



NOER & GRAU'S

## ***Turf Roundup for 1958***

### **Weather, Water, Worry Main Ingredients in Turf Picture**

By O. J. Noer

**T**HE title weather, water and worry would have been most appropriate for the 1958 turf roundup in many parts of the U. S. and Canada. The winter was bad in most of the southeastern section and there was loss of Bermudagrass in the belt from Kansas City to Philadelphia. Some bent turf was injured by early spring desiccation. In northern Quebec Province a thaw and warm spell in late winter, followed by snow and freezing weather, caused injury to bent grass greens. During the summer heavy rains in many areas played havoc with greens. Flooding in fairways was bad enough to cause browning and more or less serious damage to the grass. New construction was delayed because of overly wet soil. In Quebec Province seeding in some new courses can't be done this fall which means a season's delay in starting play.

#### **South Hard Hit**

Injury to Bermudagrass and overseedings of rye for winter play was very severe throughout the South extending beyond mid-Florida. There was loss of common Bermuda and of the fine textured grasses including Tifgreen (328). On one course in Atlanta with dual greens, a covering of pine needle straw enabled Tifgreen to survive without a blemish. It was necessary to replant the uncovered ones.

Parts of two Tifgreen greens in Atlanta were overseeded with seaside bent and red top. Although the seeding rate was a trifle scant, this combination provided the best

putting surface for winter play. The bent persisted long after the rye grass in the other part of the green was gone. With care it could have survived the summer. By early summer there was very little Tifgreen in evidence in these two greens. It would not be fair to place the entire blame upon the bent grass-red top used for winter play because the same thing happened on other Tifgreens and on common Bermuda greens overseeded with rye grass.

The Seaside bent-red top combination should be a good one for use on fine textured Bermuda greens. It has performed well at El Paso CC and was good in the trial at Atlanta. The seeding rate should be 4 to 5 lbs. of Seaside and 2 to 3 lbs. of red top seed per 1,000 sq. ft. Success depends upon two or three crosswise rakings or verticutting to remove surplus grass. Close mowing with a greens mower should follow each raking or verticutting. Seed must make contact with soil and should not be placed in a mat of thatched turf where it will sprout and die. The seed should be bulked with enough dry material (sand, activated sludge, topdressing) so seeding with a cyclone seeder can be done in 3 to 4 directions. This is the way to insure uniform cover.

#### **Seed Can Be Smothered**

After seeding, it is advisable to topdress lightly with  $\frac{1}{2}$  to  $\frac{3}{4}$  of a yard of material to 5000 sq. ft. More than that may smother the small sized seed. If more dressing is needed to smooth the putting surface it should be applied after verticutting. Seeding should be on top of it. Matting, with a flexible steel mat should follow either

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Some of aprons around Penncross greens at new Royal Montreal course are in Merion blue. Seeding rate was 2 lbs. per 1,000 sq. ft.



Turf on tees, fairways, greens at Kanawaki, Montreal, came through winter unharmed, held up through season due to Jim Patterson's care.

## Supt. Holds His Own In Battle Against The Jet Stream

FRED V. GRAU

**"I**N THIS area there have been tornadoes, thunderstorms, heavy rains, high winds, flash floods — a combination that one could well do without. July rainfall has been far above normal in many states — Tex., Neb., Minn., Mo., Kan., Ia., Ga., Md., Ind. have been having the worst floods in 45 years — Wis., up to July, had had only two days of summer weather — two days in April when the mercury hit 85. — Trouble is due to a band of planetary air, or jet stream in the upper atmosphere which controls the weather below — these winds stay north in summer — have shifted far southward, drawing cool air along with them. Warm tropical air pours in against this cold air. The resultant clash brings high winds, heavy rains, flash floods — not much to look forward to — except to tolerate it and hope for something better."

The foregoing has been freely quoted from an editorial in the Cincinnati Enquirer. The next is quoted from a letter from Art Snyder dated Sept. 2, written at Phoenix. "Temperatures and humidity have broken all records here this summer. Only four days under 100 degs. F. since May 14 — one of 88 degs., one of 92 deg. and two of 99 deg. July's average daily maximum was 110.6. Humidity above normal every day since July 29. No trouble, though."

The long, cold, wet spring in many sections wrecked many a supt's timetable. The cold continued so far into the sum-

mer that some early spring operations (aeration and thatch removal) were performed in cool weather in June. Then came the heat and humidity and recently treated grass suffered. To cope with diseases, greens were drenched with chemicals of all kinds, some of which checked recovery of weakened grass. Pinning responsibility resembled the game of "pin-the-tail-on-the-donkey." Often the material most recently applied or the tool used last got the blame, most of it unfairly.

