





Published by Mid-Atlantic Association of Golf Course Superintendents to aid in the Advancement of the Golf Course Superintendent through Education and Merit

VOLUME XXV

MAY 1974

Beat Fertilizer "Crunch" With On-The -Farm Storage

At least part of the expected fertilizer problem this spring will be a shortage of transportation and storage, according to Kenneth E. Felton, Extension agricultural engineer at the University of Maryland in College Park.

Apparently many fertilizer dealers have their storage space full and will not be able to get any more material from their suppliers until they deliver some fertilizer to farmers, Felton points out.

"Farmers could help alleviate the fertilizer crunch by taking delivery of some of their spring fertilizer needs right now," Felton points out in a publication released last week by the University's agricultural engineering department.

This may not be as convenient as having fertilizer delivered and applied directly on the fields, he says, but it may mean the difference between having enough fertilizer and having a shortage. Some dealers may also give a discount for early delivery.

Storing bagged fertilizer on farms is not usually much of a problem; a dry floor should do the job. Depending on the floor and kind of bags, you may need to lay down a plastic film to keep the fertilizer from absorbing moisture.

Bulk fertilizer can also be stored on many farms, Felton believes. If you have a dry, flat concrete or tight wooden floor under roof, you may be able to store a large portion of your spring fertilizer needs just by dumping it on the floor. If the floor is not large, you may have to put some, kind of retainers around the fertilizer. In the publication released last week, Felton has sketched simple plans for inexpensive retaining walls that you can build.

There are certain precautions you should keep in mind. For example, if you are using a haymow for fertilizer storage, you should not pile it more than about 1/7 the height of hay, since fertilizer is about seven times as heavy as baled hay, for which the haymow was possible designed.

If you would like to have a copy of Felton's mimeographed pamphlet, call your county's Cooperative Extension agent, listed in the telephone book under County Government, and ask for Agricultural Engineering release No. 64. "On-Farm Fertilizer Storage."

New Tractor Safety Standard Proposed

Another benchmark appears near at hand in efforts of the federal government's Occupational Safety and Health Administration to make farming operations safer, according to Dr. Larry E. Stewart, Extension safety and farm machinery specialist at the University of Maryland in College Park.

Dr. Stewart reported that OSHA published in the *Federal Register* on Feb. 4 a proposed standard that would require all farm tractors of more than 20 engine horse-power, manufactured after Aug. 31, 1974, to be equipped with a roll-over protective structure (ROPS) and seat belts.

The Maryland Extension agricultural engineer has mailed a copy of the *Federal Register* published proposal, along with a letter of explanation, to every county Extension office in the state. So persons desiring more information may visit their local county Extension agricultural agent to read the proposal in detail.

Anyone, with views and arguments concerning the proposed safety regulation is invited to send written statements to the following address, prior to March 6:

and the second and th
Office of Standards
U.S. Dept. of Labor
Room 504
400 First St., N.W.
Washington, D.C. 20210

Commenting favorably on the proposed regulation, Dr. Stewart noted that more than 800 persons were killed while operating farm tractors in 1973. The death toll last year in Maryland from the same cause was 18. He estimated that 90 percent of these deaths would not have occurred if the tractors involved had been equipped with roll-guards and seat belts.

A check with officials of the labor and industry division of the state Department of Licensing and Regulation indicates it will be only a matter of time following federal adoption before similar regulations will be enforced in Maryland.

Strange Tradition In St. Andrews

St. Andrews, Scotland, where golf was born, has many strange traditions.

For instance, a "free-man" of the ancient city has the right to spread his washing on the 18th fairway.





Golf Course Specialists, Inc. P.O. BOX 7 DULLES INDUSTRIAL PARK ROUTE 609 CHANTILLY, VA. 22021

WALLY STEDDING SALES REPRESENTATIVE RES.(301) 944-2202

BARRICK Ground Burned Lime

Take The Guesswork Out Of Your Liming Program

BARRICK'S GROUND BURNED LIME

S. W. BARRICK & SONS, Inc. WOODSHORD, MARYLAND 301 - 845-6341 Claude H. Barrick - Res. 301 - 845-8548



Membership Changes

Application for membership to the Mid-Atlantic Golf Course Superintendent's Association has been made by the following:

John L. Tanner 3402 26th Ave. Hillcrest Heights, Md. 20031

Gerald R. Davs Rt. 6 - Box 544 Frederick, Md. 21701

George E. Renault III 5900 K Queenston Springfield, Va. 22152

Danny Lee Angles 133 Old Centerville Rd. Manassas, Va. 22110

Harry C. Grove 2100 Lexington Ave. Hagerstown, Md. 21740

Gregory L. Mergenthaler 611 Henderson Road Bel-Air, Md. 21014

Thomas L. Miller 3722 Columbia Pike Arlington, Va. 22204 Asst. Brandywine C.C. Class H Signed– C. Spottswood Wayne Evans

Supt. Holly Hill Golf Club Class E Signed— Mike Koss

Jim Shuey Asst. Springfield C.C.

