

South German Mixed Bent

THIS mixture contains a quantity of Creeping bent, Rhode Island bent, (*Agrostis Vulgaris*) Velvet bent, and is therefore a very desirable mixture of bents because if one variety does not do well on the green, the other will. **Rhode Island Bent:** (*Agrostis Vulgaris* or *Tenuis*)

THIS seed used to come from Rhode Island—now however we send mixed German bent or Canada or Oregon-grown Rhode Island bent seed to grow in Rhode Island. My opinion against seed experts is that in order not to mix the minds of greenkeepers and superintendents and average small seed dealers is not to use the word Rhode Island bent.

Let me tell you what it is.

Agrostis vulgaris or *tenuis* in America is known as Rhode Island bent. It does not grow in Rhode Island any more in a pure condition and is not commercially cleaned or handled there. This seed is grown in Oregon but called Rhode Island bent. This seed grows in Canada, Prince Edward Island near Charlottetown and there is called Rhode Island or Prince

Edward Island bent, Browntop or Fog.

The story of New Zealand Colonial bent or Brown top or Waipu Browntop or Rhode Island bent is as follows: The wooden ship, Iron Man, about eighty years ago left the maritime provinces of the Scotch Highlands and immigrated to Prince Edward Island, Cape Breton and Nova Scotia and then to New Zealand. No ship was over 600 tons. They settled at New Zealand, Waipu County near clayish poor soil because the cannibals would not let them go to better places. When leaving Canada they stuffed their mattresses with new straw. On their arrival at New Zealand they discarded the straw, and on the clay soil of New Zealand a grass started to grow identical to the Rhode Island grass and is now called Browntop, Colonial bent, etc.

I had the occasion to spend two days last week at the experimental plots of Rutgers college at New Brunswick, New Jersey as the guest of Professor E. E. Evaul, and there collected much food for thought on bent grasses.

The so-called Rhode Island bent will not creep by stolons, but will grow in clay-poor

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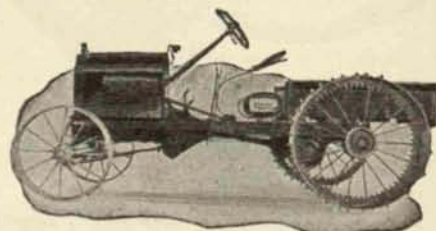
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sandy soil without much moisture. The grass grows upright from the seed, gradually thickens and spreads on the surface, it also knits well.

Now let me tell you a few words about Prince Edward Island bent. The Canadian government is subsidizing the Prince Edward Island growers association and is officially sampling and inspecting fields near Charlottetown. Seed so gathered is cleaned and exported and packed in government sealed bags, therefore giving the seed dealer and golf club a fair security as to origin, crop and quality, also the honesty as to variety and mixture.

I do not know anything about Brown Patch, I do not even know what it looks like, but I am told that Prince Edward Island bent is hardy, will withstand heat, does not need much water and will thrive on sandy soil.

Just a little personal observation on my part. You may laugh at me if you want to as my eyesight may be all wrong. I tried to distinguish the bents by their color at 100 feet distance with the following results:

Washington bent—dirty, green, low growing patchy.

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Special Grinding Wheel Attachment for sharpening grass shears, scythes, axes, etc. Skate Sharpener attachment sharpens all makes of skates—including hockey. Earns money all the year 'round. Will save its cost the first season. Write for Catalog and list of users.



The Fate-Root-Heath Co.
925 BELL STREET
PLYMOUTH OHIO

Hundreds of Golf Clubs large and small, now use the Peerless Lawnmower Sharpener.

Metropolitan bent — blue, green, low patchy.

Colonial bent—dirty, brownish, high and coarse.

Velvet bent—silky carpet-like, dark green.

Oregon Coos County bent, also known as Seaside, or Maritime or Cocoos—low, fog green.

Velvet Bent: (*Agrostis Canina*)

I THINK this seed originated in Germany and sometimes two to forty per cent is contained in South German Mixed seed.

Pure strains or Velvet bent seed are now cultivated in Prince Edward Island, also at Alberta, Canada. The production of 40-80% pure seed is very small. The 1928 world harvest was about 400 pounds and price was very high. Believe about \$4.00 to \$7.00 per pound wholesale. This seed is not of any commercial interest as yet but it is very fine grass for greens. It has shoots and surface runners, no stolons. It grows on cold, high, dry, sandy climatic conditions and not much water is needed.

