

# NORTHWEST TURFGRASS TOPICS

VOL. 7, NO. 2

PUYALLUP, WASHINGTON

SEPT. 1965

## Program 19th Northwest Turfgrass Conference

HAYDEN LAKE GOLF and COUNTRY CLUB  
Hayden Lake, Idaho

Program Chairman: Dr. Roy Goss

### Wednesday, September 22

#### MORNING:

- 7:00-12:00 Conference Golf Tournament  
10:00- 1:00 Registration, Clubhouse

#### AFTERNOON:

##### CHAIRMAN

—Milt Bauman, Overlake Golf and Country Club, Medina, Washington

- 1:15- 1:25 Welcome: Ken Putnam, Supt., Seattle Golf and Country Club, Seattle, Wash.  
Hayden Lake Country Club Official  
1:25- 2:00 "The Place of the University in Future Urban Development": Dr. Mark T. Buchanan, Director of Research, College of Agriculture, W. S. U., Pullman.  
2:00- 2:45 "Turfgrass Disease Research Report": Dr. C. J. Gould, Plant Pathologist, Western Washington Research and Extension Center, Puyallup, Wash.  
2:45- 3:10 Coffee Break  
3:10- 4:10 Turfgrass Agronomic Research Report, "Nutrition and Weed Studies": Dr. Roy L. Goss, Assistant Agronomist and Extension Specialist in Agronomy, Western Washington Research and Extension Center, Puyallup, Wash.

### Thursday, September 23

#### MORNING

##### CHAIRMAN

—Dr. David Allemendinger, Supt. Western Washington Research and Extension Center, Puyallup

- 8:30- 9:00 "What's New in Turfgrass Varieties?": Kenneth J. Morrison, Extension Agronomy Specialist, W. S. U., Pullman  
9:00- 9:30 "Performance of Bluegrass Varieties Cut at Two Heights": Professor Alvin G. Law, Agronomist, W. S. U., Pullman  
9:30-10:15 "Low Temperature Injury in Turfgrasses": Dr. V. C. Brink, Chairman, Division of Plant Sciences, U.



B. C., Vancouver, British Columbia

- 10:15-10:35 Coffee Break  
10:35-11:35 "Winter Damage to Turfgrass.": Dr. James Beard, Michigan State University, East Lansing, Michigan  
11:35-12:15 Association Membership Meeting

#### AFTERNOON

##### CHAIRMAN

—Byron Reed, E. P. Baltz Co., Portland, Oregon

- 1:30- 2:15 "Planting Ornamentals-What, When, Where?": H. T. Abbott, Associate Professor of Landscape Design, W. S. U., Pullman  
2:15- 3:15 "Control of Insects and Diseases in Ornamentals and Shade Trees": Ground Sprayers Panel, Jack Daniels, Chairman  
3:15- 3:35 Coffee Break  
3:35- 4:15 "Are You A Good Boss?": Bill Bengeyfield, Western Director, U. S. Golf Association, Green Section, Garden Grove, California

#### EVENING

- 6:30- 7:30 Social Hour  
7:30- 9:00 Banquet and Entertainment  
9:00-12:00 Dancing, Live Music

### Friday, September 24

#### MORNING

##### CHAIRMAN

—John Zoller, Supt., Eugene Golf and Country Club, Eugene, Oregon

- 8:30- 9:15 "Maintenance of Athletic Fields": Dr. Norman Goetze, Extension Agronomist, O. S. U., Corvallis, Ore.  
9:15-10:15 "Water Movement in Soils and Some Associated Problems": Dr. D. L. Guettinger, Extension Soils Specialist, W. S. U., Pullman  
10:15-10:40 Coffee Break  
10:40 Question and Answer Session, Conference Roundup

**DON'T MISS THIS ONE . . . SEE MAP PAGE 8**



## From The President's Corner

By Ken Putnam

Are you getting all you should out of the Northwest Turfgrass Association? If not, ask yourself two questions. Have I made an honest effort to obtain help? What have I done for the Northwest Turfgrass Association?

