

AN INDUSTRYWIDE PUBLICATION OF THE NEW JERSEY TURFGRASS ASSOCIATION

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Synthetic Turf

## New Jersey's Future

Needs Much Care

George Toma, Grounds Superintendent, Arrowhead and Royals Stadiums, Kansas City

In August of 1972 we opened our new Arrowhead Stadium, home of the Kansas City Chiefs, with an artificial surface of 3M Tartan Turf. In April of 1973, we opened our new Royals Stadium, home of the Kansas City Royals, with the same artificial surface. I had worked with artificial turf since 1967 on a limited basis, so working our two new stadiums with artificial turf did not hit me all at once. I have had experience with all three artificial turfs: Poly Turf by U.S. Biltrite, Astro Turf by Monsanto, and Tartan Turf by 3M. Presently, the only one in the business is Astro Turf.

The transition from natural to artificial for my men was very minor. As I have stated before many times, natural grass has taught pride to many of us in the turf business, and natural grass has taught my men how to maintain artificial turf. I have found in my travels that if you have a good natural grass field and switch to artificial turf, you will have a good artificial turf, you will have a poor natural grass field. If you have a poor natural grass field, you can bet your boots you will find that the artificial turf will also be poor.

It seems to boil down to the first three letters in management, "m-a-n". I did not see a vast difference in maintaining both types of fields. They are about even in pluses and minuses.

Natural grass that is well maintained gives a much better playing surface for the players with fewer complaints and injuries.

#### Costs Go Up

It takes the same number of people to maintain artificial turf as it does natural grass. In maintaining our natural grass field, we had equipment worth \$3,000 compared with nearly \$40,000 for artificial turf. For example, we had one Toro professional mower, one Jacobsen Estate, one three-gang roller, and pin spiker.

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# Agricultural Development

Phillip Alampi, Secretary, N.J. Department of Agriculture



New Jersey is ideally suited to meet a good portion of present and future demands from the world's richest markets for fruits, vegetables, and horticultural products, and all we have to do is reach out and capitalize on it.

This is the consensus of experts, both within the New Jersey Department of Agriculture and elsewhere. And this is the reason why we, in the Department of Agriculture and throughout State government, are seeking to enhance and preserve our agricultural capabilities for the benefit of our people throughout the State, and our agricultural community in particular.

Let's examine this fundamental fact of our prime location and its implications for farmers throughout the State.

#### **Need Turfgrass**

In the first place, we are situated in the middle of 20 million people, with the New York Metropolitan area to our north, the Philadelphia Metropolitan region to our south, and 7 million of our own people in between.

Secondly, we have one million acres of prime farmland, which in terms of climate, growing season, fertility, and ease of marketing are among the best in the world. New Jersey will not become all paving and buildings; and it has a lot of idle acres that can be put to use with some research on plant nutrition and drainage.

Thirdly, we have a constantly increasing need for fresh fruits and vegetables, for turf, and horticultural products. The concern for freshness and wholesomeness, which has zoomed among consumers in the last decade, will continue, and we will have increased need for fruits and vegetables which are fresher by miles and hours.

With our suburban lifestyle, turf-

grass and horticultural products will be needed on an ever-increasing scale.

Spring 1977

New Jersey farmers and plant growers could and should be among the world's most prosperous individuals. We have much going for us, although we recognize that this bed of roses does have some thorns. For one thing, we continue to lose our best farmland to urban development, since the real estate crop appears to be the most profitable one which farmers have.

We in the Department of Agriculture, are doing our best to stem this loss. We have initiated an experimental program in Burlington County which will test the ability of the State to purchase development easements on prime farm ground for the preservation of an agricultural land base. We believe this program will be successful, and we hope that we can demonstrate, to the Legislature and to the people of the State of New Jersey, the wisdom of making this program statewide.

We need other resources in the State of New Jersey, too. For example, we continue to need a high level of capability in our Agricultural Experiment Station so that we can conduct research on crops and agricultural methods which are adapted to New Jersey's special climate and unique problems.

We need support from New Jersey's farmers themselves so that we can break out of the "impermanence syndrome" which has been such a problem for many of our farmers for the past few years. And we need the support and the assistance of the people of the State of New Jersey themselves, not only for support of an agricultural preservation program, such as we have established in Burlington County, but most importantly, for the change of attitudes and behavior that will lead to respect for the farmer, his land, and his need to make a profit.

New Jersey farmers produce more than a great cash crop; they produce more than income for themselves and their families; they produce a higher quality environment for us all.

### A GIANT MOVES ON



Selmer Loft, one of the giants of the seed business, has passed on, but many of his ideas and innovations remain with us. Mr. Loft died in Muhlenberg Hospital, Plainfield, N.J., April 12, 1977, at the age of 85. He is survived by a wife and three sons, Per, Peter, and Jon. Peter and Jon will continue to run the business their father founded. (Peter was one of several persons who organized the N.J. Turfgrass Association.)

