AGRO-CHEM, INC. is
YOUR PROFESSIONAL APPROACH TO
LAWN MANAGEMENT IN 3 EASY
AND POSITIVE STEPS:

1. TEST YOUR SOIL
2. PRESCRIPTION FORMULATE YOUR FERTILIZER
   TO THE REQUIREMENTS OF YOUR SOIL TESTS
3. PROGRAM YOUR MANAGEMENT TO YOUR REQUIREMENTS

SOIL TESTS CONSOLIDATED FOR PRACTICAL
& ECONOMICAL TREATMENT

YOUR TOTAL SOURCE FOR PROFESSIONAL MANAGEMENT

SOIL TESTING—The most positive and effective approach —
developed through 30 years of Research & Development.
This information is now available to you to guide you in
the proper and most effective way of managing your lawn
areas.

FREE SOIL TEST & RECOMMENDATIONS for
those attending our Lawn Management Training Clinics.
Soil Samples must be submitted at least 60 days prior to
reserved clinic date. Complete Soil Sampling Kit with
instructions will be sent upon receipt of payment for reserved
seat. Your Soil Test Results will then be explained in detail
at the clinic so you will have full, first hand knowledge of
what you should do on your grounds.

PRESCRIPTION FORMULATING—Putting your soil test
recommendations to work for you in the exact manner re-
quired by your soil and lawn. In the past, Soil Testing was
almost useless because very few people could obtain the
exact materials required. Now, due to our computerized
prescription blending plant, we formulate exactly to soil
test recommendations or to your specifications. These for-
mulations can contain the Primary Nutrients (NPK), the
Secondary and Micro Nutrients (Ca, Mg, S, Fe, Zn, Mn,
Cu, B) along with Soil Looseners, and/or Rebuilders, Mat
and Thatch Decomposers and other required products —
all can usually be formulated into one easy to use product.

APPLICATION EQUIPMENT—Specially designed appli-
cation equipment that is inexpensive to purchase, and most
important, easy to use.

MATERIALS—A most complete line of Specialty Fertilizers,
Herbicides, Fungicides, Insecticides and Special Purpose
Products and Seed Mixes.

LAWN MANAGEMENT TRAINING CLINICS—Designed
especially for the man in charge of programming, pur-
casing and directing the maintenance of lawn areas of in-
dustrial and commercial property's. These clinics are
designed to provide the manager with the understand-
able and useable knowledge so that he will be able to spot
problems, understand their cause, correct and prevent
them, plus select the best products, equipment and method
to use for the individuals own area.

These clinics are based on scientific and proven facts that
are applied to the practical approach to managing
grounds.

Special purpose products for solving problems (and pre-
venting recurrence) are introduced as are new types of
equipment and techniques. Individual questions and
problems are answered and solved.

All aspects are thoroughly covered in a totally under-
standable, "Eyeball to Eyeball" basis. A total concept you
can't afford to miss.

Subject Matter includes:
- Grass and Plant Growth Characteristics
- Fertilizers—Primary, Secondary, and Micro Nutrients.
  Their function in soils and plants. Raw Material Sources
  — Natural and Synthetic
- Soils—Problems and Solutions
- Soil Testing—Testing Methods Available - Understanding
  the value and interpretation of results - value of
  research - programing according to recommen-
dations. Review of your soil test.
- Lawn Care—Listing problems, objectives, budgets and
  programing to meet the requirements of the area. Us-
ing nature's rhythm as a positive aid.
- Weed Control—Lawns, Post and Preventative Pro-
cedures, Contact, Systemic, and Soil Sterilants, In-
dustrial Weed Control, Aquatic Weed Control.
- TREE, ORNAMENTAL AND SHRUB CARE—Root Feeding,
  Spraying.
- Equipment—Selection, Calibrating, and operation.
- Application Techniques—Mising and applying materials
  Planning and programing. Plus much, much more.

These 3 day clinics will be presented in January, February and
March, 1979. Seating is limited; therefore make your reservations
early.

Call Mr. Joseph for details, costs, and dates. 312-455-6900.
**FLCRA from page 8**

The contractor must prove to the satisfaction of the Secretary of Labor the existence of a liability insurance policy for damages to persons or property arising from the contractor's operation of vehicles for the transportation of migrant agricultural workers. If the contractor is going to drive the vehicle, he must submit a doctor's certificate and a set of his fingerprints.

Every full-time or regular employee of a Farm Labor Contractor must obtain and carry a Farm Labor Contractor Identification Card issued by the Secretary of Labor if the employee engages in any of the activities covered by the Act.

The law prohibits any person from hiring a farm labor contractor to supply farm laborers until he determines that the contractor possesses a current certificate.

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**Imprinter from page 10**

Penalties for violations of the Act include fines up to $500 and one year in prison. Subsequent violations are subject to a fine not to exceed $10,000 and up to three years in prison. The Secretary of Labor may assess a fine of not more than $1000 for each violation of the act.

Copies of the act may be requested from the local Employment Office or the Wage and Hour Division of the Department of Labor.

