

### Denser, darker green Manhattan II takes the bruises for your athlete

What goes up must come down... and that goes double for athletes' knees and elbows.

Improved Manhattan II perennial ryegrass has a built-in cushion developed through genetic improvement. The greater tiller density of Manhattan II takes the punishment athletes dish out, then springs back to retain its great-



looking appearance. All that toughness... with improved mowability to boot!

Manhattan II also provides a darker green color than the old standard Manhattan; improved disease resistance, drought and shade tolerance as well as fertilizer savings.

Manhattan II was developed to save on maintenance costs ... but the *real* saving is on knees and elbows!

"Fall on the leader"

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



TURF-TYPE PERENNIAL RYEGRASS

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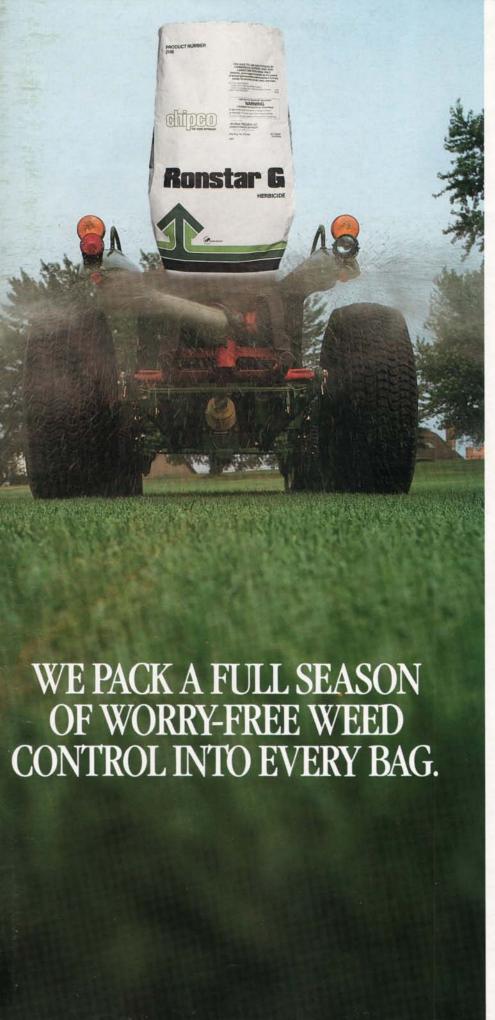
### Turf Merchants, Inc.

P.O. Box 1467 • Albany, OR 97321 Outside Oregon 800-**421-1735** 503/**491-3622** TWX **910-997-0733** 

### Turf-Seed, Inc.

P.O. Box 250 • Hubbard, OR 97032 503/981-9571 TWX 510-590-0957

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Only CHIPCO® RONSTAR® herbicide gives you safe, season-long control of crabgrass, goosegrass and tough broadleaf weeds.

Like most turf professionals, you want a herbicide that works the first time, every time. One that controls crabgrass, goosegrass and tough broadleaf weeds all season long...without damaging your turf.

But there's only one place you'll find that kind of control. Inside every bag of

CHIPCO RONSTAR herbicide.

A single application of CHIPCO RONSTAR herbicide delivers the longest-lasting, most dependable pre-emergence control of crabgrass and goosegrass you can buy. In addition, CHIPCO RONSTAR herbicide keeps oxalis, carpetweed and many other broadleaves out of sight and out of mind.

Unlike most turf herbicides, CHIPCO RONSTAR herbicide controls weeds without harming turfgrasses. In fact, tests prove that CHIPCO RONSTAR herbicide will not cause the root pruning problems associated with

other products.

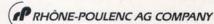
CHIPCO RONSTAR herbicide can also be used near trees, ornamentals and ground covers without fear of damaging sensitive varieties. And, CHIPCO RONSTAR herbicide won't leach or move laterally like some other herbicides.

When it's time to plan your weed control program, remember the herbicide that has everything you need in one bag. CHIPCO RONSTAR G herbicide or new CHIPCO RONSTAR WP herbicide.

Rhone-Poulenc Ag Company, CHIPCO Department, P.O. Box 12014, Research

Triangle Park, NC 27709.





Please read label carefully and use only as directed.

