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ADVERTISER INDEX

NO.	ADVERTISER	PAGE	NO.	ADVERTISER	PAGE NO.	NO.	ADVERTISER	PAGE NO.
101	Agrotec.	62	280	Gravely International, Inc.	95	148	PBI Gordon Corp./Ferromec	60-61
102	Aquatrols Corp. of America, Inc.	97	125	Hahn Turf Products	99	116	Par-Ex	1
120	BASF Corp.	105	126	Hoechst Roussel Agri-Vet Co.	75	149	Pickseed West, Inc.	57
103	Barebo, Inc.	22A	127	Howard Price Turf Equipment	59	150	Precision Laboratories, Inc.	72
173	Ben Meadows Co.	112	128	Hydro Turf And Associates	22B	151	Promark Products, Inc.	41
104	Big John Tree Transplanters	114	129	ICI Americas	43	152	RGB Laboratories, Inc.	101
105	Bluebird International, Inc.	88	130	International Seeds, Inc.	73	241	Ransomes, Inc.	51
106	Brouwer Turf Equipment	85	131	Jacobsen Div. of Textron, Inc.	89	153	Reemay, Inc.	77
107	Bunton Co.	33	132	KLM Bio-Systems, Inc.	22B	154	Rhone Poulenc Ag Co.	63-70
108	Cub Cadet Power Equipment	111	133	Kubota Tractor Corp.	49	155	Rhone Poulenc Ag Co.	31
109	Cushman Motors	17	134	Lebanon Chemical Corp./Butler	39	157	Safer, Inc.	18-19
172	Ryan/Lawnair IV	37	135	Lebanon Chemical Corp./Ronstar	20	161	Salco, Inc.	21
110	DeDoes Industries Inc.	102	134	Lebanon Chemical Corp./Betasan	93	158	Sandoz Crop Protection	54-55
111	Deere and Co., John	28-29	137	Lesco, Inc.	CV3	159	Sandoz Crop Protection	2-3
112	Dow Chemical Co.	34-35	138	Lofts Seed, Inc.	CV4	160	Seed Research Co.	23
113	Elanco Products Co./Surflan	79	139	Maruyama U.S., Inc.	26	162	Sports Turf Managers Assoc.	102
114	Elanco Products Co./XL (Regional)	113	140	Melroe Bobcat	81	164	Tecumseh Products Co.	80
115	Elanco Products Co./XL Ornamental	15	141	Milliken Chemicals	27	163	Tee 2 Green Corp.	CV2
117	Excel Industries, Inc.	45	142	National Mower Co.	16	165	Teledyne Total Power	103
118	Exmark Manufacturing Co., Inc.	104	144	Nor Am Chemical Co.	53	166	Toro Co.	12-13
119	Fermenta Plant Protection Co.	83	143	Northrup King	94A	167	Turfco Manufacturing, Inc.	22
121	Fuerst Brothers, Inc.	98	145	Olathe Manufacturing, Inc.	76	171	Turfco Manufacturing, Inc.	22
122	Garfield Williamson, Inc.	87	271	Onan Corp.	7	168	Turf Seed, Inc.	5
123	Goossen Industries	100	147	PBI Gordon Corp./Super Trimec	24-25	169	Verti-Drain	100
			177	PBI Gordon Corp./Trimec	24-25	170	Walker Manufacturing, Inc.	74

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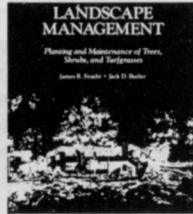
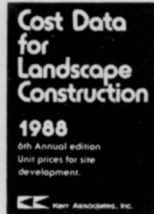
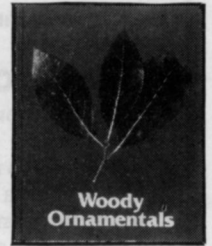
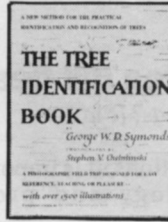
by George Symonds
Pictorial reference to identifying trees by checking leaves, buds, branches, fruit and bark. Like its sister publication, SHRUB IDENTIFICATION, popular and botanical names are listed with index tabs for easy reference. **\$14.95**

