For Putting Greens

Cleve - Brand - Charcoal

Makes the soil porous, retains moisture. Assures fine healthy turf without risk of any harmful results. Compost grade now only $30.00 a ton f. o. b. Cleveland in 50 pound paper lined sacks.

THE CLEVELAND CHARCOAL SUPPLY CO.
3905 Jennings Road - - Cleveland, Ohio

Bain Elected President

Christopher Bain, greenkeeper at the Oakland Country Club, was elected president of the Cleveland District Association of Greenkeepers at the annual meeting held recently. Frank W. Ermer of the Ridgewood Golf Club, former secretary-treasurer, was promoted to vice-president. The new secretary-treasurer is Walter L. Knowles of the Highland Park Club.

The Cleveland association held its annual dinner for green committee chairmen at Hotel Hollenden, January 27. Mr. E. W. Doty, treasurer of the Cleveland District Golf Association acted as toastmaster and the speakers were Lyman Carrier of Coquille, Oregon and James A. Smith of London, Ohio.

National’s New Power Driven Quint

Five 30-inch cutters, 12 foot swath

Cutting units are driven direct from engine, with reels protected by individual slip clutches. Requires but half the power of ground driven mowers.

Handles in smaller spaces. Reverses. Easily goes up steeper hills without overloading the turf as with the traction driven type.

The simplest, the lightest yet strongest, the most efficient and by far the most practical Fairway mowing outfit offered. See it at the Greenskeepers show at Louisville or write for prices and full descriptive literature to

NATIONAL MOWER COMPANY
839 Cromwell Ave.
ST. PAUL, MINN.

Thousands of National Mowers have satisfied owners in every state of the Union.

SAY YOU SAW THE AD IN THE NATIONAL GREENKEEPER
Nationally Known Speakers
Splendid List of Addresses on Every Phase
Greenkeepers' Conference---Educational
Attendance Expected

Official Program, Meetings, etc.

Monday, February 3—7:30 P. M.
Exhibitors' dinner—Headquarters, Kentucky Hotel.

Tuesday, February 4
10:00 A. M.—Golf Show Opens—Jefferson County Armory (Admission free).

Wednesday, February 5
10:00 A. M.—Golf Show—Jefferson County Armory (Admission free).
2:00 P. M.—Conference Opens—Jefferson County Armory.

Thursday, February 6
10:00 A. M.—Golf Show—Jefferson County Armory (Admission free).
2:30 P. M.—Educational Conference—Jefferson County Armory.
7:30 P. M.—Annual Banquet—Kentucky Hotel (Secure tickets at Registration Desk).

Friday, February 7
10:00 A. M.—Golf Show—Jefferson County Armory (Admission free).
10:30 A. M.—Annual N. A. G. A. Convention—Kentucky Hotel (Open to members only).
2:30 P. M.—Educational Conference—Jefferson County Armory.
12:00 Midnight—Annual Stag Party (See George Davies, Chairman).
Greenkeepers Conference Program

Chairman
George M. McClure
Soil Technologist, Ohio State University

Wednesday, February 5—2:00 P. M.
Introduction of chairman by President John Morley.
The Fraternal Side of Greenkeeping—By Lewis M. Evans, Philadelphia, Seeds and Grasses—By Prof. L. S. Dickinson, Amherst, Mass.
Functions of the Three Plant Food Elements—By A. E. Grantham, Richmond, Va.

Thursday, February 6—2:30 P. M.
The Life and Activities of Soil Bacteria—By James A. Smith, London, Ohio.
Experiments in the Turf Nursery—By Dr. Howard B. Sprague, New Brunswick, N. J.
Drainage and Soils—By Wendell P. Miller, Columbus, Ohio.

Friday, February 7—2:30 P. M.
A New Phase in the Control of Large Brown Patch—By Prof. L. S. Dickinson, Amherst, Mass.
Greenkeeping Problems in Canada—By W. J. Sansom, Toronto, Ont.
Activities of the Green Section—By Dr. John Monteith, Jr., Washington, D. C.
Taking Care of the Trees—By D. Q. Grove, Kent, Ohio.
Easily Applied, Effective and Economical, Free of Weed Seeds

New seedings require plant food to insure quick stand of uniform turf.

