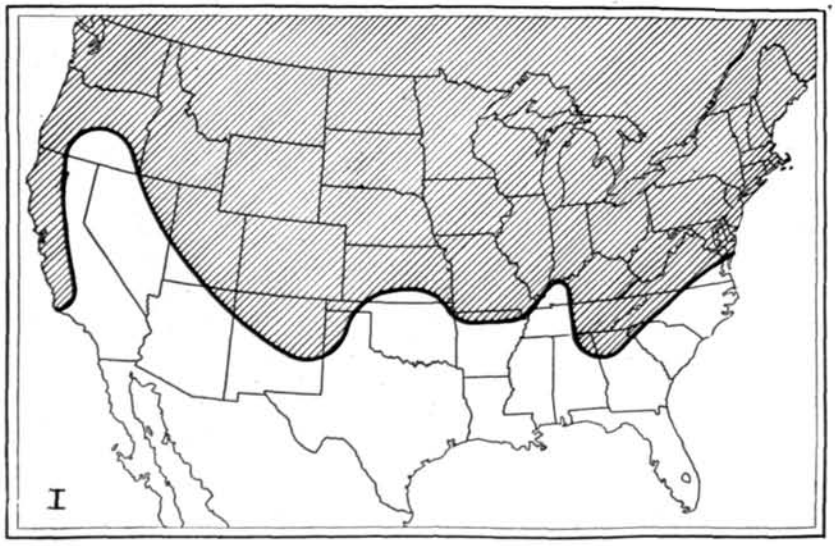
everywhere all about us, but we pay no attention whatever to that fact. If it comes into our putting greens we cut it out with a knife, with a hole cutter, with a chisel, or with any other tool that may best suit, according to the size of the spot infested. The whole problem of keeping *Poa annua* out of a putting green is exactly the same as for any other weed that should not be there. It is not a scientific problem—it is a practical problem. It is not one of indolence and superficial management—it is one of eternal vigilance, of common sense, of treating the putting greens just as you would treat any other valuable thing that you owned, and especially so when it is a thing that is owned by a number of men in an organization, and not by you alone, who is held as the trust officer for the club.

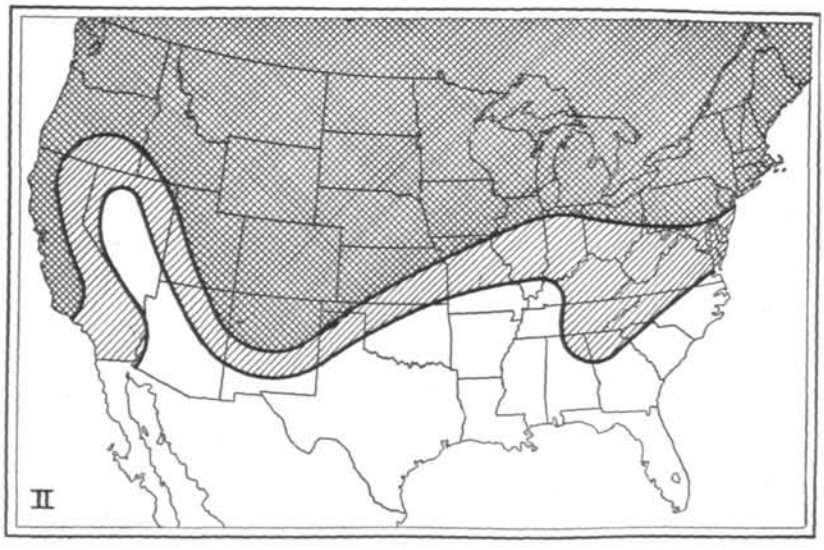
(The Old Elm putting greens are unique in so far as we know among northern putting greens, in their entire freedom from *Poa annua*. As above detailed, this has been accomplished by thorough, conscientious hard weeding from the very beginning. It is a noteworthy accomplishment. Whether success would attend similar efforts at other clubs where *Poa annua* has become very abundant on all the greens, is open to question. However, the remarkable record at Old Elm is one worthy of the most careful consideration.—C. V. Piper.)