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**JR-3 Aerifier**
Self-propelled aerifier for greens and general purpose. Fast, maneuverable, low maintenance. Scoops out small, pear-shaped, loose-walled cavities to admit air, water, and fertilizer to grass roots.

**TM-140 Aerifier**

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Q: Last winter many of our lawns were covered with snow mold. What is the best fungicide to apply, when should it be applied and at what rate?
A: The two most common snow molds are Fusarium blight (pink snow mold), which causes small, circular patches to develop in the turf, and Typhula blight (gray snow mold), which develops only under snow cover and produces larger, more irregular patches. Snow molds readily occur during periods of high humidity and air temperatures of 32° to 45° F. Snow falling on unfrozen ground provides ideal conditions for disease development.
A combination of fungicides will give the best results, and there are several labeled for either or both of the snow molds. We have found an application of Tersan 991 plus Tersan SP about mid-November (before snow cover) gives good results. Of course, another application in midwinter will increase the protection, but this is not often practiced because of the expense and the uncertainty of a sufficient thaw for a treatment. Always follow the manufacturer's directions for rate and other information.
Cultural practices can help decrease the incidence and severity of snow mold and should be considered where snow mold is a problem.
1) Remove excess thatch
2) Avoid succulent turfgrass growth in late fall
3) Rake leaves in fall
4) Continue mowing in fall until turfgrass growth ceases
5) Rake matted patches of snow mold in spring

Q: We own a golf course in southeastern Iowa. Our problem is crabgrass. What is the best product(s) to use and at what time of year? Time and money are extremely important as my wife and I do all the work ourselves.
A: I checked with Iowa State Extension Horticulture and was told that their tests have shown no significant difference between the cost or effectiveness of Balan (available only as a granule) and Dacthal. Both products must be applied before the crabgrass seeds germinate which, in southeastern Iowa, occurs about the second week in April, depending upon climatic variations. The best biological indicator in your area is lilac and the materials should be applied before the earliest lilac blooms.
Q: Roundup is a systemic herbicide that is transferred to the root system after leaf application and absorption.

1) Is it absorbed by any green tissue?
2) What, exactly, happens in the roots?
3) How persistent is it in a plant exposed to it but not killed?

A: 1) Roundup is absorbed by any green tissue although green bark would absorb less material than green leaves. The Roundup label states DO NOT SPRAY GREEN BARK.
2) Roundup (glyphosate) inhibits aromatic amino acid synthesis.
3) Roundup can overwinter in plant tissues and cause injury symptoms to appear the following year, depending upon the applied concentration and target species.

Q: Is there any safe method to root prune maple trees that are continually upheaving sidewalks?

A: Maples are notorious for the upheaval of sidewalks because of surface rooting. Roots can be selectively pruned without causing noticeable injury if only a few roots are removed per season. You should use careful judgment when considering the removal of large roots. Crown thinning will help re-establish the equilibrium between the roots and shoots and minimize injury. Proper fertilization and watering are also beneficial.

To help prevent a recurrence of the problem, deeper rooting can be encouraged by improving water drainage and air penetration into the soil.

Q: What is the best method of controlling bermudagrass while trying to establish zoysiagrass?

A: The best method is to treat the area with methyl bromide prior to planting zoysiagrass, but because of the hazards involved, I would not recommend it. The most practical control is an application of Roundup prior to planting zoysiagrass and periodic spot application as needed until the zoysiagrass completely fills in the area. Roundup is non-selective and will kill both bermudagrass and zoysiagrass in the applied area. I am not aware of any material that will selectively control bermudagrass without also harming the zoysiagrass.

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**BIG SAVER**

**Vermeer Stump Cutters.** Fastest, easiest, most economical method of removing tree stumps. With four powerful machines, each equipped with a big hydraulically controlled cutting wheel that actually chews even large stumps to chips 6-24 in. below the surface... in minutes!

**Vermeer Root Cutter.** A great preventative maintenance machine that severs tree roots before they buckle sidewalks or streets. Vermeer Log Splitters, available as self-contained units or designed to operate off the hydraulic system of your tractor. Instant firewood... with 22,000 lbs. of force.

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Q. I am planning some new construction that will cause fill to be placed over some tree roots. What precautions should I take to protect these trees?

A. First, consider the tree’s size, age, vigor, species and location, and whether it is economically worth saving at all. Once the decision has been made to save the tree, then limit the fill over the rootzone within the dripline of the tree (where 75% of the roots occur) to 6 in. or less of good topsoil. This small amount of fill will not usually inhibit water or air movement to the roots.

Paramount in protecting a tree is to provide near normal air exchange to tree roots. If the fill is to exceed 6 in. but not more than 12 in., add 6 in. of coarse gravel over the original grade capped with 6 in. of good topsoil. If the fill is more than 12 in. but not to exceed 24 in., then cover original grade with 6-12 in. of coarse gravel capped with topsoil and build a well around the trunk that is about three feet from the trunk on all sides and extends down to the original grade. If fill will exceed 24 in., then the well should be made, drain tile installed, coarse gravel blanket used, and capped with topsoil.