Class H Signed– Tom Doerer Ivan E. Day

Supt.—Island View C.C. Class B

Signed- Bob Martino Lee Dieter

Asst. Eagle Head Golf & C.C. Class H Signed- C. Spottswood

Bert Yingling

Egypt Farms Class E Signed– Angelo Cammarota Virgil Robinson

Asst. River Bend Class D Signed— Thomas Haske Virgil Robinson

These changes are being published here in accordance with our by-laws. Unless written objection is received within 30 days after publication, these men will become active members with their requested classification.

Correction

Back in our March Newsletter, we displayed a cartoon titled "Ferti-mow" conceived by Dr. A. J. Powell of V.P.I. I erroneously gave credit for this cartoon to an unknown member of Bethesda Country Club. Dr. Powell had the cartoon drawn through one of his staff for use at the Virginia Turfgrass Council Conference held this past winter. A mistake had been made, through casual conversation, that Dr. Powell was not the originator of this very original cartoon. My sincerest apologies go to Dr. Powell for this misrepresentation.

Craig Spottswood

If you can see good in everyone, you may be an optimist, and then again, you may be nots.

A friend is one who walks in when the rest of the world walks out.

It costs more to keep federal employees in paper towels today than it cost to run the whole government in 1908.

Metrication

Article slightly abbreviated for lack of space

Back in 1795 after the Revolutionary War, the United States considered breaking away from the English system of measurements. We were breaking away from England in many other respects. The French, our allies, were promoting a radical new system based on multiples of ten. We had already adopted a decimal coinage system, so there was strong support for the new decimal measurements referred to as the metric system.

Congress failed to act, however; and so we have drifted along using the comparatively complicated English system. How much simpler it would have been if the right decision had been made then. Metric system legislation was introduced in Congress in 1866, 1896, 1901, and many times since. Bills are now being introduced every year, and we can expect passage soon.

Actually, there is no single metric system. France originated the system in the late 1700's, but it has been modified in Germany, in Italy, in Japan, and in other countries to the point that each country has its own metric system—similar to the others but different enough to create problems.

We in this country are working with the metric countries to establish a uniform metric system called the Systeme International, or SI for short. This uniform system is basically metric, it is the one we expect to adopt, and we shall refer to it here simply as the metric system.

Probably not one of us can talk easily in terms of meters, liters, and grams. We have heard the terms. But the metric system is still a bit strange and foreign to us. In fact, it's rather disconcerting to realize that in a few years our Miss America with her "perfect 36" will be gone forever. She will be Miss America with a "perfect 91." But before your imagination starts taking off on that one, let me hasten to add that by that time we will be so metric-oriented that we will think of a "perfect 91" as wonderful, and she will not have changed one centimeter!

Let's review the metric system briefly to see how the metric system will affect each of us in our daily lives.

Figure 1 shows some of the basic units of measurement, with comparable metric and English system designations.

Figure 1. Basic	Units	
UNIT	ENGLISH	METRIC
Length	Inch	Meter
Weight	Ounce	Gram
Temperature	F.	Celsius
Liquid	Quart	Liter
Pressure	PSI	Pascal

Figure 2 shows some of the conversion factors between English and metric linear measurements. This illustrates the difficult part of changing to the metric system. The conversion factors are variable because of the different multiples between inches and feet, feet and yards, etc., in our English system. The difficulty, therefore, is generated by the characteristics of our English system rather than the metric multiples.

ENGLISH	METRIC	CONV. FACTOR*
Inch	Millimeter	25.4
Foot	Centimeter	30.5
Yard	Meter	0.914
Mile	Kilometer	1.61
*English To Metric	Con Sulfaces polls	

Figure 3 shows how simple the metric system really is, with various multiples of ten being used whether measurement is lengths, weights, or volume. Some of the multiples are not in common usage but prefixes have been established and are, therefore, part of the system. In the case of the basic unit of length, which is the meter, the other multiples in common usage are the millimeter, centimeter, and kilometer. In the case of weights, with the gram as the basic unit, the milligram and kilogram are the other multiples in common usage.

