

Southern California Turf Culture

A Quarterly Publication devoted to the activities of the Experimental Program in Turf Culture of the College of Agriculture, University of California, Los Angeles 24, California.

JANUARY, 1956

VOLUME 6 · NUMBER 1

SOUTHERN CALIFORNIA TURFGRASS COUNCIL ORGANIZED

The Southern California Turfgrass Council was formally organized in September by the adoption of an official Constitution and By-laws which appear elsewhere in this issue. The following officers were elected at the first meeting of the Board of Directors:

C. C. Simpson, Sr.	Past President
F. W. Roewekamp	President
William Beresford	Vice President
Raymond Page	Secretary
Gene Marzolf	Treasurer

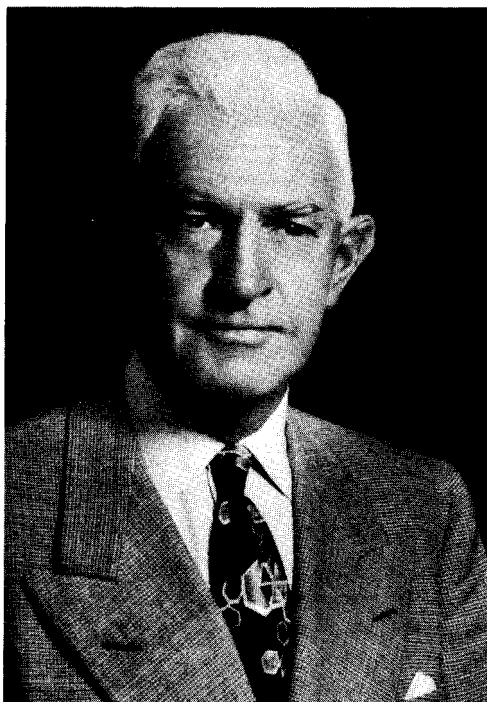
Mr. C. C. Simpson was instrumental in organizing the original Turfgrass Advisory Committee in 1948 and served as its chairman from that time to the present. The strong support of Mr. Simpson has been an important factor in the development of the field of turfgrass culture in Southern California.

He is a member of one of the large contracting firms in Los Angeles and has served the City of Los Angeles on the Building and Safety Committee. He is an active member of the Southern California Golf Association, having served it in several capacities, including that of

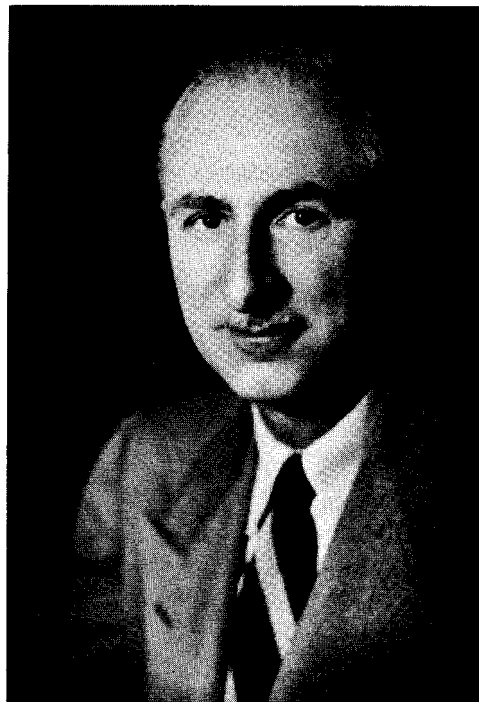
president. He was also president of the Los Angeles Country Club for two years and chairman of its Green Committee. He was president of the Senior Golf Association for two years and is a member of the U. S. Golf Association Green Committee.

Mr. F. W. Roewekamp has also worked unceasingly for many years to further progress in turfgrass culture. He has served as the secretary of the Turfgrass Advisory Committee from its inception. Mr. Roewekamp is Superintendent of Park Development for the Department of Recreation and Parks, City of Los Angeles. He has been with the city in various capacities since 1928.

