MICHAEL BIRD looks at some of the latest design ideas and innovations available to the turf professional

Requiring tractors of 16hp+, the trailed 1.2m (4ft) wide Litamina retains the unique Sisis spiral brush design and has a leading fixed brush which helps loosen and lift wet leaves and other flattened material. The hopper can be tipped without leaving the tractor’s seat.

Collectors have been available for some time for use with mid-mounted rotary mowing decks on compact tractors and with dedicated out-front rotary mowers from companies including Ransomes, Fen Jot, John Deere, Givens and Kubota. Able to operate in conjunction with the mower or as a self-propelled grass, leaf and waste materials collector in its own right, the PeCo Lawn Vac system has a 6hp electric-start diesel engine direct driving an impeller which sucks grass and other material from the deck into a hopper. All auxiliary engine controls are mounted adjacent to the operator and the 1.85 (0.8m) aluminium container can be tipped from the driver’s seat.

Self-contained vacuum collectors were developed originally for use by turf producers, employing powerful suction and wide “hoover-like” heads to lift and remove damaging clippings from vertical mowing to grass clipping materials collector in its own right, the PeCo Lawn Vac system has a 6hp electric-start diesel engine direct driving an impeller which sucks grass and other material from the deck into a hopper. All auxiliary engine controls are mounted adjacent to the operator and the 1.85 (0.8m) aluminium container can be tipped from the driver’s seat.

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Available with capacities of 5.1 and 12.4yd³ (9.5m³), Brouwer’s BV 138 and BV 85 trailed units from Turfland are designed to work behind tractors of 20 and 35 pto hp respectively. Features include flotation tyres, strong lightweight construction and a low power requirement, minimising tractor size and weight and possible surface damage. Both models have floating suction heads to follow contours accurately, important if maximum vacuum is to be maintained. The suction produced by the powerful fan (dual impellers on the smaller BV 138 machine) is said to be able to handle debris ranging from thatch and other areas where the machine cannot gain access.

Also from North America comes the two model Tuff Vac range, distributed by Turftech Machinery. Available in 4.5 and 8yd³ (3.4 and 6.1m³) capacities, the two machines have moving bed floors for unloading and fully-floating suction heads. An option offered by Tuff Vac not available on the Brouwer machines is a rotary brush for the suction head. However, Turftech say that the brush option accounts for only 10% of sales in the UK. The reason given is that the brush reduces working speed and limits the overall pick-up width, although it is claimed to be good for lifting wet leaves. For scarifying, both Turfland and Turftech prefer a separate operation ahead of the vacuum collector, this being faster and cleaner, they say, eliminating any risk of reseeding de-thatched material.

The Tuff Vac range comes with 5ft and 8ft (1.5m and 2.4m) suction heads, the smaller model also being available with an auxiliary engine-driven fan for use behind turf vehicles and other power units without a pto or with insufficient horsepower.

Also developed originally for turf growers is the Dutch-built Trilo vacuum sweeper range from MJT Contracts. On the 11m² Clean Sweep, the company offers a three section scarifier attachment which operates in front of the floating 2m suction head, giving it excellent ground-following characteristics. A powered brush is available as an option and the machine has a cab-controlled wandering hose as standard. The 4.5m³ capacity Trilo Mini Sweep has a brush fitted as standard to its floating head 1.5m vacuum head. Alternatively, it can now be equipped with a scarifier. This model features high-tip emptying and is suitable for tractors of 35hp plus.

New from the company at this year’s IoG exhibition is a 7m² machine aimed, says Trilo, at the golf course user. Requiring tractors of 35hp, it has as options a 2m sweeper head and a scarifier. Unloading, like its bigger brother, is by moving floor.

One rare development in the machinery market is a reduction in price. However, Landtec Products say they have been able to cut the cost of their Promark 1050 Vacuum by more than 30% thanks primarily to revisions in production methods and cost-

1 The Brouwer BV-85 Vacuum has an 8ft suction pick-up head a standard. The 12" diameter wander hose is spring-balanced

2 Holding up to 8cu yd of material, the Tuff Vac 8000 has a two section suction head, moving floor unloading and dual wheels on independent hubs to eliminate souffling on turns

3 PeCo Lawn Vac system provides suction collection on out-front rotary mowers

4 The Charterhouse Turf Tidy includes a gutter brush and wide-angle pto for work in tight corners

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A clean SWEEP

ings by Ariens, the new owners of Pro-markt machines. The unit, which was
developed initially to collect de-thatched material on Californian golf
courses, is completely self-contained,
having an 18hp petrol engine, 1.5m
suction head and 3m suction hose
attachment. It can be towed by virtu-
ally any power unit, has a 3.6m² hopp-
er and, in deference to pollution control
regulations, runs on unleaded fuel.

