Florida's West Course Supers are about as diversified in their fertilizer programs as they are in their over-seeding; everyone uses materials differently but accomplish the same purpose within budgetary limitations. We will attempt to generalize the programs after discussion with many Supers from our chapter.

Basically, the following materials are those most prevalently used:
- 12-4-8 with and without Minors
- 16-4-8 with and without Minors
- 15-0-15 with and without Minors
- Ammonium Sulfate
- Ammonium Nitrate
- 8-1-4 with IBDU or UF
- 17-1-10 with IBDU or UF
- Milorganite
- Liquid Ag 8-0-8 and 12-0-6 with and without Minors

Liquid Ag produces custom blends to meet all turf needs dictated by soil and tissue tests.

Green and Tee materials are principally the 8-1-4, 17-1-10, the straight Nitrates, and of course, Milorganite along with the fertigation products. Rates of N² and 1-2 lbs. of K² used by those not overseeding during the cooler season.

Both programs are using some formula of fertigation but the rates are maintained in plant foods applied. Those who rely on fertigation to maintain color and growth still apply 3-4 applications of a dry material to tees and putting greens, primarily the balanced 8-1-4 or 17-1-10 and Milorganite. Basic application criteria are set by the weather, member preferences, as well as by the budget.

Total application of N² and K² for an annual basis in our area are within the range of 14-16#, 18-24#, 24-36#, from lows to the highs. There is even one club running higher than 36# N² with 22-24# K² but this is an exception — the basic average from those I've spoken with are in the 16-30 lb. range in N² with 12-24 lb. range of K².

Fairways and roughs are fed over-all in late September or October with the 12-4-8, 16-4-8, and 15-0-15 mixes at rates of 300-500 lb. of the mix per acre. A repeat is made again in late November or December at approximately one-half the above rate. Those on fertigation usually eliminate this application relying on fertigation at least through March or April. In the event of extreme cold, both Supers may apply an application of the soluble nitrogen sources at 100-200 lb. rates per acre during the season. They are divided into two groups, those that apply the N² before or immediately after the cold spell.

Those without fertigation will usually apply another mixed good application from late February through 15th April. Recent data has shown that we should possible wait until the natural spring growth flush is complete before we make this feeding. Feeding prior to the natural flush has a tendency to reduce root growth significantly and since this is our dry season, more harm than good can be done at this time of year. Annual N² in our area on fairways and roughs run from lows of 4-6 lb./MSF to highs of 12-18 lb./MSF with K² again in the .75 range ratio of Nitrogen.

Our area has some extreme highs in PH values, some up in the 8.4-9.0 range. Minor elements, MN, FE, Mg, S, B, and Mb are rarely in the proper ratio under these conditions while at the same time AL and CA factors could be toxic, even to the point of causing turf kill. In addition, the full benefits of the primary elements are rarely attained. Sulfur is definitely equally as essential as N², P²O⁵, and K² and thence becomes a fourth major element. These factors are easily determined by leaf tissue tests made on site. Supplementary applications can be made by incorporating the minor elements in either a separate spray mix or as part of the normal sprays. Compatibility should be established before mixing materials. Side applications of Sulfur must be carefully applied and such application even more if applications of soluble Nitrates or Potashes are considered. The resulting combinations, due to the caustic Sulfur can result in extreme phyto-toxicity to vegetation.

Manganese, Magnesium, Boron, and Molybdenum deficiencies have been showing up on a number of West Coast courses. Liquid chelates of these minors applied as sprays without irrigation have shown turf responses equal to an application of a balanced plant food. Results in some instances are even superior and surely less costly. Spot spraying so-called declining areas has proven much less expensive using the minors compared to an over-all application of either fertigation or a dry mix.

Fall and Winter applications of plant foods by whatever means are no longer, "just done," but are made strictly on data obtained by reliable soil and/or tissue analysis indicating specific needs. Material costs dictate the use of these instruments and they will become even more essential as budgets are becoming limited. Another vital part of plant nutrition is the use of quality products. A 16-4-8 can be made for plus or minus $120.00/ton up to over $350.00/ton even without the use of WIN Nitrogen sources. This concept of a fertilizer being a fertilizer is about as acceptable as a $1.00 steak compared to a $10.00 steak. While chemically correct, the differences are easily recognizable in the final results after application.

(Continued on page 29)
Golfers comparing courses must be made aware that the differences in color doesn't always mean the greener course is better play-wise. Problems resulting from excess feeding are too numerous and as professionals we are already aware of them. The goals and aims of the members — owners, as well as the budget, MUST be considered before player critique along this trend of thought can be valid or warranted. The present economical status will more than likely equalize the greenness of golf turf everywhere, all other factors being equal.

Superintendents in North Florida may not be able to agree on what particular fertilizer is best for their region and circumstances, but they do agree that some form of fall fertility is essential in bringing turf out of dormancy into a healthy condition. Remember, dormancy means "inactive" not dead, and inactive turf requires nutrients in the soil for growth stimulation.

NORTH FLORIDA CHAPTER NEWS

The North Florida Golf Course Superintendents Chapter annual meeting was held July 16, 17, and 18 at the Ponce DeLeon Lodge & Country Club in beautiful St. Augustine.

Chip Powell of Deerwood Country Club handed the gavel to new president Jeff Hayden of Turkey Creek Country Club. Jeff's tenure will be aided by Vice President Robby Robbins (Gainesville G & CC); Secretary, John Perham (U. of Florida CC); Treasurer, Tom Prescott (Timuquana CC); External V.P., John Hayden (San Jose CC). Directors for the chapter are Dick Johnson (Ponce DeLeon CC), Jim Reemelin (Zau Equipment), Frank Sharro. Past President, Chip Powell (Deerwood CC).

Three days of tournament golf, good food, and fellowship were enjoyed by North Florida members and families. A very special thanks to Golf Course Superintendent Dick Johnson and his staff. The golf course reflected Dick's hard work and effort as the course was in excellent condition.

Dick was a superior host and we again thank him.

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Weeds grow all the time, even when you don't have time for them.

We specialize in aquatics. We have the people, the equipment, the know-how and the time to do it right.

When we manage your water and shoreline areas, you spend your time on more important things. You know that your lakes are in the best possible hands.

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