Roundup® belongs in your turf renovation program.
Renovation of a weedy fairway, sod farm or other grassy area used to be a laborious and time-consuming chore, but not any more.
Not with Roundup® herbicide by Monsanto. Because one application of Roundup will control many annual and perennial weeds, yet allow you to proceed with tillage and planting operations as soon as seven days later.
Roundup also makes sense wherever treatments for grounds maintenance are called for. One man with Roundup in a backpack sprayer can replace many of the herbicides and frequent repeat treatments that are often necessary.

Roundup gets to the root of the problem.
Including many of your toughest vegetation problems, like: bluegrass, bermudagrass, quackgrass, bindweed, johnsongrass, rescue and vaseygrass.
Can you afford to let another season go by without Roundup in your turf renovation and grounds maintenance programs? Your local chemical dealer is the one to see for your supply of Roundup herbicide.

“Translocation” is the key.
Roundup is applied to the weed foliage, absorbed through the leaf surface, and “translocated” throughout the entire plant. In this way, Roundup destroys the entire weed, including the roots or rhizomes.

There’s never been a herbicide like this before.

Monsanto
It runs through the briars, it runs through the brambles and it runs through the timber where a rabbit couldn’t go.

If the British had used a Klearway at the Battle of New Orleans, they could have beaten a hasty retreat and returned to face “Old Hickory” another day.

Foot soldiers couldn’t make it in the Louisiana swamps, and improperly designed equipment can’t make it when you need to clear tough right-of-way.

The one-man operated Klearway is built from the ground up to clean out heavy brush and light timber. Dual head cutting makes a clean swath on the first pass. With Caterpillar® power and full frame articulation, it’s the best machine for right-of-way applications.

For complete details, write Kershaw Manufacturing Co., 2205 West Fairview Avenue, Montgomery, Alabama 36108. KLEARWAY The army of one.

Circle 113 on free information card
ARBOTECT 20-S fungicide helps make it possible to save many elm trees that otherwise would be lost.

Injected into the trunk of the tree, ARBOTECT builds a barrier against Dutch elm disease inside the tree itself. It helps prevent the disease in healthy elms, and can often save infected trees if they are treated early enough.

Used along with sanitation, insect control, and root graft elimination, ARBOTECT can significantly improve the effectiveness of a Dutch elm disease control program.

ARBOTECT differs from other elm fungicides in several important ways:

• It is registered at rates high enough to be effective.
• It is concentrated, requiring much less water for injection, so trees can be treated much faster.
• Thiabendazole, the unique active ingredient in ARBOTECT, is highly effective against Ceratocystis ulmi, the fungus that causes Dutch elm disease.
• Even though it is more effective and convenient, ARBOTECT costs about the same to use as other elm fungicides.

This year, put ARBOTECT to work in your disease control program. It's the strongest protection you can give an elm against Dutch elm disease.
S. B. Hutton, Jr., chairman of the board of The Conard-Pyle Co. inspects stored bare root roses.

These container plants are on pallets ready to be loaded into trailers for shipment.

time the containers are watered. One hundred and fifty tons of fertilizer are applied yearly. The rose fields are fertilized according to soil test data which calls for about a ton of 10-10-10 per acre in the spring and are then top dressed in the fall.

Quonset huts are fertilized at a rate of 150 parts per million nitrogen, through the irrigation system. When material is spaced out the second year for further growth, a drip tube irrigation system is used. Water is supplied from four lakes on the Conard-Pyle acreage.

The roses are sprayed weekly with fungicide, mainly for mildew and black spot. The containers are sprayed every two weeks and about 150 pounds of fungicide are used per spraying throughout the spray season.

Aphids are the major insect problem in the fields and a spray program is instituted as necessary. Mites then become a problem after the plants are brought in. “We use a disease and insect program because buyers won’t accept the plants unless they are disease and insect free,” says Betsy Scarborough, assistant vice-president.