Carpet Bent

THIS is similar to Creeping bent—3-5 feet runners, 5-7 feet mats and cannot be obtained commercially as yet. It is part of the South German Mixed bent.

Coos County Oregon-Bent: (*Agrostis Maritima*)

SEASIDE bent also sold under a patent trade name of Cocoos bent. No seed dealer can use this word Cocoos except those who have it registered. Botanically it is a bent grass grown in Coos County, Oregon, and called Seaside bent or *Agrostis Maritima*. This can be obtained at market prices from all wholesale dealers in the East or direct from Oregon. Very

often it is mixed and adulterated like so many of the bent grasses.

Seaside bent is a creeper like stolons and is similar to South German bent but more costly in price.

Now a few words of history.

Bent prices will be higher. Our government wants to raise the duty from 2c per pound to 10c per pound during this summer.

Seed dealers generally do not know as much about Bent Grass as a first class golf superintendent would. This is not a compliment but the sad truth. Seed dealers take too much for granted. Personally, I bought a lot of Coos bent a few weeks ago, invested \$1500 in the deal and when the goods arrived I found it to be 60% common redtop. Just to show you what we are up against, the goods were returned to Oregon and the money is still coming—so is Christmas.

In 1753 Creeping bent was a well known grass in Europe.

In 1783 Seaside Coos or Maritima was a known grass in Sweden.

In 1837 in Germany.

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In 1794 Rhode Island bent or *Agrostis Tenuis* or *Vulgaris* Browntop was known in England.

According to books and research work this is all true. Therefore there is nothing new under the sun and the more I delve into the species and origin of bents the more I realize that I do not know much but I am learning to repeat what other people before me have forgotten.

In my conclusion, a few words for the poor seed merchant. We all are in the business to serve and at the same time to make an honest living.

Thousands of dollars are wasted by seedsmen and the buying public by not knowing the latin name of the bent grasses. Purchasing by commercial names may be misleading. But one thing is positive: if you buy your bent by the latin name, you cannot go wrong.

WINGED FOOT NEXT MONTH

A complete illustrated description of the Winged Foot golf course, its condition, the character of the lay-out, and its outstanding physical features will be published in next month's issue of the *NATIONAL GREENKEEPER*. If you want a copy make your reservation now.

Helpful Hints

Some practical advice from experienced greenkeepers on golf course maintenance. No guesswork here

Compost for Topdressing Putting Greens

THE kind of compost I use for topdressing putting greens is made up as follows:

I collect all the turf or sod with plenty of fibrous roots that I can possibly get; add to this good surface soil, sharp sand, and barnyard manure and make it into a pile at least one year before using. The ingredients of sod, surface soil, and sand making about 85 per cent and barnyard manure 15 per cent. The pile is kept moist to speed up decomposition.

When screening, the pile is taken down vertically to insure good mixing at the time of screening. I use approximately one cubic yard of screened compost to five thousand square

feet. This is enriched with fertilizers, one hundred and twenty-five pounds mixed with each cubic yard of compost of a well balanced fertilizer of 5-12-2.

This dressing is applied the beginning of May and again the first week of September. In June I use sulphate of ammonia in liquid form, dissolving two and one half pounds of sulphate of ammonia to fifty gallons of water. In the month of July I usually topdress with compost without fertilizers.

This treatment varies somewhat with climatic conditions as I find that some seasons require more attention in top dressing than others. But as a rule my putting greens keep



INDIANA GREENKEEPERS AT THE COUNTRY CLUB, INDIANAPOLIS

Reading from left to right: front row: George Hawkins, Treasurer; Carl A. Bretzlaff, Secretary; Victor George, President; Ed Updegraph, 1st Vice President; Albert Esterline, 2nd Vice President; Clem Coble and Charlie Clifton. Second row: Otis Roberts, L. A. Wright and G. Holmquist. Third row: Ben Cohee, Mr. Brown of the Jacobsen Lawn Mower, B. C. Stevenson and Chester Coval. Fourth row: Herman Sawyer, Oscar Clear, Basil Miller, William Moon, Herman Clear and Ralph Austin.