These two questions are the keys to the success of the Association. The more people we can help, the more important the association becomes, and the more you do for the association the more important you become. This certainly is not a one-way ticket, but if we do not watch ourselves, this could very easily end one-sided. All too much work is being left to a few people, even to the point that if someone does not get the information desired, they take it to be the fault of the Association and its officers, when in reality it is the fault of the member for not seeking the information.

The place to start is the Annual Turfgrass Conference to be held this year at the Hayden Lake Golf Club, Hayden Lake, Idaho on September 22, 23, and 24. Don't miss this conference!

Are we setting the example we should when we meet at the golf clubs? The golf course superintendents conduct should be at all times above reproach, and we should see that our guests conduct themselves in a suitable manner so as to be an asset to our association. Some very

(Continued on page 4, column 3)

## Our Horticultural Occupations Course

by Norvald Gomness

On March 31, 1964 the Seattle Manpower Advisory Committee met in the office of the Manager of the Seattle Employment Security Department to discuss proposals for training unemployed persons. At this meeting it was proposed that a training program be established, in cooperation with the Bellevue, Wash. Public Schools, for training of superintendents for golf courses, cemeteries, etc. This proposal was approved by the Committee.

A survey taken of educational and/or training facilities available to persons interested in working in the turfgrass and ornamental horticulture field, shows that colleges and universities are doing an excellent job of providing training for the Agriculture teacher, or for the research worker, but almost nothing is offered for the person who is interested in getting out in the field and doing the work. The need for specialized training facilities and educational techniques to afford adequately trained personnel available to the labor market has been agreed upon by educators in agricultural universities.

On July 8, 1964 the Bellevue School District submitted to the Washington State Employment Securities Department in Olympia, an Application for Occupational Training Program under the Manpower Development and Training Act. The estimated cost to the government for sponsoring this program to re-train unemployed persons was approximately \$94,000.00 for the year-long program. Included in the above figure were funds to be paid weekly to the students in the program to help provide them an income while enrolled in this training. At the ensuing meeting of the legislature our Application received approval, and federal funds were allocated to support our training program. Mr. Norvald C. Gomness, who has a Master's Degree in Agriculture, was appointed to instruct the course.

The general objectives of our training course in Horticultural Occupations were:

1. To give students a thorough understanding of the practical and fundamental aspects of turfgrass and ornamental horticultural science; including: soil and plant nutrition, water movement in soils, drainages, irrigation, soil-water-plant selections, plant physiology, plant identification, disease, insect and weed identification and controls, plant pruning and shaping, and turf renovation.
2. To provide the student an ability to operate, maintain and repair turf equipment and to perform other mechanical skills as are likely to be encountered on the job.
3. To give the student a knowledge of the business management aspects of record keeping, cost analyses, budget preparation, and legal aspects of pesticide application and regulations.

In general, it was our objective to provide these workers, who had only a limited educational background, with sufficient knowledge and skill to be employable in several categories within the Horticulture industry, and/or its related fields.

Upon successful completion of our program students should qualify as assistant grounds superintendents, foremen at golf courses or cemeteries, supervisors of park or school district grounds departments, employees or managers of nurseries, greenhouses, or landscape construction firms.

With these objectives firmly in mind, on August 31, 1964, our first class began. Starting our program were 22 men ranging in age from early 20's to late 40's. Most of the students in the class were from the Seattle Montlake Terrace area, with three from the Kent-Auburn region, and none from the immediate Bellevue area. Previous occupations of those enrolled in the class varied, and included firemen, truck drivers, golf course workers, newspaper distributors, railroad men, and even a minister. Seventeen of the students were married; the educational level of these men ranged from high school graduates to as many as eight years of college.

(Continued on page 6, column 1)

# Some Reasons For Summer Turfgrass Losses

By Roy L. Goss

The summer of 1965 in the Pacific Northwest has brought out many problems in the turfgrass field that have been more-or-less absent since about 1958. As many of you recall, 1958 was the last hot summer we have experienced. However, this year has been somewhat of a repeat, even though not so hot and dry, but at least it has brought out many of the same problems we experienced at that time.