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**VOLUME FOUR. NUMBER ONE** 

JANUARY 1988

### MAIN EVENTS

### 14 REGAINING CONTROL: A TALE OF TWO GOLF **COURSE IRRIGATION SYSTEMS**

Bob Maloney, greens chairman at Atlantis Golf Club in Atlantis, FL, and Dick Ameny, general manager of Canyon Country Club in Palm Springs, CA, were at wits end two years ago with runaway irrigation system maintenance costs. Although they were more than 3,000 miles apart, they regained control of their irrigation systems with similar solutions. One reason is Atlantis has one of the few electric valve systems in lightning-prone Florida. By starting with their pump systems and leading into new valves and heads, both Maloney and Ameny concluded that the ultimate solution for their renovated irrigation systems was computerized control at both the central controller and the satellites. A computer program developed by Toro that accurately calculates the water needs of valuable turf and adjusts irrigation cycles accordingly has both courses back on track to irrigation efficiency.

### 24 JACK MURPHY STADIUM: THE ROAD TO SUPER BOWL XXII

The decision on which stadium will host the Super Bowl is very important to the National Football League and is made years in advance. The selection of San Diego Jack Murphy Stadium for Super Bowl XXII was a close one, based upon the NFL's faith in the ability of a few experts to bring the siltplugged field back to life. As promised, the field has been rebuilt and recovers as quickly as it did when it was first built in 1967. Still, unseasonably cold weather and a fall schedule that included backto-back games played in the rain, has turf manager Brian Bossard and NFL field consultants George and Chip Toma on guard to fool Mother Nature between the Holiday Bowl and the Super Bowl.

### 39 CALCULATING PUMP EFFICIENCY

Energy and water savings, possible by increasing the efficiency of irrigation systems, have many sports complexes reevaluating their pump systems. Not only will a new pump system save money, it will cut down on system maintenance and enable modern controllers and heads to perform better. This article gives sports turf managers insight into efficient pump system operation and how it relates to other irrigation system components.

### LINE-UP

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12 EVENTS

**58** CHALKBOARD

62 ROOKIES

**64** SCOREBOARD

**COVER:** Aerating a golf course green in the early morning dew. Photo courtesy: Salsco Products. Co.

# The Human Heart Only Has 4 Valves.

We Have 5.

For the record, we have over 27 models, sizes and options of direct-burial, remote control valves to meet any job requirement. Select from plastic or brass, contamination resistant models, pressure regulating options, and warranties up to seven years.

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### We improved these fairways by putting 11½ of our best feet forward

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Start with single lever reel lift. Here, one lever is all it takes to simultaneously raise all five cutting units. A big benefit when cross-cutting.

The five, quick-release cutting units combine to mow 11½ feet on every pass. And, the 38 net hp 3325 walks softly with a ground pressure of only 9.7 psi with the units down.



A single lever lifts all five cutting units simultaneously to make crosscutting easier.

Frame design allows the center cutting unit to carry a full-size grass catcher. Another John Deere



Frame design allows the 3325 to carry a fullsize grass catcher on the center cutting unit.

exclusive that saves you time, makes your operation more efficient.

As you mow, features like power steering, differential lock, 12-function systems monitor, cruise control, and a 20-gallon fuel tank help make you more productive.

Service is also a snap. Here, a hinged fuel tank and engine cowling give unequaled access to the entire drivetrain.

All told, the 3325 is an entire collection of advantages you

won't find on other machines. Advantages that make you more productive, your course better kept.

Talk to your distributor today for a look at this impressive new mower. Or write John Deere, Dept. 956, Moline, IL 61265 for free

to like what you see.

Floating cutting units and mounting arms deliver ground-hugging performance over contoured terrain.