Poor turf once obtained is difficult and expensive to improve.

Milorganite applied prior to seeding promotes early growth and develops a uniform turf.

**VISIT BOOTH No. 34 AT GREENKEEPERS’ SHOW**

*We look forward to renewing old friendships, and welcome the opportunity of meeting those in attendance for the first time.*

**THE SEWERAGE COMMISSION**

*Milwaukee, Wisconsin*

*Our trained staff will help devise a sane, effective fertilizer program*

---

**PRINCE EDWARD ISLAND BENT SEED**

*(Agrostis tenuis)*

Dense upright fine growth ideal for tees and approaches, also for greens where water supply is scanty. Economical as a pound contains over 6,000,000 seeds and extreme hardiness prevents winter killing. Sealed and Certified by the Canadian Government.

**BUCKEYE BRAND SEA-SIDE CREEPING BENT SEED**

*(Agrostis maritima)*

Beautiful putting turf at one-fourth the cost of vegetative planting. Blends well with standard vegetative strains for renovating. Sealed and Certified by the State of Oregon.

**VELVET BENT, CANADIAN GOVERNMENT SEALED**—Very limited supply.

**NEW BRUNSWICK CREEPING BENT**—New variety, finer than Seaside Bent.

We are sole wholesale distributors in the United States for the Fine Bent Seed produced on Prince Edward Island and Certified and Sealed by the Canadian Government.

Our booklet, "The Fine Bent Grasses" sent free on request.

**THE J. M. McCULLOUGH’S SONS COMPANY**

*316 Walnut St. - Cincinnati, Ohio*

*A reputation of 92 years fair dealing back of every sale*
What To See At Louisville

A BRIEF DESCRIPTION OF SOME OF THE EXHIBITS OF MACHINERY, SUPPLIES AND EQUIPMENT FOR GOLF COURSE MAINTENANCE

Standard Manufacturing Company
Cedar Falls, Iowa
BOOTH NO. 43

This company will exhibit a complete line of Standard golf course accessories, especially featuring their new steel flagpole, hole rims, bag rack and tee markers, together with a variety of aluminum signs which they make particularly for golf courses.

The new Standard tee marker is an improvement over the one made last year, being furnished with an arrow to indicate the line of play. It is made of aluminum, is always bright and is light and easy to handle.

Greenkeepers will be particularly interested in the rust-proof Standard hole rim, which is cast in Aluminiite in one piece. The rim is absolutely smooth on the outside and is tapered slightly so that it can be removed easily and without injury to the grass. The pole socket is very deep and held in place by a special web reinforcing cast integral with the shell. Its open construction provides complete drainage when the flagpole is in place.

Mr. W. H. Voorhees, president and general manager of the company, will have charge of the exhibit.

Ideal Power Lawn Mower Company
Lansing, Michigan
BOOTH NO. 9, 11 AND 13

The Ideal Exhibit this year will be larger and better than ever before. Announcement of new low prices on Ideal “Bulldog” fairway mowers will be made for the first time at the Show.

A new light weight “Bulldog” Golf tractor will be on display with a new 3-unit Rough mower. This new rough cutter is built just for cutting roughs. It is not necessary to hoist up the rear of the units to get the correct height of cut—these special units cut at the correct height when in normal position. The