Mr. Roewekamp has a B. S. degree from the University of Wisconsin with a major in horticulture and landscape engineering. He also has a M.S. degree in horticultural science from the University of California. He is past president of the National Shade Tree Conference and of the Southern California Horticultural Institute, and is a member of the American Institute of Park Executives. He is on the executive committee of the California International Flower Show.



MR. C. C. SIMPSON



MR. F. W. ROEWKAMP

SOUTHERN CALIFORNIA TURFGRASS COUNCIL CONSTITUTION AND BY - LAWS

1. NAME

The name of this Council shall be the Southern California Turfgrass Council.

2. PURPOSES

The purposes of this Council shall be to promote and advance the growing of good turfgrasses and other ground covers, to provide exhibits for scientific, educational and recreational purposes, to aid in the gathering, dissemination and exchange of facts and information, and to work and cooperate with other agencies and organizations related to this subject.

3. MEMBERSHIP

General membership in the Council shall consist of those who are actively interested in the purposes of this Council.

4. OFFICERS

The officers of this Council shall consist of a President, Vice-President, Secretary, and Treasurer. These officers shall be elected from the official delegates of the Board of Directors at the Annual meeting. The duties of the officers shall be such as usually devolve upon their positions. Officers shall serve for one year or until successors are elected.

5. BOARD OF DIRECTORS

There shall be a Board of Directors, consisting of one member and an alternate from each accredited turfgrass interest in Southern California. The Board of Directors shall consist of one delegate or his alternate from each of the following turfgrass interests:

American Institute of Park Executives - California Society
American Institute of Planners
American Lawn Bowling Association
American Society of Golf Course Architects
American Society of Landscape Architects - Southern California Chapter
Athletic and Recreational Turfgrass Association
California Association of Nurserymen
California Fertilizer Association
California Institute of Landscape Architects
California Landscape Contractors' Association
Equipment Industry
Golf Course Superintendents' Association of America
Interment Association of California
Irrigation Sprinkler Contractors' Association
Los Angeles City Board of Education
Los Angeles City Department of Recreation and Parks
Los Angeles County Department of Parks & Recreation
National Golf Foundation
Park Foremen's Association Los Angeles City Department of Recreation and Parks, Maintenance Div.
Public Links Golf Association
Seedsmen
Southern California Golf Association
Southern California Golf Superintendents' Association
United States Golf Association

Ex officio -The immediate Past President of the Council shall be a member of the Board of Directors.

Each accredited turfgrass interest shall appoint a delegate and an alternate to serve on the Board of Directors for a period of one year. These names shall be presented for approval to the Executive Committee.

The Board of Directors may by majority vote, add, from time to time, other organizations to the list of accredited turfgrass interests.

The Board of Directors shall be the governing body of the Council.

The Executive Committee shall consist of the President, Vice-President, Secretary, Treasurer and Immediate Past President.

6. MEETINGS

The Board of Directors shall meet quarterly in March, June, September, and December. The delegate or the alternate shall attend all quarterly meetings.

There shall be an Annual Meeting of the Council at a date set by the Executive Committee.

Special meetings may be called by the Executive Committee.

7. DUES

Members shall be considered to be in good standing upon payment of dues as fixed and determined by the Board of Directors. The Board of Directors shall not be empowered to fix dues to the Council in excess of two dollars annually without approval of the general membership at an Annual meeting.

8. STANDING COMMITTEES

(A) Research and Educational Committee:

The Research and Educational Committee shall consist of at least 3 members appointed annually by the Executive Committee to serve as an advisory committee to the Division of Agricultural Sciences of the University of California and subdivisions thereof. In this function the committee will coordinate its activities with those of the Northern California Turfgrass Council and of other similar councils which may be organized in the State.

