

# Them.

There are plenty of monofilament trimmers on the market; all quite similar in appearance.

But before you buy, take a close look. Because one, The Green Machine—the country's best-selling gas-powered monofilament trimmer—is much more than just a great monofilament trimmer.

It's also a great brush cutter...and a great tree and vine pruner.

The Green Machine's unique PowerStik™ design lets you work with maximum performance overhead, on the ground, and at all levels in between.

Using quick-change accessories, The Green Machine will trim, prune or cut just about everything in the yard. From the most delicate grasses, to three-inch thick tree branches. You'll replace a whole range of hand trimmers, pruners, clippers, edgers—even chain saws in most pruning and thinning operations.

We could almost say the

only other yard tool you'll need is a lawn mower.



Remember that The Green Machine is gas powered. There are no cumbersome electrical cords to worry about. The powerful, lightweight 22.5 cc engine gives you torque to do the full range of jobs without the stalling-out problem often found with electrical units.

But performance is only one reason to buy a Green Machine.

Quality is the other. The Green

# Us.

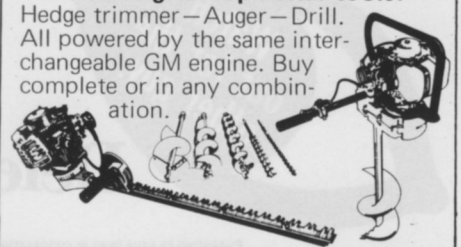
Machine is engineered throughout for easy starting and long hours of trouble-free operation. Parts and service support are nation-wide.

So, don't settle for a tool that does only part of the job. Monofilament trimming is great. But for complete grounds care you need number one. Us. The Green Machine. The Trimmer-Cutter-Pruner.

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### Plus these great optional tools:

Hedge trimmer—Auger—Drill. All powered by the same interchangeable GM engine. Buy complete or in any combination.



Versatility makes it number one.

# The Green Machine™

# Penn State publishes "Street Trees" manual

The College of Agriculture at The Pennsylvania State University has published a manual entitled "Street Trees," designed to assist people taking part in planning and carrying out street beautification programs in urban areas.

"This manual has been prepared for use by shade tree commissions and professional horticultural firms who plan and carry out tree planting and maintenance," stated Dr. Roland R. Daniels, assistant professor of environmental horticulture and author of the publication.

Topics include site and variety selection, site preparation, plant-

ing, and care and maintenance following planting. Included in an appendix are: (1) a checklist of current street plantings and analysis of potential planting sites; (2) proposed specifications for selecting, planting, and maintenance of street trees within developments; (3) general specifications for deciduous shade and flowering trees; (4) standards of workmanship for tree care and maintenance; and (5) suggested contract specifications for establishing and maintaining street plantings.

Two other features are a tree hardiness zone map of Pennsylvania and an outline of characteris-

tics for trees suitable for planting in the Commonwealth.

The manual may be purchased for \$2.12, tax included, from STREET TREES, Box 6000, University Park, PA 16802. Make checks or money orders payable to The Pennsylvania State University.

Typical of comments regarding the manual is this statement from a teacher in Canada: "Your publication is a significant contribution to the popular literature describing aesthetic horticulture and urban forestry tree selection and maintenance. It should have wide application throughout northeastern North America." □



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**High Density**...a combination of both fast-acting and controlled release forms of nitrogen. And each individual granule is the same analysis that's printed on the bag...a completely homogeneous fertilizer preventing the separation of nitrogen, phosphorus and potassium for an exceptionally even distribution of nutrients. So each and every plant gets the nutrients you've selected.

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Scotts  
**ProTurf**

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# MSU gets \$30,000 grant for tree program

The Michigan Department of Natural Resources (DNR) has given Michigan State University researchers a \$30,000 grant for tree and forestland improvement throughout the state.

The annual renewable grant will aid MSU and the Michigan State Cooperative Tree Improvement Program (MICHCOTIP) in increasing forest productivity.