The Exhibitors and Where to Find Them

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Booths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toro Manufacturing Co.</td>
<td>4</td>
</tr>
<tr>
<td>International Harvester Co.</td>
<td>4</td>
</tr>
<tr>
<td>Thompson Mfg. Co.</td>
<td>15</td>
</tr>
<tr>
<td>Ideal Power Lawn Mower Co.</td>
<td>9, 11 and 13</td>
</tr>
<tr>
<td>Lyman Carrier, Inc.</td>
<td>20</td>
</tr>
<tr>
<td>I. L. Radwaner Seed Co., and Fraser Pub. Co.</td>
<td>21</td>
</tr>
<tr>
<td>E. G. Staude Mak-A-Tractor Company</td>
<td>23</td>
</tr>
<tr>
<td>Koppers Products</td>
<td>24</td>
</tr>
<tr>
<td>George A. Davis, Inc.</td>
<td>25</td>
</tr>
<tr>
<td>Virginia-Carolina Chemical Corporation</td>
<td>26</td>
</tr>
<tr>
<td>Hyper-Humus Products Co.</td>
<td>27</td>
</tr>
<tr>
<td>Fate-Root-Heath Co.</td>
<td>28</td>
</tr>
<tr>
<td>Jacobsen Mfg. Co.</td>
<td>29</td>
</tr>
<tr>
<td>Ric-Wil Company</td>
<td>30</td>
</tr>
<tr>
<td>Pennsylvania Lawn Mower Works</td>
<td>31</td>
</tr>
<tr>
<td>Moto-Mower Company</td>
<td>32</td>
</tr>
<tr>
<td>Atkins and Durbrow</td>
<td>33</td>
</tr>
<tr>
<td>Worthington Mower Company</td>
<td>34</td>
</tr>
<tr>
<td>Henry H. Doty</td>
<td>35</td>
</tr>
<tr>
<td>Milwaukee Sewerage Commission</td>
<td>36</td>
</tr>
<tr>
<td>Universal Sand Equipment Co.</td>
<td>37</td>
</tr>
<tr>
<td>H. B. Sherman Mfg. Company</td>
<td>38</td>
</tr>
<tr>
<td>Ohio Humus Products Company</td>
<td>39</td>
</tr>
<tr>
<td>Buckner Mfg. Company</td>
<td>40</td>
</tr>
<tr>
<td>J. Oliver Johnson, Inc.</td>
<td>41</td>
</tr>
<tr>
<td>American Seed Company</td>
<td>42</td>
</tr>
<tr>
<td>F. &amp; N. Lawn Mower Company</td>
<td>43</td>
</tr>
<tr>
<td>Standard Mfg. Company</td>
<td>44</td>
</tr>
<tr>
<td>L. R. Nelson Mfg. Company</td>
<td>45</td>
</tr>
<tr>
<td>Grasselli Chemical Company</td>
<td>46</td>
</tr>
<tr>
<td>O. M. Scott &amp; Sons Company</td>
<td>47</td>
</tr>
<tr>
<td>Pelican Works</td>
<td>48</td>
</tr>
<tr>
<td>Roseman Tractor Mower Company</td>
<td>49</td>
</tr>
<tr>
<td>National Mower Company</td>
<td>50</td>
</tr>
<tr>
<td>Golf Course Supply Company</td>
<td>51</td>
</tr>
<tr>
<td>Jefferson County Retail Nurserymen's Association</td>
<td>52</td>
</tr>
<tr>
<td>American Radiator Company</td>
<td>53</td>
</tr>
<tr>
<td>Logan Company</td>
<td>54</td>
</tr>
<tr>
<td>Price Chemical Company</td>
<td>55</td>
</tr>
<tr>
<td>Chambers Seed Company</td>
<td>56</td>
</tr>
<tr>
<td>Golfdom</td>
<td>57</td>
</tr>
<tr>
<td>The National Greenkeeper</td>
<td>58</td>
</tr>
</tbody>
</table>
NEW IDEAL UNIT FOR CUTTING ROUGHS

units are used with the regular standard Ideal "Bulldog" Fairway mower frames, either 3-unit or 5-unit size.

A complete Ideal "Bulldog" 5-Unit Fairway mower will be shown. Ideal claims that their exclusive patented construction—which makes possible the use of a low-wheeled, compact cutting unit—insures a better cutting job, and that a "Bulldog" outfit will give service over a period of years at less upkeep cost per season than any other large capacity mower.

The Ideal Roller-Type Greens mowers with latest improvements will be shown. A complete mower will be on display, as well as mowers on special display stands.

Toro Manufacturing Co.
3042-3160 Snelling Ave.
Minneapolis, Minn.


