THE SPYDER
DO YOU PALLETIZE YOUR PRODUCTS - SOD, FERTILIZER, SEED, GARDEN PRODUCTS?
THEN YOU SHOULD KNOW ABOUT THE SPYDER MATERIAL HANDLER!

A LIGHTWEIGHT HEAVYWEIGHT
The Spyder's welded tubular steel frame is designed for maximum strength with minimum weight. Its load carrying capacity is 3500 pounds, the capacity of most standard forklifts, but the Spyder weighs only about 2700 pounds.

THIS LIGHTWEIGHT CREATES MANY BENEFITS.

EASY PORTABILITY
Traditionally, job site unloading has been performed by truck mounted cranes, towable or trailer transported forklifts, and even by hand, with each method having its own particular advantages and disadvantages. The Spyder, we believe, combines advantages of each method to provide you with a totally new concept in job site unloading.

In less than a minute the Spyder loads itself at the rear of your truck or semi-trailer bed without loss of valuable cargo space, and is transported with no road contact. Just like a truck mounted crane, but not like a towable forklift. When you arrive at the job site the Spyder unloads itself, then unloads the load. Pallets can be placed away from the truck at whatever distance necessary, like with any forklift, but not like a truck mounted crane.

We also provide a custom-designed lightweight trailer for convenient towing behind a car or truck if this method better meets your requirements.

THE BENEFITS DON'T END HERE.

MINIMAL MAINTENANCE
The Spyder is totally hydraulic. A 23 HP, two cylinder, air cooled Kohler engine is belt connected to two variable displacement hydrostatic transmission pumps and one fixed displacement gear pump. These pumps provide oil to three hydraulic motors and three sets of hydraulic cylinders. Any of these components, including the engine, can be replaced on the Spyder in about an hour. Each machine comes with a parts manual which lists not only our part number, but the manufacturer's name and their part number also. All parts on the Spyder can be shipped air freight from the factory, if you cannot obtain it locally. The idea is to minimize downtime.

WE LISTEN TO OUR CUSTOMERS
CUSTOMER ORIENTED IMPROVEMENTS
Recent improvements include a quick tension release on the belt drive. Just pull a lever while sitting on the operator's seat and all tension is taken off the belt drive for easy engine starting or belt removal. A newly designed drive wheel hub moves the center of the drive wheel directly over a large roller bearing for increased load carrying capacity and greater resistance to shock loads.

THE BEST IS YET TO COME

CREDIBLE COSTS
There are many costs involved with owning and operating any piece of equipment. At times your initial investment cost may be high, but low maintenance and operational costs offset this. At other times it's just the opposite.

The Spyder, compared to other job site unloading equipment, offers a rare combination of relatively low initial cost, low operating costs, and low maintenance costs.

NOW IT'S UP TO YOU

PROFIT POTENTIAL
When you consider all the information written here about the Spyder, and then consider how practical it would be in your own application whether it be unloading sod, fertilizer, seed etc., be sure to go one step further. Contact me by mail or phone and let me send you a brochure or answer questions you might have regarding your particular application.

We have sold over 500 Spyders across the U.S., Canada, England and Trinidad. We are establishing dealers and outlets throughout the U.S. and Canada. Two new manufacturing facilities are currently in the advanced planning stages. One in England and the other in Texas. THE REASON? THE SPYDER IS HERE TO STAY!!!

If you have delivery problems, let us show you how the Spyder can solve them.

For more information on the Spyder call or write: Mike Whitt - Sales Manager
Foxcroft Development Associates
5402 Edgewood Rd.
Crystal Lake, IL 60014
815-459-3351

Circle 118 on free information card
Goosegrass control with preemergence herbicides

Dr. Wayne Bingham, professor of plant physiology at Virginia Polytechnic Institute and State University, included some aspects of his research on goosegrass control at the recent Virginia Turfgrass Conference in Williamsburg, Virginia. While treatments for crabgrass control should go on in early March or early April, he said, goosegrass treatments should be delayed until May or even early June, when goosegrass germinates.

