

Spray on or lay it down

Peter Bridgewater finds out how pitch line marking has come along way since the days of mixing up chalk powder and applying the resultant slurry to mark out pitch lines.

Up to the mid 70s, there was a limited selection of basic equipment and hydrated lime (Calcium hydroxide) was the 'product' of choice. The operation was time-consuming, the product very toxic, messy to mix and apply and the lines often became blurred following the first shower of rain and easily smeared by player contact.

HOW THINGS HAVE CHANGED

Today, a wide range of marking compounds, paints and machines are available, pitches can be marked out very quickly, the lines are bright and rainfast and the 'paint' can now be left on the turf not the operator or transferred to players!

There are many different types of marking equipment available; Dry Line, Pressure Pump, Belt Feed but the choice will probably fall between a Transfer Wheel marker or Spray Line marker.

TRANSFER WHEEL MARKERS

Wheel Transfer Markers convey the liquid paint via rotating wheel onto a tray and then transfer the paint via a sponge to a wheel that places it directly onto the turf surface. Some models use a cast iron wheel with dimples that collects and holds the paint before transferring it onto the surface.

The machines themselves are quite basic, need minimal maintenance or cleaning and are very robust.

When used with the right liquids, these machines will put down an excellent line but they have to be used under almost ideal conditions where frequent use of the pitch is low and the surface maintains reasonable grass coverage. The line marking operation itself also can be quite time consuming.

Professional football clubs have tended in the past to favour Transfer Wheel markers as they normally string the pitch out at every mark, walk very slowly when marking and therefore feel more in control. The majority of groundsmen however, will mark the pitch at least twice, once in each direction, simply because that is the way the transfer wheel operates.

Marking one-way coats the leaf on one side, marking the other way coats the other side, either way it only coats the top of the grass and the line is cut out more easily. Clubs will often use the paint at a high, even neat concentration because for them cost is not seen as an issue.

The total opposite is the case when line marking pitches under Local Authority management. Here practices are based on the unit cost, availability of labour and time. Transfer Wheel markers are still used as old habits die hard but their use is becoming less and less as improved equipment and advanced paint technology are made available.



Impact Spray Line Marker showing its ability to coat both a surface with that has good grass coverage and one where all the turf has been worn away.

The paints used by Local Authorities tend to veer towards a lower unit-cost as they are more often a chalk base product or one using a reduced specification concentrate. Unit cost per bag or container may look low but the amount used is quite high and can often end up being false economy.

Major disadvantages exist with the use of Transfer Wheel markers under adverse surface conditions when it is difficult even to push the machine along a muddy, rutted halfway line, never mind attempting accuracy. Similarly, towards the season end when the surface is dry, the transfer wheel is applying the paint onto a surface that has a top layer of dust that adheres to the transfer wheel making it difficult to obtain a maintain a quality line.

In such situations, what could look good value at first sight, may not provide the results required.

SPRAY LINE MARKERS

When comparing the difference between Transfer Wheel and Spray Markers, the benefits of applying a line as a spray is that the paint is being applied to and through the grass without any point of contact on the surface. This means both sides of the grass blades are being covered as well as the turf surface itself so the line does not get cut out so frequently.

There are additional practices required such as machine cleaning after use, ensuring the battery is kept charged and the paint used will almost certainly be a higher specification, higher unit cost product but there are many advantages.

More pitches can be marked as with spray application it only necessary to mark the line in one direction. Marking can be carried out regardless of the surface condition of the pitch. Low operator fatigue, reduced handling and exposure to the product are additional benefits.

Most recently a concept adopted by the wine producing industry has been transferred to the line marking operation. Rigby Taylor's 'bag-in-the box' Impact system eliminates the need to mix product as the highly concentrated paint is simply poured into their specially designed machine and spraying can start immediately.

A cone jet is used as this ensures an improved coating of the leaf blade compared to a flat fan nozzle. The bag-in-the box concept eliminates mixing, reduces the level of operator exposure and is less wasteful as the paint can be left in the machine overnight if required. The containers can also be simply and inexpensively disposed of with standard refuse.

Obviously there are a variety of machines and paints on the market and the final decision will depend on a range of factors but speed, flexibility, actual cost of the operation, reduced operator exposure and disposal will all need to be considered.

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Bag-in-the-box showing how it can be easily poured without operator exposure



Empty bag that is easily disposed off and waste is minimised as the bag collapses as the material is poured