

PRODUCTS IN GREENKEEPING

The Dynamics of Organics

David Lee describes some new products from Rigby Taylor

The concept of 'organics' is nothing new to greenkeepers, who have been practising the art of natural nurturing of the soil for generations.

Scottish greenkeepers have utilised seaweed in their top-dressings for more than a century. Whether it is animal manure, seaweed, hoof and horn, dried blood or even soil itself, the principles of revitalising the ground for improved turf culture is accepted, as an important management procedure.

What is new however, is that some researchers now feel that organics have a positive biological value in the management of a healthy ecologically balanced soil system.

"The general trend of late has been a definite increase toward greater usage of organic products as a basis of sound grass husbandry programmes, especially in environmentally sensitive areas", comments Geoff Yelland, technical services manager at Rigby Taylor Ltd.

Aware of the demand for such products, the company recently introduced a comprehensive range of organic liquid feeds under its Mascot label. Market research strongly suggested the need for a more sophisticated approach toward soil conditioners, says Yelland. Customers indicated that a single, all purpose product was not enough to accommodate the complexity of soils, soil related problems and standards required for their turf regimes.

The Mascot organic range has three products. The first, Organic Liquid Fertiliser, is a general soil conditioner. It contains anaerobically fermented cow manure with essential trace elements for use on all sports turf - from fine swards to outfield grass.

The product differs from other liquid feeds on the market in two respects. First the source of manure ensures a known composition of nutrients and second the Nitrogen content.

While soil conditioners/feeds must not be confused with the

stronger elements of inorganic fertilisers, the Organic Liquid Fertiliser does contain 0.12% Nitrogen and 0.24% Potash.

Applied at the recommended rate, three times a year, it rapidly encourages microbial activity, leading to improved soil structure and increased nutrient availability from both existing 'locked in' nutrients and subsequent fertiliser applications.

The addition of iron has produced the next product in the range - Mascot Organic Green. It is designed for fine turf areas where an improvement of soil structure is required plus a rapid 'green up' effect without producing excessive foliar growth while 'hardening off' the turf, making it less susceptible to fungal diseases.

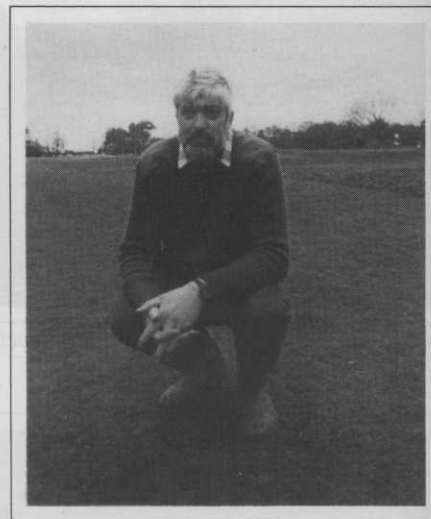
Organic feeds have traditionally featured either liquid cow manure or seaweed. Rigby Taylor has now integrated the benefits of both manures in their Organic Liquid Cocktail. A 70:30 mixture of liquid cow manure to seaweed extract it also contains 'Hydro-Wet', an inbuilt wetting agent to enhance soil penetration.

The immediate function of the cocktail is to stimulate growth of microbes in the soil through the supply of polysaccharides in the seaweed extract. These digest and convert available dead organic matter such as peat, dead roots, leaves and grasses into humus, allowing development of an improved soil structure.

The product also enhances a soil's moisture retention capacity through the presence of sodium alginate. This can carry water up to 2,000 times its own molecular weight to prevent top soil drying out.

Conversely, where peat is a problem, acting as a sponge and causing water-logging, the cocktail will break down the peat strata which, as a sterile growing medium, is not easily converted into humus.

"The product is ideally suited to heavy clay or light, sandy soils", says Geoff Yelland.



Peter Jordan, Head Greenkeeper at Coombe Wood Golf Course gets better root development.

Peter Jordan, Head Greenkeeper at the 18 hole Coombe Wood golf course, Kingston upon Thames, was one of the first to use the new Mascot Organic Cocktail after its launch at the 1988 IOG exhibition.

Having previously used seaweed feeds he was attracted to the cow manure/seaweed combination. "I was keen to try it to stimulate greater micro-organism activity within my soil structure", he said.

The cocktail was applied in late September to the fairways on the top 10 holes along with all the tees and greens at the recommended rate of one pint water to one pint product, a low dilution rate which he liked.

"One of the things I noticed was that it didn't block the spray nozzles unlike other liquid feed products I've used. It was very easy to use and apply. Although we put it through our filters to make sure there was no slurry build-up and inspected those filters during application to make sure they were clean, it went straight through the sprayer very well, without affecting the jets. It also sprayed nicely too!"

The results were clearly visible after two weeks with the treated areas showing a pronounced greened up effect. Examination of the greens in early March found a

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further improvement to the turf.

"Its thickened the roots up very well even in this short space of time. You can see that when you change the hole. Although the actual length of the roots have not extended they have become much thicker, illustrating a healthier plant. And that's just in 4 months over the winter. Root development is what its all about."

Another factor Peter Jordan has discovered is that organic feeds help build up grass resistance to disease. "The amount of times we have sprayed in the last 12 months is very low. We have had disease but the number of fungicide treatments on the course has been minimal in a year when disease has been quite rife".

Thatch has been a major problem on the course which is primarily clay although the greens are constructed of a light, textured imported soil. This he partially puts down to the age of the greens (Coombe Wood was opened in 1904-) and the over application of sulphate of Ammonia in the past.

"The old policy of continuous,

heavy feeds of Nitrogen to get a quick grass flush has encouraged the thatch, but we are getting over the problem by a concerted policy over the last three years by verti-draining, hollow tining to 6 ins and slitting as frequently as play will allow. The organic feed has undoubtedly assisted with the thatch breakdown, which is now at a decaying stage."

An additional area where he sees the value of organic feeds is in seeding. "Where we have seeded the tees and over-seeded the greens the feed has retained moisture, stimulating grass seed germination. Similarly, where we have sprayed onto re-turned areas the feed has helped bind in those turves with added moisture retention, but without the spongy effect associated with thatch build-up".

His programme of organic feeds with slow release granular fertiliser is now starting to encourage the finer grasses, and help reduce the poa. "Before the treatment we found water tended to hold on the greens with the thatch. The greens are now drawing well".

This year he aims to apply two light applications of BASF based granular fertiliser in Spring and early August/September in conjunction with earlier treatments of two or three sprays of the Mascot Organic Cocktail and Iron to harden up the grasses.

As a firm believer in organic fertiliser Peter Jordan says he would like to mix his own feed but its just not practical. "I like the convenience of the cocktail. I have the confidence that, as its pre-mixed, the content amounts are correct for immediate application without the worry of whether its the right mix of nutrients".

The need for liquid organic feeds to be used in conjunction with an inorganic fertilisation programme is stressed by Rigby Taylor's Geoff Yelland.

"While liquid organics do contain small proportions of the major nutrients and trace elements, they are essentially soil conditioners", he says. "As such, it is imperative that they are considered as an adjunct to standard fertiliser programmes.



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