Greenkeepers, Read This!

An extraordinary meeting and dinner of all greenkeepers under the auspices of the Metropolitan Greenkeepers Association will be held on Saturday night, June 29, 1929, at the Lawrence Inn, Boston Post Road, Mamaroneck, N. Y., Phone Mamaroneck, 405, who have been kind enough to accommodate us for the occasion, near the Winged Foot Golf Club; the object of which is to welcome John Morley, President, and the Executive Committee of the National Greenkeepers Association.

Mr. Findlay Douglas, President of the United States Golf Association, and various other prominent men of the golfing world will be our guests.

During the open tournament by presenting this letter and registering at the Metro-

politan Greenkeepers Booth at the main entrance of the Winged Foot Country Club, you will receive our badge which entitles you to admission free. This concession has been kindly granted by the President of the Club.

This applies to all greenkeepers whether members of our Association or not. It is therefore the desire of the Organization that you will make every effort to be present, because it is opportunities like this, that our Association can make itself felt and recognized.

Cordially yours,
Metropolitan Greenkeepers Association
Capt. J. P. Truran, Secretary,
North Hills Golf Club,
Douglaston, Long Island.

in good condition and respond well to this treatment.

Toronto Golf Club W. J. Sansom,
Long Branch, Ontario Greenkeeper

Careful With Fertilizers

Because of the wet weather this spring I have been very careful with fertilizers. I have used 75 lbs. of 10-6-4 in my top dressing and used sulphate twice, April 15 and May 15. Twenty lbs. the first time and fifteen lbs. the next time.

I top dressed one quarter of a yard to a 1000 sq. ft. The top dressing contains sandy loam soil, charcoal, and sand. The proportions were three parts soil, two parts of sand and one part of charcoal.

I have three Jacobsen mowers and have had very good results, each mower mowing eight greens in three hours.

Westwood Country Club Fred Burkhardt
Cleveland, Ohio.

Questions and Answers

By JOHN MORLEY

I would like to know if there are any objections to dissolving Calogreen, sulphate of ammonia, and arsenate of lead in one solution and applying to the turf providing the proper amounts are used, or bichloride of mercury, sulphate of ammonia and arsenate of lead?

I have had no experience with Calogreen. In using

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one and a half ounce of bichloride of mercury with eight pounds of sulphate of ammonia it shows that I got very little results from the latter.

What can be done to overcome the holes or bruised turf from pitched balls?

I have never as a rule had to bother with the above, or in other words we have never raised these holes with a fork since we had the western open. Our turf heals up in about one day. This is another boost for charcoal.

Before Topdressing

your greens this summer, write for information on Hyper-Humus—the only cultivated and prepared humus.

86 to 89%

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Doggone It—What Is Dog Bent?

By E. E. PATTISON, Director

International Seed Testing Laboratories, No. 11 Park Place, New York City
Formerly Seed Analyst U. S. Department of Agriculture, Washington, D. C.

PERHAPS you have had someone ask you the above question. The interest in this specie of bent has been stimulated by our golfers who have been playing this spring on the attractive links in the British Isles.

So many of them have been singing the praise of "dog bent greens" and so few of us in America know the grass by its British name. Dog bent is just another name for Velvet bent which is botanically known as *Agrostis canina*. To those of us who know Latin the common name Dog bent appears as a straight translation.

While part of the credit for the excellent putting surface must be given to the species of grass yet one must not lose sight of the fact that at least part of the credit must be given to the climate of the Isles. The latter we can't import but we can make an effort to get Velvet bent green and those who have tried know that success is possible.

In previous articles written by the writer the question of seed supply was discussed in detail but for those who missed this issue we are repeating a few facts.

Supply Is Very Limited

THE supply of Velvet bent seed is very limited. We know of just two fields producing seed, both are outside of our country. One is a natural field which up to two years ago produced seed

which was approximately 90% pure *Agrostis* spp. and 85% of this 90% (actually 76.5%) was Velvet the other 15% being *Agrostis vulgaris* (also called *Agrostis tenuis*) commonly known as Rhode Island bent. Seed of the 1925 and 1926 crops gave excellent results

in this country, the Rhode Island bent being hardly noticeable. However, the field did not yield the same amount of Velvet in 1928. While we did not see samples of the whole yield the samples we did see and examine,

tested 85% pure *Agrostis* spp. and only 60% of this 85% (actually 51%) was Velvet. We do not believe such seed should be sold for pure Velvet bent. Without doubt it is valuable seed but it should be sold for what it really is, that is a mixture of Rhode Island and Velvet bent.