A soil mix of hardwork bark is composted and pasteurized, but not sterilized. It kills the weed seeds present, but does not prevent weed seeds from flying in and becoming established. “It gives us maybe a month grace period of no weeds and from then on through the next two years, we do have to combat the weed problem,” says Scarborough.

“Why use approximately eight thousand cubic yards of this soil mix a year?” About three tons of herbicides are used yearly. They are applied three times: Spring, Summer, and Fall.

Chemicals are purchased twice a year. Spring chemicals are purchased in March. “Then we’ll come back again in July and pick up the rest of the summer supplies,” Scarborough adds. “We purchase large quantities at a time and store them securely.”

Eleven major horticultural organizations are cooperating in a nationwide campaign to make 1979 the “Year of the Rose,” presenting that flower as a living symbol of love, friendship and peace. Thousands of people from throughout the world stop each year to see the Conard-Pyle rose fields blooming. Driveways are maintained through the fields for visitors and a picnic area is adjacent to the Robert Pyle Memorial Rose Garden.
Can Exhalt® 800 cut your fungicide cost in half?

Many turfmen say yes. Our lab tests confirm it. Don't you at least owe it to yourself to spend three minutes reading the story?

For years, fungus disease control has been a source of trouble, frustration and expense. The problem is not the fungicide itself, but the application: how to keep it in place despite torrential rains and irrigation. The problem is wash-off.

That's why the development of Exhalt800 is a milestone of progress in the turf world. Here's the story:

Unlike many sticker-extenders that give little help, Exhalt800 encapsulates every fungicide particle with an armor of protection—a sticky, flexible "fabric" that clings to turf and foliage, essentially on contact. Yet it flexes and "breathes" to allow normal plant growth.

Because Exhalt800 keeps much of the fungicide in place, even in extreme weather, it can double or triple the control period. Even if it rains an hour after application, you'll still have effective control (see test chart), with less wash-off and less build-up of residue in soil.

Using Exhalt800, you may save 50% or more because you will need fewer sprays, you will use less fungicide with each, and reduce labor costs proportionately. Meanwhile, you can be confident the disease won't flare out of control. The evidence is clear.

In university field tests using leading fungicides, Exhalt800 added to spray tank at minimum-label recommendations gave control equal to higher recommendations without Exhalt800. With higher Exhalt800 dosages, you can double or triple the control period. Results can vary with the kind of fungicide used.

Exhalt800 costs little because it goes far (mix one pint with each 100 gallons in spray tank). Won't damage turf, trees and ornamentals when used as directed. Easy to use: add to spray tank and agitate. Easy clean-up: rinse equipment with water. If frozen in storage, Exhalt800 won't separate; may be thawed and used.

Too good to be true? The question doesn't surprise us. Compared with its competition, Exhalt800 is hard to believe. To know the truth, you should test it. On a golf green. A fairway. On any fungus-infested lawn or foliage.

As an efficient manager, can you ignore the overwhelming evidence? See your Gordon distributor for information, prices and technical assistance.

A closer look at Exhalt® 800 — the reason it works

1) Microscopic particles of fungicide are suspended in water in spray tank.

2) One minute fungicide particle, greatly magnified. Countless millions of such particles in water become the spray solution.

3) Exhalt800 liquid enters spray tank. Hydrophobic (repelled by water), it breaks into a myriad of tiny droplets and attaches to fungicide.

4) Tiny Exhalt800 droplets form a porous, flexible "fabric" that encapsulates each fungicide particle (enlarged to show detail).

5) Turf, when sprayed, becomes coated with millions of fungicide particles, each particle encapsulated within the porous "fabric" of Exhalt800 droplets.

6) Encapsulated fungicide particles on blade of grass (magnified portion). The Exhalt "fabric" around each particle is porous and flexible; it lets plant "breathe", flex and grow, releases fungicide slowly.