Toro Silver Flash Mower

Virginia-Carolina Chemical Corporation
Richmond, Virginia

This company will have a very attractive exhibit at the Greenkeepers' Show in Louisville, featuring a fertilizer they call "Fairway" for golf courses and lawns.

In addition they will have photographs of golf courses and country clubs in many parts of the country where Fairway has been used. This company is one of the largest manufacturers of fertilizers in the country and maintains an extensive experimental department so that complete information regarding the action of various fertilizers will be available to greenkeepers who call at this Booth.

New Toro Junior Tractor

Virginia-Carolina Chemical Corporation
Richmond, Virginia

Booth No. 22

New Toro Power Putting Mower

This exhibit at Louisville, the largest in the show, will be complete in every detail and will have on display not only a number of new items that the company is bringing out this year, but in addition they will have a showing of some of their standard items so familiar to the trade in years gone by.

The main objects of interest, however, will be in their new machines—the power putting green mower, the new Toro Junior tractor, the Silver Flash and the Del Monte Greens rake, all of which will prove interesting to those attending the Convention.

A number of Toro distributors have signified their intention of being on hand for the Convention, and among those who are expected to be in attendance are W. E. Lafkin, of the New York Toro Company,
Who Will Win The Hundred Berries?

CHAS. ERICKSON  
Minneapolis, Minn.

JOE VALENTINE  
Philadelphia, Penna.

HERE they are—the men who will construct the putting greens at the 4th Annual Golf Show and Convention of the National Association of Greenkeepers of America at Louisville. On the left is “Charlie” Erickson, who for over thirty years has been greenkeeper at the great Minikahda Golf Club, Minneapolis. He is Captain of the Western team. On the right is Joe Valentine, veteran greenkeeper of the famous Merion Cricket Club of Philadelphia, where many National Championships have been played. Joe knows a putting-green when he sees one and he knows too the very latest designs and how to build them.

Fred A. Burkhardt, chairman of the Show Committee has set aside two spaces in the center of the Show floor, each one twenty by thirty-two feet and will furnish the contestants with molding sand and white sand and whatever equipment is necessary to form up these greens to a scale in whatever way they want. The contestants will be given absolute freedom to choose any type of green they desire, but they must provide a drawing to scale three foot square showing the drainage lines because these cannot be indicated on the green itself.

John Morley will appoint a committee of disinterested people to act as judges and they will decide which green is the better for every purpose whereupon the Captain whose team wins the contest will receive a hundred dollars cash from the Show Committee.

Mr. Erickson had planned a trip to California but when he was notified that he was Captain of the Western team and realized how much fun they were going to have in Louisville, he cancelled his California trip and says he will be on the job with his sleeves rolled up. Neither Captain has announced the make-up of his team but they must be greenkeepers as the Committee announces that architects and pros are barred.
O. M. Scott & Sons Company
Marysville, Ohio
BOOTH No. 46

This exhibit at the National Greenkeepers Convention will consist of samples of Scott's Golf Course Seeds and Scott's Turf Builder.

One interesting factor of the exhibit will be samples of Kentucky Blue Grass showing the various steps in the recleaning process from the rough seed, just as it comes from the stripper, to the very finest and heaviest quality of seed that it is possible to secure with the use of the very best recleaning equipment.

Mr. P. C. Williams will be in charge of the exhibit.

Pennsylvania Lawn Mower Works
1615-35 North 23rd Street
Philadelphia, Penna.
BOOTH Nos. 27 AND 29

"Quality Leadership for 52 years," stands out as a beacon in the exhibit of the Pennsylvania Lawn Mower Works at the 4th Annual Greenkeepers' Golf Show. Always conservative but yet progressive the Pennsylvania line of mowing equipment attracts attention wherever it appears.

The Louisville exhibit will include the following mowers—
1 Fairway Quint complete, with the new 6 cyl. Pennsylvania Chevrolet Tractor.
1 Super Roller complete.
1 New Aristocrat, 7-blade, greens mower complete.
1 Special Aristocrat with 6 blades, for cutting tees and approaches.
1 New Super Great American.