Nothing Runs Like a Deere







## FROM THE PUBLISHER

t used to be that once the season was over, be it golf, baseball, football, soccer or any other sport, the grounds manager could begin to take it easy, take a little time off to relax and contemplate the ensuing season. I said it used to be, but that doesn't seem to be the case now. A combination of milder weather and larger numbers of

golf playing aficionados seems to have extended the golf guil playing ancionadus seems to have extended the golf playing season. With more tournaments on the calendar, both professional and amother golf courses are golf and amother golf courses. both professional and amateur, golf courses are getting more pour professional and amaleur, you courses are gening more play. Large galleries that tramp all over the course watching the tournaments cause soil connection as well as wear pray. Large gamenes mar tramp an over me course water ing the tournaments cause soil compaction as well as wear

This places a tremendous burden on the golf course su-

This places a tremendous burden on the golf course su-perintendent and his crew. In years gone by, with less play, smaller galleries and shorter seasons, the superintendent had more time to get his course back in shape. perintendent and his crew. In years gone by, with less play, smaller galleries and shorter seasons, the superintendent had more time to get his course back in shape. Nature could take its course. ke its course.
For the sports turf manager, in the past he too would have the time to put his playing
But times have changed and we must
elds back in shape once the season was over. For the sports turf manager, in the past he too would have the time to put his playing fields back in shape once the season was over. But times have changed and we must also change with the times.

take its course.

so change with the times. To be sure the professional must have a good working knowledge of the turf. The ex-To be he has gained coming up through the ranks will stand him in good stead. but perience he has gained coming up through the ranks will stand him in good stead. To be sure the professional must have a good working knowledge of the turf. The experience he has gained coming up through the ranks will stand him in good stead, but perience he has gained coming up through the ranks will stand him in good stead, but perience he has gained coming up through the ranks will stand him in good stead, but perience he has gained coming up through more knowledged than his predecision. perience he has gained coming up through the ranks will stand nim in good stead today's manager has to be so much more knowledgable than his predecessors.

Shorts is his husiness and as such stadiums and golf courses are trained to make the his husiness and as such stadiums and golf courses. day's manager has to be so much more knowledgable than his predecsssors.

Sports is big business and as such stadiums and golf courses are trying to maximize sports is big business and as such stadiums and policy for a sports stadium to have football and baseball games are revenue. It is not unusual for a sports stadium to have football and baseball games are revenue. Sports is big business and as such stadiums and golf courses are trying to maximize income revenue. It is not unusual for a sports stadium to have football and baseball games in the same week. It is not unusual for these same stadiums to fill in blank dates with the same week. It is not unusual for these same stadiums to fill in blank dates. also change with the times.

income revenue, it is not unusual for a sports stadium to have football and baseball games with in the same week. It is not unusual for these same stadiums to fill in blank dates with in the same week. It is not unusual for these same stadiums to fill in blank dates with in the same week. It is not unusual for these same stadium to have football and baseball games with in the same week. It is not unusual for these same stadium to have football and baseball games with the same week. It is not unusual for these same stadium to have football and baseball games with the same week. It is not unusual for these same stadiums to fill in blank dates with the same week. It is not unusual for these same stadiums to fill in blank dates with the same week. It is not unusual for these same stadiums to fill in blank dates with the same week. It is not unusual for these same stadiums to fill in blank dates with the same week. It is not unusual for these same stadiums to fill in blank dates with the same week. It is not unusual for these same stadiums to fill in blank dates with the same week. It is not unusual for these same stadiums to fill in blank dates with the same week. It is not unusual for these same stadiums to fill in blank dates with the same week. in the same week. It is not unusual for these same stadiums to fill in blank dates with rock concerts, motocross, and even religious services, such as the one Dodger Stadium put on when the Pope visited the United States. ut on when the Pope visited the United States.

Managers of the stadiums are many stadiums are owned by cities or municipalities, whenever they can. The orest many stadiums are owned by cities and they book dates whenever they can. The orest many stadiums are owned by cities and they book dates whenever they can.

Many stadiums are owned by cities or municipalities. Managers of the stadiums are pressured to generate more revenue and they book dates whenever they can. The prespective to generate more revenue and they book dates whenever they can. The pressured to generate more revenue and they book dates whenever they can. The pressured to generate more revenue and they book dates whenever they can. pressured to generate more revenue and they book dates whenever they can. The pressure is on the sports turf manager. He has to make sure that once the field is olavable let's say a rock concert, and there is a hallname the following week. that the field is olavable. put on when the Pope visited the United States. sure is on the sports turt manager. He has to make sure that once the field is used for let's say a rock concert, and there is a ballgame the following week, that the field is playable.

There is no question that with more frequent use. the fields and the only courses have. its say a rock concert, and there is a ballgame the following week, that the field is playable.