We tend to forget from year to year the sort of problems we have had in the past and are prone to employ certain management practices that may not be best for weather conditions prevailing at the time. In this article, I will point out several areas where problems have occurred this year and some points that you should take into consideration in future management programs.

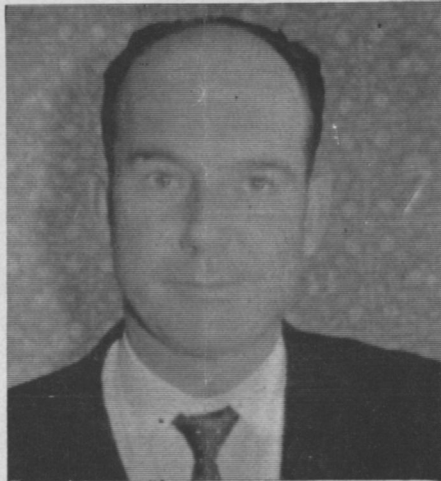
## Soil Oxygen

It is just as important to maintain a good level of soil oxygen for plant roots as it is to maintain it for our own use. Without soil oxygen root respiration cannot proceed normally. When roots do not respire, they cannot take up plant nutrients, nor carry on other metabolic functions required to produce a good turf. There are several factors that affect soil oxygen and can be listed as follows:

(1) If soils are too heavy, that is, contain too much silt and clay, there is generally a reduction in the non-capillary pore space devoted to better oxygen relationships. If there is a high percentage of capillary pore space in the soil, they will tend to hold more water and less air, hence, the slightest amount of over-irrigation may produce saturation of the soil. The only way this problem can be eliminated is to use soils or soil-building materials that will produce more non-capillary pore space and protect the soil from loss of structure.

(2) Aeration is another means of opening up the soil so that

(Continued on page 5, column 1)



## The Oregon Compost Heap

by Byron Reed

I use this opportunity to mention, as a past president of the Northwest Turfgrass Association, the great benefits to be gained by attending the Northwest Turfgrass Conference on September 22, 23, and 24, 1965. This conference will be held this year at Hayden Lake Golf & Country Club at Hayden Lake, Idaho. I was privileged to attend the board of directors meeting earlier this year, and I was impressed with the program which is undoubtedly printed in this paper. A great deal of time was given by your board to arrange these conferences for your benefit. Your attendance is complimentary, your absence contrary.

An extremely fine ladies program is arranged, and I am sure that your getting their approval will automatically place you in Hayden Lake, Idaho, in September.

We are very pleased with a visit to Oregon by your Turfgrass Association President, Mr. Ken Putnam, and we hope that we will get Ken back for another visit this year. We believe Oregon is the greatest recreation state in the Union, and it appears that Ken is leaning a bit this way.

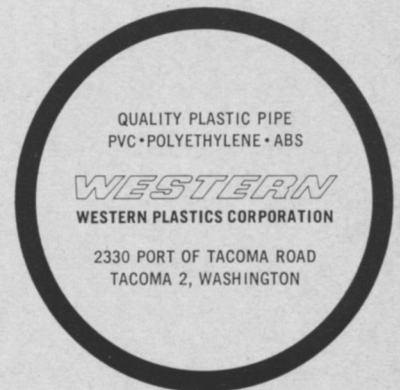
The Oregon Turf Managers Association is planning to print their monthly meeting schedule for 1966 in the Turfgrass Topics. This will assure all our friends in the Northwest that they are welcome to attend our meetings, and they will know when they will be held.

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This column covered all the new golf club building in the last issue and, since that date, some progress has been made. Gresham Country Club, 12 miles east of Portland, is due to open in August of this year. Salishan Golf Club, on the coast, is opening a new nine this fall.

Again, I hope to see you all at Hayden Lake, Idaho, this September!

# "Turfgrass Times" Being Published

By Roy L. Goss

Dr. Gene C. Nutter, who resigned last December as Executive Director of the Golf Course Superintendents' Association of America, and Editor of the Golf Course Reporter, has announced that he is entering the publishing business. The first issue of the new magazine "Turfgrass Times" will appear next fall.