Per, who resides in Copenhagen, Denmark, will continue on as an official and knight of the Danish government.

Mr. Loft began his career after receiving a degree in agriculture from the University of Copenhagen. He started with a producer of sugarbeet seeds. Because of his ability to speak Danish, English, French, and German, he was selected to tour the world, selling sugarbeet seeds for the Scandinavian Seed Co.

He visited the United States and made his way across the country by rail, going from town to town selling seeds. On reaching California he met a man who informed him that the place to really sell sugarbeet seeds was Japan. Convinced his friend was right, Mr. Loft asked his home office for permission to go and it was granted. While in Japan, Mr. Loft made the largest sale his company ever had.

Because of his fondness for the United States, Mr. Loft returned and set up a permanent office here. His operation was quite successful. But by the 1920's the world economy had slumped. Businesses were failing in many countries. The sugarbeet company was ultimately forced to close its doors as well.

Yet in the face of it all, Mr. Loft began his own company, Lofts Pedigreed Seed, Inc. His first wife had died during the influenza epidemic several years before and Mr. Loft had married his present wife. He used to quip that he began his business with a "new wife, second hand car and \$500."

Today that company is one of the largest marketers of grass seed in the world. Its product line has expanded to include a wide range of garden chemicals and supplies. Lofts products are well-known throughout the United States and the world.

#### **Far-Sighted and Creative**

Mr. Loft was an intensely creative man, and one of his pleasures was visiting universities to select seed varieties. Out of his interests came the company's own research farm. His interest in agriculture carried over into his private life. Mr. Loft owned several farms in New Jersey where he raised cattle and pigs.

Mr. Loft had an almost uncanny ability to forecast in advance national trends in his field before they became reality. For example, he predicted the rise in golf's popularity and began to develop seeds to meet the sport's particular needs. Many seed varieties developed for golf were found to be exceptionally suitable for other large area applications, such as parks and lawns. Mr. Loft saw the country's interest in ecology long before it became a "cause." So he made seed for wild birds available in the produce sections of food stores which greatly increased the demand for this product.

Although he was born in Denmark, Mr. Loft was very pro-American. Except to visit his family, he seldom left the country. He became an American citizen in 1928, and loved his adopted land. To him, America was still the land of opportunity.

Mr. Loft continued to innovate plans until the day he died. His office was jammed with plant samples he was growing and evaluating. He was never content to rest on his laurels, even though he was the man who almost singlehandedly revolutionized many facets of the seed business.

With his passing, many in the seed industry owe him a debt of gratitude.

#### DO ORGANIC PHOSPHATES HAVE EFFECTS BEYOND INSECTICIDE ROLE?

On several occasions, a turf response has been observed on turfgrass that can be questioned as an insecticide effect.

The first was in the early 1960's. When Dr. Reed Funk of Cook College applied diazinon to a ryegrass strain test, a growth response was observed that was clearly in excess of controlling any insects present. Some nematodes were found but their role could not be determined. Six years later, red fescue survival was improved with phosphorothioate in a dry period.

othioate in a dry period. In 1976, Charlie Brett at the Nassau Country Club on Long Island saw definite improvement in turf quality when Dursban, an organic phosphorus compound, was applied in late spring and early summer where insects were not present to explain the turf improvement.

Charlie was of the opinion that his insecticide treatment was giving some *disease control.* He called the situation to the attention of several persons in turf with the result that Dr. Robert Smiley and Robert O'Knefski found *Helminthosporium dematioideum* in the untreated areas as the only item of explanation for the turf injury.

All this suggests that growers should be alert to possible disease control action of this insecticide and other chemical treatments. Also, it suggests that organic phosphate insecticides might be included when experimenting with chemicals for diseases control.

R.E.E. and P.M.H.

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#### SYNTHETIC, from Page 1

In maintaining artificial turf, we have two \$4,000-vacuums that we must use. If we don't, we lose our warranty. It costs us \$2,000 a year for vacuum brushes and bags. A \$3,000-tractor is required to pull the vacuum sweeper. We need \$6,000, 35-h.p. tractors to pull three \$12,500-water removal machines. A self-propelled water removal machine runs \$37,000. We use a \$3,000 - air compressor to blow the dirt out of the turf around the bases. Also, we have hand and wet vacuum machines. So, one can see that it takes equipment to maintain artificial turf at professional standards.

#### **Cover Infield Nightly**

There is one plus for artificial turf in our daily baseball schedule. It gives the men a little more sleep; they start at 10:30 a.m. With natural grass, we had to start at 7 a.m. to remove the tarp so that the tarp wouldn't burn the grass when the sun came out. At 10:30 a.m. we remove the field cover. The field cover is 160 by 160 feet; made of vinyl-coated nylon.

The cover is placed on the infield each and every night after the game.

The field cover is used to keep the sliding pits, dirt around the bases, from becoming mud and also keeping the artificial turf dry so the balls will not skip. Ground balls on wet artificial turf have the tendency to skip rather than bounce.