The other field was planted with the idea of seed production and has been constantly treated for this purpose. Last year's climatic conditions were such that the yield was exceptionally small. The 1927 yield the major part of which was used in the U. S. A. gave seed testing 98% pure *Agrostis* sp. and 95% of this 98% (actually 93.10%) was pure Velvet. We are advised that the yield this year is expected to be satisfactory and that part has already been reserved.

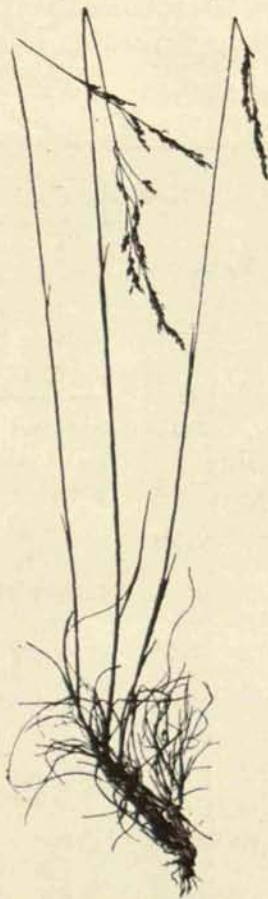
Velvet bent is one of the natural ingredients of South German Mixed bent seed and it is from small plugs taken from greens seeded to South German Mixed bent that some of our wiser greenkeepers have started their Velvet bent nurseries and plots. Those of us who have seen the beautiful Velvet green recently constructed

by Mr. Mitchell of Kernwood Country Club, Salem, Mass. and also the wonderful nursery plot of Mr. Wilson at Charles River Country Club know that propagating Velvet vegetatively pays in more ways than one.

For many years to come there will not be



AGROSTIS CANINA
(Velvet Bent)



PLANT AND SEED
OF VELVET BENT

enough seed to sow pure Velvet bent greens but those wishing Velvet bent greens can start their nurseries with 10 to 20 pounds of seed or from Velvet bent plugs and with intelligent vegetative methods have in two or three years enough sod for several greens.

There exists in some minds the idea that Velvet is more susceptible to turf diseases than the other bents. This idea we believe to be entirely erroneous. From our observation we would say that it was less susceptible especially to the large brownpatch.

BENT GRASS SEED

There are some thirty varieties of Bent grass and one should have some practical knowledge relative to handling them if he is to give worth while advice as to the variety which will give the best results. There is no one variety that is a sure "cure all" in all localities. The kind that produces a "Rolls Royce" turf in California or Washington may prove to be a "second hand flivver" in Missouri, New York, Wisconsin or other states. I am a farmer. Most of my farms are devoted to the growing of different varieties of the Bent family of grass and some of these varieties make the finest turf of anything in existence. I have had a great deal of experience covering many years in furnishing golf clubs, municipal parks, athletic fields, etc., with fine turf grass seed for their putting greens, fairways and lawns. I always endeavor to furnish those varieties of bent that from experience do the best in those localities where the seed is to be used.

WHEN YOU PURCHASE SEED DIRECT FROM THE FARMS WHERE IT GROWS YOU ARE ASSURED OF AN ABSOLUTELY FRESH, VIABLE, ACCLIMATED, WINTER HARDY PRODUCT THAT WILL PRODUCE MORE PERMANENT AND DESIRABLE RESULTS ON YOUR COURSE THAN ANY SEED OF FOREIGN ORIGIN.

Boost one of your own American industries to the extent of purchasing your seed from the American farmer who grows it.

A. N. PECKHAM, Kingston, R. I.

Hillcrest—A Test for Champions

HILLCREST Country Club, located at Hickman Mills, a suburb of Kansas City, Mo., is a real test for champions. For the past two years the National Open Qualifiers have been held there and this year it is the scene of the Missouri State Amateur Championship.