To be published by Turfgrass Publications, Inc., Turfgrass Times will serve the entire turfgrass industry as a journal of technical information, news and developments, professional activities and advancement, and business and management information. Circulation will boast the largest coverage of any publication in the turfgrass field.

As publisher-editor of Turfgrass Times, Dr. Nutter will be combining his broad background in turfgrass research and teaching, sod production, publishing and editing, and trade association management. Prior to serving as Executive Director of GCSAA during its growth years of 1959 to 1965, Nutter was for eight years a professor at the University of Florida in Turfgrass Management and Research. A turfgrass agronomist by training, he completed undergraduate studies at Ohio State University, and later received his Ph.D. from Cornell University, specializing in turfgrass science. Widely traveled throughout North America, Nutter has participated in many national, state, and regional turfgrass conferences, and he holds membership in numerous scientific, honorary, and trade organizations in turfgrass and related fields. He is author of more than one-hundred technical, trade and popular articles in the turfgrass field.

Dr. Nutter said: "I have always looked forward to the time when I could link the diverse and gigantic turfgrass industries through my own publications."

Joining Nutter as Vice President of TPI, and Managing Editor of Turfgrass Times is Eddie L. Ervin, Jr., former Publications Director for

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GCSAA. Ervin brings a rich background in publishing and journalism. Before joining GCSAA, he was Director of Information, and Publications Manager for the United States Golf Association, Managing Editor of Golf World Magazine, and served in various capacities with daily newspapers in South Carolina and Florida. Ervin is a graduate of Erskine College.

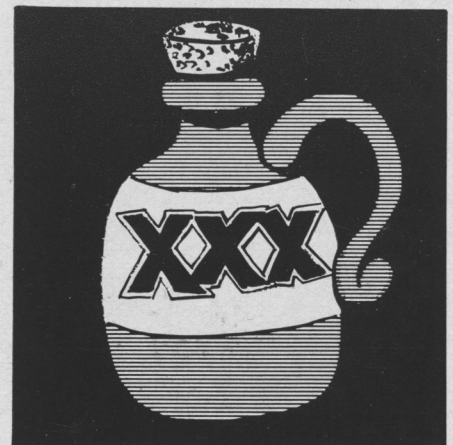
(President's Corner—cont. from page 2)

undesirable remarks came out of the May 28 meeting at Overlake. Let's watch this and do not let it happen again.

This is the final article under this by-line, and also the end of my term as president. It has been a very pleasant and rewarding experience and everyone has been most cooperative. The officers and Board of Directors have worked hard to make this year and this conference a success.

We could not close this without saying a word about two work horses, namely, Dick Haskell, our treasurer, and Dr. Roy Goss, our Executive Secretary. It is they who carry the biggest burden and an outstanding job they are doing. We are grateful to them for their efforts to improve and maintain the organization's high standards.

I feel confident that our incoming president and officers will continue to operate the Northwest Turfgrass Association with due regard for the traditional adherence to the needs of the organization and its members.



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(Summer Losses—cont. from page 3)

air can permeate into the surface, and also eliminate compaction at the same time.

#### Effects of Soil Temperature

When soil temperatures are high there is a greater respiration rate. Hence, in hot weather soils require more air or oxygen than when soil temperature conditions are cooler. This situation can often cause a dilemma, since most turfgrass managers are prone to greatly increase water application during hot weather to the point of saturating the soil and further excluding oxygen.

When soil temperatures are cooler, that is within optimum ranges, root respiration proceeds at a slower rate and nutrient uptake is much more effective and efficient.

#### Soil Saturation Problems

We might say that the roots of a plant can actually die in the midst of plenty of water if there is no oxygen to permit normal metabolism within the roots. As pointed out above, the degree of saturation is usually controlled by the amount of capillary and non-capillary pore space. The non-capillary pores are the most important from the standpoint of aeration because their aggregate volume represents the minimal air capacity of the soil except for brief periods after a rain or an irrigation, and during such times these are the pores which allow gravitational water to percolate. The smaller pores are the capillary pores and are very important because they determine the maximum amount of water a soil can retain, which is the field capacity.

