

clubs are paying summer help around \$2 per hour and year round employees are receiving \$2.20 to \$4 per hour."

Obviously we here in the Mid-Atlantic area are not the only ones affected by the high cost of labor.

From the sound of things, the winter injury suffered by courses in the Northeast section was really bad. So bad in fact that the GCSA of New England published an open letter to club presidents and greens chairmen in their area. The purpose was to clear the air as to exactly what happened last winter and why the turf has not been perfect this year. The letter was well written, quite explanatory, and proves that their association is looking out for the well being of all their members. It might be well for other associations to ask themselves if they could make the same claim. At any rate, well done, N.E. Chapter.

The Metropolitan GCSA in New York state had an interesting speaker at their June meeting. She was Mrs. Allison Choate, a member of the Apawamis Club and a past Senior Women's Amateur Golf Champion in New York. She spoke briefly outlining what she felt was important to our lady golfers. The two items she stressed were fair pin placements and well groomed sand traps. Rather an interesting speaker, don't you agree?

Do you ever have water in your cups in the morning after watering? Try this idea - buy a hygiene syringe at the drug store and attach a 12" piece of fuel line from a greens mower to the end of it. Presto! Instant cup cleaner-outer. It really works slick, too.

#### THE NITROGEN DILEMMA: By Edward J. Heath

On Aug. 15, 1966 while visiting Warren Bidwell's Philadelphia C.C. I was astonished! His greens were of such quality and texture they were literally shaved to perfection. I asked his assistant how much nitrogen had been applied to date. He replied "2 pounds per 1000 sq. ft.". Why has this superintendent followed the principles of low nitrogen on his greens? What are the facts of high nitrogen verses low nitrogen on putting greens?

Referring to the USGA Green Section Record Sept. 1967, "Why the Nitrogen Race" by Alexander M. Radko, the role of nitrogen in putting green management is:

1) It provides color - the upper safe limits provide a deeper, darker green than the lower rates. (High Nitrogen - Good)

2) It encourages leaf growth - the upper limits provide more vegetative growth than the lower limits. (High Nitrogen - Bad)

3) It discourages root growth at the upper safe limits while the lower safe rates encourage far better root growth. (High Nitrogen - Bad)

4) It provides a soft, rank growth at the upper safe limits and a hardy, healthier growth at the lower limits. (High Nitrogen - Bad)

5) The higher rates encourage poa annua invasion far more than the greens fed on the low side. (High Nitrogen - Bad)

6) The higher rates require more critical water management than moderate rates. (High Nitrogen - Bad)

Except for color, is there any reason for keeping nitrogen at the high levels? Granted, color has a psychological effect on the golfer as well as the superintendent, but isn't golf played on turf, not color? The duration of a putt is not affected one bit by color.

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Nitrogen application on greens has varied somewhat over the years, but generally, the higher levels have dominated. Color and growth has been the main concern for getting the more important aspects. This phenomenon remains a mystery so superficial it has confused many of us. This false assumption that nitrogen is the sole answer to justify our immensely abused stamping grounds of greens reminds me of the man who said, "I had just begun to understand the atom, now someone splits the darn thing".

Naturally, in planning our fertilizer program we must consider, plant requirements, source of nutrients, soil texture and soil structure. Keeping in mind turf, like the human body, if fed too much at one time becomes fat, tired, and sluggish, unable to fight off adverse conditions. By feeding greens more frequently at lower rates even in the spring, a better balance of carbohydrates is achieved. This creates an overall healthier condition for the turf, and produces a superior putting surface.

When used correctly, nitrogen is the key element in the production of good turf, but why do some think if a little is good, a lot is better? Greens would fare far better if they were kept on the hungry side by fertilizing at lower rates. As compaction, thatch, and mat build-up, more nitrogen re-action takes place in the upper fraction of the soil profile. Heavy amounts cause blades to become thick and rank. The end result is a lush growth and thatch which is extremely difficult to thin out the remainder of the season. This fattening-up process produces a situation that only more and costlier maintenance can remedy. Stanley Metsker, of Boulder C.C., started his new Penncross greens on low nitrogen. He now maintains 4 pounds a year, has never varti-cut, and his greens are rated among the best in Colorado.

Each of us has his own problems in greens maintenance, especially with the heavier traffic we are experiencing today. However, the above role of nitrogen cannot be overlooked. We cannot standardize nitrogen applications for reasons already mentioned, but cannot we standardize low nitrogen?

Considerable work and study has been done regarding different roles of nitrogen and more research is needed. Research has been done at Virginia Polytechnic Institute on winter fertilization regarding nitrogen validity. This Institute has achieved good winter turf color without adverse physiological changes. This demonstrates heavy spring applications of nitrogen are not necessary for growth and color, but result in reduced root growth and carbohydrate reserves. The question is how widely this practice can be utilized in other winter climates. It cannot be overlooked as probably becoming instrumental along with the other new developments in golf course maintenance.

Refraining from high nitrogen takes courage and one is often tempted to push the little grass plant far past its physiological capabilities regardless of the consequences. If we keep in mind these all important relationships, a logical and practical conclusion can be reached. Feed the grass what it needs, when it needs it, in light frequent applications. Remember, keep the nitrogen low!

The late Professor Lawrence R. Dickerson once said, "Let the little grass plant grow, don't make it grow!"

Editor's note: In talking with Ed about his article, he said he didn't want to try and be a Ph.D., but that these were his views and that he wanted to share them with the other members in the association. We thank Ed for his contribution and welcome any comments.

**GUIDE FOR EVALUATING EMPLOYEE PERFORMANCE**

PERFORMANCE FACTOR	FAR EXCEEDS JOB REQUIREMENT	EXCEEDS JOB REQUIREMENT	MEETS JOB REQUIREMENT	NEEDS SOME IMPROVEMENT	DOES NOT MEET MINIMUM REQUIREMENT
Quality	Leaps tall buildings with a single bound.	Must take a running start to leap tall buildings.	Can leap over short buildings only.	Crashes into buildings when attempting to jump over them.	Cannot recognize buildings at a glance.
Timeliness	Is faster than a speeding bullet.	Fast as a speeding bullet.	Not quite as fast as a speeding bullet.	Would you believe a slow bullet?	Wounds self when attempting to shoot.
Initiative	Is stronger than a locomotive	Is stronger than a bull elephant.	Is stronger than a bull.	Shoots the bull.	Smells like a bull.
Adaptability	Walks on water consistently.	Walks on water in emergencies.	Washes with water.	Drinks water.	Passes water in emergencies.
Communications	Talks with God.	Talks with the Angels.	Talks with himself.	Argues with himself.	Loses these arguments.