

NEW MEMBER SWEEPSTAKES!!

All New Members Joining Between October 1st and December 1, 1999, will be eligible for a drawing for a free registration to the STMA 11th Annual Conference & Exhibition, January 12-16, 2000, St. Louis, Missouri

BONUS – EVERYONE WINS

Join Now – and get up to three months FREE!

That's Right! If you sign up RIGHT NOW, your membership is in force through December 31, 2000.

Get Serious With STMA

Application for Membership

The Sports Turf Managers Association (STMA) is an organization of professionals representing all segments of the sports turf industry. Our members work to combine the science of growing turfgrasses and the art of maintaining sports turf to produce playing fields that are both safe and aesthetically pleasing.

STMA provides members with a variety of benefits, including: education through regional institutes and conferences; support for sports turf research; facilities tours; a national awards program; access to the STMA National Conference & Exhibition; our *Sports Turf Manager* Newsletter; and MUCH more!

If you're serious about the sports turf industry, then it's time to become a member of STMA. Join today!

Member Information

Name _____
 Title _____
 Employer _____
 Type of Business _____
 Address _____
 City/state/zip _____
 Phone _____ Fax _____
 E-mail Address _____
 Signature _____
 Referred by _____
 (STS99)

Membership Category (please check one)

- | | | |
|--------------------------|--|-------|
| <input type="checkbox"/> | Professional facility sports turf manager | \$85 |
| <input type="checkbox"/> | Four-year colleges and university facility sports turf manager | \$85 |
| <input type="checkbox"/> | Other schools, research, Ext. agents, teaching | \$85 |
| <input type="checkbox"/> | Parks and recreation sports turf manager | \$85 |
| <input type="checkbox"/> | Commercial (US or International) | \$295 |
| <input type="checkbox"/> | Additional members from same commercial co. | \$50 |
| <input type="checkbox"/> | Student (non-voting) | \$20 |
| <input type="checkbox"/> | International (other than commercial) | \$85 |
| | (must be in US dollars) | |

Total amount enclosed \$ _____

Please enclose payment in U.S. dollars (check, money order, Master Card, Visa, Discover or American Express) and send to:

Sports Turf Managers Association, PO Box 3480, Omaha, NE 68103-0480

For more information, contact STMA Headquarters at
 800/323-3875, 712/366-2669, fax: 712/366-9119 or e-mail: SportsTMgr@aol.com

"Promoting Better and Safer Sports Turf Areas"

Paspalum

by R. R. Duncan, Ph.D.

**A new
environmental
sports
turf**

In August, the New Orleans Saints created a buzz when they installed natural grass inside the Superdome for a pre-season game against the Green Bay Packers. To fulfill the special, low-light requirements for this unprecedented project, the team turned to paspalum, a new grass that's showing promise for athletic turf applications.

Scientifically referred to as *Paspalum vaginatum*, the grass is known by several common names: seashore paspalum or siltgrass in the United States, and saltwater couch in Australia. While the grass is a "cousin" to dallisgrass and bahiagrass, it more closely resembles hybrid bermudagrasses in appearance, growth habit, and quality.

The Saints installed Salam, Southern Turf Nurseries' proprietary selection of paspalum that had been used in other applications throughout the world.

Origin

Paspalum is a perennial grass that has both stolons and rhizomes. Normally found between 30- and 35-degree North-South latitudes, the grass' primary center of origin lies in the fine-textured ecotypes of South Africa and the coarse-textured ecotypes of both Africa and the Americas. It propagates vegetatively, and acts similarly to hybrid bermudas.

Establishment

Vegetative material — sprigs, stolons, and rhizomes — can be planted at a rate of 200 to 600 bushels per acre. Grow in time approximates 90 days in conditions of proper fertility and moisture.

The fertility package for establishment and grow-in is also similar to that of the bermudas. Highly sol-

Continued on pg. 16

WHY DO MAJOR UNIVERSITIES, THE MAJOR LEAGUES, AND N.F.L. TEAMS CALL CYGNET WHEN THEY NEED EMERGENCY REPAIRS OR NEW INSTALLATIONS? (not to play ball)



INSTALLED CLEVELAND INDIANS
IN 42" AND 48" ROLLS



STRIPPED JACOBS FIELD
CLEVELAND INDIANS

FOR fewer, tighter seams
stability and performance
when you are ready to install,
give **CYNET** a call



INSTALLED OHIO STATE (AND
STRIPPED) 2" THICK TURF 48" ROLLS

...BECAUSE CYGNET PERFORMS!!!