For all-round versatility, there are
can virus vacuum sweepers which can sur-
pass the features offered as standard
on the British-built GrandswEEP range
from Ryetec. The company markets
four trailed models with capacities
from 1.75m³ to 8m³, suitable for use
with tractors from 15hp to 5hp. All
are equipped with Goodyear Terra
Tyres and have pto fans and hydrauli-
cally-driven sweeping/scarifying
brushes on fully-floating headers
incorporating powered lift and height-
adjustable wheels.

Wander hoses are standard on all
machines which tip hydraulically for
unloading. A further benefit is that
the wander hose can be connected
directly to a mid-mounted mower
dock for powered grass collection. An
optional gully brush is available for
use on hard surfaces.

A powered gully brush and scarifier
are offered also by Ransomes to
extend the working versatility of its
three ranges of conventional sweepers
which come in pedestrian, trailed and
ride-on versions. The top-of-the-range
1500 can be specified with an
optional water sprinkler system for
dust suppression.

Significantly reduced noise is
claimed for the new Billy Goat
VQ801HP outdoor sweeper from Bob
Andrews Limited, making it ideal for
work close to golf hotel and resort
complexes. The secret, says Ken Salt
of Andrews, lies in the use of a new
computer-designed impeller which
can operate with high efficiency at
slower engine speeds. The result is
less noise, engine wear and fuel con-
sumption. Self-propelled, with an
optional tow-behind "chariot" for the
operator, the sweeper has a Honda
8hp petrol engine, 30in vacuum pick-
up and 8.7ft³ (0.25m³) bag capacity.

Said to be the quietest unit cur-
tently available, the hand-held Sabre
BLV25 Blower/Vac from Hemming
and Wood is powered by a 25cc petrol
engine producing just 70 decibels at
50ft.

Finally, available with a choice of
interchangeable sweeping, scarifying
or flail heads, the trailed Charte-
house Turf Tidy, has a 5ft (1.5m)
working width and is suitable for use
with tractors from 20hp upwards,
according to the job being carried out.
Tipping of the 2.2m³ hopper is
hydraulic with a tipped clearance of
5.25ft (1.6m). To minimise the risk of
compaction, the machine runs on dual
rear wheels. Options include a gutter
brush and wide-angle pto for use in
tight corners.
When the motor car buyer purchases a Lada, can he expect Lamborghini performance and quality? Of course not, it’s a foolish question: the difference is chalk and cheese!

It is surprising then, that many would-be purchasers of top dressing for use of fine turf playing surfaces approach the whole subject with a Lada mentality. Perhaps the comparison is unkind, for the Lada does at least have merit within its defined marketplace and there are thousands of satisfied users. What is beyond argument, however, is that those who beat a path to the door of the cheapest source of top dressing are stepping into a minefield.

To answer the sort of questions that ought to be asked but are often overlooked or ignored, I spoke to Tim Banks, managing director of Fen Turf Dressings Ltd., long time manufacturers and suppliers of sundries, used on many championship courses.

Let us first look at what we mean by top dressing. In essence we are referring to the application of a bulky medium prepared specifically for the purpose of improving the playing surface, which will (or should) have the ability to deliver the following benefits to surfaces that have been subjected to golfers, weather extremes, diseases and insect attacks. Frequent top dressing applications will ensure:

- The levelling off of the playing surface to ensure smoother, faster, dryer greens;
- The ability to assist in improving poorly drained areas;
- The ability to improve drought resistance (depending upon the make-up of the compost);
- The application of a product containing small amounts of plant food value which reduces the need for artificial feeding.

Having established the need for top dressing (and there surely can be none who doubt its efficacy?), the recommendation is one of little and often during the season of growth rather than one heavy application which smothers grass cover.