Dr. Bingham felt that his preemergent herbicide tests should be carried on for more than one...Continues on page 47

<table>
<thead>
<tr>
<th>Herbicide</th>
<th>Kg/ha</th>
<th>1974</th>
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<tr>
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<tr>
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<tr>
<td>Benefin</td>
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</table>

Prosulfalin was applied 9/5/74 at 3.4 kg/ha.

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This is the symbol for NMC...the Nursery Marketing Council. Whenever it appears in your advertising or catalogs, on your letterhead or invoices, or wherever else you let it be seen, it identifies your firm as a voluntary supporter of the professional, sales-directed, united, national marketing program for all the green industry.

Your printer can work with this page to reproduce the symbols in any of these sizes, or other sizes you may require. When you wish to use the symbol in a two-color version, the instructions will let your printer know what is recommended.

There may be times when you wish to give your readers some explanation for the symbol, and words something like this might be useful...
NEW EXCEL HUSTLER 295
liquid-cooled engine puts
industrial power on an industrial mower.

The same EXCEL HUSTLER mowers that excel in
grounds maintenance maneuvers also come with a
liquid-cooled industrial engine. The new model 295 of-
ters superior performance and a long engine life with low
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The only significant difference from the proven 275
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the USA, to Excel's specs for use on the new model 295.
This industrial engine is not to be confused with automotive
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Continental 2-cylinder liquid-cooled engine has long
stroke and develops high torque at lower RPM. Powerful
2-cylinder engine is easier to maintain & service. Al-
together, that's economy!

Like other EXCEL HUSTLER mowers, the new 295 is
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power independently to both drive wheels via dual hy-
drostats, with immediate response. The big 72" mower
can make intricate twists and turns around trees,
signposts, park equipment — it even mows out corners
with no time-consuming back-and-forth antics that mark
ordinary mower operation. Crew chiefs report one prob-
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EXCEL HUSTLER, and who has to settle for conven-
tional mowers!

Summed up, the new 295 is the same superior mower
with more power than ever, and the full safety package.
Attachments that stretch its working seasons the full
year also interchange with all EXCEL HUSTLER mod-
els from 272A through 295.

Watch for a field demo or write for free literature and
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sas or Canada, call (316) 327-4911 collect. EXCEL
HUSTLER turf and groundskeeping equipment is built
right by Excel Industries, Inc., Box 727, Hesston, Kan-
sas 67062.

For GSA: GS-07S-03665 For HUD: OAH(CO)m 2635

EXCEL INDUSTRIES, INC. Box 727 / Hesston, Kansas 67062 / (316) 327-4911 / (800) 835-3260

Circle 134 on free information card
For ad on following page circle 136 on free information card
The annual grass problems may differ from one part of the nation to another, but the solution is the same . . . Elanco's Balan. All across the country, Balan users have proven for themselves that a regular Balan program is their most effective means of controlling the hard-to-control annual weed grasses. Balan's granular form makes it as quick and easy to apply as fertilizer.
grasses are the problem...

"Around here, our main problem is crabgrass in the fairways, so we use Balan in the spring. It's so economical we treat fairways and the roughs."

"Almost every course in the South has two main weed grass problems: Poa annua and goosegrass/crowfoot. Two applications of Balan gets rid of them both."

"Plain old crabgrass is the biggest problem around here. Balan is so economical we put it on all our fairways in the spring before germination."

Balan is the dependable, economical pre-emergent that kills weed grass seeds as they germinate, allowing the desirable grasses to fill in. Name your weed grass problems... crabgrass, goosegrass, Poa annua or foxtail. Balan's the practical solution. Order Balan from your Elanco Distributor today.
Carson, California, is a city that takes pride in its appearance. Its 22 square miles include about 35,000 trees on public land, approximately 50% planted in just the past ten years. E "Tuto" Iglesias, maintenance superintendent of the Carson Parks and Recreation Department, is pleased with tree appearance and growth since the city "gave the job to Jobe." He says, "For our tree maintenance in residential areas, we fertilize exclusively with Jobe's spikes. Easy application saves us money on equipment and personnel." Carson discovered another benefit using Jobe's spikes — water conservation. Says Iglesias, "We used to fertilize while watering trees. Since starting to use Jobe's, we save on water usage."

