Cooperation of Agronomic And Irrigation Factors

About a year ago I was in the Dominican Republic to assist in the reclamation of turf at the Santo Domingo CC. The water situation was reminiscent of that of today — insufficient, erratic and unpredictable. When there was any water it would trickle lazily out of the end of a half-inch hose laid on a 328 Bermuda green. Gravity had to assist in its distribution. Pressure, nearly non-existent, couldn't operate a sprinkler. Fairways of Sourgrass were irrigated only by the rain, but they were surprisingly good.

Few architects would take it upon themselves to design and build a course where the water supply isn't ample. Fully automated irrigation systems would be useless without water. Yet, there are situations where the only requirement is that the greens be watered.

Try and Let It Dry Out!

At many courses, unfortunately, members dictate the irrigation policy. Many supt.s. have told me they would like to skip watering for a while and let the soil dry out to further downward root extension. But when the soil begins to get firm, there are the old complaints from the golfers. Then an order comes from the green chairman: “Start watering!” Under such circumstances, how can any supt. conduct a planned sensible water program?

It is an established agronomic fact that plants make much more efficient use of water when fertility levels are adequate. Well-fed turf will retain its green color much longer than hungry turf, even if water is held back.

Need or Habit

Research stated at Penn State in 1946 has shown conclusively that the best golf turf receives water only when needed. At the 1965 Purdue University turf conference, a speaker asked for a show of hands on the frequency of fairway irrigation. The majority of supt.s. indicated...
Certification

The word “certified” means “assured, made certain, or endorsed authoritatively.” To merit the term, the product must be produced under certain rules and regulations prescribed by an official certifying agency.

Certified, applied to seed, means that the product has known or assured parentage and that it has been produced under rules and regulations which insure preservation of its identity and its genetic purity.

Certified seed is produced by growers who cooperate with crop improvement associations or with state departments of agriculture. Either or both may serve as the certifying agency. A Blue Tag is the well-known mark of certified seed.

Blue Tag certified seed can be traced by lot number to the “mother” or breeder seed. Breeder seed of Merion Kentucky bluegrass was produced at Penn State from a pound of seed sent by Fred Grau at Beltsville to Bert Musser at Penn State. A few ounces of breeder seed were planted under close supervision to produce foundation seed. Growers planted seed to produce Blue Tag certified seed which would be sold to golf courses and sod farms where discriminating supts. and operators wanted to be sure that they were getting only Merion.

Another example is Penngift Coronilla (crownvetch). The Breeder seed is produced only from the tiny farm where it was discovered in 1935. Planted in isolated protected fields, breeder seed produces foundation seed which is furnished to growers who desire to produce Blue Tag certified seed. Each generation is carefully protected to assure the buyer that the product he plants is genuine Penngift.

Penncross bentgrass seed can be certified only if the three vegetative parents (breeder stock) are purchased from qualified growers and if not more than three (3) crops of seed are taken from the fields. Apparently some growers continue to harvest seed after the three-year limitation. It is sold as Penncross but does not merit the Blue Tag and, therefore, can’t be certified.

Uncertified seed carries no assurance of genetic purity. Everyone should be familiar with the Latin expression, “caveat emptor” which means “Let the buyer beware” or “He buys at his own risk.” He who buys uncertified seed has no redress when plants, which are other than those expected, emerge. There is discussion on a proposed ruling that a variety name may not be used for seeds not eligible to carry the Blue Tag of certification.

Certification usually implies that the seed also is of high mechanical purity and has excellent germination. This is not always true but most producer-processors pride themselves on a high-quality product in all respects when it merits the Blue Tag. Certification is denied when purity falls below an accepted standard or when weed seed content is higher than acceptable.

that they water fairways three times a week. Obviously, their courses are not being watered on the basis of need, but from habit. It may have been a coincidence that the main topic of the conference was “Poa Annua Control.”

Another conclusion of researchers is that water should be supplied only as fast as the soil can absorb it. Thus, the infiltration rate is an important agronomic consideration. Development of soil cultivating equipment has made it possible to improve infiltration capacity, but its

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use has to be understood by the supt. or
water-logging can result. Some day computers may be put to work to coordinate
agronomic factors, infiltration and the use
of cultivation devices. Then something
like perfect turf, impervious to poa annua,
and green all summer will be realized. Un-
less, of course, the members intervene!

Research also has shown that the root-
ing depth of different species of turf has
much to do with water needs. I know, for
everything, where Merion Blue survived
after a month of zero irrigation in arid
country. Bermuda held color and life for
over 100 days under the same conditions.
Numerous other examples such as these
are cited.

Researchers, agronomists, irrigation spe-
cialists and, of course, supts. need to get
together and put irrigation and fertility
levels in the proper perspective. There is
a needless waste of water and turf be-
cause their thinking has never been fully
coordinated.

Penncrown Vetch

Q. Please send further information on Pen-
gift crown vetch as mentioned in GOLFDOM
in a recent issue. We plan to seed our irrigated
fairways to Highland bent and the greens to
Penncross. What is your opinion? (Ohio)
A. Penncross for greens is a good choice. It
is the best seeded bent for putting greens.
Vegetated creeping bents are still very much
in the picture but superiority depends heavily
upon management.

A mixture of Colonial bents (Astoria and
Highland) would be better than either one
alone. Since all Colonial bent seed carries a
certain percentage of creeping types, it is a safe
bet that your fairways will become creeping
bent. Why not go one step further and add
five pounds per acre of Penncross seed to hasten
the day when you can begin at once to man-
age for creeping bent. Those who warn that
Penncross will develop thatch are right. But,
since all turfgrasses develop thatch, why not
start using current knowhow, improved fer-
tilizers, lime, and specialized equipment to pre-
vent thatch from becoming a nuisance. Certainly,
you will be able to mow Penncross creeping
bent fairways more closely and to irrigate less
frequently. Diseases and poa will be less of a
problem.

Incidentally, have you considered hydros-eed-
ing your bent seeds? Distribution is more nearly
perfect, seeding rate can be lower and more
accurate, and germination time is reduced.