(B) The President of the Council shall appoint annually the following standing committees of at least 3 members each.

- | | |
|--------------------------|-------------------------|
| 1. Membership | 4. Finance and Auditing |
| 2. Policy and Activities | 5. Nominating |
| 3. Publicity | |

9. AMENDMENTS

Amendments to By-Laws may be made at any Annual meeting providing thirty (30) days notice of such shall have been given to the general membership and upon approval previously having been made by the Board of Directors.

Adopted: September 13, 1955

To Take Effect: January 1, 1956

CHEMICALS FOR LAWN RENOVATION

A PRELIMINARY REPORT

by

E. Robert Bichowsky,

J. Harold Mitchell Co., Pasadena

Victor B. Youngner,

University of California, Los Angeles

Inrerest in the use of chemicals for the preparation of weed-free seed beds for new turfgrass planting has increased greatly in the past few years. Methyl bromide has been used successfully for some time, but the problems and hazards associated with its use have inspired further research with many other chemicals by both private and public institutions.

Investigations to determine the value of a number of chemicals for this purpose have been conducted at U.C.L.A., the Huntington Library and Botanic Gardens and other locations in the Los Angeles area. These tests have shown that a few of these herbicides have excellent possibilities when used properly.

In Southern California bermudagrass, *Cynodon dactylon*, is the most common and difficult weed to control. A chemical, if it is to be of value for renovation purposes must completely kill this grass species as only a few surviving plants, stolons or seeds will soon re-establish it.

One of the most promising materials used in these tests was Vapam (sodium N-methyl dithiocarbamate, dihydrate) manufactured by the Stauffer Chemical Company. Vapam is a liiquid which can be applied with a sprinkling can or other type of sprinkler. Effective control of bermudagrass and many other weeds was obtained with an application of one quart of Vapam in 5 to 10 gallons of water per 100 square feet of area, and a second application of 1 quart of Vapam in 5 to 10 gallons of water about ten days later. The treated area must be watered well for one to two weeks prior to the treatment to insure good growth of the vegetation, and water must also be applied immediately after application to wash the material into the soil.

A single application of Vapam did not give good bermudagrass control. Possibly a combination of one treatment of vapam followed by an application of weed oil to kill bermuda stolons and other surface material would be effective. A light renovation of the area prior to treatment may also give better bermudagrass control.

A great advantage of Vapam over many other materials tested is that the ground can be reseeded in about ten days after the treatment. However, it should not be used close to shrubs or trees. A good practice is to treat no closer to any such plant than the drip line.

On the test plots at the Huntington Library, excellent control of St. Augustine grass was also obtained with

Vapam. Crabgrass seed did not seem to be destroyed, however, unless the soil had been turned first to incorporate the seed into the fumigated areas. Observations indicate that Vapam also has excellent fungicidal and nemacidal properties.

Dalapon (2,2-dichloropropionic acid, sodium salt) at the rate of two ounces per 100 sq. ft. gave excellent control of bermuda and other grasses, but was ineffective on broad leaved weeds. TCA (trichloroacetic acid, sodium salt) at the rate of four to eight ounces per 100 sq. ft. also controlled bermuda and other grasses. Therefore these two chemicals should be considered when control of bermuda and other grasses is the principal desire. Thirty days or more should be allowed between the time of treatment and reseeding. TCA is very toxic to tree roots and must be used with great care whenever trees are near the area to be treated.

Ammate (ammonium sulfamate) at the rate of two or three pounds per 100 sq. ft. may also have some value as a chemical renovator. Poor control of bermudagrass was observed with this material at the U.C.L.A. plots; but at the Huntington Library plots, excellent control was obtained. Differences in climate, soil, and watering practices might account for this great variation in results.

Experimentation with these and other similar materials is continuing here and throughout the country, and eventually completely weed-free lawns may be obtained when chemicals are applied, prior to seeding.

