



If it's not **Certified Manhattan II**, it's not 'such a deal' after all.

Some dealers are offering you a deal to take something they call Manhattan off their hands

Qualified turf associations can earn cash for turf research by saving Manhattan II blue tags. Contact your dealer for details.

THE REAL BAG



Manhattan Ryegrass Growers Association has the exclusive contract to produce Manhattan and Manhattan II perennial Ryegrasses. These select seed growers have not produced the old Manhattan strain for years, so much of what is being produced as Manhattan is probably not true Manhattan.

The improved *certified* Manhattan II, co-developed by Dr. Bill Meyer at Pure Seed Testing and Dr. C. Reed Funk has significant improvements over the old Manhattan ... like rust and disease resistance, darker green color and better plant density.

So what is their stuff? We *know* it bypasses seed certification and royalty programs. And, because it's not certified, we have no way of knowing just what's in the bag.

And neither do you.



PVP 8200154. Unauthorized propagation prohibited.

Manhattan II

TURF-TYPE PERENNIAL RYEGRASS ONLY FROM

Turf Merchants, Inc.

33390 Tangent Loop Road
Tangent, OR 97389
800-421-1735 FAX 503-926-4435
(503) 926-8649 TWX 910-997-0773

Turf-Seed, Inc.

P.O. Box 250 • Hubbard, OR 97032
800-247-6910 FAX 503-981-5626
503/ 981-9571 TWX 510-590-0957

When Quality Counts...



... USE THE BEST

Silva-Fiber®

100% Virgin Wood Fiber
For Hydraulic Planting

1-800-443-9179

Weyerhaeuser
EF-4 Tacoma, WA 98477

Circle No. 147 on Reader Inquiry Card

REINCO HYDROGRASSERS and power mulchers in stock. Opdyke Inc. (Philadelphia Area) 215-721-4444. TF

Landscape installation + lawn maintenance co. Northern Ohio - established 15 yrs. — 250K plus - Unlimited growth potential. 1-216-769-3238. 10/88

MISCELLANEOUS

LANDSCAPE TRAINING VIDEOS

Intermediate mower maintenance field and shop repair; efficient/profitable mowing techniques; professional shrub trimming, etc. **ENGLISH AND SPANISH.** Write for free brochure.

C.D. Anderson Landscape Videos
515 Ogden Avenue
Downers Grove, IL 60515

LANDSCAPERS SUPPLY FREE CATALOG. Buy direct and save up to 75% on a full line of commercial lawn maintenance equipment, engines, parts and accessories. Call Toll Free 1-800-222-4304. 12/88

WANTED

WANTED: Large Lindig and Royer Shredders. Lewis Equipment. 320 Third Street S.W., Winter Haven, FL 33880. (813) 294-5893. 10/88

USED EQUIPMENT

BUCKET TRUCK: Hi Ranger 65', 57', 50'. Skyworkers with chip boxes. Asplundh brush chippers. Bean 55 gal. sprayers. Pete Mainka Enterprises, 633 Cecilia Drive, Pewaukee, WI 53072. 414-691-4306. TF

BUCKET TRUCKS, Straight Stick, Corner Mount and Knuckle Boom Cranes. Brush Chippers - New Morbark Disc Type, New Woodchuck Drum Type. Best prices anywhere. Used Chippers - Asplundh, Woodchuck, etc. 2 to 8 usually in stock. Sprayers, Dumps, Stakes, Log Loaders, Crew Cab Chip Box Dumps, Railroad Trucks, 50 in stock. Sold as is or reconditioned. Opdyke's, Hatfield (Philadelphia Area) 215-721-4444. TF

NEW AND USED EQUIPMENT—Asplundh, Hi Ranger and Lift-all forestry bucket trucks, Chipmore wood chippers. Mirk, Inc., (216) 669-3567, (216) 669-3562, 7629 Chippewa Road, Orrville, Ohio 44667. TF

POSITION WANTED

Horticulturist seeking management position in the green industry. Qualifications include M.S. in Agriculture, experience in grounds management, woody ornamental production and greenhouse management. Resume available. Reply to: LM Box 456. 8/88

send a Classified Advertising message...
...write here.