Percentage of fungicide retained after rain

<table>
<thead>
<tr>
<th>Fungicide alone</th>
<th>Fungicide &amp; brand X</th>
<th>Fungicide &amp; Exhalt800</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>25%</td>
<td>50%</td>
</tr>
<tr>
<td>25%</td>
<td>50%</td>
<td>75%</td>
</tr>
<tr>
<td>50%</td>
<td>75%</td>
<td>100%</td>
</tr>
</tbody>
</table>

INCHES OF RAIN

Chart shows how Exhalt800 resisted wash-off in a laboratory test. Spray coatings were applied to glass panels and dried 10 minutes at approximately 70°F. Retention after erosion by rain was measured by solvent stripping the panels and determining the residual fungicide by quantitative ultraviolet spectroscopy.

GORDON'S
PROFESSIONAL TURF PRODUCTS

300 SOUTH THIRD STREET
KANSAS CITY, KANSAS 66118
913-342-8780
Let us prove to you that weed control with TRIMEC® costs less per acre

Test Trimec side-by-side with any other broadleaf herbicide for cost-per-acre, the true measure of economy.

In these inflationary times, discovering bargains is a way of life. Housewives stubbornly track down food and clothing specials. Purchasing agents pore over their price lists. And turf managers intensify their search for economy.

In each case, pitfalls abound. Because unit price alone can be misleading.

In herbicides, the gallon price is only one factor in value. Performance is equally important. Together, they can answer the three questions that really count:
1. What is the smallest cost per acre for maintaining weed-free turf?
2. Will the smallest cost buy control that's ecologically sound and trouble-free?
3. Which herbicide best provides these ideals?

Certainly you won't find the answers in a price list. You know that honest solutions depend on how much herbicide you use ... and what happens after you use it.

For several years, we've been saying that Trimec is the most effective, most economical, most troublefree broadleaf herbicide you can buy. But you should have more than our word. That's why we want you to test it.

Test it for power
Trimec has broad-spectrum capability. Normally, one light application controls almost all weeds, even hard-to-kill species. In fact, we're surprised when we find a broadleaf weed that's Trimec-resistant. Why? Because Trimec's patented formulation of 2,4-D, MCPP and Dicamba is curiously, synergistically powerful. The interaction of the three components produces strength much greater than the sum of the separate components. This synergistic gain multiplies the efficiency, and does it with a small chemical dosage. This synergism also increases Trimec's cool-weather efficiency; it continues to work in late fall, at 50° or cooler.

Test Trimec efficiency
Comparisons have shown that Trimec costs less per acre for weed-free turf than any other herbicide. You use fewer gallons, you seldom need retreatment ... your total cost is lower. Such efficiency alone is reason enough to justify a Trimec test. Yet, other benefits are just as persuasive:

Test Trimec gentleness
This herbicide is ecologically sound, and troublefree. Although it's strong enough to destroy almost all weeds, it poses little threat to trees, flowers and ornamentals because there is little root absorption from the light chemical dosage. Tender grasses are protected, too. And the danger of "drift" is reduced. Biodegradable, precisely factory-formulated, Trimec also eliminates "field chemistry" and the chance of costly mixing errors.

Trimec benefits summarized
- Controls the widest range of broadleaf weeds
- Gets hard-to-kill species with one treatment
- Wide safety margin for lawn grasses, ornamentals
- Minimum hazard from root absorption
- No vapor action after application
- Effective weed control in wide temperature range
- Unique formula overcomes water hardness problems
- Treated areas may be seeded within two weeks
- Non-flammable and non-corrosive in use
- Product stable several years above 32°F
- Biodegradable; friendly to the environment
- Bentgrass formula also available

Will you field test it?
We ask you to put Trimec to the test with these suggestions: Search out the worst weed patch in your turf. On one half, apply your customary herbicide. On the other half, spray Trimec at the label recommendation. Then, watch effects. Add up labor and material costs. Evaluate the results for each test patch. Whatever your conclusion, we'd like to know. For such information is value to our future progress.

Finally, consult your Trimec dealer for prices, technical information and other help. He's listed on the next page and would like to share in your experiment.