Next must come a further decision, to buy in or prepare one’s own? It will not surprise the reader to learn that as a manufacturer Tim Banks is biased in favour of the latter, but as he points out, there is also the convenience factor, for personnel employed on such work must be properly costed into the overall expense: no-one works for nothing!

In talking essential quality, and making the valid point of an often in-built resistance to accept quality without considering price, the question asked most often at Tim’s company (and I’m sure his company is no isolated exception) is invariably ‘how much?’ — only rarely is the question posed ‘what does your top dressing contain?’.

I find this puzzling and must fall into agreement with Tim when he declares “Quality putting surfaces deserve a quality top dressing. Surely the most important question should therefore be ‘what are the constituents; tell me the ratios of materials and the analysis of particle size; what is the pH; how low is the clay and silt content?’.

So what makes a good top dressing? Tim’s opinion is that it should be — indeed must be — a free-draining material from a constant source (very, very important) which contains minimal clay and silt particles. Heavy loams containing large proportions of clay must be avoided at all costs, for such clay content will increase compaction, reduce drainage potential and increase rather than stem ball bounce. To this free-draining substance must be added a lime-free, washed silica sand of the right shape (rounded to sub-angular) and with the correct particle range. Sand quarried from the Leighton Buzzard area in Bedfordshire is particularly famed for containing these desirable properties. It is considered unwise to use soft, local sands, especially those which have a content containing lime, for this will increase alkalinity, a negative factor. The finished product should be neutral to slightly acidic, for this will encourage desirable finer grasses such as Festuca and Agrostis. Any mixture which is alkaline will produce in abundance the one thing that greenkeepers

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abhor – the weed grass Poa annua.

If all this isn’t enough, the greenkeeper should heed another note of

caution: use of materials which are

too fine will almost certainly pro-

duce layering of the surface which

will encourage, at best, hydrophobic

conditions and at worst a total cap-

ping of the growing medium.

The exact proportion of each

ingredient in top dressing can be

determined by ground conditions

and that degree of excellence which

the greenkeeper seeks to achieve. In

Britain, sandy dressings are consid-

ered preferable in assisting drainage

and for their ability to rapidly inte-

grate into the soil. Remembering

this, the greenkeeper should estab-

lish (by soil testing, if necessary) his

existing soil texture and seek a top-

dressing which has similar character-

istics. The problem of ‘layering’ will

decrease if the top dressing mix is

consistently close to the particle size

of the existing texture.

Finally, one other important func-

tion of top dressing is the biological

control of thatch. In time, thatch is

decomposed by microbes living in

the soil and the action of top dress-

ing, especially when filling core

holes, brings soil into contact with

the thatch and speeds up the decom-

posing process.

Popular mixes today, according to

Tim, are 70%/30% and 80%/20%,

the higher percentages being sand,

the lower Fensoil. These allow light

and regular top dressing to be

applied throughout the playing se-

son to achieve maximum effect.

The golf market in top dressing a

competitive, often to the point of

foolishness, of companies working

for peanuts. I don’t profess to un-

derstand the motives behind such bus-

iness transactions but appreciate that

which has been said before – nobody

works for nothing. What I do un-

derstand is that for many, price is an

important consideration and the

blurred mentality results in an

awful lot of highly suspect junk

being foisted upon the unwary. Should price alone be the prime con-

sideration or indeed the overriding

factor? Let us look at a way of con-

paring like with like. The cost of a

visitor green fee at a popular Club –

my own Club – is now over £25.

Eight years ago the cost was under

a tenner. The cost of high quality top

dressing material eight years ago

was around £20 a ton, today it is

around £25 a ton. As an inflation

buster and measured against the

cost-of-living index, it can be seen

a real terms that cost has actually

decreased! Put into perspective, no-

thing is worse for the long-term

effectiveness of your greens than

the application of an inferior product.

If there is a message here it is one

of caution: you only get what you

pay for. For once the computer

world has the perfect one-liner to

sum up that philosophy. Heed it

well: RUBBISH IN – RUBBISH OUT.

• David White was talking to Tim Banks.

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Dave Salisbury, Head Greenkeeper, Burghley Park G.C.