Figure 3. Metric Multiples

Meter Basic Unit = 1

PREFIX	SYMBOL	UNITS (meters)
Kilo	K	1,000
Hecto	Н	100
Deca	DA	10
Meter	(basic)	1
Deci	D	.1
Centi	C	.01
Milli	М	.001
	sar hanne ur dina a	

How does the metric system affect our daily lives?

Assume that it's 20 years from now and a new day is dawning. The alarm rings, you bounce out of bed, and the first thing you do is check the thermometer. That's when you enter the metric world. The thermometer reads 10 degrees. That's 10 degrees Celsius. On the old Fahrenheit thermometers it would have been an invigorating 50 degrees.

Perhaps you are familiar with the Centigrade scale from your school days. This is now known as the Celsius scale. It is identical to the old Centigrade scale; it has simply been renamed to honor the scientist who originated the idea. Zero on the Celsius scale is the freezing point. 100 degrees Celsius is the boiling point of water.

After you have checked the temperature on the morning 20 years from now, you shower and shave and sit down to breakfast. Instead of taking a quart of milk from the refrigerator, you take a liter of milk—just a fraction more than a quart. If you have a bowl of cereal, the box gives the net weight in grams, not in ounces.

After you finish breakfast, you kiss your "perfect 91" good-by and hop into the car for the drive to your office. The office is no longer 10 miles away but, instead, 16 kilometers away. And you don't drive 60 miles an hour. You drive 96 kilometers an hour.

On the way you stop for gas and tell the attendant to "fill it up." He puts in 60 liters-about 16 gallons. At (Continued next page) today's gasoline prices, the attendant would charge you between 10 and 12 cents a liter. I have a suspicion the price may be higher by that time!

So far, except for the Celsius temperature scale, the metric terms we have used are familiar-liter, gram, kilometer. But if you ask the gas station attendant to check your tires, he won't inflate them to 30 pounds per square inch but, rather, to 200 kilopascals. The "Pascal" is a unit of pressure, and to most of us it is a new term that we will learn to use when we convert to the metric system.

In our daily life, we will use the metric system in many other ways. When we mow our lawns, we will set the mower for 5 centimeters, not 2 inches. When we buy a belt, it will be so many centimeters long. When we order lumber, we won't order 2 by 4's. And when we step on the bathroom scale, it won't read 200 pounds. It will read 91 kilograms.

We and our parents and grandparents have been happy with our Fahrenheit thermometers, our 12-inch rulers, and our quarts of milk. Why should we change to the metric system?

One, it is a better system than our English system. It is simpler, more coherent, more logical, and easier to work with.

Two, we have no choice. The entire world is going metric. Even England, where our system of weights and measures originated, has adopted the metric system and, over a period of 12 years, is phasing out the old system of inches, feet, and yards; ounces, pounds, and tons; pints, quarts, and gallons. Mexico is metric. Canada has committed itself to going metric.

We are almost alone in the world in sticking to the English system. There are only 11 other countries that haven't taken steps to go metric, Trinidad, Barbados, Jamaica, Guyana, Gambia, Sierra Leone, Southern Yemen, Muscat, and Oman and Burma. In addition to these, there are two small island countries in the Pacific, Tonga and Nauru, which have still not committed themselves to the metric system.

This is a ridiculous situation for the United States. We are in step with 11 countries which have a combined population less than the state of Texas and a combined area just slightly larger than the state of Texas. We are out of step with the rest of the world.

Obviously, the United States has to go metric. Is it a big step? Of course it is. But it isn't as big as we might think. There will be a period of transition. You and I have a period of years in which to learn to use the metric system.

Secondly, that transition period has already begun.

In our daily life, we are accustomed to buying 8 mm, 16 mm and 35 mm film for our cameras. Your druggist measures your prescription in grams and milligrams. Many of our packages today are expressed in weight by both ounces and grams.

Some of us may be counting calories. Others perhaps should be. A calorie is the amount of heat required to increase the temperature of one gram of water one degree Celsius, and is therefore a metric unit. So keep on counting calories. They won't change.

In our business life, that transition period has begun also. The real effort and the actual dollar costs of converting to the metric system fall most heavily on business and industry, yet the advantages of getting in step with the rest of the world are so great that business and industry are converting rapidly—already!

About 30 percent of Ford Motor Co.'s production worldwide is metric. Ford has opened a new plant at Lima, Ohio, and now is building a completely metric engine there for the Mustang II. The engines being used in the Ford Pinto, Plymouth Cricket, Dodge Colt, and Chevy LUV are already metric.

At General Motors, all new development now will be metric from the start.

John Deere is producing metrically dimensioned tractor engines here and in Europe.