760 - TREE MAINTENANCE

by Pascal Pirone
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405 - WOODY ORNAMENTALS

by Partyka, Joyner, Rimelspach, Carver
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345 - COST DATA FOR LANDSCAPE CONSTRUCTION 1988

Kathleen W. Kerr, Editor
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300 - LANDSCAPE DESIGN: A PRACTICAL APPROACH

by Leroy Hannebaum
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305 - LANDSCAPE MANAGEMENT

by James R. Feucht and Jack D. Butler
Planting and Maintenance of Trees, Shrubs, and Turfgrasses. Describes the basic principles of cultural management of installed landscapes. The important factors of plant growth, soils and fertilizers, improved planting techniques and new pruning techniques, integrated pest and disease management, and spray-equipment calibration and care are all featured. **\$29.95**

370 - LANDSCAPE OPERATIONS: MANAGEMENT, METHODS & MATERIALS

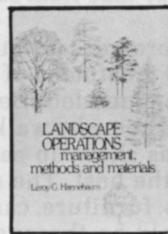
by Leroy Hannebaum
An in-depth examination that combines technical training in landscape science with methods of accounting, business management, marketing and sales. Discusses effective methods for performing lawn installations, landscape planting and maintenance. Step-by-step accounting calculations are explained in simple terms. **\$34.00**

365 - LANDSCAPE PLANTS IN DESIGN

by Edward C. Martin
An annotated photographic guide to the design qualities of ornamental plants and their aesthetic and functional use in landscape designing. Over 600 trees, shrubs, vines, ground covers and turfgrasses are described in nontechnical language. Over 1900 photographs. Provides a basis for selecting the best plant materials for any particular use in landscape design. Contains detailed indexes that provide quick reference to particular design qualities and growing conditions. **\$58.95**

375 - RESIDENTIAL LANDSCAPES

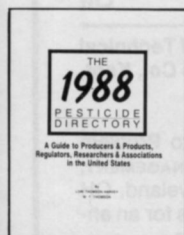
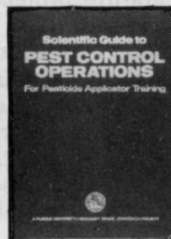
by Gregory M. Pierceall
An excellent reference for individuals involved in the design and development of plantings and constructed features for residential sites. Illustrations and actual residential case study examples are used to communicate graphic, planning and design concepts which are the focus of this text. **\$41.00**



565 - WEEDS
by Walter Muenscher
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125 - SCIENTIFIC GUIDE TO PEST CONTROL OPERATIONS

by Truman, Bennett, Butts
Provides a sound basis for studying the technical aspects of pest control. Covers pesticides, safety, health and environmental concerns, equipment, flies and mosquitos, rats and mice, birds and much more. **\$35.00**



500 - THE 1988 PESTICIDE DIRECTORY

by Lori Thomson Harvey and W.T. Thomson
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LM

by Balakrishna Rao, Ph.D.

Sanitation, insecticides kill fleas

Problem: How do you destroy fleas? (Fla.)

Solution: To manage flea populations, it is important to learn about their biology and proper identification.

Cat fleas are frequently found in houses and in yards where dust and organic debris accumulate. They can attack dogs, cats, foxes, raccoons and even humans. They may not bite hard, but their irritation is painful.

Fleas are capable of transmitting infectious diseases. Adult fleas are 1/8-inch long, wingless insects with piercing/sucking mouthparts. They are dark reddish-brown with a flat body. They can jump several feet when off the host. Cat fleas undergo complete metamorphosis (egg, larvae, pupae and adult). The females lay four to eight tiny, white oval eggs after each blood meal.

Eggs hatch in about 10 days and the larvae feed on dried blood, bits of feces and other materials. They go through three molts which may take from seven days to several months.