During construction, even where no grade change is scheduled, damage can occur to trees by soil compaction, harmful chemicals or solutions, wounds or fires. To prevent such damage restrict or confine traffic in wooded areas, prevent storage of harmful materials or supplies in the vicinity of desirable trees.

Many designers require that fences or barricades be erected around trees or groups of trees that cover at least a 20-25 ft. area. When removed trees and debris are to be burned, thought must be given to locate and confine burning to areas so heat, smoke and ashes do not injure remaining plants. Also, burning areas should be constantly tended and there should be access to fire fighting vehicles if an accident occurs.

Another consideration during construction in wooded areas is how will the construction effect the micro-environment of that site and what will subsequently effect the remaining plants. Removal of large numbers of trees exposes other trees to increased amounts of sunlight, wind, drier soils perhaps, etc. These anticipated effects could influence the choice of species, size, age, and vigor of vegetation to remain. Such decisions may require the expertise of an arborist, forester, horticulturist, or nurseryman.
“Jobe’s Spikes are a good opportunity to make money in the winter.”

Jobe’s Tree and Shrub Spikes help Jack Lynn make money in the off-season. They extend his business well into winter, when crews would otherwise be idle. Lynn adds, “Jobe’s Spikes take the guesswork out of feeding trees and shrubs. We wouldn’t use anything else.”
"Sound Conditioned" M & M Brush Chippers
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Applying engineering designs which "Sound Conditioned" our industrial scrap reduction machinery, Mitts & Merrill can modify our brush chippers for low noise levels. At the same time, those engineering features which have made Mitts & Merrill the leader for years have been retained.

Optional torque converters and the heaviest steel cylinder — even without an external flywheel — combine to give positive cutting action under the most rugged conditions. Isolates the engine from shock. Minimizes maintenance.

Poly Forms, a division of Presto Products, has introduced Sod-Saver, a landscaping block designed for turf maintenance. The blocks, made of heavy-duty molded plastic that is resistant to water, acid, heat, and extreme cold, is are loakbearing and allow the growth of healthy grassroots.

For use wherever heavy pedestrian and vehicle traffic is a problem, Sod-Saver blocks have the potential of providing new surfaces for golf course and park areas, for overflow parking, for service vehicle admittance for industrial and municipal buildings, and for airplane parking.

The blocks are available with solid cell centers for use in paving or as a temporary roadway. Blocks are 30" x 12" and are available 1-½" thick for normal use and 2-¾" thick for heavy duty use.

Leisure & Specialty Cab Sales have introduced a Specialty Cab, manufactured with the roll bar concept, for the compact sized farm and garden tractors. The cabs are axle mounted and easy to align for quick

Westheffer Turf Division announces a new 300 gallon lawn and tree care spray unit. The unit is completely self-contained and is mounted on a heavy duty pipe skid for ease of loading and unloading. Standard equipment includes a 300 gallon stainless steel tank, electric start 7 h.p. gasoline engine, 10 g.p.m. pump, belt drive reel, and mechanical agitation system. Designed primarily for lawn care operators, the unit will also reach trees and shrubbery to heights of 25 feet.

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1. TCA 551 offers close to 2” spacing between holes.
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installation. They feature an all steel cab with lucite S.A.R. tinted windows, rust resistant under-coating, brand matching paint, and a weight of 315 pounds.

Model DS-3 Spate 3" double acting diaphragm-type water pump from Desco Diesel Energy Systems handles sludge, sand, silt, slurries, viscous liquids and other problem fluids through delivery hoses with little internal wear.

Model DS-3 is compact, lightweight, easily portable and pumps air to 70 psi at approximately 8 cfm, pumps 1700 gallons/hour of water at 100 ft. head and 25 ft. suction, has 29 ft. maximum suction lift without need for a foot valve, and automatically reprimes itself in seconds. Its ability to pump through practically any length of suction and delivery hoses make the new Spate 3" pump a versatile, dependable unit for trench dewatering, industrial desludging, fire fighting, underwater pressure jetting and many other difficult applications. The quick-priming feature also allows it to operate efficiently in an automatic on and off mode for control of seepage.

Model DS-3's patented inertia flow principle enables the Spate Pump to displace two and a half times the actual swept volume of the cylinders at low internal speeds. This delivers high pressure while preventing excessive internal wear on the die cast aluminum/silicon alloy structure, which is also said to be highly resistant to corrosion from sea water.

Life-Time Products offers a unique elevating platform trailer capable of hauling two tons of cargo over the highway. The platform hydraulically lowers completely to the ground or can be raised up to 40" to accommodate most truck and dock heights. The bed maintains a level plane when raised and lowered, avoiding load damage due to cargo shift. This all purpose trailer is designed for one-man loading and unloading of heavy items that would normally require costly lifting equipment or more man-power.

The trailer is furnished with standard equipment such as battery operated hydraulic pump, electric brakes, DOT lights and reflectors, safety chains and ball type hitch for over the highway use.