(Please Print) _____

1. Number of insertions: (circle) 1 2 3 6 9 12 TF (Til Forbid)
2. Start with (month) _____ issue. (Copy must be in by 5th of month preceding)
3. Amount enclosed: \$ _____

To keep our rates as low as possible, payment must accompany order.

SIGNATURE _____ DATE _____

NAME _____ COMPANY _____

STREET _____

CITY _____ STATE _____ ZIP _____

PHONE NUMBER _____

MAIL AD COPY TO: Dawn Nilsen, LANDSCAPE MANAGEMENT, 1 East First Street, Duluth, MN 55802.

RATES: \$1.10 per word (minimum charge, \$25). Boldface words or words in all capital letters charged at \$1.35 per word. Boxed or display ads: \$90 per column inch, one time; (one inch minimum); \$85, three times; \$80, six times, \$75, nine times; \$70, twelve times. For ads using blind box number, add \$10 to total cost of ad.

...serious about beautiful turf? put the Brouwer^{T.M.} anti-thatch team to work.

Verti-Cut

For fast, economical, vertical mowing, the Brouwer Verti-Cut^{T.M.} is the ideal machine.

A regular use program enables you to control the level of troublesome thatch. It allows valuable chemicals, fertilizers and also water to penetrate to the roots. Other important benefits are improved aeration, better results when overseeding and reduced surface compaction.

- Low 35 h.p. tractor requirement
- 138 in. cutting width
- Easy blade depth adjustment
- Variable blade spacing
- Economical to buy and operate



Brouwer-Vac^{T.M.}

Largest capacity vacuum unit of its type, for fast, economical work cleaning up thatch from verti-cutting on sod farms, golf courses, parks and recreation areas. A huge pick-up head and powerful suction fan make easy work of trash and litter at airports, parking lots, racetracks and hard surface areas. The optional hose extension allows easy clean-up around trees, fences, culverts and ditches.

- Up to 10 ft. wide suction path
- Huge 335 cu. ft. capacity
- Hydraulic unload conveyor
- P.T.O. drive 35-45 h.p. tractor
- Finger-tip hydraulic controls

For more information about this and other fine turf care equipment, phone your Brouwer dealer ... TODAY

BROUWER

TURF EQUIPMENT LIMITED

An Outboard Marine Corporation Company

7320 Haggerty Rd./Canton, MI. 48187 Telephone (313) 459-3700

Woodbine Avenue / Keswick, Ontario, Canada L4P 3E9 Telex 065-24161 Telephone: (416) 476-4311

ADVERTISER INDEX

NO. ADVERTISER	PAGE NO.	NO. ADVERTISER	PAGE NO.	NO. ADVERTISER	PAGE NO.
101 Brouwer Turf Equipment	37	Reubens	74	130 Monsanto Co.	12-13
102 Brouwer Turf Equipment	25	116 Jacklin Seed Co./Arid	15	131 Northrup King Co.	41
103 Brouwer Turf Equipment	73	117 Jacklin Seed Co./Fylking	40	132 Nor-Am Chemical Co./Nitroform	CV3
104 Bunton Co.	2-3	118 Jacobsen Div. of Textron	43	133 Nor-Am Chemical Co./Proxol	33
105 Cushman/Lawnaire	51	119 Jonathan Green Div. of International Seed Co. (Regional)	65	134 Olathe Mfg. Inc.	62
106 Cushman/Frontline	29	121 Kubota Tractor Corp.	69	135 Oregon Fine Fescue	61
107 Cushman/Matway	18	122 Landscape Exposition	59	136 PBI Gordon Corp.	22-23
108 Elanco Products Co./Rubigan SDS (Regional)	36	123 Lebanon Chemical Corp.	55	137 Pickseed West, Inc.	49
109 Elanco Products Co./Rubigan	1	124 Lesco, Inc.	45	138 Reinco Co.	8
110 Elanco Products Co./Rubigan	1	125 Lofts Seed, Inc.	CV4	139 Reinco Co.	11
111 Elanco Products Co./Team	75	126 Melroe Co.	35	140 Rhone Poulenc Ag. Co.	63
112 Elanco Products Co./XL	75	127 Mobay Corp./Bayleton	16-17	141 Tee-2-Green Corp.	CV2
113 Estech, Inc.	7	128 Mobay Corp./Nemacur/ (Regional)	21	142 Telemark, Inc.	39
114 Garfield Williams, Inc.	27	129 Mobay Corp./Oftanol (Regional)	30-31	143 Turf Seed, Inc.	5
115 Jacklin Seed Co./				144 Turfco Mfg., Inc.	18
				145 Turf Merchants, Inc.	71
				146 Turf Vac Corp.	28
				147 Weyerhaeuser Co.	72