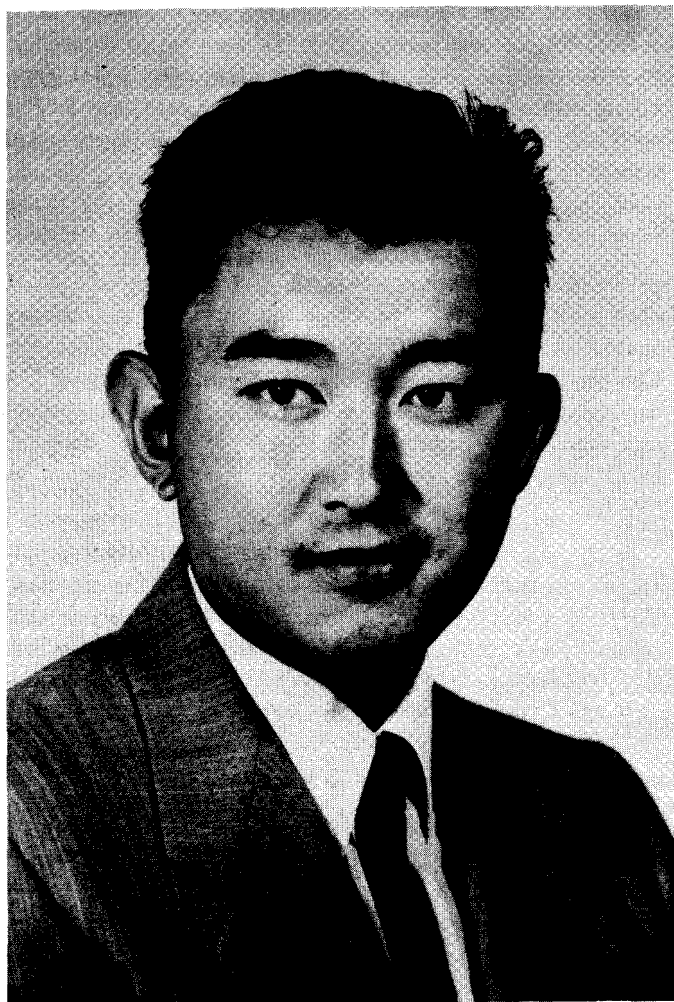
In order that the information in our publications may be more intelligible, it is sometimes necessary to use trade names of products or equipment, rather than complicated descriptive or chemical identifications. In so doing it is unavoidable in some cases that similar products which are on the market under other trade names may not be cited. No endorsement of named products is intended, nor is criticism implied of similar products which are not mentioned.

This publication "Southern California Turfgrass Culture" is sponsored and financed by the Southern California Turfgrass Council. Communications should be sent to the secretary, Mr. Raymond Page, 174 N. Canon Drive, Beverly Hills, California, or to Dr. Victor B. Youngner, Department of Floriculture and Ornamental Horticulture, University of California, 300 Veteran Avenue, Los Angeles 24, California.

TORAO "TOSH" FUCHIGAMI JOINS U.C.L.A. STAFF

Since the departure of Mr. C. Gordon Ryckoff, management of the U.C.L.A. turf plots has been under the direction of Mr. Tosh Fuchigami. Mr. Fuchigami is a native of California and attended elementary and secondary schools at Marysville and Yuba City. He also attended Colorado A & M until his education was interrupted by service with the Army. Upon returning, he entered Cornell University, where he obtained the B. S. degree in 1952 with a major in ornamental horticulture.

In June 1952 Mr. Fuchigami joined the staff of the Department of Landscape Management, University of California at Davis, serving as senior nurseryman. He transferred to the Department of Floriculture and Ornamental Horticulture at U.C.L.A. in March 1955 and took over his present duties in turf culture July 1, 1955.



MR. "TOSH" FUCHIGAMI

BILL TAVENER APPOINTED RESEARCH ASSISTANT AT U.C.L.A.