NEW from CYGNET: We are able to prescription strip a sportsfield in hours (stripped Ohio States entire football field in six hours) with our new machine.

CYNET is able to harvest 48" WIDE ROLLS consistently from very thin to over 2" thick. We can install these rolls without pulling or pushing them along the ground (no stretching or tearing). Our patented machines carry the rolls, turn them at ground speed, and install down a comfortable slide for tighter seams.

NO ONE ELSE CAN MAKE THIS CLAIM
U.S. PAT. #5,215,248 & 5,307,880

4711 INSLEY ROAD
NORTH BALTIMORE, OHIO 45872



YOU CAN'T INSTALL
TURF BETTER

Phone: (419) 354-1112
Farm: (419) 655-2020
Fax: (419) 352-1244

Call 1 (800) 817-1889 use **Fast Fax #1060999** and/or Circle 106 on Inquiry Card

From Turf-Seed, Inc.

Tall Fescues

Wear-resistant wonder grass for home lawns, parks, athletic fields, golf course roughs and roadsides in sun or shade

Variety name:

Characteristics:

BrightStar II

A unique variety with leafy, decumbent growth habit. In the top group of the 1996 NTEP trials. Medium late maturity for less stemmy Spring turf.

Catalina

Low growth profile with reduced clippings. Good overall disease resistance. In the top ten in the 1996 NTEP trials. Catalina contains 78% endophyte.

Charger II

Dark, dense, dwarf turf ranks especially high in dormant bermudagrass winter overseeding trials. Good cold tolerance.

Citation III

Rich, dark green color. Excellent heat and wear tolerance. Reduced stemminess and vertical growth in spring and summer. Contains endophyte.

Manhattan 3

Lush, dark green variety. Very dense growth habit. Manhattan 3 has good overall disease resistance and turf quality. Contains 94% endophyte.

For more information on Turf-Seed products, visit our website at www.turf-seed.com, or e-mail us at: info@turf-seed.com

Turf-Seed, Inc. uses the full recommended rate of Apron XL™ LS seed treatment. Help your grass seed get a good, healthy start.

Produced and marketed by:

Turf-Seed, Inc. / PO Box 250, Hubbard, OR 97032 / 503-651-2130 / FAX 503-651-2351 / 800-247-6910



Circle 128 on Inquiry Card

Continued from pg. 14

uble nitrate (NO₃) sources, such as CaNO₃, can be used in conjunction with close mowing (<0.5 inches) and periodic verticutting to hasten grow-in.

Attributes

A number of characteristics will make paspalum an important, environmentally friendly athletic turf-grass for the 21st century:

- Ocean water can be used for irrigation on some ecotypes.
- Recycled water (gray, effluent) can be used for long-term irrigation.
- The grass features minimal pesticide requirements.
- Compared to current bermuda sports fields, paspalum needs 1/3 to 1/2 less fertilizer for routine maintenance.
- Paspalum's range of mowing



Fraser YMCA in Hinesville, GA, planted paspalum on its soccer field in June 1998. This October-1998 photo was taken just prior to beginning play. Courtesy: R. Duncan

YOU COULD BE HONORED BY THE PROS!



Why not enter your baseball field in the Beam Clay® Baseball Diamond of the Year Awards contest? You need not be a customer, member, or subscriber; and there is no entry fee. You could be featured in **sportsTURF magazine** and receive an official awards plaque.

The Awards are sponsored by **Beam Clay®, sportsTURF magazine,** and the **Sports Turf Managers Assoc.** in recognition of excellence and professionalism in maintaining outstanding, safe, professional quality baseball diamonds. Entries will be judged in three categories: professional diamonds; college diamonds; and school, municipal or park diamonds.

Send the information below to enter:

1. Age of baseball diamond (year of installation).
2. Geographic location (city and state).
3. Description of maintenance program.
4. Operating budget for baseball diamond.
5. Irrigation. None Manual Automatic
6. Total number of maintenance staff for field.
7. Does baseball field have lighting for night games?
8. Number of events on baseball diamond per year.
9. Types and number of events on diamond other than baseball.
10. How many months during the year is the field used?
11. Why do you think this field is one of the best?
12. **IMPORTANT:** Send two copies of entry and two identical sets of color photos.