From the back tees Hillcrest measures sixty-five hundred and thirty-seven yards with a par of seventy-three. Most of the putting greens are Kentucky bluegrass, although two are creeping bent and one Cocoos bent. George Robb, the greenkeeper, states that Hillcrest is



GEORGE ROBB, GREENKEEPER
Hillcrest Country Club,
Kansas City, Mo.

considered to have the best golfing terrain around Kansas City.

There are many natural hazards which add to the beauty of the Hillcrest course. The holes show great variety in contour and design and each has its own characteristics which call for carefully played shots. The last few holes of the incoming nine are so arranged as to increase with difficulty, compelling a player to finish strong. Another notable feature of Hillcrest is the fact that the holes stream out in every direction, thus requiring a player to use splendid judgment on windy days.



NUMBER 18 GREEN

This hole is 343 yards and the green is level and well bunkered



NUMBER 1 TEE AT HILLCREST

In the background is the rambling spacious clubhouse located in a setting of trees and shrubbery

Water and How To Use It

By HARRY A. BURKHARDT, *Greenkeeper*
Butternut Ridge Golf Club, North Olmsted, O.

THE first important factor in watering a golf course is a satisfactory water system.

If you are planning a new water system be sure you have a practical design before trying to install the pipes and pumps.

Keep your water line out of the fairways as much as possible, so that in case of a leak and you have to dig up the pipe you need not disturb the fairway.

The size of pipe is a question you will have to work out for yourself. Small pipe and right angle turns cut down pressure because of friction and you will not have the amount of water you would require at your green. Too large a pipe might give you more water pressure than you need and in that way you are wasting money for your club.

In planning a water system start from the farthest point from the water supply and work back, taking into consideration the elevations and falls, and figure out the friction loss you will have in that line. Then work back to your other green stations and cut down the size of the pipe when you get to the greens near the source of water where your pressure is the highest.

Your hydrants at the greens should give at least five gallons per minute. Some sprinklers take as high as 20 gallons a minute, so if you are not certain just which make of sprinkler you are going to use you had better make your hydrants deliver 20 gallons a minute.

THE Lark Sprinkler at 40 lbs. pressure delivers 9.9 gallons per minute; at 60 lbs. pressure it delivers 11 gallons per minute.

The Simplex Economy Sprinkler at 40 lbs. gives 16.8 gallons per minute and at 60 lbs. delivers 20 gallons per minute.

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CREEPING BENT STOLONS

Washington and Metropolitan Strains

Pure, free of weeds, and of one season's growth

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If you have a sprinkler that will throw 20 gallons of water per minute and you run it three hours on a green you are putting on 3,600 gallons of water. One gallon of water weighs 8.33 lbs., in three hours watering you are putting 29,988 lbs. of water on your greens or covering a green of 6,000 square feet with 1½ inches of water. If you water fifty times a year you will put on 6¼ feet of water. That is more water than we get by Mother Nature's watering system. The ground can take only a certain amount of that water so most of it is wasted.

YOU can prove that for yourself. Take some soil and weigh a small portion of it. Then place a piece of filter paper in a funnel and put the soil on top of the paper. Measure out some water and find out how much you need to pour on before the water starts to drain through.

After the water stops dripping through the soil place a vessel of some kind under the funnel, then measure out a certain amount of water and pour it on the saturated soil. After the water drains out test and see if you do not get the exact amount you poured on the second time. This is proof enough that the soil is saturated and will hold no more.

In clay this might not work because when you get more water than the ground can take and continue putting more on, the clay will pack and the water will not go through but will lay on top. Be careful of watering clay soil.

On other soils if you continue to give them more water than they can take care of, the surplus will make channels of your drains and when the ground does dry the water will not do any good but just run through to the drain by its own channels. Freezing and thawing is about the only thing that will remedy that.

Humus is a good water retainer substance but if it is in layers and the layers are below the root system of the plant the roots will not benefit by it. But if you mix humus thoroughly through the soil it will do some good.

What's Doing in Ontario

By J. H. EVANS

Golf Editor—*The Toronto Globe*

AFTER weeks of excessive moisture and a spring which was expected to leave untold problems on a hundred courses throughout the Province, the Ontario greenkeeper now finds his course in need of moisture. It is a condition which Nature alone can solve for him because few clubs, in fact none over here, possess a system by which fairways may be watered. However, the situation is not yet of sufficient importance to cause great concern.