Mr. William Tavener has recently been appointed Research Assistant in the Experiment Station at U.C.L.A. to work in the field of turfgrass culture and management. He began his new duties July 1, 1955.

Mr. Tavener's home is in Fort Collins, Colorado, where he attended elementary and secondary schools. He graduated from Colorado A & M in June, 1955 with a B. S. degree in horticulture. He holds a commission in the Artillery Reserve, and must report to Fort Sill, Oklahoma, for active duty upon completion of his studies for the M. S. degree at U.C.L.A.

While at Colorado A & M, Mr. Tavener played center for the Aggies, and in 1954 played in the Salad Bowl game. He was married in June of this year.



MR. WILLIAM TAVENER

TWO IMPORTANT DATES TO REMEMBER

The Northern California Turfgrass Conference will be held on the Davis Campus of the University of California on Monday and Tuesday, January 30 and 31, 1956.

The 27th National Turfgrass Conference and Show, sponsored by the Golf Course Superintendents Association of America, will be held in Long Beach February 5-10, 1956.

SEEDBED PREPARATION FOR TURFGRASS

O. R. Lunt, P. A. Miller, and G. Wyckoff

Note: The following is a brief summary of studies which will be reported in greater detail in the "Golf Course Reporter."

The preparation of the seedbed is one of the most important of all the management operations concerned with growing grass. An exploratory experiment was conducted on seedbed preparation for turfgrass in which the variables were conditioning agents and fertilizers, and soil fumigation. The soil on which the study was made was in relatively poor tilth and had the property of forming hard surface crusts.

Table 1 summarizes the treatments and some of the principal effects. The soil conditioner was one of the soluble iron materials* used at the rate of 5 pounds per 100 square feet. Manure was used at the rate of 25 pounds per 100 square feet. The fertilizer application was at the rate of 1.25 lbs. of ammonium sulfate and a similar amount of single superphosphate per 100 sq. ft. Formaldehyde drench was applied at the rate of 1/2 gallon per 25 gallons of water per 100 square feet. Chloropicrin was injected at the rate of 288 ml per 100 square feet, and methyl bromide was used at the rate of 1 lb/ per 100 square feet.

TABLE 1
Height of grass and number of weeks per plot as affected by treatments.
Height figures are averages of 24 measurements made 53 days after seeding.

Treatment No.	Treatment	Lbs. N per 1000 ft. ²	Inches Ht. of Grass	No. of Weeds per Plot
1	control-control	0	0.60	20.1
2	control-methyl bromide -	0	.72	10.5
3	control-formaldehyde	0	.82	15.0
4	control-chloropicrin	.9	1.14	17.7
5	manure-control	3.7	.72	14.2
6	manure-methyl bromide	3.7	.57	8.2
7	manure-formaldehyde	3.7	.71	7.7
8	manure-chloropicrin	4.6	.72	6.2
7	conditioner-control -	1.2	1.44	12.7
10	conditioner-methyl bromide	1.2	1.44	7.5
11	conditioner-formaldehyde	1.2	1.77	5.0
12	conditioner-chloropicrin	2.1	2.43	7.5
13	conditioner t fert.-control	3.7	1.74	16.7
14	conditioner t fert.-methyl bromide	3.7	2.03	7.5
15	conditioner t fert.-formaldehyde	3.7	2.41	11.5
16	conditioner t fert.-chloropicrin	4.6	3.00	13.0
	LSD .05		0.28	

Although the effects of the soil conditioner were confounded with fertilizers, the observations and the data indicate the quality of turfgrass was improved by the conditioner. The density of roots at a depth of 4-6 inches was increased, the density of the stand appeared to be greater, and the friability of the soil was obviously improved on the plots receiving the conditioner.