Deadline for entries: Entries must be postmarked no later than October 30. Selection of winners will be made by the Awards Committee of Four Major League Head Groundskeepers.

Mail entries to:
Beam Clay Awards
Kelsey Park
Great Meadows, NJ
07838



heights includes the following: 0.125-inch golf greens or bowling courts, 0.5- to 0.75-inch soccer fields, and 0.5- to 1.0-inch football fields.

- The grass' soft, cushioning texture can help prevent skin abrasions, ankle and knee problems, and "turf toe."

- Its leaf texture is cosmetically similar to that of hybrid bermudas, but paspalum features more layers of leaves for a thicker canopy.

- Low-light tolerance (not tree shade) makes the grass a good candidate for use in domes and arenas with retractable roofs.

- Paspalum withstands wet, boggy conditions in lowland areas adjacent to wetlands and in areas with high water tables.

- Compared to the best centipedegrasses and bermudas, properly managed paspalum exhibits similar, and sometimes superior drought tolerance.

- The grass roots equally well in mucks, heavy clays, and pure sands.

- Its soil pH adaptability ranges from 3.6 to 10.2.

- Mower striping patterns on paspalum last two- to four-times longer than on bermudas.

- Wear tolerance is similar to that of hybrid bermudas.

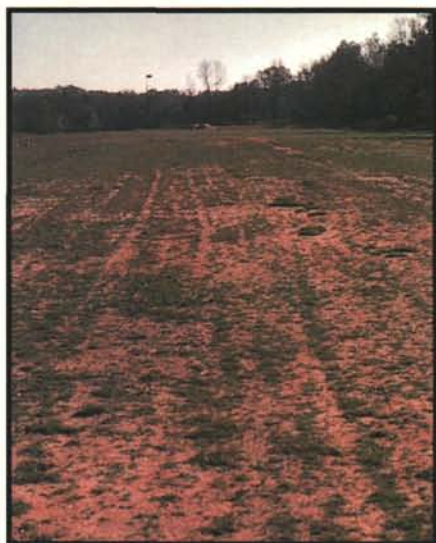
- The grass features a darker green color than most bermudas.

- Paspalum requires approximately 50-percent less water than hybrid bermudas.

Cold tolerance

Paspalum's major limitation is its lack of cold hardiness. Like most hybrid bermudas, the grass' adaptation limits fall in the southern

Call 1 (800) 817-1889 use **Fast Fax #1070999** and/or Circle 107 on Inquiry Card



A practice football field at Starrs Mill High School in Fayette Co., GA, grows in after being sprigged with paspalum. *Courtesy: R. Duncan*

transition zone.

Current paspalum ecotypes can grow south of a line from Raleigh, NC; to Chattanooga, TN; to Little Rock, AR; to Dallas, TX; to south of San Francisco, CA. Paspalum sports fields in the northern transition zone would need to be covered with plastic blankets to ensure winter survival.

Overseeding

Paspalum is the last warm-season grass to go off-color in the fall. It requires at least two to three nights of 26-degree F temperatures to go completely dormant.

The grass goes off-color three weeks later than the bermudas, but it normally comes out of winter dormancy two weeks later than the bermudas as well. Paspalum can be overseeded with most cool-season grasses, including perennial ryegrass, alkaligrass, and tall fescue.



Ron R. Duncan, Ph.D., is professor of turfgrass breeding and stress physiology at the University of Georgia.

References

1. Duncan, R. R. "The environmentally sound turfgrass of the future." *U.S. Green Section Record* 34(1). 1996.

2. Duncan, R. R. "Seashore paspalum responds to demands of stewardship." *Golf Course Management*. February, 1997.

3. Duncan, R. R. "Paspalum: An environmentally friendly warm-season grass." *Georgia Green Industry Assoc. Journal*. March,

1998.

