and potassium. I've seen soil test levels for correcting deficiencies of potassium in heavy clay soils that recommend rates of 18 lbs. per 1,000 square feet. We face similar problems with soil pH correction.

Timing of phosphorus and potassium applications in another area of limited knowledge. Because of multiple round applications lawn care programs may do a better job of timing phosphorus or potassium nutrition than traditional single-application programs.

Micronutrient sources are also important to lawn care programming. Organic micronutrients are generally more expensive than inorganic materials. We need to consider rates to provide those materials to our customers at affordable prices. Timing of micronutrient application may again favor the lawn care program over traditional programs.

Compatibility of micronutrients with other chemicals and the equipment is important. The micronutrients delivered in lawn care applications are either mixed with dry or liquid NPK materials. The liquid solution presents the greatest hazard for chemical incompatibility and it has also been recognized in dry mixtures. There are some problems when tank trucks are exposed to micronutrients on an extended basis.

In order to make this industry continue to grow it is imperative that research be conducted within the constraints of business. We must broaden our agronomic base to provide for alternative fertility programs which will benefit both the customer and the industry.

