

# TOP-DRESSING

By Jim Arthur

PERHAPS in no other area of greenkeeping is there so wide a division between theory and practice than in the question of what top-dressings to use and how to formulate and prepare them.

Few would debate the uncontested published evidence over the past 80 years of the link between phosphate fertilisers and annual meadow grass invasion. Perhaps more might feel inclined to argue as to whether annual meadow grass is such a deep-dyed villain as many of us have contended for many years, especially if they are only interested in course condition for summer tournaments and not all-year-round golf.

On one course, subject to unconventional treatment, it is admitted 'that the greens are 100 per cent annual meadow grass and it does not matter.' The fact that this is a symptom of serious problems below seems to have escaped notice.

Few fertiliser companies would try to dissuade golf clubs from buying nitrogen-only fertilisers, though they still sell NPK mixtures. I was, however, horrified on a recent advisory visit to see a written recommendation from one company advising the immediate application of 12oz per sq yd of lime to greens because their tests showed a pH of 4.7! They were good, 90 per cent *Agrostis* greens!

But with top-dressings, every facet of argument affects decisions. Whether to make your own or buy in is the chief point of discussion. My feeling is that unless you are lucky

enough to have consistent and freely available supplies of black, sandy, humus-rich topsoil virtually free from clay, either on the course or nearby, it then becomes too unpredictable a matter to try to make your own if you have to rely on variable sources of bought-in 'soil.'

With links courses, a more consistent supply is often achieved by stacking sand and seaweed and giving it time (with turning) to completely break down.

Some clubs are fortunate in being able to buy the large quantities they require of the eminently suitable black humus-rich soil from the fens—adding the correct sand as needed. Note that this is not a peat, but a neutral rather than acid source of humus, which is so difficult to provide from other sources.

Such clubs have existing generous shed accommodation, virtually compost factories, with sophisticated and expensive bulk shredding and screening and even in some cases sterilisation machinery.

The biggest arguments against home production are the huge cost of setting up such large soil sheds and handling equipment and the difficulties in getting suitable basic materials with which to produce good top-dressing.

If such shed and screening equipment is not available, my advice

is to buy in. I am unimpressed with the usual argument that 'it gives the men something to do in wet weather.' Some years, we could wait forever for wet weather, with an empty compost shed. Today, we are not, on busy courses, top-dressing in winter and so we want very finely screened *dry* material for spring and summer use. And with modern tractor cabs, many operations on the course can be carried out in wet weather. (If clubs provide their greenkeeping staff with decent accommodation and warm drying rooms, they will work outside more readily and efficiently in the wet.) In any case, no business can survive by employing staff unproductively just to keep them busy.

Cost is often raised as an objection to buying in, but even home production is not free. If you cost in labour, buying in sand and either extracting raw materials from the course or buying them in, not to mention subsequent handling and screening (but not making any allowance for capital investment in machinery or sheds), then the true cost of home mixing is about £12 to £15 per tonne and often more.

With good-quality imported dressing available at under £30 per tonne delivered, even if 100 tonnes are bought in each year—and most clubs, sadly, buy less—it is a relatively minor cost. The rub comes when we talk about what to buy!

It is essential to get a physical analysis carried out. A glance at the table of comparative results shown on

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Grade	Diam. mm.	Sample A %	Sample B %	Sample C %	Sample D %
Stones	> 8	Nil	Nil	Nil	2
Coarse gravel	8-4	Nil	Nil	Trace	1
Fine gravel	4-2	Trace	Trace	Trace	3
Very coarse sand	2-1	6	Trace	1	2
Coarse sand	1-0.5	29	1	1	8
Medium sand	0.5-0.25	55	69	5	11
Fine sand	0.25-0.125	6	27	19	18
Very fine sand	0.125-0.05	Trace )	1 )	12 )	22 )
Silt	0.05-0.002	Trace ) 4	2 ) 3	27 ) 74	20 ) 61
Clay	< 0.002	4 )	Trace )	35 )	19 )
Loss on ignition (humus)		8	2-3	27	1
Calcium carbonate ('lime')		Nil	Nil	Nil	4

this page reveals how wide can be the variation and, indeed, many top-dressing mixes sold are appallingly bad and also very inconsistent from batch to batch, according to the source of 'soil' used.

**Sample A** is a nationally available, well-advertised dressing, which regularly and consistently shows equivalent analysis results. It has a satisfactorily narrow range of sand size particles (84 per cent between 1mm and 0.25mm), a satisfactory humus content and is acid. Above all, it has only four per cent fines—ie very fine sand, silt and clay combined.

**Sample B** was a locally made-up mix, now withdrawn, and it can be clearly seen that it was really only a very fine, dirty sand.

**Sample C** was a home mix, showing an appalling combination of 74 per cent fines with 27 per cent humus—in fact, a compost derived from heavy soil and farmyard manure. Even adding large quantities of sand would never reduce that awful clay content and clay and sand make bricks!

**Sample D** was also bought-in. It was literally a sand/soil mix with no humus

and 61 per cent of fines. No wonder it sealed the surface and caused ponding.

There must be many other comparisons that can be made and Dr Peter Hayes at Bingley and I are collaborating on a survey of available materials. Samples have been collected from bulk deliveries and, therefore, should not have been tarted up!

What we need, of course, is a very low fines content and a sand particle range that is not too spread out—as the small particles infiltrate into the spaces left by the large particles. The material must be lime-free (for inland courses anyway) and have a sensible humus content. In other words, what good practical men have known for years by just looking at it and rubbing it between finger and thumb, plus that essential other ingredient experience!

I do not have the space to get involved in controversies of sand-only versus compost top-dressings, except to say that changing policies in mid-stream is disastrous and your material should equate physically

with what is below the grass.

Equally, it is difficult always to condemn buying in top-dressing expensively bagged as opposed to bulk deliveries if there are no storage facilities and it is, of course, much easier to handle the material around the course.

The problem is that smaller amounts tend to be bought to compensate for the doubling of price.

The balance must favour using a quality controlled, bought in top-dressing with consistent analyses and quality, unless you are lucky enough to have suitable raw material available in quantity on the course or are a links course, making top-dressing from sand and seaweed alone.

Nothing changes in greenkeeping, in principle, only in detail to compensate for increasing pressures due to play, with higher standards being demanded, yet less time in which to carry out the work. These top-dressing problems have not altered at all since the start of the century and sand and seaweed is as sound a policy now on links courses as it was a hundred years ago.

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