Trimec® is a registered trademark of PBI/GORDON Corporation, U.S. patent No. 3,284,186

GORDON’S
PROFESSIONAL TURF PRODUCTS
Prevent grass and weed growth in problem areas with Vegemec™

**Total Vegetation Killer**

Vegemec is the truly effective way to eliminate all weeds and grasses from driveways, fence lines, sidewalks, parking lots, fire hydrants, telephone poles, lamp posts, in cracked concrete or blacktop — wherever no vegetation is wanted.

Vegemec kills existing vegetation and prevents new growth during the growing season. Will not leach out, damage desirable grasses or ornamentals. Self-marking, the effect is promptly visible on treated foliage. A non-volatile concentrate, Vegemec is unsurpassed for efficiency and economy... a superior product for total control.

### Authorized Distributors

**Gordon Professional Turf Products**

**ALASKA**

Palmer - Kansas, Inc.

**ALABAMA**

Birmingham - Varity Chemical Inc. - Tico, Inc.

Hartford - Westfolk Chemical Works

Montgomery - Tico, Inc.

**ARIZONA**

Phoenix - Gilt Nursery Supply

Target Chemical Co.

Tucson - Copper State Chemical Co.

**ARKANSAS**

Alexandria - Capital Equipment Co.

**CALIFORNIA**

Foster-Gardner, Inc.

Oakland - Alabe-A-Weed Co.

Cathedral City - Butlers Mill Inc.

Centerville - Target Chemical Co.

Chula Vista - Wilbur Ellis Company

Costa Mesa - Foster-Gardner, Inc.

Fresno - Rocky Seed Company

Yorba Linda - Y & L Farm Sales, Inc.

Orange - Balloon Fertilizer Co.

Orinda - Coastal Ag. Chemical

Jamestown - Orchard Supply Company

San Diego - So. Atlantic Mill, Inc.

San Gabriel - Southland Mitchell Co.

San Jose - Foster-Gardner, Inc.

Santa Barbara - Meyer Chemical Co.

Northern California Fertilizer Co.

Culver City - Target Chemical Co.

San Leandro - Custom Chemlne Inc.

Santa Ana - Meyer Chemical Company

Santa Barbara - Southland Mitchell Co.

Agri Turf Supplies, Inc.

Soda Springs - Forty Chemical Products Company

South Gate City - Los Angeles Chemical Co.

**COLORADO**

Denver - S & J Turf Products

Colorado Springs - Gorby, Inc.

Flagstaff - E. S. May Co.

Grand Junction - Tico, Inc.

Greeley - Waters & Rogers

Westminster - Pueblo Chemical & Supply

**CONNECTICUT**

Stamford - James Turf Supplies

Greenwich - Shearin Greenhouses & Nurseries

Hartford - Shearin Greenhouses & Nurseries

St. Windsor - Turf Products Corporation

**DELAWARE**

Wilmington - Turf Enterprises

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Jacksonville - Brightman Seed Co.

Pompano Beach - Smith Natural Chemical Corp.

Pensacola - Gulf Shore Turf Supply, Inc.

Tampa - Gulf Coast Turf

Sanford - Chase & Company

Winter Haven - Swift Agricultural Chemical Corp.

Driftwood - Swift Agricultural Chemical Corp.

**GEORGIA**

Atlanta - Hamilton Chemical Co.

College Park - Stephenson Chemical Co.

Coates - Lawn & Turf, Inc.

Dunwoody - Georgia Gulf & Garden

Fort Valley - Westfolk Chemical Works, Inc.

**HAWAII**

Hilo - Occidental Chemical Co.

Honolulu - Occidental Chemical Co.

Kahului - Occidental Chemical Co.

Lihue - Occidental Chemical Co.

**IDAHO**

Boise - Steve Regan Co.

Caldwell - Wasatch Chemical Co.

Idaho Falls - Wasatch Chemical Co.

Rupert - Wasatch Chemical Co.

**ILLINOIS**

Barrington - Glen Distributing Co.

Bloomington - Professional Turf Specialty

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W. Chicago - Turf Products, Ltd.