Dr. James Hanover, MSU forestry specialist and program coordinator, and researchers are trying to accomplish this through cultural and genetic improvements.

Part of the effort involves developing superior hybrids which mature more quickly than ordinary trees. To date, MSU has developed special varieties of fast growing spruce, poplar, aspen and birch. Seeds from their varieties are being

used to start plantations throughout Michigan.

The researchers are also testing cultural practices of fertilization, herbicide trials, spacing techniques and nursery production of hybrid varieties. These studies are conducted on cooperators' lands throughout Michigan to determine optimum growing conditions for certain species.

MICHOTIP was formed in 1974 as a cooperative effort to work on the problems of Michigan forestlands and urban trees. Members include MSU, DNR, universities and private companies from around the state. Members pay a yearly fee to participate in, and receive research benefits done through the program.

Part of the total research program is MSU's work on accelerated-optimal-growth \*Accel-O-Gro

for rapid tree production. In Accel-O-Gro, trees are grown under greenhouse conditions, and through use of light and temperature controls growth is continuous and not affected by seasonal fluctuation. Trees can then be grown to the desired size much faster than regular nursery practices. Researchers can also determine more quickly the superiority of weaknesses of species grown under these conditions.

These techniques will be applied to all aspects of Michigan forestry — including street tree improvement and commercial and state forestland operation.

For more information about MICHCOTIP from Hanover write: Department of Forestry, Michigan State University, East Lansing, MI 48824. □

## GOODALL

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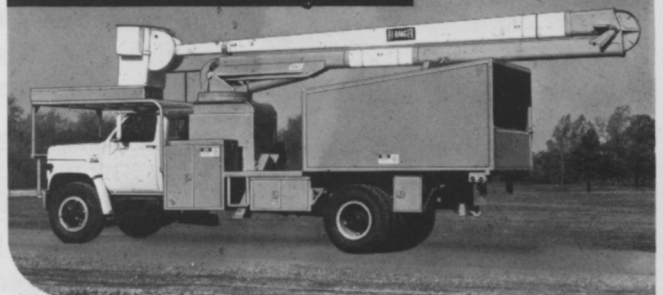


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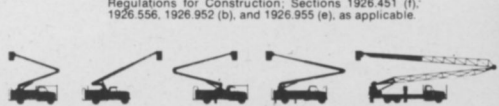
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Add the great beauty inherent to Fylking: brilliant green color in early spring, in summer heat, and into late fall; low-growing, fine-textured leaves that thrive mowed low as 1/2-inch; thick, luxuriant turf. Fylking is more resistant to disease, drought, heat, cold, smog, traffic and weed invasion.

Cost? Fylking seed costs less than most other elite bluegrasses.

A healthy, beautiful base for your lawn seed mix, ask for the Swedish beauty, Fylking Kentucky bluegrass.



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Fylking's thick, brilliant-green, fine-textured, low-growing leaves and dense, tight-knit rhizomes and root system make superior turf.



Fylking plants are started from "original" breeder's seed in sterile green house media, then transplanted to fumigated soil in isolated breeders block for seed increase.





# Pest Control

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# Imminent patent expirations to impact \$1.6 billion pesticide market in Europe

About 115 British pesticide patents will expire during this year and the next, "and the expirations will open up new manufacturing possibilities," finds a study on the European market for insecticides, fungicides, herbicides, and other pesticides by market research specialists Frost & Sullivan, Inc. in New York City. Such patents include one held by BASF on a urea derivative herbicide, by Monsanto on a Quinazolines fungicide, by Bayer on a carbamic ester insecticide, by Geitelich Sohne on a thiourea derivative biocide, and by Lyonnaise Ind Pharmaceuticals on an Indandione derivative rodenticide.