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The Aardvark, seen recently on trials at Eaton and Royal Cromer, is the culmination of three years of research and development by Anglia Soil Restructuring Ltd. The third prototype has brought the machine to its present highly developed state, built upon its own chassis with twin axles and running on softrac tyres, the widest tyres available for their diameter. The weight of the Aardvark has always been an important design feature and ground pressure is claimed to be less than the human footprint.

The injection probe, rear mounted to avoid running over treated ground, inserts a 20mm diameter probe into the ground and releases compressed air at varying depths from 250mm down to 1 metre, depending on the levels at which the machine is required to operate.

It may be necessary to make multiple releases of compressed air at several depths if there is more than one compaction layer, for irrigation sedimentation, compaction, anaerobic peat layers, iron pans and poor drainage may occur as multiple situations that require aeration at different depths. Washed and graded Silica sand 2-3.5mm in diameter is recommended for long term aeration and drainage. The average sized green can be dealt with in minutes rather than hours and is ready for play without further treatment.

Details: Tel: 0603 404367.

A major new development in barrelled oils storage has been launched by Dee Bank Engineering Ltd. The bunded store complements the popular Saferite range of flammable and hazardous substance storage vaults.

Expensive absorbents and operational cleaning costs are avoided while the potential for accidents in the oil store is greatly reduced: In the event of a container being damaged over the bund, the contents will not be wasted and no environmental repercussions will follow. Where a fire risk is imminent, a forklift can be used to move the whole store to a point of safety in seconds. Pollution Inspectorate, Fire Services, Water Authorities, NRA and Environmental Audits can be satisfied and the working environment improved with this easy to install, cost effective system. The generous sized work-station allows the operator to dispense oils into smaller containers whilst over the bunded area.

Drips and leaks from pump hoses are contained and can be safely drained via the protected gate valve. The sturdy, maintenance free, mobile work-station is hot dip galvanised and available in 2, 3 or 4 barrel sizes. Tel: 0352 714930.

John Deere has appointed two further companies to its expanding groundscare equipment dealer network. They are Balmers Garden Machinery of Burnley (tel: 0282 53900), and A J Scambler of Hemingford Abbots, near Cambridge (tel: 0480 495909).

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In the rain, they're guaranteed to keep you dry.

BIGGA have teamed up with manufacturers Pro-Quip to bring you these weatherproof jacket and trouser sets at an unbelievable low price. They're made of exceptionally hard wearing polyurethane and beneath it is a closed cell foam layer which does not absorb moisture and is sandwiched. A closed cell foam layer original dimension when depressed.

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There's usually a price to pay for taking a shortcut, warns JAMES T SNOW

Too good to be true

Here we go again! Calls and letters are coming in from people or about people who are going to build pure sand greens (using a uniform coarse sand, no less) instead of USGA specifications because of some article they read recently in a widely distributed turf publication. And why not? After all, the article says that all sand greens are easier and cheaper to build... nice and simple. All the complicated, high-tech, unnecessary, costly steps have been eliminated. No need to worry about today's inconsistent organic materials, or about gravel drainage beds or intermediate coarse sand layers.

Worried about water retention? Just mix some water-absorbent polymers or other unproven inorganic amendment into the top few inches of the sand profile, place the whole 12" rootzone on top of the existing soil base with some drain lines installed in it, and grow healthy, carefree turf. Revolutionary, you say? No, it isn't. Sounds too good to be true, you say? Yes, it is!

There's usually a price to pay for taking a shortcut, and hundreds of greenkeepers (and their Clubs) around the world have paid a high price for taking the "easy" way with pure sand greens and untested modifications. Our experience tells us this:

• Pure sand greens built without a perched water table are often extremely droughty and experience severe dry spot problems.
• There is no buffering capacity in pure sand greens, and wide shifts in pH can occur very quickly.
• Pure sand greens often require extremely high rates of fertilizer application while holding reasonable compromise to allow a green to drain properly and to resist compaction while holding reasonable amounts of moisture and nutrients for plant growth. Don't be fooled by anyone into thinking that greens can be built easily and cheaply without having to pay for it later with interest. Pure sand rootzones and their untested modified versions should not be encouraged or conformed.

The author, James T Snow, is National Director, USGA Green Section. This article first appeared in volume 30, No 4 of the USGA Green Section Record and is reproduced here with due acknowledgement and thanks.

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There's usually a price to pay for taking a shortcut, warns JAMES T SNOW
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