High porosity is of no advantage at all if most of the pores are so small that they hold capillary water. Under such conditions, the soil is essentially waterlogged at field capacity. Non-capillary porosity of 12 per cent or less, will create a waterlogged state from time to time.

Soil saturation will often result in the surface rooting of turfgrass plants. This is a dangerous situation since only a day or two without water, under certain heat conditions, may cause a loss of turf because the thatch layer and the soil surface will not retain sufficient moisture to last for more than a day or two under

severe heat conditions. Surface rooting is likewise, dangerous in that extreme thatch conditions can be promoted in this manner.

Algae will form under extremely wet soil conditions. Conversely, the best method of eliminating algae is to maintain surface dryness as much of the time as possible. Perhaps nothing favors the development of *Poa annua* better than good wet surface soil.

#### Fertilizer Injury

Many examples of fertilizer burn have been experienced this summer. This is nothing particularly new since this does occur practically every year or anytime during the fertilization season. The most drastic results from fertilizer burn do occur, however, during the summer months when there are heat and moisture stresses. Oftentimes the turfgrass manager who has burned his turf with fertilizer might suspect that this is the cause, however, he would like to have the diagnosis that it is some type of disease or something that he actually didn't cause. This is only human nature, however, this point should be considered very carefully in diagnosing your problem. Fertilizers can burn in principally two ways as follows: 1) The actual concentration of the fertilizer around the crowns and roots of the grass and, also, on the grass leaves. This is simply a case of the fertilizer pulling water from the plant itself. A plant cannot stand the loss of much water without going into permanent wilt. Concentration burns usually are caused by spilling, miscalculations, or the puddling of water immediately after application of fertilizer. 2) Fertilizer burns can result from high salt concentrations in the soil. The reaction here is one of a higher osmotic pressure of the soil solution than the solution within the plant. If the soil solution is stronger than that in the plant, it cannot remove water from the soil regardless of the amount in it. 3) Bruising the grass by any means accentuates grass injury following fertilizer application. This can be done by simply walking, mowing, or any other mechanical means.

#### Herbicide Injury

Most chemical reactions are influenced by temperature. There is a law that says for each 10 degrees

(Continued on page 6, column 3)

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(Hort Program—cont. from page 2)

Classes were held from 8:00 a.m. to 3:00 p.m. in the Newport High School, with shop training at Bellevue High School. Classroom work was supplemented by field trips to golf courses, parks, cemeteries, and commercial firms.

Shop training, totaling approximately 196 hours, consisted of developing skill in maintenance and repair of small motors, grinding and lapping of lawn mower reels, blades and bed knives, electric arc and acetylene welding of turf equipment, spray painting of metal and wood equipment, grinding and sharpening of small tools.

Field training, making up approximately 256 hours, developed of turf maintenance and construction equipment, ability to install irrigation and drainage systems, proper application of liquid or dry fertilizers and other agricultural chemicals, how to properly grade and make soil preparations for turf seedbeds and other ornamental plantings, handling of various types of sprinkler heads for proper irrigation, correct seeding and planting, cut-

ting and laying sod and renovation of turf areas.

In the classroom, approximately 27 hours were spent in studying soils in general, to acquire a general knowledge of how soils are formed and how soil types differ.

The studying of soil mechanics, consisting of approximately 330 hours, allowed the student to recognize various soil types and confirm his beliefs by running soil tests, in order to determine irrigation installations needed, to properly design efficient disposal systems and run percolation tests.

During the study of soil chemistry, consisting of approximately 324 hours, students learned methods of soil and plant-tissue nutrient analyses and determination of exchange capacity of soil, enabling them to operate field equipment to determine when crops need fertilizing and how much to apply, to match irrigation and fertilizer application to receive maximum benefit from each, to run pH tests to determine acidity of soil and how to modify or change it if necessary, and to recognize need for and run total salts tests.