This index is provided as an additional service. The publisher does not assume any liability for errors or omissions.

Reubens

Canada bluegrass

U.S. Plant Patent No. 3823



The right grass for water-stressed roughs, marginal maintenance areas.

Also an excellent mixture component for low-maintenance fairways and other specialized turf areas.

Reubens made its reputation in tough reclamation areas where water and nutrients were low.

These characteristics make Reubens an excellent choice for golf course roughs under drought stress or marginal maintenance conditions. Reubens is also an excellent compo-

Available through your local wholesale seed distributor or

W. 5300 Jacklin Ave., Post Falls, ID 83854-9499
208/773-7581 FAX 208/773-4846
TWX 5107760582, Jacklin PFLS

nent in fairway seed mixtures designed for low-maintenance.

Reubens germinates faster, is lower growing with dark green appearance in spring, then progressing to a blue-green color.

Insist on Reubens for your water stress or low-maintenance areas.

Jacklin Seed Company

The choice is yours. Whether your customers need season-long preemergence weed control by itself or on fertilizer from leading formulators, Team fits.

Either way, you can control crabgrass and goosegrass season-long with just one application. Or even a split application, if need be, to better fit your program.

Team granular also fits your high standards of annual grass weed control. University tests show it's outstanding. Team gets to the ground and stays put to form a zone of protection that keeps weeds out all season long.

And Team does all this without hurting your turf, including sensitive bentgrass.

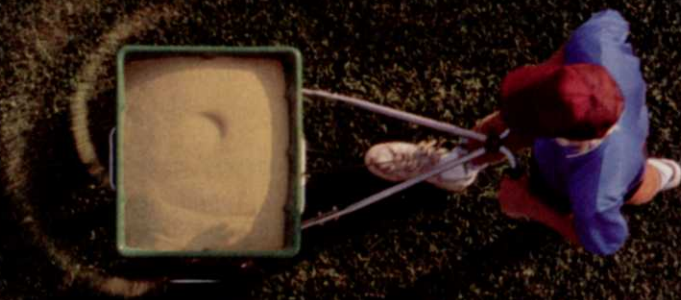
So spread it straight in granular form. Or spread it on fertilizer available from leading formulators. Team fits your program. See your Elanco representative. Or call toll-free: **1-800-352-6776.**

Elanco Products Company
A Division of Eli Lilly and Company
Lilly Corporate Center
Dept. E-455, Indianapolis, IN 46285, U.S.A.
Team™ — (bifenox+trifluralin, Elanco)
Refer to Team label for complete use directions.



Circle No. 111 on Reader Inquiry Card

Spread it your way.



Team™ granular.

Team™ on fertilizer.



PROBLEM MANAGEMENT

by Balakrishna Rao, Ph.D.

In sandy soil...

Problem: I have extremely sandy soil. What type of turfgrass does well? I run a cemetery in eastern North Carolina. None of the turf seems to build a consistent root structure. What are your suggestions for building root structure? (N. Carolina)

Solution: Not knowing exactly what type of turfgrass you tried to establish, it is difficult to answer your question. I feel that some of the improved turf-type tall fescue cultivars should establish well in your soil providing you supply the proper water and nutrients.