The weather can be held responsible for only part of the troubles. Many courses report "splendid condition" and "no trouble." By and large we point to good management in every detail plus good drainage on courses that had little or no trouble.

### Poa Annua Abundant

Poa annua thrived with the abundant rainfall. In a few cases the trouble was simply "Poa going out." This we expect in any season. It is nothing new. No new recommendations are available for eradicating Poa.

Poa thrives under heavy (sometimes excessive) irrigation. The Bull Sheet (Midwest GCSA) for Sept. says, "Overwatering of putting green turf certainly is the biggest contribution to our greens woes." The simple answer is to cut down on water but it is not that simple. Water often is used as a "soil softener." The minute a green gets a little firm some golfer complains about "the hard greens" and demands that they be watered. Against his better judgment the supt., to keep peace in the family, often will apply water (not needed) that may increase trouble.

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method. Surfaces should be kept moist by light hand syringing until grass seedlings become well rooted. In places where damping-off is a recurring possibility it would be well to use an appropriate fungicide before seeding.

The Seaside bent-red top combination is better than either alone. Both germinate equally fast. Seaside is slower to make cover. The red top provides the putting surface during late fall and early winter. Seaside is at its best in late winter up to early summer.

There was loss of U-3 and other strains of Bermuda in the transition belt from Kansas City to Philadelphia. It created uncertainty about the wisdom of using this grass in the area. Kill was as bad in Ala., Ga. and the Carolinas. There they will not turn to something else. Partial loss during one season should not condemn any grass. That course is justified only where loss occurs every year or is likely every second to fifth year.

### **Nashville Goes to Bent**

The creeping bent grass greens at Richland CC in Nashville, Tenn. were good all year. They have been that way for 6 years. Charles Danner's novel and easy way to prevent Bermuda encroachment into bent greens with the edger on a Ryan sod cut has been described and illustrated in the "Turf Tips" of *Golfdom* (Feb., 1958, p. 32) so there is no point in repeating here. Play at Richland by members of other clubs was heavy during the spring transition period from winter grass to Bermuda. The other bent grass greens in Nashville also were good. As a result, Belle Meade decided to go all the way and switch to bent greens. When completed there will be three courses in Nashville with bent greens.

The Penncross bent greens at Cherokee in Atlanta came through the summer exceptionally well even though the top soil mix was poorly done. There was no rain of consequence during July and Aug. which was a big help to Cherokee. East Lake CC in Atlanta has started to build two bent grass greens and plans to have them ready for play in 1959. They will seed with Penncross because of its good performance at Cherokee.

At the new Royal Montreal course on Isle Bizard, Penncross was seeded on most of the greens at 1 lb. per 1000 sq. ft. They were seeded in the fall of 1957 and were ready for play in June, 1958. The cover of

turf was excellent by that time. There was a mild attack of brownpatch during the warm wet spell of weather in early Sept. The attack was not the result of over-nitrogen feeding. The greens got no fertilizer all summer. In late Sept., slight puffiness of the turf was noticeable on some of the greens which had not been put into play.

### **Gives Good Control**

Chlordane gave good control of goosegrass (silver crab) in test areas in Okla. and Ga. when used as pre-emergence herbicides in early spring. Rates in the range of 60 to 80 lbs. per acre of actual chlordane appeared best, with the heavier rate having a slight edge. At present cost of material, chlordane is not apt to be used generally on fairways. Its use could be justified on tees and in the aprons and fringes of greens.

Control of dallisgrass and crabgrass has been excellent in the South with disodium methyl arsonate, or sodium arsenite, in combination with 2,4-D. For best results the addition of a little good quality wetting agent is desirable. Some prefer a sodium dimethyl arsonate formulation for everything because there is less discoloration, despite the fact that sodium arsenite is very much cheaper. Others use sodium arsenite with 2,4-D on fairways. On greens and tees they substitute the disodium methyl arsonate combination with 2,4-D.

Sometimes weed control is attempted on Southern fairways by burning with soluble fertilizers such as ammonium nitrate or ammonium sulfate without watering in afterwards. Kill of hen bit and other winter weeds is good. But this scorched earth method is a good way to help hot weather grass-like weeds. The fertilizer defoliates the Bermuda, and before it can recover, opens the way for heavy infestation of crabgrass, goosegrass and possibly dallisgrass. The better plan is to use fertilizer for its intended purpose which is to encourage growth of desirable grasses and then apply an appropriate herbicide if needed to check or stop growth of weeds.