In the new Pennsylvania Tractor the company believes that it has developed for 1930 the only 6-cylinder tractor on the market. It has tremendous power and in carefully conducted trials last season negotiated the steepest hills without effort.

The Fairway units have been refined for the coming season and the company has received a great many unsolicited testimonial letters from greenkeepers in various sections of the country expressing their satisfaction with the new Pennsylvania mowers. With a new 6-cylinder tractor and improved fairway unit, Pennsylvania is in position to answer the problem of fast economical mowing which the better golf clubs now demand of their greenkeepers. The Pennsylvania exhibit as in past years will be in charge of Mr. N. D. Perine.

E. G. Staude Mak-A-Tractor Co.
2675 University Avenue
Minneapolis, Minn.
BOOTH No. 19

This company will exhibit the $695.00 Model "A" Staude General Utility golf course tractor complete with cubic yard steel dump body, in their space at the Greenkeepers' Convention.

Hundreds of greenkeepers have had a part in building the Staude General Utility Golf course tractor. That is why every possible use for a golf course tractor is taken into account in the building of this machine.

The Staude Company are specialists in this work and announce that the following are some of the striking features of the new Model "A."

Light weight—powerful as dynamite—a bear on hills. Adjustable Drawbar—any make of mower, roller, etc., can be easily attached to it. Can be used from the construction to the maintaining of a golf course. Built to do the work and lasts a life time. Easiest tractor to control and most economical to operate. Service available at any Ford dealer. Inexpensive to buy and repair costs are practically nothing.

The Ric-Wil Company
Union Trust Bldg.
Cleveland, Ohio
BOOTH No. 26

Ric-Wil Filter Tape will be exhibited and demonstrated by this company in their booth at the Louisville Show. It is used to wrap the joints of farm or bell-and-spigot tile, and being porous it allows the water to filter through into the tile but keeps out sand and silt.

Ric-Wil Filter Tape is a porous woven fabric, processed with a solution that makes it water and acid
proof, preventing disintegration of the fabric and assuring a permanent joint. This solution also renders the fabric adhesive to tile surfaces and to itself, which eliminates the tying or wiring so necessary in using other kinds of material, an important saving of labor costs of installation.

Ric- Wil tape comes in handy rolls of fifty yards each in widths of 4, 6 and 9 inches. It can be furnished in widths up to 36 inches on special order. Greenkeepers who have drainage troubles, particularly with sand filling up the tile in bunkers, will find much to interest them in the Ric- Wil exhibit.

International Harvester Company
606 South Michigan Avenue
Chicago, Illinois
Booth No. 4

This well known company is entering the Greenkeepers' Golf Show for the first time and will exhibit a McCormick-Deering fairway tractor with a seven-foot mower, the entire unit being designed especially for golf course requirements.

The McCormick-Deering Fairway tractor is a practical all-purpose power plant for golf-course construction and maintenance. It satisfactorily meets all requirements for fairway maintenance, for mowing the rough, and for construction and improvement work. It is easily controlled and turns in a circle with an 8-ft. radius. It works in close corners, turns quickly, cuts close to obstacles and out again, leaving a surprisingly small amount to be done with hand labor.

A flexible 7-foot bar mower, the power for the operation of which is taken directly from the tractor engine by means of the power take-off, has been designed for use with this tractor. With this mower and a trailer mower, one man can mow 75 to 100 acres a day.

Pelican Works
Niles, Michigan
Booth No. 48

This company manufactures the Raining Sprinklers for golf greens and fairways, which are made in various sizes to cover areas from forty to one hundred feet.

Mr. J. T. Plumer head of the company saw the great need of a watering system for golf courses in 1917 and began experimenting with a sprinkler which would throw water at close and long range and give even distribution. His sprinkler was tried out in the Detroit district and met with great success so that they are now manufacturing them on a large scale.

A complete line of Raining sprinklers will be on exhibit and they will demonstrate the laborless over-night system for greens, also the underground absorbing system for fairways that is one hundred per cent automatic and waters the entire golf course. Mr. Plumer himself will be in charge of the exhibit.