Give the job to Jobe.

Whether your groundskeeping responsibilities extend over an acre or an entire city, use JOBE'S TREE AND SHRUB SPIKES to cut out extra work and give extraordinary results. Instead of expensive, time-consuming hole drilling, tree and shrub fertilization can be done easily by just one man with a hammer. Using JOBE'S spikes is like adding a gentle giant to your crew. They're a big improvement over old-fashioned methods.

Trees thrive on 'Triple Five.'

A 5" diameter tree needs only five spikes, and can be driven into the soil in five minutes. Jobe's Spikes' exclusive patented binder makes them easy to drive into the ground and provides extended release of 16-8-8 fertilizer.

Call your Jobe's distributor to order spikes. Or order direct.
$30 per case (105 spikes) prepaid, 5 case minimum. 15 or more cases, $25 per case; 36 or more, $22.50 per case.
Also try Jobe's Evergreen Spikes (12-6-8) and Fruit Tree Spikes (5-15-15).

International Spike, Inc., P.O. Box 1750, Lexington, KY 40593
Preemergence Herbicides

year for a good evaluation of control. Variability between locations became a factor.

When the new herbicides began to show up and their effect on goosegrass control showed them to be important, they were looked at and critically compared to find which had the best results. Dr. Bingham found that if he split application, control was better.

Oxadiazon, however, seemed to work just as well whether it was applied all at once or split. With DCPA, bensulide and benflu, better results were achieved with a split application.

The following charts show a comparison of goosegrass control over a three year period, the first indicating control and the second indicating the amount of bermudagrass filling the plots back in.

### Goosegrass Control in Common Bermudagrass Fairway

<table>
<thead>
<tr>
<th>Herbicide</th>
<th>Kg/ha</th>
<th>Bermudagrass ground cover</th>
</tr>
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<tbody>
<tr>
<td>Oxadiazon</td>
<td>4/16</td>
<td>9/5</td>
</tr>
<tr>
<td>Butralin or</td>
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<td>4.5</td>
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<tr>
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<td>11.2</td>
</tr>
<tr>
<td>Check</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>

1Kg/ha multiplied times 1.12 equals lb./A.
2144 square feet = complete coverage of the plot.

Lawn Smooth, Rock Tough VEMCO Flail Mowers

Talk about versatile! The Vemco Flail Mower keeps parks, and other large lawn areas smooth and streak-free. It also cuts rocky, trashy areas where ordinary mowers cannot go.

Standard Series mowers, with 42", 48" and 60" widths, have many construction features usually found only on heavy-duty models. Heavy Duty Series, with 60", 72" and 84" widths are tougher yet. Rock Dodger blades swing free in all directions, are practically immune to breakage.

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Today’s professional turf manager recognizes the value of up-to-date turfgrass breeding and research. That’s why so many are upgrading their programs with Fiesta.

Why not join them?
SCOTTISH GREENKEEPERS PRESERVE NATURAL CHALLENGE OF COURSES

by Stan Metsker

Stan Metsker made the trip to Scotland in September of 1977 to bring back ideas for the Country Club of Colorado where he is the Superintendent. For the last five years he has been working with architect Peter Dye, who designed and constructed the course, to develop some of the Scottish links atmosphere.

It is easy to see why Golf started in Scotland. The courses were there just waiting to be discovered. The dunes formed the contours, the grass was so starved that it was thin and easy to find a ball in, and the rabbits and sheep kept the grass down enough to form what later became mowed greens. Next to the sea (the links land) there are dunes of beachsand that provide so many possible natural golf holes that the biggest problem must have been in choosing which way to lay out the course to the fullest advantage.