IBM initiated a 10-year conversion program in 1971.

At its Hough plant at Libertyville, Illinois, International Harvester is designing and manufacturing all new products in metric measurement units.

Manufacturers of small engines will follow suit. You can expect that new designs soon will be metric.

These actions are being taken even though there has been no legislation yet. Perhaps it's better that way. With the present active participation of the United States in refining metric standards, and a gradual changeover by manufacturers at their convenience, perhaps the total cost and disruption can be minimized.

Total conversion to the metric system in the United States, according to one estimate, would cost 100 billion dollars. The cost to small engine central and service distributors and dealers will be an infinitesimal part of that. (Continued next page)



The real burden falls on manufacturers.

An estimated 10 percent of the total 100 billion dollar cost will be in what is called "soft" conversion—simply expressing measurements of our present products in metric equivalents—on drawings, on literature, on labels, on packaging, in books, in records. We would also change road signs, gasoline pump meters, and innumerable other familiar items now bearing nonmetric language.

The remaining 90 percent of the cost of going metric is in what is called "hard" conversion. Hard conversion means complete redesigning of products to metric measurements. That means redesigning every component in a Kohler engine. Every component in conveyor systems and lift trucks. Every gauge. Every measuring device.

When the heating system in a Kohler factory is replaced, when the wiring is replaced, when the building itself is replaced, all components will be metric, from bricks and 2 by 4's to boiler pipes and light fixtures.

Convert all industry and all products to the metric system, and you can understand why the total cost has been estimated at 100 billion dollars. Keep in mind, however, that the conversion will be gradual and that the cost will be spread over 10, 20, or more years. Keep in mind, too, that if we don't convert to the metric system, we could lose many times 100 billion dollars in international trade in the next century; and that would affect the standard of living for all of us.

School systems are already starting to teach the metric system so that young people will be well prepared for the transition period.

The conversion to metric will increase the inventory of hardware items somewhat for small engine distributors and dealers, because they will have to carry replacement nuts and screws for today's nonmetric engines at the same time that they are "phasing in" metric parts. Other parts are unique to a particular engine anyway, unless you are dealing with a family of engines with some interchangeability of parts. So I would conclude that the effect on inventory cost would be minimal.

Small engine distributors and dealers will have to double up on some tools during the transition period. They will need the nonmetric tools they have now, but they will need metric tools also.

Many of our present tools will need no conversion. Others such as socket wrenches, open end wrenches, torque wrenches, pressure gauges, and micrometers must be sized



or calibrated to the metric scale. The cost of equipping a dealership with metric tools is moderate.

Will we have to train dealers in the metric system? Probably not. For one thing, many of them already work with metric engines—snowmobile engines, motorcycle engines, diesel engines—and I suspect they worked into it without any special training in the metric system.

Also, dealers order replacement parts by part number, whether the parts are metric or non-metric.

Thirdly, at the risk of repetition, the transition will be gradual and dealers will learn to think metric and talk metric almost without realizing it.

Actually, this discussion can be summarized in a few words:

The United States is going metric. Legislation is imminent. Companies are already changing.

Small engine manufacturers are going metric. New designs are apt to be metric, while production continues for a while on non-metric models. Or we could say it this way—as older models are dropped from the product line, new products will be metric.

Small engine distributors and dealers are going metric. And they will do so at minimum cost, with minimum effort, and so gradually that they will be part of the metric world before they know it.

Along the way, we will forget a few things-like the "perfect 36." Or that time-honored saying, "An ounce of prevention is worth a pound of cure." And Texans will have to give up, or resize, the 10-gallon hat.





May Pro-Superintendent Tournament

The May meeting of the Mid-Atlantic will be held on May 14, at the U. S. Naval Academy Golf Course in Annapolis, Md. This meeting will be our Pro-Superintendent golf tournament, so come Superintendents, let's show the Pros a good say and bring them to the golf tournament.

Golf Professional Bill Templin and his capable Assistant, John Rantanen, will be in their shop to assist you in any way. They will also be helping us get you started off the first tee. The golf course will be available for play anytime after 10:00 am. Only a sandwich and beer machine are available for lunch. We would appreciate your cooperation in returning the enclosed cards.

Our host Mike McKenzie grew up on a golf course in Pennsylvania working for his father Paul. He has worked as an assistant for Bill Emerson at Crofton and Tom Haske at River Bend. Mike graduated from the University of Maryland in the Institute of Applied Agriculture's first class in 1967. He spent nineteen months in the army, fourteen of that time in Vietnam. Mike worked at Goose Creek Country Club as Superintendent before taking the job at the Naval Academy in March of last year.