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Peoria - Dehn & Wageman, Inc.

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Morton Grove - J.G. Supply Company

Rockton - turf Management Supply

Springfield - Drake-Snugget Equipment, Inc.

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**INDIANA**

Indianapolis - Desco Chemical, Inc.

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Marion - Desco Chemical, Inc.

**IOWA**

Cedar Rapids - Hawkeye Seed Co., Inc.

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Davenport - In-State Turf Co.

Des Moines - Des Moines Turf Co.

Iowa City - Pipestone Turf Co.

**KANSAS**

Kansas City - Pest Control Supplies

Lawrence - Stan's Seed Co.

Salina - The Landscape Corporation

Topeka - Shearin Greenhouses & Nurseries

Wichita - R. E. W.解除

**KENTUCKY**

Kentucky - George W. H. Co., Inc.

Louisville - Butler Seed Co.

Westport - Warmouth Turf Supply Co., Inc.

**LOUISIANA**

Baton Rouge - Gulfshore Turf Supply, Inc.

New Orleans - Champion Turf Equip., Inc.

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Newton Center - Garnet Equipment Co., Inc.

Waltham - Farm Bureau Cooperative

West Newton - The Clappper Company

West Warwick - R.R. Morse & Son, Inc.

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Detroit - Terminal Sales Corporation

Grand Rapids - Milliken & Son, Inc.

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St. Paul - Mr. L. Gould Company

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Billings - Turf Aid Dist. Company

Helena - Mr. Turf

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**NEW HAMPSHIRE**

Greenfield - Turf Specialty Co.

**NEW JERSEY**

Rockaway - Jep Sales, Inc.

**NEW MEXICO**

Santa Fe - N.R. Miller Co.

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Nylonville - Island Golf & Turf Farm

Ronald - Champion Turf Equipment

**OHIO**

Canton - Letherman Seed Company

Cincinnati - Century Turf Dist. Inc.

Mansfield - Proctor & Gamble, Inc.

Cleveland - F. E. O. Williams & Co., Inc.

Dayton - Century Turf Dist. Inc.

Elyria - Lakeshore Equipment & Supply Co.

Findlay - Oelstrom Company

Mansfield - John R. Skinner Co.

Toledo - Century Turf Dist. Inc.

**OKLAHOMA**

McKissok - Texas Chemical House

Oklahoma City - E. B. M. Chemical Co.

Tulsa - E. B. M. Chemical Co.

**OREGON**

Portland - The Charles H. Lilly Co.

Vancouver - Waters & Rogers

Wilsonville - Elco Equipment

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Doylestown - Philadelphia Toro

Harrisburg - Prelude Chemical

Huntingdon - Proctor & Gambles


Pittsburgh - Lawn & Golf Supply

Pittsburgh - Standard Turf Equipment Co.

Reading - Reading Bone Fertilizer

Wycombe - Hạt Supply

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Memphis - Axon Corporation

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Nashville - Oelstrom Company

**UTAH**

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Salt Lake City - Wastach Chemical Div.

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Charlottesville - Turf & Garden Div.

Harrisonburg - Whitey Seed Company

Richmond - Richmond Power Equip. Co., Inc.

Richmond - Agri-Turf Products Co., Inc.

Snowfield - Miller Chemical & Fertilizer

**WASHINGTON**

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Renton - Pacific Agro Company

Seattle - The Charles H. Lilly Co.

Western Farmers Association

**WEST VIRGINIA**

Charleston - Young's Inc.

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Chippewa Falls - Turf Products Co., Inc.

Elm Grove - R. B. Co., Inc.

Milwaukee - R. B. Co., Inc.

**MAY 1978/WEEDS TREES & TURF**

37
WHOLESALE GROWER

SCHEMIDT AND SON:
PROPAGATORS OF
DECIDUOUS TREES

The events and happenings of the past 32 years that formed and shaped J. Frank Schmidt and Son Company of Boring, Oregon are demonstrative of what has and is happening in the bare root shade and flowering tree industry.