The Fate-Root-Heath Co.
925 Bell Street
Plymouth, Ohio
Booth No. 24

Turf preservation has been given much careful study by experts, and we are confident they will readily concede that something more than soil and seed must be considered in the care of the greens.

To keep good turf it must be protected, and in this, MOWING plays an important part. Grass must be kept the desired length by mowers properly sharpened so as to shear off the grass in a manner that will not injure the roots.

Dull mowers pull and tear the turf. This is the reason many clubs are using the Peerless Mower Sharpener, replacing the old way of sharpening mower blades with the latest scientific, inexpensive method, which does the job easily and quickly, and puts the right kind of an edge on the blades.

This machine sharpens all kinds of mower blades.

Soil Samples

James A. Smith, president of the Ohio Humus Products Company, who is going to set up a soils testing laboratory in his booth at the Greenkeepers' Show at Louisville, requests those bringing samples of soil to Louisville for examination be sure and bring a sample of the soil directly below the rootage of the turf. It will not be the soil carrying the rootage that has the trouble, but will be the soil immediately below which will probably be so hard that moisture and rootage cannot penetrate it.
of mowers, including the herringbone type with "V" shape spiral knives. Equipped with motor it is easily operated from a lamp socket, or can be operated from a line shaft. A gas engine can also be used.

The Peerless Mower Sharpener is equipped with reverse feed, and a roller support is furnished which makes it possible to sharpen putting green mowers with 8" rollers behind the cutter bar. The machine is four feet wide between the frames and will grind the spiral knives of 40" mowers by removing them from the mower. The spirals of the 30" units and hand mowers can be ground without removing them from the mower. Equipped with the special grinding wheel attachment, cutlery and various tools such as hedge shears, grass shears, and sickles used around golf links and parks can be ground.

Practical demonstration of this Peerless Mower Sharpener, manufactured by The Fate-Root-Heath Company of Plymouth, Ohio, will be given in our booth at the Annual National Greenkeepers Golf Show.

The Universal Compost Mixer is said to be the most modern machine for the economical and efficient preparation of compost. The machine is rugged and substantial in construction; it is a compact integral unit provided with a pulley so that it can be driven by a tractor. The mechanical principle of operation consists of rotation of an impellor assembly within an impellor housing having intake and discharge openings.

The compost or top dressing material is shoveled into the intake hopper of the machine and in passing through the machine is subjected to the impact action of the impellor blades which breaks up all of the lumps.

Due to the centrifugal and blast effect developed by the impellor, the material is thoroughly mixed and discharged through the air, falling in a fluffy pile ready for immediate use. The machine is portable and can be readily moved to any location and the material discharged in any direction, either near or far, and piled to suit conditions.

The Universal Compost Mixer eliminates repeated hand shoveling and screening of materials, as once through the machine is generally sufficient for complete preparation. Briefly summarized the Universal Compost Mixer accomplishes the physical preparation of compost or top dressing in a better manner, shorter time and at less cost than any other method now in use.

The Hyper-Humus Company will exhibit their product, Hyper-Humus showing its use as a compost for top dressings for old greens and its value in incorporating it into the soil for new greens.

Hyper-Humus is a prepared, cultivated, natural organic which is well oxidized by continuous cultivation. There was a 40 per cent increase in the sale of humus in 1929 over the previous year and the present indications point to a very large demand for the coming season for our cultivated humus, especially among golf courses.

Hyper-Humus when mixed with the top dressings makes an ideal carrier for the uniform application of Lead Arsenate, Sulphate of Ammonia, etc. It absorbs these materials, and furnishes one of the purest, if not the purest, organic to the soil. It is free from disease, odorless and easy to handle.

Actual tests in the various Agricultural schools have shown that 100 pounds of sand will hold 25 pounds of water; 100 pounds of clay, 50 pounds of water and 100 pounds of humus or decayed organic matter will retain 190 pounds of water. This is a fair idea of what humus will do for your greens in the way of retaining moisture during dry, hot weather.

W. P. Troxell, sales manager, will be in charge of the exhibit.