Several other factors, such as light and post planting care, are important. Try planting improved tall fescue cultivars and maintain good moisture level during germination and establishment.

Another major factor to consider is the timing and method of seeding. First prepare the seed bed, making any necessary soil modifications or pH adjustment, and then spread certified seed mix. Consider incorporating some organic matter such as peat or compost to maintain better moisture content of your sandy soil. A starter fertilizer can be applied at this time. Gently rake the area to maintain contact between seed and soil. Spread straw as mulch to help maintain proper temperature and moisture. Water the area as needed until establishment. If the area is heavily shaded from trees, provide selective pruning to allow sufficient light for turfgrass survival.

Late fall fertilization

Problem: Is one nitrogen source superior for late fall fertility? A nitrogen source that's independent of soil microbial activity (IBDU) seems like a good choice. (Montana)

Solution: Richard Rathgens, a senior agronomist on our staff, made the following comments. For late fall, you are correct in choosing a fertilizer which is not dependent on soil micro-organisms for release of nitrogen. This is because a late fall fertilization should be applied at the time of the last mowing of the season when soil micro-organism activity is low.

To obtain the benefits desired, a quick-release source of nitrogen such as urea should be applied. If, however, there is a concern that nitrogen will be leached from the rootzone (e.g. sandy soils), a controlled-release source of nitrogen should be used. The type of controlled-release fertilizer used would be one whose release is dependent on soil moisture: sulfur-coated urea or IBDU.

Spreading diseases

Problem: How big is the problem of turfgrass diseases spreading by contract mowing? (Iowa)

Solution: The mowers can spread some of the infected disease clippings or disease agents (eg. fungi, bacteria).

A good example would be leaf spot and dollar spot diseases. For any disease to establish, it is necessary to have a virulent pathogen, susceptible host and favorable environment (eg. proper temperature, moisture, etc.) for the disease development. If any one of these factors is absent, a disease will not occur. Therefore, even if the mowers spread the infected tissues from one place to another, a disease may not develop.

To answer your question, turfgrass diseases spread by contract mowings are not a major problem because several different contributing factors should be present for disease development.

In many situations, "stress" predisposes the turf to diseases. One of the major stress factors, in my opinion, is mowing too short. This will remove the green tissue needed for photosynthesis. As a result, turf can be starved gradually. Short mowing can also scalp and allow the soil to dry out quickly. Therefore, maintain proper cutting height. If in doubt, cut at 2½ to 3 inches high to improve turf quality. A turf properly maintained with balanced fertilization, watering and pest management as needed will have less potential for disease.

See your supplier

Problem: Which of these products (weed and feed combinations), applications, etc. is more economical for coverage on 500 acres of open turf areas? (Ohio)

Solution: Not knowing the fertilizer analyses of the "weed and feed combinations" you are referring to or the weed problem, it is difficult to suggest a product. The economics of these products depends on the fertilizer and herbicides chosen for blending.

Without giving any brand or product name, the best thing to do is to review some of the catalogues from suppliers to determine the economics. Many of the suppliers have technical advisors on staff who can work with you.



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.

WHEN TURF IS READY TO GROW, NITROFORM[®] IS READY TO GO

Consistent 38% nitrogen

Decreased thatch build-up

Nitrogen released slowly for sustained turf feeding during active growth periods

Available in Blue Chip[®], Gray Chip[™] and new Blue Granular[™] for dry application; Powder Blue[®] and Powder Gray[™] for spray application.

Nonburning and nonleaching

Odorless and pathogenfree

For Quality Nitrogen
NITROFORM

Always look for the NITROFORM[®] logo.
It's your assurance of high-quality nitrogen.

 **NOR-AM**
NOR-AM CHEMICAL COMPANY

3509 Silverside Road, P.O. Box 7495, Wilmington, DE 19803

Circle No. 132 on Reader Inquiry Card