Through the latter part of May and the early part of June, President William Sansom and the membership of the Ontario Greenkeepers' association, which includes course superintendents of the 18-hole lay-outs of the province, were compelled to use every available unit of their equipment to cope with the heavy growth. They had more grass than they could cut.

The monthly meeting of the Ontario Greenkeepers' association was held on June 12 on the course of the Islington Golf and Country Club at which the discussions arose from what had failed to materialize and what did not happen and with the lack of rainfall as the only item of note on an agenda prepared by Mr. Sansom. Such is the fortunate position of the Ontario greenkeeper.

It was noted with considerable interest that brown patch, a disease which has presented itself on different occasions in the past, has failed to make its appearance although there has been brown patch weather through central and western Ontario. For the disease there are different explanations. The absence of the



The 11th Green at Plainfield Country Club, Plainfield, N. J., where the New Jersey State Championship was held this year. Stumpp & Walter Co.'s Grass Seeds used for seventeen seasons.

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growth when it was expected has added another confusing factor to the study being carried by the association through its officers to eliminate brown patch. There was no evidence of it in bent grass.

The group insurance policy of the National Greenkeepers' association was unanimously endorsed at the meeting. While the policy and the rate will directly benefit present members of the association, President Sansom saw in it

Address all communications relating to Association membership, dues, etc., to--

JOHN QUAILL, Secretary
426 Highland Avenue
West View, Pittsburgh, Penna.

Address all communications relating to the Golf Show at Louisville, February 5-8, 1930 to--

FRED A. BURKHARDT
Chairman, Show Committee
405 Caxton Bldg., Cleveland, Ohio

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an indirect benefit to the organization. He believed it would assist in securing the practical cooperation of greenkeepers from many nine hole courses for the work which the association is carrying on.

Greenkeeper Joseph Stanfield of the Mississauga Golf and Country Club informed the gathering that the reconstructed Mississauga course would be in play for the spring tournament of the Ontario Golf association. The course was short from the point of view of the requirements of championship and was lengthened last fall by a professional architect.

The construction was carried out by Stanfield and his workmen several hundred dollars lower than the estimate given the club for which Stanfield is receiving considerable credit. Heavy marsh was cleared and drained and several hundred yards added to the course. Stanfield now awaits the criticism of leading amateurs.

Mississauga is a particularly attractive course. A stream fifty yards in width flows through it into Lake Ontario. Two holes were added to it, one of which is a one-shotter, 170 yards in length with the green built on the bank. The river also crosses the other hole at a point which will necessitate considerable skill with the second shot.

President A. E. Gilverson, of the Rice-Lewis company, a Toronto firm handling golf equipment attended the meeting. Mr. Gilverson has visited all courses in central and western Ontario and reported that he found them in excellent condition. There had been no winter kill, and while grass was late, there was no evidence of damage from the protracted cold spell.

5 Months For A \$1.00

The publishers of the National Greenkeeper are making a special subscription offer for the remaining five months of 1929 for \$1.00. These issues are extremely interesting and important containing illustrated descriptions of the courses where the National Championships are played; also accurate data on turf maintenance problems, brown patch control and other vital subjects of golf course work.

Slip a dollar bill in an envelope addressed to the National Greenkeeper, 405 Caxton Bldg., Cleveland, O. The publishers will send you a receipt and put you on the mailing list for the balance of 1929.

Don't Want To Miss It

Decatur, Illinois

May 18, 1929

Enclosed please find three dollars (\$3.00), for subscription to the NATIONAL GREENKEEPER.

I also want to thank you for calling this matter to my attention, as I don't want to miss a single issue of this valuable magazine.

I am very much interested in keeping up with the new and improved methods of golf course maintenance. The greenkeeper today cannot maintain the high standards of greenkeeping unless he is thoroughly conversant with the newer and up-to-date equipment and methods of greenkeeping.

I want to thank you for the help your magazine has been to me in the past and I hope the future issues will contain more and better information. Again thanking you for past favors, I beg to remain,

Very sincerely yours,

(Signed) Frank Balding, Greenkeeper
Sunnyside Golf Club
Decatur, Illinois

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