This is but one finding in an unprecedented probe into the European pesticide market that, in 1975,

amounted to \$1.6 billion. Herbicides account for half of that figure, fungicides for about a quarter, and insecticides and miscellaneous pesticides for something less than 25 percent. By country, the largest national market is France at \$602 million a year, followed by West Germany at \$296 million, Italy at \$179 million, United Kingdom at \$165 million, and Spain at \$117 million.


Altogether the European Economic Community, that makes up the geographical market scope covered by the 212-page study, compares to the United States in agricultural self-sufficiency, especially in meats, dairy products, sugar, and cereals (except for maize). In addition, the EEC accounts for nearly

half the world's wine production. "Europe makes up a very large pesticide market," says the study, which also includes a chapter on the Russian market.

To meet that market need, some 1,000 companies turn out at least ten times that many pesticide formulations. By end-user category, forestry pesticides, in particular, offer "a scope for considerable expansion," while animal husbandry pesticides may decline in relative importance over the long term, the study says.

As for pest control, the industrial market is worth approximately \$50 million annually, with termite protection and other wood preservation measures accounting for half of the expenditures. An additional

*Continued on page 40*



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If you don't agree that the Brandt Cap Cutter is the safest, easiest way to open plastic spouts, return immediately for full refund!

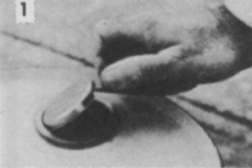
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The Brandt Cap Cutter easily opens a five gallon drum of chemical as it cuts a circular opening in the plastic spout (Rieke Flexspout — Registered T.M. of Rieke Corp.)

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**1**



Use the uniquely designed hand bar built into the bottom of the cap to pry off the chemical drum seal.

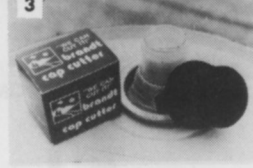
Pull up the plastic spout and remove the drum cap.

**2**



As you twist on your Brandt Cap Cutter, you are cutting an opening into the plastic spout, eliminating the need for knives, screwdrivers and other sharp instruments.

**3**



**RESULT** — A circular opening with no jagged edges — ready to pour — in 1/3 of the time.

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# expirations affect european market

Continued from page 39

\$100 million market for pesticides in home and garden applications is growing at a 4 percent to 5 percent annual clip. This market is characterized by high-priced, high-margin products.

Government regulations present the biggest uncertainty to pesticide producers. "Regulatory schemes among the various countries are fundamentally similar, but maddeningly different in detail," the study says. A typical control requires a pesticide producer to show evidence that a new product is toxicologically and environmentally safe. Some countries also require a producer to prove the efficacy of a product. But virtually all countries either restrict or forbid the use of organo-chlorine insecticides and

arsenites, and they limit organic mercurial applications to seed dressings.

The hodgepodge of government controls has hurt new product development. Of the \$20 million that it costs to come up with a new pesticide, a manufacturer tends to spend about \$10 million on data gathering just to win government approval.

The EEC will eventually come to regulate pesticide use, so that a universal control scheme can prevail throughout Europe, the study forecasts. Such a scheme is likely to combine the wide scope of British regulations along with the provision in French, Belgium, and Norwegian schemes that require pesticides to be re-approved periodically.

"The resulting control could be superior to any one of the separate national schemes," the study observes.

Despite the government obstacles, some product innovation does go on. Synthetic pyrethrin-type insecticides will become commercially important within a few years, the study project. Another R&D trend is to develop herbicides that apply to a single crop. Also, more and more companies are turning out synergistic mixtures of traditional pesticide formulations. Looking further down the road, compounds that translocate downwards in a plant to do a job against soil-borne disease and pests will become "of great importance" in pesticide development. □

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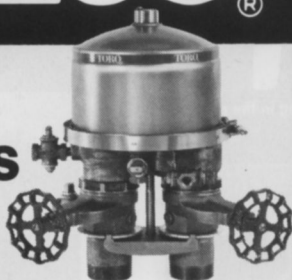
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