USGA GREEN SECTION RECORD
40 East 38th Street, New York, N. Y. 10016

TURF TWISTERS

HOW MUCH NITROGEN?

Question: There seems to be much confusion concerning the rates of fertilization for a bentgrass green. Why do some clubs apply only 2 pounds of nitrogen per 1000 square feet per year and others apply as much as 14 pounds per 1000 square feet? (West Virginia)

Answer: Fertilization depends on many variables but primarily length of growing season, climate, and soil conditions and to a lesser degree the particular bentgrass species and method of application. For instance, a Penncross bentgrass green with good drainage through a sandy soil might require approximately 8 pounds of nitrogen per 1000 square feet per year if the growing season is long and the weather cool. In general, the lesser amounts of fertilizer are favored provided it is adequate to keep the grass healthy and vigorous with good color. Only in extreme cases i.e., where the growing season is 12 months long, can we conceive of 14 pounds per 1000 square feet being required.

TOO MUCH CALCIUM ARSENATE

Question: Is calcium arsenate effective as a selective control for *Poa annua*? (Wisconsin)

Answer: Yes, calcium arsenate is quite effective as a control for *Poa annua* if used properly. Under no circumstances can calcium arsenate be applied to an area where it is known that free surface water will remain or stand for an extended period of time. If you wish or plan to use calcium arsenate, preparations must be taken to insure that surface drainage is rapid throughout the area to be treated. Slit trenching is currently being used for this purpose. Further, we are finding that light, frequent applications of calcium arsenate are safer and more effective than one heavy application. If calcium arsenate is used and a high per cent of *Poa annua* exists, an overseeding program with desirable grasses is necessary.

ENOUGH EMULSIFIER?

Question: We used a well-known insecticide tor controlling cut worms on greens but even applied at less than the manufacturer's recommended rate, we received a moderate turf burn. The formulation was an emulsifiable concentrate and we applied it very carefully. What caused the burn or what did we do wrong? (New York)

Answer: Most emulsifiable concentrates have a petroleum base such as xylene, and this is probably what caused the burning. Although emulsifiable concentrates are good for grub-proofing (where they can be watered in), we prefer the wettable powders of insecticides for cut worm or sod web worm control where the material should remain on the blade or upper portion of the grass plant.