THE VERTIRAKES

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- for Golf greens, Bowling greens, Cricket pitches and Tennis courts.

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- for Golf course greens, Bowling turf, Fine lawns etc.

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-for Golf course fairways, Municipal Parks, Sports pitches.







These three machines have been designed to remove all the thatch, thus stimulating recovery and growth of strong healthy grasses. You will find that each machine will clear the difficult, dead, matted, fibrous grass that is so often so difficult to get rid of.

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Front Cover Picture

Recent Scottish guests of Atco at their factory included Mr. John K. Campbell, Links Supervisor of St. Andrews, pictured third from the left. The visit coincided with the Institute of Groundsman's Conference at Nottingham University at which Mr. Campbell was invited to present a paper. Also shown are left to right Mr. David Mitchell—Parks Superintendent Glenrothes Development Corporation, Mr. Jim Ferguson, Mr. Campbell, Mr. H. J. Jebett—Sales Manager, Atco Professional and Heavy Duty Mowers, Mr. Willie Anderson, and Mr. Andrew Murray—Fife County Parks Superintendent.

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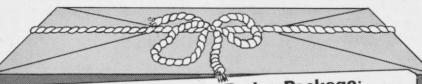
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THE SHOTS

TRAINING

There are hopeful signs of better training for young and older Green-keepers before long.

The Department of Employment and the Lancashire College of Agriculture are setting up a course in "Groundsmanship and Greenkeeping" at the Department of Amenity Horticulture, Myerscough Hall, near Preston.

There will be a full-time course of 36 weeks devised for training adult entrants or retraining Greenkeepers wishing to improve their skills.

Course members will be entered for the City and Guilds of London Institute Stage II examination and a College certificate will also be awarded to those who complete the course successfully.

The English Golf Union has also come up with a handsome promise of funds for setting up a correspondence course once details can be satisfactorily settled. This will run concurrently with a three year apprenticeship, but could be taken by others.

It is hoped that it will lead to similar qualifications at the appropriate level.

The Lancashire course will be free and trainees will receive tax free payments during training. The postal course is likely to be one for which students can get grants from their Local Authority.

In Scotland, training is also now directed towards a City & Guilds

examination.

Extract from "Evening Echo, Bournemouth, Tuesday, April 30th 1974

CRACKS IN GOLF COURSE

A nine-hole golf course, Ashley Wood, near Blandford is cracking up because of the weather.

The cracks first became apparent nearly two weeks ago. Some of them are about one-eight of an inch wide and they run round in small circles, said Col. Shove, Club Secretary.

He said the damage was not permanent "All we need is a change in the wind, some rain and a warm spell, he said.

Greens at Ashley Wood are not artificially watered because water has to be pumped to the clubhouse from a deep well. In any case we would not have dared used water on the greens with the cold north-east wind and frosts", said Col. Shove. "That would only have caused more damage".

With acknowledgement to

"EVENING ECHO" Bournemouth. Tuesday April 30th 1974.





Now you see it

Now you don't!

NEW! This Toro 'pop-up' sprinkler disappears below ground after watering. Its fully retracting head protects against damage by mowers or vandals . . .



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pop-up sprinklers systems

(It could be St.Andrews, Troon, Sunningdale or your club...)

Toro 'pop-up' sprinklers water greens, tees and fairways through the night, automatically. Day time stoppages are eliminated, courses play consistently and of equal importance, greenkeepers can concentrate on other more demanding work around the course. Consider these benefits then ask Wright Rain to design a Toro 'pop-up' scheme for your club! Write for details and the name of your nearest appointed installer now . . .

TURFACE—WHAT IT DOES

Soil Amendment for Golf Courses

J. R. David Palmer, Supaturf Products Ltd.

Turface is a calcined mineral aggregate designed to provide a constantly friable soil—year after year.

Friable soil produces many benefits:

- 1. Resilient turf.
- Faster and more complete water infiltration.
- 3. Free air movement.
- Lower maintenance cost.
- 5. Greater control over disease.
- 6. Deeper, healthier root growth.

A well conditioned turf is better able to resist wide variations in weather conditions.

Prior to Turface, soil additives often overcame only a few of the conditions which cause poor turf, and they sometimes compounded these problems because of their physical properties. There was no single product that could economically promote better turf growth in all kinds of weather without difficulties.

There are five major turf problems which usually plague turf managers:

- 1. Poor drainage.
- 2. Inadequate ventilation.
- 3. Shallow root growth.
- 4. High maintenance cost.
- 5. Disease.

During the many years of field testing and commercial use throughout the country, Turface has proven itself in minimizing, if not completely eliminating, all of these conditions.

1. Poor Drainage

This problem usually results from the compaction of the top three or

four inches of soil. Compaction is either immediately noticeable develops gradually. Immediate compaction usually results from the use of unsuitable soil mixtures. Gradual compaction indicates organic decomposition from traffic and weathering. Using organic materials as top dressing to overcome this difficulty will at best serve only as a temporary cure. In a short period of time, due to decomposition of the organic matter, the compaction problem returns to a greater degree. Various grades of sand are often used as top dressing to provide friable soil.

Although these inorganic materials will not decompose, their use results in poor resiliency, high leaching rates, and low water holding capacity of the treated soil. Where bad design or preparation causes drainage difficulties, a poorly designed area will drain better if the soil is not compacted. Friable soils on sloping areas will allow water to penetrate the soil rather than run off and collect in low areas.