The data indicate that 4 to 5 pounds of nitrogen per 1000 square feet applied prior to planting may not be excessive. Manure did not noticeably improve the tilth of the soil at the rate used. The negative response to manure is explained as an effect due to a high carbon nitrogen ratio which developed in the manure as a result of a heavy rain after the application. The results obtained do not necessarily indicate that the negative response to the use of manure is typical.

Fumigation treatments including methyl bromide,

formaldehyde and chloropicrin did reduce the weed population, but did not satisfactorily control it. A marked and highly significant stimulation from the use of formaldehyde and chloropicrin resulted. In the case of chloropicrin the stimulation was beyond what might be attributed to the nitrogen contribution. No stimulation from chloropicrin or formaldehyde was observed on the manure plots. The reasons for this interesting interaction are not readily apparent.

* "Flotal" was the material used. This is ferric ammonium alum with about 12% peat as a carrier. The iron precipitates in the soil as a hydrated iron oxide which when freshly precipitated acts as a bonding agent between clay particles to form water stable aggregates. Flotal is no longer being marketed in California. One of the chemical companies offers ferric sulfate instead, which they claim has effects similar to "Flotal." Presumably, other materials of demonstrated ability to readily produce water stable aggregates would produce effects similar to those attributed to "Flotal" in this study.

TRIALS OF SELECTIVE HERBICIDES FOR CRABGRASS CONTROL - 1955

Victor B. Youngner and Torao Fuchigami

Department of Floriculture and Ornamental Horticulture
University of California, Los Angeles

Crabgrass is one of the most serious and troublesome lawn weeds. New chemicals appear frequently on the market which are designed to control this weed without permanently injuring the desirable lawn grasses. Trials were conducted at UCLA during the summer of 1955 to test three of these new products in comparison with *two* of the older crabgrass killers. The rate recommended by the manufacturer of each product was the only one used. The materials tested, and the rates of application, were as follows:

1. PMAS (phenyl mercuric acetate, 5%) - 27 lbs. per acre
2. Crab-Not (potassium cyanate 86%) - 12 lbs. per acre
3. Di Met (disodium monomethyl arsonate hydrated, 50%) - 21 lbs. per acre
4. Crag Herbicide 1-pre-emergence herbicide (sodium, 2,4-dichloro-phenoxyethyl sulfate, 90%) - 3 lbs. per acre
5. DuPont Experimental pre-emergence crabgrass killer (3-(3,4-dichloro-phenyl) 1-methyl-1-n-butylurea, 50%) - 4 lbs. per acre

Since crabgrass had reached the branching stage by July 8, the time of the first application, the two pre-emergence herbicides were tested in combination with Di Met only, to determine whether or not they would prevent late season crabgrass seed germination. Thus there were five treatments and a check, each replicated four times. The size of the individual plots was 75 square

feet. Each of the materials was applied in one-half gallon of water per plot.

The Di Met, Di Met plus Crag Herbicide 1, and Di Met plus DuPont pre-emergence herbicide treatments were applied twice, one week apart. The Crab-Not and PMAS treatments were applied three times, one week between applications. High daytime temperatures were below 80°F. throughout the period of treatment. The entire test area had a uniformly heavy infestation of crabgrass when the tests were begun.

As shown in the table below, the Di Met, Di Met plus Crag herbicide 1, and Di Met plus DuPont pre-emergence treatments killed all crabgrass plants in two applications. The three applications of Crab-Not and PMAS were much less effective, killing 50% or less of the crabgrass. No visible turf injury resulted from the Di Met treatment, and only very slight discoloration was apparent from the Di Met plus Crag herbicide 1 treatment. Slight blade tip injury resulted from the Crab-Not and PMAS treatments. The Di Met plus DuPont pre-emergence herbicide produced moderately severe burning of the turf, but recovery appeared to be complete in about two weeks after the second treatment. The turf used for these tests consisted of Merion bluegrass, Kentucky bluegrass, meadow fescue, Alta fescue, and common bermudagrass.