### **Loss in Winter**

Mention has been made of Bermuda-grass winterkill in the intermediate belt. Loss seemed most serious on tees. Even in normal winters, loss will occur wherever play on dormant Bermuda is heavy. If an alternate teeing area of cool season grass is unavailable for winter use the markers can be kept up front and worn turf re-

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## GRAU

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There are still too many supts. who are not given the opportunity to maintain their courses as they see best. There is an encouraging trend in the right direction but it is a slow process. Some troubles can be traced directly to an ill-advised direction given by a club official, but when the chips are down the superintendent "should have known better."

In new construction we have a golden opportunity to build troubles out and easy maintenance in. We regret to report that new courses are being built that disregard many of the proved principles that have come from years of research and practical experience. Drainage is the key to success on every part of every course everywhere. Recently we saw a year old course that had not yet been opened for play and could not be opened until the manure layers in the greens had been eliminated by rebuilding the greens! This experience points to the need for a "construction committee" which would seek the best recommendations from every available source and issue a realistic report on what is desired. Within every golfing community there are supts. with the combined practical experience of hundreds of years with all kinds of technical information. It is available at little or no cost. It is an area for thoughtful study.

### Sand Has Excellent Qualities

Sand is construction material that is gaining more and more attention. When one sees excellent turf with deep white roots growing on sand in the desert areas it is easy to say, "Well, why not?" When one sees the troubles that develop when there is an excess of organic matter he thinks more of sand. Two drawbacks to sand are (1) excessive leaching of nutrients and (2) extra watering to keep turf green. The first no longer is a problem with the non-leaching types of fertilizer. With deep roots and ample nourishment the second is less important than it has been believed. Two things in favor of sand are (1) excellent drainage and aeration and (2) firmness for good playing quality. Straight sand for topdressing a green has been frowned upon but it may have its place. When a soil has too much clay in it to begin with, there is no point in adding more. By incorporating sand through proper aeration and spiking, the sand tends to form in vertical drainage channels rather than horizontally.

The effect of matted turf in holding granular materials away from contact with the soil is gaining well-deserved attention. To our knowledge no one has measured accurately the total damage to turf from this factor alone. One supt. recently wondered why we waste our time measuring the pH of the soil beneath a matted turf because, as he put it, "the lime never reaches the soil anyhow." If much of the

Ralph R. Bond, owner of Old Orchard Turf Nurseries, Madison, Wis., takes exception to an observation made by Fred Grau in the Sept. GOLFDOM Q & A column (page 48) in which it was said that Old Orchard tends to thin in mid-summer and let poa annua creep in. Bond writes the following:

"The 30-year old Old Orchard C-52 strain, which I developed, is planted in from one to all greens at 400 clubs. No supt. ever has called my attention to the thinning of C-52 or the invasion of poa annua. I have just inspected the 9 greens at Stevens Point (Wis.) CC and the 18 at the Muny course in Janesville and find no evidence of thinning or invasion of poa annua or any weeds. These greens are from 17 to 30 years old. Hans Wagner, supt. at Janesville, for one, will verify my statement. In his words: 'I have never had anything go wrong with my C-52 greens.'"

material we apply is held in the mat of turf and cannot reach the soil below, it would seem that we need to re-examine many of our methods and to evaluate particle size and method of application in terms of results.

Grasses. No Roundup would be complete without a critical evaluation of grasses, old and new, in the light of performance.

### Crowded Seedlings

Penncross creeping bent seed is being planted on many new greens. Supply of Blue Tag seed is good, and the price is reasonable. One lb. of seed to 1,000 sq. ft. is ample. Anything over a lb. is extravagant, wasteful and harmful. When seedlings are crowded all of them will be weak because of competition. Fewer plants will provide sturdier growth and better coverage.

Vegetated bents that are extremely popular include Old Orchard, Cohansey, C-1 and C-19 mixed, and Toronto. New strains are being tested and discarded in

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## Noer's Roundup

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placed from a nursery in late spring or early summer.

In early spring there was some desiccation injury to the bentgrass on greens and fairways in many parts of the intermediate and northern sections. After that some areas were dry and others were overly wet. The heavy, drenching rains came throughout the summer and were followed frequently by hot, humid weather. This combination played havoc.

Iron chlorosis was prevalent and especially bad following heavy rains. Frequently, injury from an iron deficiency was not suspected because ferrous sulphate applications had been routine every 10 to 14 days. In normal weather this suffices, but there can be iron chlorosis just the same after a drenching rain. Then it is wise to apply a little extra ferrous sulfate at the first sign of yellowing after a downpour.

This summer a few supts. questioned the wisdom of using wetting agents. They claimed greens remained overly wet and would not dry out after heavy rains. Controlled testing is needed before this observation can be accepted as a fact.