Turface is recommended for use as a top dressing on established turf, or as part of the soil mixture during construction, to aid in maintaining constantly loose soil. Turface, whether wet or dry, will not compact, cake or break down to smaller particles. This is because Turface particles are angular, not flat, round or square. Being of varying size, a continuous network of particles is formed, which serves as a "separator" in sticky, gummy soils. In many years of testing.

Keep turf at its best -all season



with a single feed from new Gold-N

Gold-N is completely different from conventional turf fertilizers. Following an initial boost of nitrogen, it supplies this vital nutrient slowly and continuously over a period of 3 to 6 months. All from a single application!

Constant Quality

This steady supply maintains turf at its best. Keeps it thick and green. There isn't the intermittent "too lush, too little" effect of more soluble fertilizers. And because Gold-N resists leaching in wet weather, grass vigour is maintained even on free-draining soils, golf courses, public open spaces and reclaimed derelict sites.

It's Consistent

Gold-N minimises scorching, tolerates variations in temperature and moisture. And because it's made to rigid specifications, every bag is as good as the next. It's easy to handle and spread – by hand or machine. And it's hygienic so there's no danger of the diseases associated with organics like hoof and horn. What's more the nitrogen content is virtually all usable.

Superior Performance

Gold-N saves money by eliminating leaching and other wastage. It works economically in situations where perhaps five or six dressings of the usual fertilizer would be required – keeping time and spreading costs to a minimum and increasing playing time. It will help to transform sparse growth areas to lush swards in one or two seasons and after only one application per season.

For full details of Gold-N, contact: England & Wales – Chipman Chemical Co., Horsham, Sussex EH6 7EN. Tel: Horsham 60341

Scotland – SAI Horticulture Ltd., Hortus House, 3 John's Place, Edinburgh. Tel: 031 554 5451/6

N. Ireland – Richardsons (Ulster) Ltd., 1 Short Strand, Belfast BT5 4BS. Tel: Belfast 57424/5/6

Eire – ICI (Ireland) Ltd., 5/9 South Frederick Street, Dublin 2. Tel: Dublin 771831



Gold-N

keeps grass lush and green (CI)

The British Golf Greenkeeper

Turface survived many freeze-thaw periods. Leaching tests run in Wyandotte Research Laboratories verified the breakdown resistance. No ingredients were found which would adversely affect plant life.

2. Inadequate Ventilation

Healthy root structure requires oxygen. Compacted soil will not allow air to reach the roots. Field research has proven that roots will grow toward available oxygen in the same manner as they grow toward moisture. Soils that highly restrict air penetration from above, and movement below, the surface will become stagnant. The green is therefore susceptible to infection and poor root growth. Greens properly built and maintained with Turface breathe more freely because the soil remains loose.

It is important to examine the top one or two inches of turf periodically for compaction. Continual traffic and decomposition of cuttings and other organic matter will form an impervious layer. Since oxygen and moisture must penetrate this layer to reach deeper roots, it is important to reduce the degree of compaction. Periodic top dressing with Turface will allow freer and deeper movement of air in and out of the soil.

3. Shallow Root Growth

This mainly occurs from the inability of water and oxygen to reach and remain at the deep roots. On a hard, compacted green, the water will remain near the surface. Water penetration in compacted soil may be as low as 0.1 inches per hour. During a rainy season, or when manually watered, the shallow roots take all of the water capable of penetrating such a surface, and deep roots will not develop or survive, since there is no moisture available to them. Because of rapid evaporation near the surface. the shallow roots need frequent watering. Soil conditioned with Turface allows water to penetrate quickly to greater depths. Turface absorbs its own weight in water. This means that moisture will remain deep in the soil long after the soil near the surface has dried out. A friable soil with a material that will not decompose, will permit freer air movement and retain moisture.

4. High Maintenance Cost

Labour, fertilizers, equipment, and the use of chemicals are the principal cost factors in maintaining turf. Of these, labour is the most expensive. The presence of even small amounts of Turface in soil effects definite

savings in labour.

A Turfaced soil will take approximately twice the water in half the time that a standard golf course mixture will. Watering time is thus cut by more than half. Repair of damaged turf is easier with the loose Turfaced soil, and recovery is definately quicker. Labour is saved because of less ball damage on greens, less scuff damage caused by spikes, and quicker turf recovery of heavily played areas such as tees.

Because Turfaced soil resists infection, the cost of applying preventive chemicals is normally reduced.

5. Disease

Many soils incorporate large amounts of sand, which is used because it assists in drainage. Sand does not, however, hold or absorb water, which is so beneficial for healthy root structure. Turf having healthy root structure fights disease, whereas weak root structure is more susceptible to disease. Disease is more common under high moisture, drought, or stagnant conditions.

Turface provides faster drainage than sand, and also holds enough moisture to minimize drought. Stagnant conditions prevail when excessive





- *Fat soft tyres to protect turf
- *8hp 4 stroke engine
- *Max 15mph
- *Lights and horn
- *Easy access for maintenance
- *Front wheel suspension
- *Low running cost
- *Heavy duty performance
- *Electric starter
- *Brakes
- *Variable speed transmission
- *Tiller steering
- *Optional passenger seat

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 - slicer and spiker
- Greensaire—Golf green precision aerator.
 - 2 models
 - Tracaire—Large area trailed turf aerator.
 - 2 models
- Spreadrite—Precision top dresser and fertiliser spreader

Contact: Horwool (Holdings) Ltd. Tel: Maldon 4051 Fullbridge Mill Fullbridge Maldon Essex

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