The Naval Academy Golf Course is about 40 years old with some parts of the front nine being older. Before the land was bought by the government there was a course in almost the same location, the course was known as The Greenberry Point Club.

September 1, 1963, was the last meeting of the Mid-Atlantic at the Academy course, at which time there were 38 members present. Thanks to Bob Shields for sending an old newsletter which contained some very interesting facts. Twenty one years ago the fairways were 65% Bermuda, a native fine leafed Bermuda that was winter hardy in Annapolis. This Bermuda was sure to have taken over in a very short time, one could see daily progress the newsletter said. Those of you that play the course will wonder where the Bermuda went. Evidently it didn't turn out to be as hardy as was originally anticipated.

Social hour will begin at 5:30 and dinner will be at 6:30. Directions to the club-from Washington-Go east on route 50, cross over the Severn River bridge, take exit marked Baltimore, Naval Academy, to the right (Route 450). From Baltimore-take Route 2 to Annapolis, follow signs to the Naval Academy (Route 450). From Eastern Shore-take first sign to Naval Academy Route 450. When on Route 450 just before crossing the Severn River turn to the left at the light. At the first stop sign bear to the right-straight through the next stop sign to the Club. The Pro Shop is on the left.

Directions to the Dinner and meeting-from route 450 cross over the Severn River and turn left at the first light (Gate 8). Go to the first stop sign and turn right. Just before coming to Gate 4 turn right, the Officers Club is on the left. There is plenty of parking to the right of the Officers Club.

The real test of courtesy and restraint is to have an ailment just like the other fellow is describing and not mention it.



Cleaver Attends Green Industry Council

Representing GCSAA, George Cleaver, Chestnut Ridge CC, Lutherville, Maryland, joined 15 other industry representative March 8 in Washington, D.C., to continue with the organization of the Green Industry Council. National Secretary-Treasurer Cleaver, along with members of state and national arborist, nursery, pesticide applicator and sales organizations held the council's second meeting to further discuss its purposes and procedures.

Cleaver said that a good deal of the conversation dealt with the problems being faced as a result of environmental protection regulations, particularly the certification of chemical pesticide applicators. He emphasized that the council will be operating basically as a medium for the exchange of information and ideas. There will be no bylaws, minutes, or dues, and although the group may prepare a resolution, it will not have the authority to act independently from the organizations represented.

When everything looks hopeless and desolate, look and see if you are not facing the wrong direction.



SOIL & PEAT INDUSTRIES, INC. ROCKY MOUNT, N.C. RT. 1 – BOX 267 919-443-5016

U.S.G.A. QUALITY TOPDRESSING STERILIZED SOIL MIXTURES PEAT HUMUS

EGYPT FARMS, INC.

Whitemarsh, Md. 21162

301-335-3700

STERILIZED TOPDRESSING TOP SOIL – SOIL MIXTURES SHREDDED HARDWOOD BARK MULCH

Adams Equipment. Inc.

928 Philadelphia Ave. Silver Spring, Md. 20910 (301) 585-1322 & 589-2300 2205 E. Joppa Rd. Baltimore, Md. 21234 (301) 668-0500

TORO Fowar Equipment Ryan Power Equipment Sprinklers Fertilizers Chemicals Briggs & Stratton Parts Kohler Parts Lauson-Tecumseh Parts Wisconsin Parts Miscetlaneous Golf Supplies

GOLF COURSE EQUIPMENT Complete Turf Maintenance Equipment Complete Service Available





Helping the superintendent through turf research...

Controlled Release Fertilizers Fertilizer/Pesticide Combinations

Fungicides-Herbicides-Insecticides
Soil Testing-Weed & Disease Identification

SCOTTS • LELY • GANDY SPREADERS

Finest quality turfgrass seed-Fairways • Greens • Tees • Roughs Scotts Windsor and Victa blends

Technical Representative 8459 Kitchener Road Springfield, Va. 22153 Phone: 703/451-2589

Steve O'Neill

Tom Comalli

Technical Representative 711 Hyde Park Drive Glen Burnie, Md. 21061 Telephone: 301/969-4216

338-0483

Moore Golf, Inc THE MARCH UNIT

> COURSE CONSTRUCTION REMODELING IRRIGATION INSTALLATION



ROCKVILLE, MD. 20853

H. R. HERNDON, JA HENRY J. CARROLL 235-4189

HENRY J. CARROLL TREE SERVICE

Member of the Maryland Arborist Assn., American Society of Consulting Arborists and the International Shade Tree Conference



1974

MD 201