The forces and factors were climatic, human and economic. The company grew under the inspiration and directions of J. Frank Schmidt, Jr., the company's president. As in the case of most Northwest nurseries, it began as a family farm-nursery. Each member of the family, three sons and a daughter, branched out into a different aspect of the industry.

Frank, Jr., took the direction of ultra-specialized, mass produced nursery stock. Ultra-specialization means propagating and growing one line of nursery stock, bare root deciduous shade and flowering trees. Such concentration of effort results in the production of a line of trees that represents a careful balance between conservatism with proven trees and forward thinking with tested new selections. Schmidt states, "By the mid-1940's it was apparent that asexual propagation of cultivars was the only way to assure a uniform, predictable product, rather than depending on seed-produced trees that are like people, each somewhat of an individual."

Mass production, strenuous grading standards and continuous trial and error experimentation set the
stage for a continuous expansion philosophy. Today the nursery continues to plant approximately 10% more seedlings per year.

"Conditions in the Country were right for this philosophy," comments Schmidt. "Ample production each year beyond experienced sales levels always allowed us to have trees for sale during mid-winter and spring when the specimen tree grower and the retailer discovered the market was going to be stronger than anticipated." As a result, the company's sales graph over the years has been a continuous upswing. "This has permitted us to reinvest in people, equipment, land and facilities," Schmidt states. "It is my belief that a company's purpose for existence is to provide a group of people an enjoyable means of livelihood as they provide for the needs of the customer. The president's main job is to see that the companies policies are maintained in a healthy economic balance."

This spring the company delivered 600,000 trees to customers in 36 northern states and to the Provinces of Canada. The past few years sales increases have averaged around 30 percent. One-third of the crop was sold as one-year whips to specimen needs not anticipated by the market was going to be stronger than anticipated." As a result, the company's sales graph over the years has been a continuous upswing. "This has permitted us to reinvest in people, equipment, land and facilities," Schmidt states. "It is my belief that a company's purpose for existence is to provide a group of people an enjoyable means of livelihood as they provide for the needs of the customer. The president's main job is to see that the companies policies are maintained in a healthy economic balance."

This spring the company delivered 600,000 trees to customers in 36 northern states and to the Provinces of Canada. The past few years sales increases have averaged around 30 percent. One-third of the crop was sold as one-year whips to specimen tree growers and two-thirds as branched two and three-year-old trees to retailers and landscapers. Sales Manager, Archie Whiteford, comments, "Each year we seem to sell more trees during the spring months, filling those last minues needs not anticipated by the customer. Having extra trees dug and held in our new 325,000 ft. cooler is going to increase these sales even more in future years."

"Other factors of the industry have contributed to the growth of this Oregon nursery" states Norbert Kinen, business manager. "Previously, most of the Oregon nursery production was sold both through Oregon-based wholesale brokers and re-wholesaler firms scattered throughout the country. Communication and transportation have shorted the distance between the grower and the ultimate customer, reducing costs."

The temperature-controlled tractor-trailer truck has allowed rapid delivery with less handling of the trees. Nursery Trade Shows, ten of which the nursery participates in, have placed the grower and their customers together. "It is one of our major ways to gather feed-back on our trees and address ourselves to special needs," states Frank Schmidt III, vice-president and production manager. "Customized canopy trees were introduced last year as a result of that communication."

Asked about the future, Frank Jr. displays a confidence in a continued expansion of the shade and flowering tree demand. Quality trees and a wider selection of materials will be part of that demand. The growing interest in environmental quality and energy consciousness accounts for the motivation. He expects the national advertising program being developed by the newly created Nursery Marketing Council will stimulate a momentum that will surprise many. "The question is," he says, "are we going to be prepared when it happens."

Trees are dug, graded, and stored beginning in late October through January and shipped beginning late in February, through March and into April. 133 cultivars and varieties are offered in the company catalog of which 33 are patented trees. Slightly over a million seedlings are being planted this spring.

