Scott Kinkead, is General Vice-President of Turfco Manufacturing Inc. the Minneapolis-based manufacturer of Top Dressers who created the first powered machine in 1961. Here he presents a timely view of recent developments in top dressing.

**New practices require more versatile equipment**

The benefits of top dressing have been recognized since the days of old Tom Morris. According to legend, it was old Tom who purportedly said: "More sand, honeyman, more sand." While top dressing principles are as valid now as they were then, the use of top dressing as a management tool has increased. Smoothing the playing surface, producing a better growing medium and controlling thatch have become much more important as golfing traffic has risen. As a result, golfers today have higher expectations for the quality of their facilities. These factors are changing the way greenkeepers manage their top dressing programmes. New, more efficient equipment designs are coming on to the market in response to the changing trends in top dressing.

As you look at your top dressing needs now and in the future, it will be important to consider these changing trends. They may well influence how you select and employ your top dressing equipment in the years ahead.

**Size of areas being top-dressed**

Once top dressing was typically limited to greens, now many courses top dress tees, approaches and even problem areas in fairways. This has led to more specialised equipment with increased capacities.

**Greater variety of materials**

Top dressing has generally involved some combination of soil, sand or peat. Nowadays, however, top dressers are used to overseed, spread compost, spread grass clippings, apply lime and even spread soil amendments such as crumb rubber - as well as applying a wider range of top dressing mixtures. Equipment needs to be versatile enough to handle more materials efficiently.

**Influences of material storage**

Many top dressing materials are stored outside and thus are often wet when loaded, even if they are covered. Top dressers today must be able to spread wet or damp materials, and spread them evenly to minimize extra time for dragging the surface. Some greenkeepers have been forced to use costly, bagged sand to avoid wet materials. Newer top dresser designs can effectively handle most materials.

**Frequency of application**

Ten years ago, top-dressing golf greens was usually a twice a year activity - once in the spring and once again...
in the autumn, following aeration. Now, with a greater focus on greens quality and consistency, greenkeepers may top dress greens every two to three weeks and some as frequently as every 10 days.

**Variable application rates**

When top dressing was applied once or twice a year, it was usually heavy - a 6mm layer or more. Now, frequent light applications may involve as little as 1mm of sand each application. Today's equipment must be capable of both extremes.

**Time and labour considerations**

More frequent top dressing, of course, means the process must be more efficient. Equipment, therefore, must be more efficient, more reliable and more accurate to get the job done in as short a time as possible, and with the least amount of manpower possible.

**Size of area to be top-dressed**

The size of greens influences the type of top dressing equipment that can be used. Small greens with numerous bunkers and obstacles may dictate a pedestrian top dresser. These, of course, are quite manoeuverable but lack capacity. For maximum capacity, as well as good manoeuverability, a truck-mounted top dresser may be the answer.

Between these options are trailed top dressers, most of which have good manoeuverability and a relatively high capacity to reduce the most timely aspect of top dressing operations - loading. One rule of thumb says that if you can get on a green with a riding greens mower, it will probably accommodate a trailed top dresser. Hopper size becomes more important if you plan to top dress tees and approaches or even fairways.

**Variety of materials**

Ten years ago, the typical top dressing application could be anything from straight soil or compost, to a mix of 70% organic material and 30% sand. Today, the trend is to higher sand levels - perhaps 80% sand with 20% organic material - all the way up to 100% USGA specification sand.

Equipment must be able to handle a wide range of top dress mixtures, with the capability for both heavy and light application. If the equipment is also used for other jobs, such as overseeding or applying lime, it must be adaptable for those materials. Does it have the precision adjustments to apply everything from sand to compost to crumb rubber uniformly and consistently? Will it handle wet materials, whether sand or other applications such as spreading grass clippings? These are important and fundamental questions that need to be addressed and then the equipment selected accordingly.

**How is top dressing material stored?**

Whether sand and other materials are stored outside or under cover effects how they spread. Even materials covered and stored outside will usually have considerable moisture content, wicked up from surrounding surfaces. In the past, the inability of top dressing equipment to handle wet materials restricted their use. Some greenkeepers were forced to use bagged sand to get around the problem. An expensive solution to the problem! However, properly designed equipment can handle a variety of moist or wet top dressing mixes. Brush to conveyor belt designs typically do the best job when conditions require spreading wet mixtures. Continuous pattern belts deliver more uniform application with varying moisture levels.

**Frequency of application**

Greenkeepers have found that frequent light application of top dressing sand or mix helps maintain level and consistent greens, as well as helping dilute and control thatch. Some newer grass varieties tend to be more “thatchy” and, with heavier use, there has been a tendency to increase fertiliser and chemical use to maintain turf growth and vigour. This also tends to increase thatch.

A good, consistent top dressing programme creates a smoother playing surface and modifies the topsoil layer to provide a better medium for grass growth. Along with aeration, top dressing can improve flow of water and air to the root zone and soil drainage. Greens that are top-dressed frequently tend to be faster, too.

Harold Neal, greenkeeper at Tulsa Country Club, says his frequent light top dressing programme allows him to mow greens higher. This promotes better grass health without sacrificing any speed at all. His greens recently were rated as the finest putting greens in that region.

Following a frequent light top dressing programme will necessitate more efficient equipment. Uniform application, the ability to handle material with varying moisture content and hopper capacity all become major considerations.

**Desired application rates affect equipment selection**

The trend to frequent, light top dressing means that top dressing equipment must be versatile enough to apply material at extremely light rates, from as little as 1mm thick, up to heavy rates (6mm after aeration, for example). Uniform distribution is critical with light applications, to avoid extra time for working in the material. Some greenkeepers put on a very light application without dragging. Bill Larson, CGCS at Town & Country Club, says...
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