Estimated Crabgrass Control in Per Cent of Original Population Remaining -

AVERAGE OF FOUR REPLICATIONS

Herbicide	Number of Applications	Per Cent of Original Crabgrass Remaining	Turf Injury
Di Met	2	0.0%	None
PMAS	3	65.0%	Very slight
Crab-Not	3	55.0%	Slight Tip burn
Di Met plus Crag Herbicide	2	0.0%	Slight discoloration only
Di Met plus DuPont Pre-emergence Herbicide	2	0.0%	Moderately severe burning
Check - no treatment		100.0%	None

Additional treatments of the PMAS and Crab-Not would have eventually perhaps killed most of the crabgrass in the plots receiving those treatments, but as the Di Met treatment gave such excellent control in only two applications, further testing seemed useless.

Some control of late season crabgrass seed germination was obtained from the use of the two pre-emergence herbicides. However, this test was inadequate to determine the real value of these materials and they must be tested further before a fair evaluation of them can be made.

(continued on page 8)

TURFGRASS DISEASE CONTROL

P. A. Miller

Dept. of Plant Pathology

University of California, Los Angeles

The established area of Seaside bentgrass turf on the UCLA campus was used for comparative trials of three turf fungicides. The area was divided into a randomized series of plots with four replications of the treated and check plots. Krominate, Kromad, and Calo-Clor were the three fungicides applied at 14 day intervals from June 29 to September 6. The fungicides were applied as sprays at the rate of 2 ounces in 5 gallons of water per 1000 square feet through a fan-type spray nozzle at 40 pounds pressure. A six gallon electric powered sprayer was used. Dollar spot counts were made and the average of the four replications was recorded on the day of each spray treatment. No brown patch appeared in the plot area during the period from June 29 to September 6. Dollar spot decreased almost to the vanishing point in the check plots by the end of this period although the plot area was maintained at the low level of nitrogen fertilization of six pounds of nitrogen per 1000 square feet per year. Previous experiments had demonstrated that this low level of nitrogen fertilizer application at monthly intervals favored the development of dollar spot disease.

All three fungicides used in this trial were equally effective in the control of dollar spot. On July 29 the plots sprayed with Krominate were noted as showing very noticeable discoloration and those sprayed with Calo-Clor slight discoloration.

RECENT GIFTS

Athletic and Recreational Turfgrass Association
\$50.00

U. S. Golf Association Green Section
\$300.00

Gardeners Association of Pasadena Area
\$10.00

O. E. Linck Company
Clifton, New Jersey
3 boxes Di Met

American Chemical Paint Company
Ambler, Pennsylvania

4 lbs. Weedazol
4 lbs. Muno
6 lbs. R'eedone

American Cyanamid Company
New York
50 lbs. calcium cyanamid
1 can amino triatole
1 can experimental Herbicide #6249

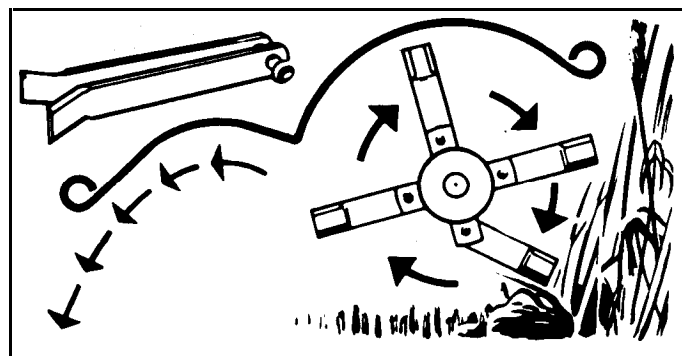
Carbide and Carbon Chemicals Company
New York
2 lbs. Crag Herbicide 1

THE MOTT HAMMER KNIFE MOWER

This new mower which has recently appeared on the market operates on an entirely different principle from any other mower. The cutting action of the Hammer Knife Mower is that of a scythe. This is accomplished by pivotally mounted, spirally arranged pairs of knives on a steel shaft which revolves at approximately 2000 RPM. At this speed centrifugal force causes the knives to stand straight out, pulling in grass and weeds as they cut and shred them. Because the knives are loosely hung, they merely fold back when a rock is struck and resume their normal position when clear. By changing the knives the mower can be converted to a renovator in a few minutes time.