Instead of mowing the synthetic turf, we vacuum it, and the time required to do this can double or even triple the mowing time, for one must creep along to get the dirt out of the turf.

The men daily walk the entire field with an ammonia solution to wash out tobacco juice stains, and with a special paint brush, comb out burns which are marks on the turf caused by sudden stops and starts of the players which give abrasive shoe action that fuses the turf blades together. They also carry a can of aerosol chewing gum freeze. This freezes the gum which helps them comb it out with the special combs.

#### Water, Dirt Removal

There are no drains in artificial turf except those along the playing field walls. After a rain, we must get rid of excess water with a water removal machine. If we use the roller squeegee type machine, it takes about one hour but this type machine is very harmful to the padded base. The water vacuum machine takes 4 to 8 hours.

Before a game, it takes a few more men after the players warm up to get the field ready in the 15 minutes of allotted time. This involves vacuuming the infield sideline area, using street type push brooms to sweep the dirt off the turf around the sliding pit areas and, yes, gum freeze.

Daily, or as needed, they use a pipe hose connection on an air compressor to blow out the dirt on the turf in a 12 inch area arround the sliding pits, then pick up the dirt with a vacuum.

Many times the men work on the turf when its temperature ranges from 120° to 140°. Their daily bonus for working on artificial turf is to work the bullpen areas of zoysiagrass which are 24 by 80 feet on a Purrwick system sand base. Here they can breathe again on a hot day.

To have a satisfactory artificial turf field, one must have a good maintenance program. Still, a very important factor is that one must be very careful not to overdo it and wear the turf out not through play but by too much maintenance.

A plus for artificial turf is that it can withstand continuous use that could play havoc with natural grass. But as playing conditions go, a wellmaintained natural grass field has it all over artificial turf.





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#### **THATCH CONTROL TESTS**

A great deal of interest has been generated by the potential thatch reduction capability of several experimental and commercial products.

Studies were initiated at the O.S.U. turf plots in 1974 and 1975 to evaluate the effectiveness of Bio-Dethatch, Thatch-Away, and several experimentals on Kentucky bluegrass. Through early 1976, no significant differences have been observed from any of these treatments in comparison to untreated check plots.

These results are consistent with results from other replicated research work at universities in the Midwest.

> – Ohio Turfgrass Foundation Newsletter.

#### ABSTRACT

Annual Bluegrass Wear Tolerance – Turfgrass Mixtures Under Wear Treatments by J.P. Shildrick, The Journal of Sports Turf Research Institute 51:9-40-1975.

#### SUMMARY

Two trials were made, mown at 25 mm. (1 in.) and 13 mm. ( $\frac{1}{2}$  in.), with artificial wear treatments. The main purpose was to assess various "medium" grasses likely to be intermediate in wear tolerance between perennial ryegrass and the fine grasses, red fescue and browntop bent.

Annual meadowgrass, annual bluegrass (*Poa annua*) and two cultivars of timothy were the most wear-tolerant medium grasses; two cultivars of smooth-stalked meadow grass were intermediate; crested dogstail and roughstalked meadowgrass were least weartolerant.

In the trial mown at 25 mm. annual meadowgrass was not sown and no other medium grass gave marked benefits in a range of 40 mixtures in which perennial ryegrass and fescue/-bent were, for different reasons, the most important components.

In the trial mown at 13 mm. containing 31 mixtures without ryegrass, annual meadowgrass was outstanding for wear tolerance though objectionable as a sown component of mixtures; no other medium grass was an obvious choice for reinforcing fescue/bent, although on balance smooth-stalked meadowgrass seemed best for this purpose.

#### COMMENTARY:

I have been telling students that annual bluegrass (annual meadowgrass) may be our dominant grass with cool temperatures, generous moisture, close cutting and heavy traffic.

The above study by our English friends gives me a little "I told you so" license. If we think about turfgrass wear tolerance, we realize that it is more than a tough leaf. Annual bluegrass certainly does not have tough leaf tissue, but it must have some of the other attributes such as survival on a

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compact wet soil. Equally important might be its ability to reestablish and regrow under such difficult conditions.

If we think further about this study, we might expect that annual bluegrass would have poor wear tolerance under warm, dry conditions. Certainly, this study increases our respect for annual bluegrass in areas where excessive winter and summer failure do not occur.

All this brings us to the point that annual bluegrass might be accepted as a turfgrass where a close cut is required and it can be grown with low incidence of serious failure.

Of course, an acceptable incidence of failure is elusive. One reason is that all grasses grown for fine turf fail on occasion.

Golf courses are most concerned with annual bluegrass, and the superintendent ultimately makes the decision on what is acceptable performance of a grass on the basis of what he sees, what he believes he can accomplish, and what the members demand. When making this evaluation, remember that annual bluegrass has good resistance to traffic when it is growing under favorable conditions. -R.E.E.