To be concluded in January, 1959.

## Grau's Roundup

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the search for the one that has "everything."

Seaside continues to be planted on many new courses in the face of overwhelming evidence of the superiority of many other bents.

Merion blue continues to grow in favor for tees, fairways, athletic fields and lawns in spite of its high N requirement and susceptibility to rust. The answer seems to be that Merion produces better turf and that the high fertility required is a small price to pay for perfection. Rust ceases to be a problem when Merion is adequately fertilized. Fewer mistakes are being made today by applying too much water on Merion. One sure way to bring bent and Poa into Merion turf is to overwater it. Merion deserves to be treated like a baby — "Feed it and keep it dry!"

Bermudagrasses are being planted on many areas where Bermuda once would have been considered a weed. Each year more fairways, tees and lawns are converted to Bermuda. U-3 is widespread and a favorite by virtue of its performance. Sunturf went backwards during the past



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winter and spring when it completely winterkilled in many areas. Tifgreen has been used widely on new courses and in converting from unsatisfactory strains. There was some loss of Tifgreen because of the severe winter in areas such as Atlanta and St. Louis. In spite of this Tifgreen continues to be highly satisfactory for greens. Ugandagrass proved to be one of the most winter hardy over a wide range. It has made steady gains because of its similarity to bent and ease of maintenance. Everglades and Ormond remain confined largely to Fla. where they are recommended.

### Superior Fescue

Pennlawn creeping red fescue is being recognized and accepted as a superior fescue. As a companion to Merion it enjoys considerable popularity. In preliminary trials as a winter grass overseeded on Ugandagrass, it shows much promise. It deserves investigation as a replacement for ryegrass on Bermuda greens.

Dull mowers have obscured effects of improved grasses and fertilizer treatments on many test areas. This is a matter of considerable concern. It becomes difficult to evaluate color, texture and quality of

a grass when the area is a mass of dead and dying blades bruised and chewed by dull mowers.

Economy has entered many discussions and budget planning sessions. Labor costs get foremost consideration. Better maintenance with fewer operations seems to be the trend. This means fewer irrigations, fewer applications of fertilizer, fewer topdressings.

Urea-form fertilizers were mentioned in our ROUNDUP for 1950 while they were in the development stage. At this writing they have assumed a position of major importance in the specialty fertilizer field.

Experimental evidence from DeFrance of Rhode Island, Musser of Pennsylvania, and Daniel of Indiana shows that uniform, steady feeding of grass can be achieved with one or two applications of urea-form nitrogen a season.

Weed control saw a major breakthrough in the destruction of dallisgrass (the scourge of the South) with DSM A. Research reports show that dallisgrass can be dealt a selective death blow with this organic arsenical.

The GOLFDOM Q&A dept. has been busy answering questions on "Clover in



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Greens," "How to Build a Back Yard Putting Green," "Poa Annua," and a host of other things. It has been gratifying to learn that so many folks read GOLF-DOM's Q&A. It is a pleasure to be of assistance to anyone who needs help.

Diseases of grasses got careful study by Dr. H. R. Couch who stated at the GCSA conference in Washington that proper nutrition is associated with lowered susceptibility to certain diseases, notably large brownpatch and redthread. Cultural control of disease thus assumes new importance. The implication is that fungicidal controls will work better when nutrition is balanced.

Hydrated lime continues to give relief when the going is rough. It is by no means a "cure-all" but it helps to check diseases when nothing else seems to work. The flash rise in pH in the surface of the turf seems to discourage fungus activity which thrives in an acid medium.

(To Be Concluded in January)

## Architects' Views on Tax Repeal

(Continued from Page 38)

George W. Cobb, Greenville, S. C. — I expect to see something of a lull between now and Jan. 1 in getting courses underway, but thereafter we can look for a boom. Several groups that I know of that obtained land and organized clubs several years ago, but never got going, now are asking for plans to be ready for construction contracts in 1959. Some confusion may arise in the future in the interpretation of what are maintenance projects and what are reconstruction jobs, but I imagine that rulings of the Internal Revenue dept. will eventually remove all this.

## Purdue Offers Four-Year Course in Turf Management

An organized four-year undergraduate program in turf management is available in the Purdue University agronomy dept. to limited number of students who are approved for the course on an individual basis. All requirements for the degree, BS in Ag., apply to this program.

A limited number of scholarships in turf management are available. Information concerning them can be obtained from the Scholarship Office, Purdue U., Lafayette, Ind. Complete information also can be obtained from W. H. Daniel, turf specialist at Purdue's agronomy dept.