Several models are available for both home lawn and large turf area uses.

In order that the information in our publications may be more intelligible, it is sometimes necessary to use trade names of products or equipment, rather than complicated descriptive or chemical identifications. In so doing it is unavoidable in some cases that similar products which are on the market under other trade names may not be cited. No endorsement of named products is intended, nor is criticism implied of similar products which are not mentioned.



THE CUTTING ACTION OF THE
MOTT HAMMER KNIFEMOWER

LANDSCAPING - A NEW MAGAZINE

A new monthly magazine devoted to the broad field of landscaping installation and maintenance was launched recently in Southern California, with Mr. Glenn L. Black as editor. October 1955 issue carried an article on dichondra by Dr. Jesse D. Skoss. The magazine is well printed and illustrated and will doubtless appeal to many people concerned with this field. The publication office is at 4720 East 2nd Street, Long Beach 3, and domestic subscriptions are \$3.00 per year, or \$5.00 for two years.

Later in the summer further tests were conducted with Di Met at this same rate, and a very similar product, R'eedone Crabgrass Killer L 850 (disodium methyl arsonate, 31.65%). The latter material was used primarily at the recommended rate for temperatures below 80°F., 24 lbs. per acre.

Complete kill of nearly mature crabgrass was obtained with 2 or 3 applications of these materials after the middle of September. Bentgrasses were unharmed by several applications at the recommended strength, and heavy crabgrass infestations were removed from a young dichondra lawn with no injury to the dichondra. Pensacola bahiagrass, however, is very susceptible to this material and was severely injured by only one application. The creeping red and Chewing's fescues were also severely* injured by this chemical, and it should not be used on lawns containing large amounts of these grasses.

Soil moisture appears to be an important factor in

the effective use of the disodium methyl arsonate herbicides. Crabgrass was not killed when the material was used on a lawn which was not watered frequently. The soil should be moist at the time of application, and the lawn should be watered regularly after treatment. When day temperatures are high, there is more injury to the desirable turfgrasses.

These tests indicate that the disodium methyl arsonate crabgrass killers are very effective when properly used and are superior to the older contact herbicides. This material should be readily available next season under these and other brand names.

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SOUTHERN CALIFORNIA TURFGRASS FIELD DAY

The Southern California Turfgrass Field Day held October 11, 1955, was highly successful with an attendance of over 400. This was one of the largest groups to ever attend a turfgrass conference or field day in Southern California.

The field day began at 12 noon at the U.C.L.A. turf plots, where several short talks were given, explaining the research program being conducted there. After several visits to places with interesting turf grass developments, the group stopped at the Meadowlark Country Club for dinner and the evening program of talks and a panel discussion.

SALT TOLERANT GRASSES

European beachgrass, *Ammophila arenaria* growing on the beach at Venice, California, is a coarse grass used to hold drifting sand. This very salt tolerant grass was first used on the west coast at Golden Gate Park, San Francisco, and is now found in a number of places as far north as Washington State. A related native species, the American beachgrass, is found along the Atlantic Coast but not here.

There are several other grasses of possible value in sandy soils high in salt. Two native grasses, *Distichlis spicata*, Seashore salt grass, and *Monanthochloe littoralis* also commonly known as salt grass are of potential value and should be investigated further. Several of our standard turfgrasses may also be of value in some places. These are St. Augustine grass, alta fescue, creeping bent, and common bermudagrass. The Zoysias have been reported to do very well along the beaches in the East, but they have not been tried here under those conditions.