

RECYCLE

The modern Christmas is the time of the year when one realises just how much we have become a packaging society. It is little wonder that local authorities are faced with an increasing problem of what to do with waste. Landfill sites are quickly disappearing and yet there seems little sign of any diminishing use of cardboard, paper, polystyrene and a host of other materials all designed to make an item attractive. What has this got to do with course management? Nothing directly, but it does highlight an important issue that addresses every one - recycling. If a recycling programme is to work effectively every department within the club has to be involved and inspired.

For many clubs modern demands have increased the need to collect grass on areas such as fairways that in the past have simply had the clippings left where they fell. Golf courses have in fact been recycling grass since their inception - rabbits and sometimes sheep were often used as mowers. These naturally converted the grass into nutrients. With the introduction of gang mowers the clippings were left in the turf. What is this, if it is not recycling?

Research has shown that over 80% of grass plants consist of water plus a percentage of nutrients, especially nitrogen. By returning this to the soil, moisture retention is increased, some plant food is also provided. The secret of recycling is to produce a turf where thatch build-up is contained so that the clippings can reach the soil, and decompose there.

During the last few years there have been a number of rotary machines introduced onto the market under the recycling banner. While these are new models, the recycling concept has been around for well over 25 years. One of the main incentives for this present higher profile has come from the USA where a number of States have closed their landfill site's gates to organic waste, so the pressure has been on to recycle as much as possible.

For the recycling rotary mowing system to be successful it requires a specially designed cutting deck. The housing has to retain the cut material long enough for it to be chopped into small enough pieces that will pass down into the sward where they can then decompose. Another major factor of this form of mowing is that the height of the grass needs to be left longer than is generally considered

usual in this country. Each cut should only remove one third of the growth, so in some cases the grass will have to be mown on a more regular cycle.

Where collection is being carried out disposal can become a big problem. The clippings do not decompose well in a compost heap, and the end result is usually a stinking heap of gunge.

On a small scale the answer is to mix other matter such as leaves with the grass; this produces more satisfactory compost.

The rotary blade units consist of a disc with small replaceable knives. This system is found mainly on domestic machines and has slight disadvantage compared with the others. Because the chopping chamber is fairly small it can easily become congested with material, especially when there is high moisture content. While access to clearing it is usually relatively easy it can become tedious this operation has to be carried out too frequently. The noise this shred-

ding process creates may also be a problem. A far quieter method is the second system. The material passes between a cylinder with a series of knives that chop the material against a static blade. On the electric versions of this type of unit reversing the rotation of the blades will easily unblock the cutting mechanism.

Most shredders will tackle saplings but for larger diameter branches a chipper is required. These, generally consisting of a large disc with replaceable blades that do exactly as the name implies - convert the wood into chips. The size of these can be controlled within most chippers to match the area where they are going to be used. Shredded material can be used as mulch on ornamental areas such as flowerbeds or under shrubs. When well composted the result is an ideal soil conditioner. Chips are ideal for making natural paths

Whilst not exactly recycling the use of biodegradable oil in hydraulic systems and two-stroke engine mixtures reduces the risk of damage through spillage to turf and also benefits the environment by reducing pollution.

Most machinery manufacturers recognise the importance of recycling and many components they now use are recyclable, a point worth taking into account when considering buying a particular piece of equipment.

There are numerous other things that can be done and no doubt readers have their own schemes. Here are a few others worth considering. Persuade players to place any empty drink cans into special containers out on the course. The clubhouse generates a lot of glass bottles; these can be disposed of in bottle banks. Paper and cardboard are easily dealt with in the same manner.

One scenario, which might happen one day; is using vegetable oil from the kitchens as fuel in a converted diesel engine. Some road vehicles in the USA are already running on this substitute. But be warned, any greenkeepers who decide to go down this route will leave a trail of fumes around the course similar to the smell from a fish and chip shop.

For any recycling schemes to be successful it will require all the people working in or visiting the complex to be receptive to the schemes.

A recent piece on a local radio station illustrated the problems the country is facing regarding the disposal of unwanted rubbish. Cambridgeshire is a flat county and two of the only hills in it are the result of waste material. Perhaps your course needs some new bunkers?



When it comes to heavier material such as brushwood, a shredder is the best solution. These reduce the volume of material by a ratio of up to 10 to 1 which means that the space required for dumping is drastically reduced, as are the number of trips to a disposal site. There is another advantage; the action of the cutting or chopping mechanism exposes larger fibre areas that enable the decomposing micro-organisms to gain easier and faster access to carry out their work.

There are three cutting systems now available; horizontal rotary blades, cylindrical blades cutting against a static knife or a drum unit with hammers or flails.

The third system is commonly found in commercial units. It is made up of a blade carrier such as a drum to which are attached a number of either hammers or flails. Some large models have a conveyor that automatically feeds the material in to the shredder where it is pulverised.

Whatever type of shredder is used it is important in the interests of safety