The old rules of golf called for the teeing area to be within two clublengths of the previous hole. Even now, the next tee may be almost that close to the edge of the just completed green. This contributes to fast play in Scotland where everybody walks.

All the courses are not maintained alike nor do they look alike. The manufactured look of American courses can be found, but it is the exception. The maintenance of these courses is quite different from that in the U.S. Greenkeeper Norman Ferguson of Troon Golf Club uses the following methods:

- Fertilize with nitrogen only, once in spring and once in summer.
- Mow fairways once per week.
- Mow greens three times per week when growing well, twice when slower.
- Change cups once per week.
- For insects use DDT or Chlordane.
- After aerifying greens, topdress Turface into low spots and compost into high spots.
- Irrigate only enough to make the grass survive dry periods.

Like most other Greenkeepers in Scotland he has no triplex greens mowers, no power trap rake or trucksters. He does have some automatic irrigation of greens and, even more rare, some automatic irrigation on the fairways. As with other courses, one of his big continuous problems is rabbits. They are forever digging holes.

To understand the vegetation of a links course you must remember that the “soil” is almost pure dune sand and that the weather is that of an island (high humidity) on the same latitude with the Hudson Bay in Canada, Southern Alaska, and Southern Sweden. The climate is generally cool, windy and frequently rainy. But, there are occasional droughts.

These infertile, acid, and fast draining soil conditions call for some pretty tough plants. Gorse (Ulex europaeus) is the most abundant and most respected bush. It is full of spine and is impossible to walk through. It blooms in the Spring and has pods that snap open on sunny fall days. It grows from a few in. to six ft. high and often is mixed with brambles such as blackberries. Gorse is often seen on the top of the dunes.

Heather (Calluna) grows in clumps very close to
When we originated U.S. marketing of corrugated plastic drainage tubing in 1966, we recognized its applicability to virtually every area of drainage need—farms, highways, construction projects, septic fields, grounds maintenance, golf courses, etc.

To prove the value of plastic tubing in a wide range of drainage applications we worked with, cooperated with, shared our technical knowledge with the specifying, testing and code-writing community. And we kept developing our product line to meet the needs of different users.

Today, we serve all these markets, and more, through continuing new product development; production capability second to none; and the most extensive overall sales and manufacturing supply network in the industry.

When you specify ADS products, you get everything you’d expect from the company that’s been marketing corrugated plastic drainage tubing longer than anybody else in the U.S. That’s how leadership is earned.
North Berwick 16th Green (above) is formed by two plateaus which makes for some interesting putts. Worker (below) uses an alder broom to brush debris off a Gleneagles green.

the ground, usually less than six in. high. It blooms in late summer and early fall with the purple flowers making a living carpet. A golf ball can often be found in heather but the stroke to get it out is difficult due to the plant's wiry nature. It does well on hillsides.

Broom (Cytisus) is common but seems to be scattered as an individual plant among the more common gorse. It has almost no leaves, hence its name. It grows about three ft. high and has beautiful pea-like yellow flowers in the spring.

Roses are common but often they are the small creeping types and grow in with the grasses. Trees are almost non-existent. Occasionally there is a small maple or a wind swept hawthorn. Trees are not necessary to have a good golf course as is evident at the courses at St. Andrews Links.

Common Sea Buckthorn (Hippophae rhamnoïdes) is not seen as often as gorse but on some courses makes large clumps of brush that are 15 ft. high and almost impenetrable. It has a nice gray-green color and spreads by suckers.

The grasses are mostly fine leaved fescues mixed with some bent and sometimes a little Poa annua where there is close mowing. The rough is generally thin and easy to find a ball in, even if the seed heads may be as high as six or eight inches. The fairways are also thin and often there is moss on the ground. Divots fill in very slowly, so it is a common practice to “sand” the divots. Seed is not usually included in the “sand” because dry winds often will kill the young seedlings. There was some evidence of overseeding on fairways.

Due to a prolonged dry period and the lack of a water system, some fairway grass had been lost