Principal propagating techniques are by budding on a root stock, rooted cuttings. Some are strictly from seed with no asexual propagation and some are grafted. The company produces its own understock in its own seedling department. Seedlings are held in the seedling beds for one to two years, then planted out in fields for one season, at the end of which they are budded. Late the following winter the seedlings are cut off just above the bud of the cultivar and above a good active bud of those that will be grown on their own root. As growth begins in the spring from the selected bud, a device called Grow Straight is placed ¼-inch away to direct the new growth straight upward avoiding a "dog leg" in the tree stem or trunk. After one season of growth from the selected bud, the tree is termed to be a one-year-old tree having a three to four-year-old root. Approximately one-third of each year's production is sold as one year whips and the remaining two-thirds is sold as two to four-year-old branched trees ranging in size from five to 15-ft. tall and an inch to two inches in caliper.

All of the nursery's production is sold wholesale to customers in hardiness zones two to six throughout the U.S. If you drew a line from Northern California through South-
Schmidt and Sons
ern Colorado into Oklahoma. East through Missouri on to Virginia you would establish the Southern boundary of the company’s customers. Customers include growers in their local areas for balled and burlapped specimen trees, re-wholesalers and propagating nurseries who resell to retailers, and garden centers and landscape contractors who sell to the commercial and domestic consumer either bare root or by containerizing until the trees are established.

The company holds patents on five trees and the Grow Straight joint partnership, a specimen tree nursery called Northwest Shade Trees, Inc. It produces balled and burlapped specimen shade and flowering trees for the West and Northwest U.S.

There are 60 full-time employees, and up to 130 workers are added seasonally. Professional bidders are employed, mainly Mexican Nationals who have work permits for this specialized work.

Schmidt spent approximately $100,000 on new equipment last year. It owns 24 tractors of various sizes for work ranging from plowing, discing and subsoiling to cultivating between rows of trees. Four customized diggers are used during the digging operation which are track machine elevated to go over the top of trees, a U-blade for cutting the roots, and hydraulic shakers to remove the soil. All trees are handled on pallets conveyed on trailers and moved by forklifts.

Much of the equipment is customized after purchase for special tasks such as snow blowers for opening up sawdust trenches for winter storage and a compressor rig and boom to convey workers over each row to operate pneumatic shears for stubbing the seedlings down to the selected bud. Other customizing work is necessary to strengthen or adapt machinery such as planters, cultivators and disks for cultivation between the rows. The shop foreman is hired both for maintenance of equipment as well as customizing equipment. There are other types of specialized equipment produced for the nursery industry like tree tagging machines and tree bundling machines.

Despite the machinery, there is still much hand labor in a nursery of this type which increases the labor cost and the cost of trees. Industry has not evidently found it profitable to address themselves to the needs of this type of nursery operation in designing and manufacturing labor saving equipment. As a result, companies are left to their own resources.

The process, therefore, of merchandising the shade tree industry has been slow. Costs could be cut considerably if there was a means of conveying trees from behind the digger onto pallets without damaging them. Conveying systems for grading trees and handling then in the warehouse in preparation for storage and shipment would also reduce costs a great deal.

The nursery has two acres of humidified warehouses for short term storage and processing of trees, six acres of outdoor sawdust bins for

---

**Conwed®**

**Hydro Mulch® 2000.**

It's in the bag.

Hydro Mulch® 2000 is a ready-mixed tackifier and mulch in one bag. That simplifies storage and helps eliminate loading errors. Application is fast and easy. Hydro Mulch 2000 fibers cut post job maintenance costs and provide protection against costly repairs and redo's. The special tackifier helps hold down the fiber mulch, seed and fertilizer while it protects against wind and water erosion. The fiber mulch holds water and stabilizes temperature variances for fast seed germination and strong plant starts. A temporary green dye permits monitoring of application and gives the job a finished look.

Write for informative brochure. Conwed Corporation, Environmental Products Division, 332 Minnesota St., P.O. Box 43237, St. Paul, Minnesota 55164. Phone: (612) 221-1144.

Circle 154 on free information card