To manage flea problems, thorough sanitation, proper use of insecticides and treatment of the pet(s) by a veterinarian is recommended. Determine the hot spots of fleas in the home by walking wearing white socks. Dark fleas show up easily when they jump from floor to the host. The suspected area, such as floor cracks, furniture, carpet edges and pet sleep area, should be thoroughly vacuumed prior to treatment to remove larvae, pupae and organic debris.

Also, pet hairs should be cleaned and pet bedding should be discarded or washed in hot soapy water.

For indoor treatment, application of insecticides such as malathion premium grade 3%, diazinon (Knox Out 2FM) 1% or propoxur (Baygon) 1% is recommended. Reports also suggest that dust of bendiocarb (Ficam D) 1% and Pyrethrins (Drione) 1% can be effective too. In addition, there are some automatic foggers containing ronnel (Korlan) plus dichlorvos (Vapona) available in canister, which will knock down and kill many adult fleas.

Outdoor areas frequented by pets should be treated with insecticide such as Ficam, Sevin, Dursban, diazinon, malathion, propoxur or silica gel. In addition, pets should be treated by a veterinarian for flea problems.

Check with your local extension personnel for further advice.

Eliminating perennial weeds

Problem: The landscaping division of our company undertakes new lawn establishment in new home developments. Often in these newly-seeded lawns, we find a lot of annual and perennial-type weeds. Although we follow good lawn establishment procedures, a lot of these unsightly perennial grassy weeds appear gradually over time. Our clients think that these weeds are from our seed mixtures.

Can we use Roundup or a fumigation method to kill the weeds prior to establishment? (Pennsylvania)

Solution: Several different factors such as the cultural practices used prior to seeding, the type of seeds used, mulching, post-seeding care, seed germination and seedling establishment can partially contribute to weed establishment in any newly-seeded lawn.

Generally, most soils contain thousands of seeds of several kinds of weeds, which can remain viable in soil for many years. These seeds as well as vegetative parts of certain weeds can present problems whenever soil is disturbed, particularly perennial grassy weeds. Therefore, prior to tilling, grading and seed bed preparation, the first step in soil preparation should be to control persistent weeds. This can be achieved by the use of non-selective herbicides or soil fumigation.

Use of non-selective herbicides such as glyphosate (Roundup) should make the existing vegetation easier to manage. Remember, this product will not have any effect on viable weed seeds in the soil, which may present a potential problem later. Therefore, wait for three to four weeks and repeat applications if desired.

If your objective is to get rid of all viable plant structures, fumigate the seed beds. Before fumigating, prepare the soil for seeding by covering the seed beds with polyethylene (plastic) covers while applying 250 to 300 lbs. of methyl bromide per acre. Keep the plastic cover on beds for 48 hours after fumigation and make sure its edges are firmly secured. Then, before seeding, remove the plastic and let the seed beds air out for 48 hours. Remember that methyl bromide is highly toxic; therefore, follow good safety procedures while fumigating. Read and follow the label specifications.

Besides this method, weed populations can also be minimized to some extent by:

1. using weed-free certified seed with good germination potential;
2. maintaining seed and soil contact when seeding;
3. using good mulch cover to maintain moisture and temperature, protect seeds from erosion and discourage bird feeding;
4. keeping the seeded area moist throughout the germination and establishment period; and
5. if only a few weeds are present, consider using either pre- or post-emergence herbicides to manage these weeds, only after the turfgrass has established. Remove persistent weeds by sanitation (digging where practical) or spot treat with a non-selective herbicide like Roundup. Then reseed these areas.

LM



Balakrishna Rao is Manager of Technical Resources for the Davey Tree Co., Kent, Ohio.

Questions should be mailed to Problem Management, LANDSCAPE MANAGEMENT, 7500 Old Oak Boulevard, Cleveland, OH 44130. Please allow 2-3 months for an answer to appear in the magazine.

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