During the approximately 160 hours of study spent on physiological and pathological problems (their identification and control) students gained skills in differentiating between insect or disease damage and nutrient excess or deficiency problems. They learned certain conditions give rise to certain problems and how to minimize or prevent these resulting conditions from recurring. They studied major insect, disease and weed problems and typical methods of controlling each.

In the area of plant identification and management, on which 90 hours were spent, students learned major grass and ornamental plant varieties and their uses, use of keys to identify plants, how to propagate plants, prune and shape plants.

Approximately 105 hours were spent studying Business Management to teach students the state regulations regarding pesticide applications and some of the legal aspects of pesticide regulations. Students were taught to analyze costs of equipment and materials in relation to work accomplished, prep-

(Continued on page 7, column 2)

(Summer Losses—cont. from page 5)

rise in temperature, the rate of a chemical reaction is usually doubled. It becomes apparent, then, that severe herbicide injury can be experienced on a hot day that would have resulted in optimum results with the temperature being 15 degrees to 20 degrees cooler.

The best way to avoid herbicide injury is to spray before the weather gets too hot (not over 80°F.) and delay any other weed control activities until late season. Late season weed control is an extremely effective weed-killing period. Even those weeds that were only injured may not be able to live through the winter months.

Immediately after herbicides have been applied to turfgrass areas, mechanical injury should be avoided. By this we mean do not mow or allow extensive traffic for a day or two since this can cause serious injury.

A piling up of clippings within 1 to 2 days after a herbicide has been applied will accentuate damage to the turf. These clippings tend to concentrate the volatile herbicides and increase the grass kill.

#### Summer Mechanical Injury

Power raking of home lawns or lawn-type turf during the hotter summer months can result in serious injury to the grass. If the degree of power raking is sufficient to help eliminate thatch conditions, then it will likewise be severe enough that considerable damage will be experienced. Power raking should be confined to early fall or to early spring conditions.

Verticutting on golf course putting greens can be drastic if extreme care is not exercised. If verticutting is practiced at all during the hot summer months, it should be extremely light and do not cut into the crowns of the grass. Many of the golf course putting greens are composed primarily of *Poa annua*, and this grass species can withstand very little injury during stress periods.

The cutting height of the grass should not be lowered during the hotter summer months, if at all avoidable. Even if your grass is being cut higher than the recommended cutting heights for its intended

(Continued on page 7, column 1)



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(Summer Losses—cont. from page 6)

use, it is not a good practice to do any cutting down or lowering of the height during the summer months. The best time to lower your mower is in September or very early in the spring, around February and March.

Oftentimes turfgrass will, for no better term, puff up and is scalped off by the mowers. There are quite a few reasons for this as follows: 1) Overwatering, causing a drowning of the roots which induces surface rooting. 2) Excessive thatch formation. 3) Cutting the turf too high. 4) A dull mower which will not cut but will pull or tear the grass.

**How to Keep Out of Trouble**

1) Avoid fertilizer burn by either applying concentrates in extremely low quantities during July and August, or 2) Apply slow-released fertilizers such as the urea-formaldehyde forms of nitrogen, or other good organic fertilizers. 3) Avoid excessive use of potassium during these months since this is a strong salt and excessive amounts can cause grass injury. 4) Either use no herbicides or only judicious use of them during July and August. 5) If mechanical treatments are made, do them very lightly and not vigorously. 6) Critically analyze your watering program, and do not over-duce it. Soil oxygen is very important and watering can eliminate soil oxygen. In the future, soil tensiometers will play a more important role in helping to control water. 7) Maintain adapted species that will withstand the intended use and climate. 8) Treat for insects, particularly, sod webworms. 9) Observe, carefully, the rules for disease control.

Just remember that there is always an answer for nearly everything that happens with a growing plant. The diagnosis may not be too simple nor too obvious, and this is the hardest part of the whole problem. The simplest way to stay out of trouble, then, is to observe the points discussed above and, certainly, this will help to eliminate the possible causes of the problem. At least, it will make diagnosis of the problem much simpler.

.....  
**SEE YOU AT  
THE CONFERENCE**  
.....

(Hort Program—cont. from page 6)

ation and keeping of records and the value of these records, and how to prepare and present a budget.