There is no question that with more frequent use, the fields and the golf courses have
There is no question that with more frequent use, the fields and the golf courses have
There is no question that with more frequent use, the fields and the golf courses have
There is no question that with more frequent use, the field is playable. I nere is no question that with more frequent use, the fields and the golf courses have shorter time in which to rejuvenate. It is no wonder that these professionals need all the help industry can provide.

alp industry can provide.

And provide they do. Today's newer turfgrasses, chemicals and tools all help the professional provide they do. Today's newer turfgrasses, chemicals and tools all help the professional provide they do. Today's newer turfgrasses, chemicals and tools all help the professional provide they do. Today's newer turfgrasses, chemicals and tools all help the professional provide they are turfgrasses, chemicals and tools all help the professional provide they are turfgrasses, chemicals and tools all help the professional provide they are turfgrasses, chemicals and tools all help the professional provide they are turfgrasses, chemicals and tools all help the professional provide they are turfgrasses, chemicals and tools all help the professional provide they are turfgrasses, chemicals and tools all help the professional provide they are turfgrasses, chemicals and tools all help the professional provide they are turfgrasses, chemicals and tools all help the professional provide they are turfgrasses, chemicals and tools all help the professional provide they are turfgrasses, chemicals and tools all help the professional professiona And provide they do. Today's newer turfgrasses, chemicals and tools all nelp the protessional to do a better job in a timely manner. I would say the turf manager today has a herculean task. help industry can provide.

erculean task.

In days gone by the manager would have complained about the task at hand and how manager would have complained about the task at hand and how in days gone by the manager would have complained about the task at hand and how management wanted done and still keep the grounds management wanted done and still keep the grounds. In days gone by the manager would have complained about the task at hand and now impossible it was to accomplish what management wanted done and still keep the grounds in good shape.

good shape.
Today's manager realizes that in addition to having to be a professional in good turf a professional in good turf to think as a businessman. He has to realize the must also begin to think as a businessman. Today's manager realizes that in addition to having to be a professional in good turt management practices he must also begin to think as a businessman. He has to realize that the revenue derived is what drives his management. Management doesn't care how management practices he must also begin to think as a businessman. He has to realize that the revenue derived is what drives his management. Management doesn't care how that the revenue derived is what drives his mo wonder that budgets for operating these he gets the job done as long as it is done. It is no wonder that budgets for operating the gets the job done as long as it is done. tnat the revenue derived is what drives his management. Management doesn't care how he gets the job done as long as it is done. It is no wonder that budgets for operating these areas have increased. in good shape.

areas have increased.

eas nave increased.

As for the turf manager of the future, he will not only have to be astute in good turf as for the turf manager of the future, he will not only have to be astute in good turf not only have the good turf not only have to be astute in good turf not only have the good As tor the turt manager of the future, he will not only have to be astute in good turf practices, he will have to possess good business skills as well. No longer will it be unpractices, he will have to possess good business skills as well. Or reseed frequently common to completely resort a playing field on an annual basis. practices, ne will have to possess good business skills as well. No longer will it be uncommon to completely resod a playing field on an annual basis, or reseed frequents to completely resod a playing field on an annual basis, or new types of equipment to aerate. The use of more chemicals to maintain the fields. common to completely resod a playing field on an annual basis, or reseed trequently.

The use of more chemicals to maintain the fields, or new types of equipment to an annual basis, or reseed trequently.

The use of more chemicals to maintain the fields, or new types of equipment to be an annual basis, or reseed trequently. The use of more chemicals to maintain the fields, or new types of equipment to aerate and cut the turf will all come into play to help the manager do a better job. But in the end, the buck stops with the turf manager. It is his knowledge combined with his bush end, the buck stops with the turf manager. and cut the turf will all come into play to help the manager do a better job. But in the end, the buck stops with the turf manager. It is his knowledge combined with his businesd, the buck stops with the turf manager. It is his knowledge combined with his businesd, the buck stops with the turf manager. It is his knowledge combined with his businesd, the buck stops with the turf manager. It is his knowledge combined with his businesd, the buck stops with the turf manager. end, the buck stops with the turf manager. It is his knowledge combined with his business skills that will propel him to the top of his profession and place more demands for his services.

his services.