Geography of Fine Turf Grasses

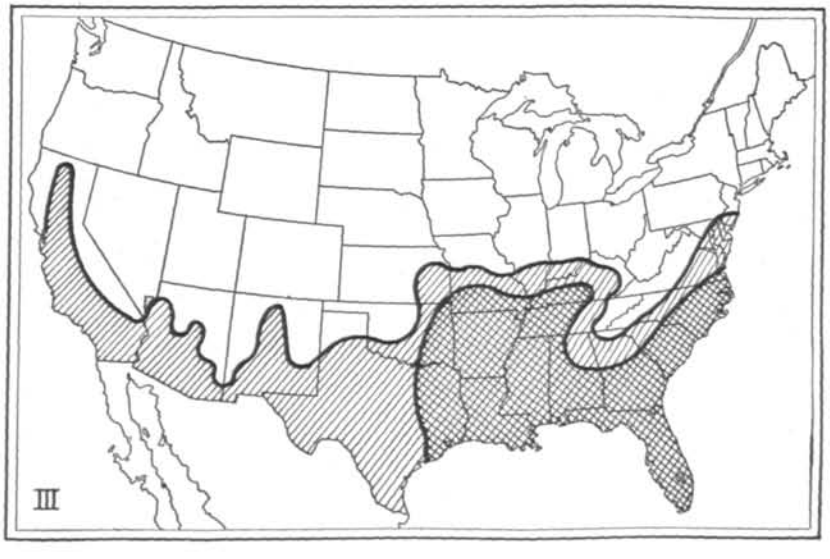
The accompanying maps show approximately the areas where each of the important turf grasses will succeed. If one will refer to these maps he will avoid making mistakes as to the grasses to use. The most troublesome area is that which marks about the southern limit of bluegrass and the bents and the northern limit of Bermuda grass.



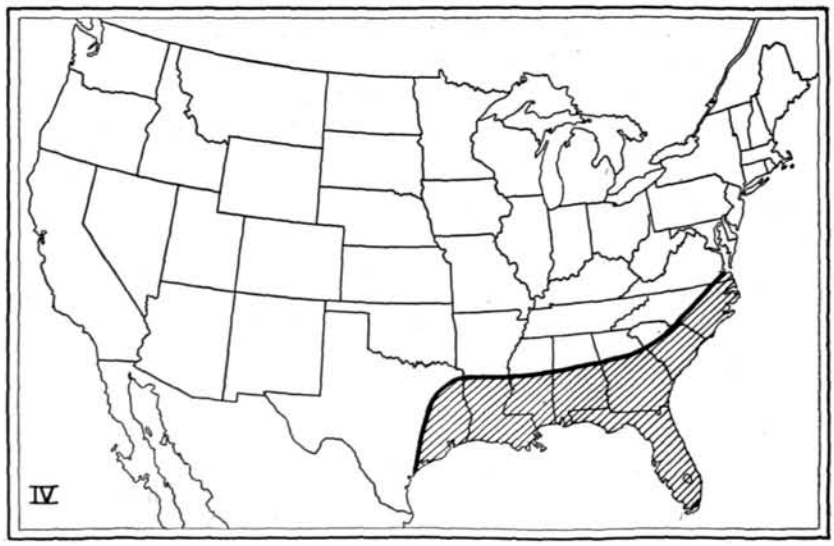
MAP I. KENTUCKY BLUEGRASS, REDTOP AND WHITE CLOVER. The hatched area is that in which Kentucky bluegrass succeeds best. White clover and redtop occupy the same area, but both thrive well much farther southward.



MAP II. BENT GRASSES AND RED FESCUE. The double-hatched area is that in which creeping, velvet, and Rhode Island bents, and red fescue succeed well; the single-hatched area, that in which they need good care to succeed, although red fescue rarely succeeds south of the double-hatched area.



MAP III. BERMUDA GRASS. The double-hatched area is that in which Bermuda grass succeeds best; the single-hatched, that in which it competes with blue grass and other grasses.



MAP IV. CARPET GRASS. The hatched area is that in which carpet grass is adapted.

A, B, C of Golf Course Hydraulics

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During the past few years there has been a great increase in the interest taken in golf, with a resulting large increase in the number of courses used. The more pretentious of these courses, supported as they are by clubs having a large membership, are generally well laid out and cared for. But in the case of many of the smaller clubs the financial situation does not permit of expert planning and supervision.

In order that a golf course may be kept in satisfactory condition, a water supply is of prime importance, and, strangely enough, it is the one feature which seems to have received the least attention. Even among the better courses many examples of insufficient water supply are found, or of a water supply with such inadequate piping as to prevent the water being applied either economically or satisfactorily.

With a water supply satisfactory in quantity, delivered through piping of sufficient size, and with a suitable pressure at the hydrants, the greens can be watered or sprinkled so as to obtain a satisfactory growth of grass, and that without danger of the greens becoming soggy. But where the water supply is insufficient or the piping too small or the pressure too low, a proper application of the water becomes so difficult or tedious as to render it reasonably certain that a proper irrigation of the greens will not be had. Some parts will probably be insufficiently irrigated while other parts may be injured by the application of too much water.

In view of the above statement of conditions it has seemed that a few notes bearing upon the water supply subject would be welcome. These notes, being intended for the assistance of those who are not technically informed rather than for those who have made a study of the subject, will begin with the most elementary facts and be extended to such an extent