At the conclusion of our program we requested a team of experts in the field of agriculture and horticulture to come into our facility and evaluate the degree of success to which we fulfilled the initial objectives of our program. The team comprised of Dr. Roy Goss—Extension Agronomy Specialist at Washington State University, Mr. Ken Maekawa — Maekawa Brothers Greenhouses, and Mr. Art Mehas—County Extension Agent in Horticulture, Agricultural Extension Services, spent two days interviewing students who were completing their training in our Horticultural Occupations course. Briefly, the evaluation team found: the objectives of the course were reasonable, the men trained in our course were meeting the needs of the industry, the program needed a little more practical experience in plant, weed, disease, and insect identification and less time spent in the soil chemistry area. It was also the feeling of the team that the field training division of the course could be improved by the use of school-supervised demonstration plots to allow students first-hand experience in relating weed identification to herbicide selection and application and, in the same manner, approach the practical experience of disease and insect control and identification. In summary, the team felt that the students had been well taught and had accumulated considerable knowledge. Recommendations made for improvement to the program were as mentioned above.

On August 13, 1965, 13 students graduated from their year-long training. All of these men were permanently employed on full-time jobs upon graduation.

Although the federal funds will not be available to support our training program in the future, the Bellevue School District is undertaking the sponsorship of this vocational training under their new community college. The second class of Horticultural Occupations is scheduled to begin September 7, 1965, contingent upon adequate enrollment. Previously, under the M.D.T.A. sponsorship, only certain

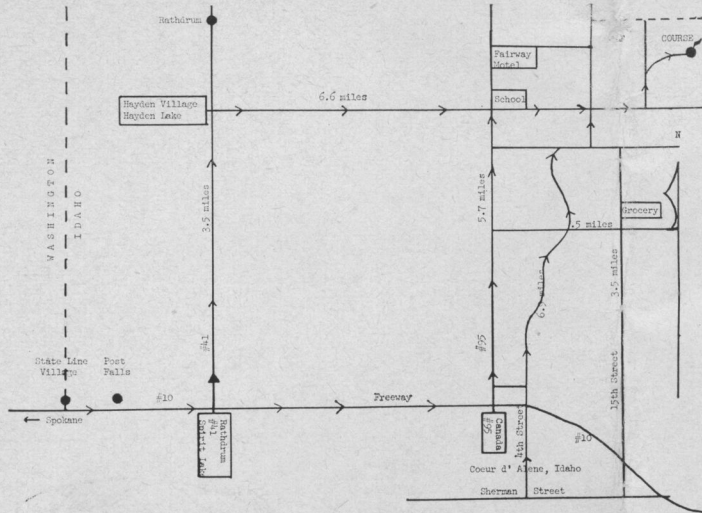
unemployed persons were eligible for training in our course. Now, however, since the course is being offered by the Bellevue School District, enrollment is open to anyone interested. We look forward to having an even more successful program this year with the benefit of making changes as suggested by the evaluation team. Any interested persons may contact the office of Extension Services, Bellevue Public Schools, GL 4-8971, Ext. 338 for further information and/or application for admission forms.

  
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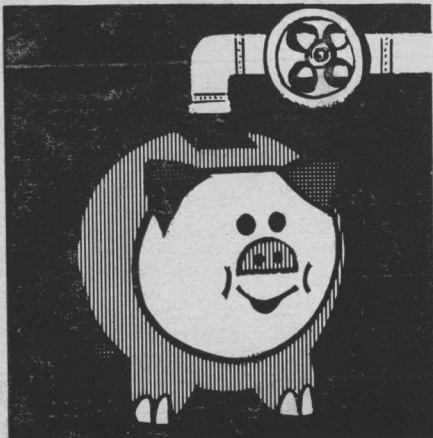
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## HOW TO GET JOHNS-MANVILLE TURF & TORO SUPPLY, INC.

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 High calcium, sacked, bulk or spread

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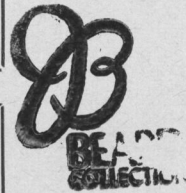
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