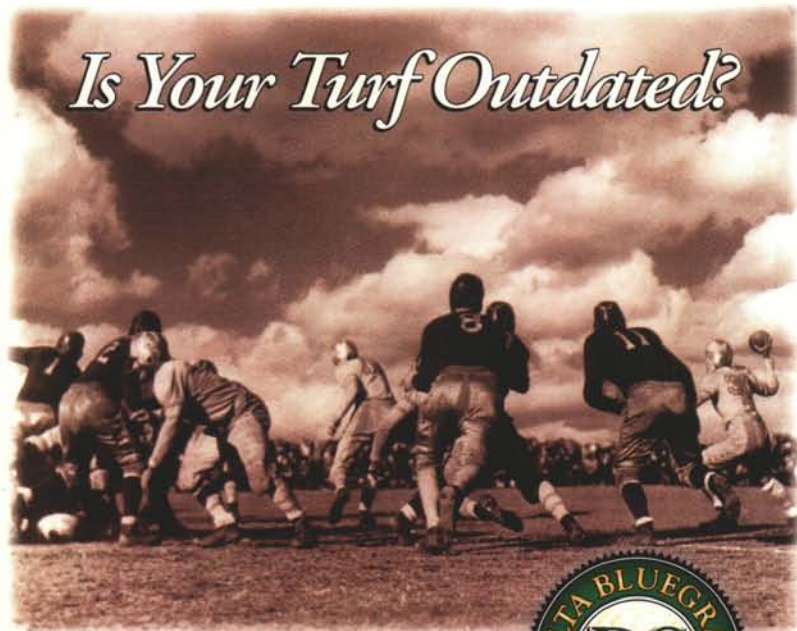
4. Duncan, R. R. "Paspalum for recreational turf." *Through the Green*. July/August, 1997.

5. Duncan, R. R. "Seashore paspalum herbicide management." *USGA Greens Section Record* 36(2). 1998.

6. Huang, B. "Roots and drought resistance." *Golf Course Management*. June, 1997.

7. Trenholm, L. E.; R. N. Carrow; and R. R. Duncan. "Paspalum vs. Bermudagrass: Which is more traffic tolerant?" *Golf Course Management*. July, 1998.

Is Your Turf Outdated?



Delta Bluegrass Company has the solution - Tifway 419 and our patented, exclusively grown Baby Bermuda. These Hybrid Bermudas are perfectly suited for the strenuous conditions your turf is accustomed to enduring. Washed for your convenience, these warm season grasses are available on sand, meeting USGA specs, as well as peat soil.

For over three decades, Delta Bluegrass has been producing and installing the industry's highest quality peat sod. Give us a call for more information on Hybrid Bermudas and other varieties of our premium sods - Your turf will be glad you did!



DELTA BLUEGRASS COMPANY

P.O. BOX 307
STOCKTON, CA 95201

800.637.8873 OR
209.469.7979

Contractor's License
#C-27 752734

Call 1 (800) 817-1889 use **Fast Fax #1080999** and/or Circle **108** on Inquiry Card

Making the Cut

by Bucky Trotter

Athletic turfgrass plants must live and perform at lower than natural heights. You must understand how the plants operate before you can develop a good mowing program.

Mowing reduces leaf surface, which plants use to manufacture and supply carbohydrate nutrition. When plants are in their active growing stages, carbohydrate production is high. This allows them to store nutrition as food reserves that will help in periods of stress or dormancy.

Mowing lower than the optimum height during the growing season can impair plants' ability to develop these reserves. When the plants die, you may cite heat or cold injury as the main cause. But the trouble started when you cut off their food supply.

When their leaves are cut, plants focus energy on re-establishing the lost surface area. This process requires carbohydrates, and the plants may need to reduce the supply of nutrition traveling to the root system to compensate. This can reduce or stop root growth.

Plant carbohydrate distribution gives the leaf system priority over the roots, rhizomes, and stolons. As the percentage of leaf tissue removed increases, so does the period of reduced root growth. The root system will continue to become more shallow, which will impair the plants' ability to withstand stress, especially during drought.

Equipment selection

Several variables should factor into your selection of mowing equipment. You have to find a price that fits your budget, while considering cutting acreage and the types of turf and terrain the equipment will cover. Don't forget to include maintenance issues in your decision, and factor in service and parts availability. Desired quality of cut and cutting height will also direct your choice.

Cutting action adds another factor to the list. Mowing units use either impact or sheer cutting.

Rotary and flail mowers produce impact cutting. Rotary units provide acceptable-quality cuts at high cutting heights. They may require more belts,

but they tend to be relatively inexpensive. Rotary mowers will not strip or cut patterns into turf.

Reel mowers use scissor-type, sheer cutting action. They provide a quality cut at lower cutting heights than rotary mowers. They also require less power, but tend to be more expensive than rotary units.

Equipment maintenance

Proper maintenance can prevent a lot of common equipment problems. Check and maintain fluid levels regularly. Closely monitor oil, hydro fluid, and water in the batteries.



Courtesy: Textron

Change filters according to manufacturers' specifications, and regularly check and maintain all belts. Tire pressure is also very important, and all equipment should be greased as specified.

Clean and wash your equipment before moving it between sites. Many turf diseases can be transported from one field to another if infected clippings travel with the mower.

Because of their high nitrogen content, clippings can also corrode and rust mower decks. Dirt can work into bearings and seals to cause damage as well. A thin layer of dirt can increase hydrostat temperature by 10 degrees, which can push it toward its breakdown level. Always allow units to cool down before cleaning.

Keep blades and reels sharp and properly adjusted at all times. Dull



Courtesy: John Deere

equipment will tear or shred plants, giving them a straw-colored tint and leaving them vulnerable to disease.

A few minutes of care before and after each mowing will extend the life of your equipment, and will improve its performance.

Quality of cut

Factors that affect cut quality include blade sharpness, blade speed, cutting unit suspension, wheel base size, grass discharge, and dispersion characteristics. Keep an eye out for the following problems:

- **Scalping:** This condition results when you remove too much leaf surface. It can also occur when a mower is unable to follow contours due to excessive speed, poor deck adjustment, low rpm, bumpy terrain, or rough soil.

- **Streaks:** One or more lines of uncut grass can stem from grass that's lying or being forced below the effective cut height. A damaged reel or blade, or a cutting unit overlap can also leave an area of the blade path uncut.

- **Clumping/Windrowing:** Mowers with good dispersion characteristics will distribute clippings evenly over the entire grass area. These clippings do not have to be removed if they are small enough to work their way into the uncut grass.

Inefficient discharge can cause clippings to accumulate in unsightly clumps or rows. If excessive clippings lie on the surface, they must be removed or scattered with a second cutting. Avoid cutting when grass is too wet, or clumping will increase.



Bucky Trotter is assistant director of athletics for the University of South Carolina Athletics Department, 1300 Rosewood Drive, Columbia, SC 29208; phone: (803) 777-0459. ©1996 Athletic Business magazine. Reprinted with permission.

Lawnmower emissions and the environment

The subject of lawnmower engine emissions has long been plagued by public information that is outdated, misstated, and simply not true. Lawnmowers have come under attack in the battle for clean air, and some unrealistic and unfair comparisons have placed the machines in the same league with automobiles. According to the Outdoor Power Equipment Institute, these types of comparisons are misleading for the following reasons:

- An average automobile is driven approximately 14,000 miles in one year and uses hundreds of gallons of gasoline. Even large facilities don't produce those kinds of numbers with their mowing schedules.

- Typical, privately owned walk-behind lawnmowers run an average of 25 hours per year and only use a few gal-

lons of gasoline.

- The estimated number of lawn mowers in the U.S. is approximately 38 million, compared to the 159 million cars that are on our roads.

It has also been claimed that after two years, the average lawnmower will produce 34 times the amount of smog-forming emissions an average passenger car creates. In fact, new automobiles annually generate 10 times more emissions than new lawnmowers. While a new car generates an average of 20 pounds of smog-forming emissions in two years, a new walk-behind mower generates only 2.1 pounds in that same time.

The total contribution of smog-forming emissions from all of the lawn and garden equipment in the U.S. today is

actually less than two percent.

Today's outdoor power equipment engines run, on average, 70-percent cleaner than those built in 1990. Design improvements have produced engines that are more fuel-efficient, more durable, and cleaner-running.

New technologies have produced small, non-road, four-cycle engines that comply with standards established by the EPA for small, spark-ignition engines of 25 horsepower or less. The industry has also developed new, specially designed fuel cans that help reduce emissions caused by spillage.

OPEI is a trade association whose membership is primarily composed of U.S. manufacturers of powered lawn and garden maintenance products, components, attachments, and services.



Out front cutting with baskets for clippings.



Attractive striping shows-off playing field.



Groom 2-4 acres an hour with National Mower 70" Sports Turf-Triplex

Great Sports Striping At Superb Prices

- Light on your wallet – low initial cost and long life
- Great striping from the shearing reel cut of a National
- Smooth, clean cutting builds harder, healthier turf
- Easier to sharpen and lower operating cost
- Easier to maintain than rotary riding mower
- Easy rear turning wheel for high maneuverability

Visit us online: www.nationalmower.com
or call: 1-888-907-3463



NATIONAL MOWER COMPANY

700 Raymond Avenue • St. Paul, MN 55114

Fax (651) 646-2887 Email sales@nationalmower.com



NATIONAL® is a Registered Trademark of National Mower Company

Nothing makes sports turf look better than a National. The Best Price. The Best Cutting.

Tree Maintenance

by Colleen Heraty

Trees add more than character to the grounds you manage. They provide shade, and can lower cooling costs of adjacent structures. They form natural barriers that provide privacy and block noise. They reduce storm water runoff by intercepting, storing, and using water. They even promote clean and healthy air, as their leaves release large amounts of pure oxygen.

By recognizing their many needs, you can create a healthy environment that will allow trees to thrive. They will repay you and your grounds with many benefits for generations to come.

Establishment

To install healthy trees, you first need to choose tree species that will thrive in your planting environment. Selecting the wrong tree type can lead to years of problems for you, and for your trees.

Determine whether your choice prefers sun or shade. Does it need alkaline or acid soil? How much space does the particular species need to grow and flourish?

- **Variety:** Try to plant a wide variety of species at your facility. This strategy will help prevent disease and insect infestations from destroying large percentages of trees. In Illinois, a recent study revealed that half of the tree species in urban areas are maples, and that only six tree species



Trees add beauty to your facility, among many functional benefits.

make up 86 percent of all state trees. This lack of variety helped Dutch elm disease destroy many beautiful trees in the region.

- **Soil:** Have your soil tested through a local garden center or extension office to determine pH and nutrient levels. These offices can give you information on which tree species will do well at your location.

- **Weather:** For urban planting, the "heat-island" effect sometimes requires selection of more drought-tolerant trees, particularly in areas with extensive pavement. Also, if your community uses salt to clear icy roads in the winter, you may want to factor salt tolerance into your species selection.

According to the Morton Arboretum in Lisle, IL, the most serious airborne pollutant in the Midwest is deicing salt used on roadways. Highly susceptible species should not be planted near major roads that are frequently salted.

After-care

I've often heard arborists and landscapers complain that after installing or caring for a tree, they have returned to find that it's being neglected. Trees need maintenance their entire lives, but care is particularly crucial during the establishment period after a tree has been transplanted to a new location. Only approximately five percent of a transplanted tree's root system is immediately available to absorb water, so extra care is needed.

Regular watering is essential to a tree's early survival. Mulch and proper pruning techniques will also help ensure a healthy life.

- **Adding mulch:** At planting time, spread a four-inch layer of shredded bark or organic mulch over the entire planting area outside the watering basin. This will help conserve soil moisture, inhibit weed growth, and prevent baking of the soil by the sun.

Mulch will improve soil fertility and soil structure as it degrades into the soil. Avoid "volcano mulching," which is caused by applying too much mulch around the base of the tree. This creates an ideal condition for diseases to thrive.

When planting tree wells or narrow strips, it may be

NOW

One pass aerating and clean-up!

With Goossen's new

Versa-Vac Aerator Attachment

Turf can now be aerated and cores harvested in just one pass.

With one single pass, Goossen's 50-inch aerator attachment

penetrates the soil with hydraulically controlled pressure followed by a 70-inch counter-rotating steel flail rake that pulverizes the cores allowing the thatch to be lifted into the trailer while the soil is left behind as a fine top dressing.

Immediate pick-up of cores eliminates the smashing that occurs when the cores are driven over by other methods used for harvesting. A finishing roller smooths the turf where the cores were extracted. The rake has steel knives or rubber fingers which are interchangeable depending upon the type of soil being treated.



Interchangeable decks are also available for mowing, sweeping and vacuuming. Let the Versa-Vac meet all your turf care needs.

Goossen

INDUSTRIES

P.O. Box 705 • Beatrice, NE 68310

Toll-Free: 1-800-228-6542 In NE: 402-228-4226 Fax: 402-223-2245

Circle 110 on Inquiry Card