

Autumn Fertilisers

By John Stephenson B.SC(HONS) *Maxicrop Limited*

THE CURRENT PRACTICE of using high amounts of the major plant nutrients – N.P.K. – has left the role of the trace elements, the minor plant nutrients, rather in the background. But it is worth considering the role to which trace elements are put within the plant. They are used in the main within the molecules of enzymes; these can be considered as chemical converters. They assist the countless chemical conversions that go on within the plant and which are designed to convert the basic elements – carbon dioxide, water, N.P.K. – into the many substances which go to make up the finished plant.

Trace elements are also vital in the molecules, hormones, auxins and so on, which are so vital in controlling the rate of growth and development of the plant. Trace elements, if you like, are vital to the health and vigour of the plant and we've no need to tell you what healthy grass looks like. High levels of N.P.K. on the other hand are responsible for promoting healthy growth. Trace element application does increase yield, but not to the extent that applications of N.P.K. do.

Where does this leave the greenkeeper at this time of year? Being interested in the appearance and health of his grass, there should be no need to convince him of the need for trace elements; but what is the best way and time to apply them? There is little doubt that the quickest way to get these vital trace elements into the plant is by foliar feeding; the trace elements in the spray are absorbed through the leaves on which they fall in a very short time, a matter of ten minutes or so. They are also absorbed into the part of the plant where they are required in the greatest concentration, the manufacturing areas, the leaves.

One of the difficulties in concocting a foliar feed containing trace elements is the balance – the proportion relative to each other of trace elements which should be included. Trace elements can compete with each other for uptake by the plant and an excess of one, however slight, can inhibit the uptake of another. Also in too great concentrations they can even become toxic to the plant. This is one of the reasons why seaweed extract is so successful as a foliar feed. The trace elements are there in the proportion required by the plant, because they are in the proportion in which they were in one plant already, that is the seaweed. Maxicrop was the first product to be sold in this country as a foliar feed and it's a lead we hope we've maintained.

As the temperature falls, the metabolic activity of the growth of the grass or any plant decreases to an almost static point. This does not mean that during the winter months grass stops growing and developing, it means that during the colder periods it slows down and speeds up again if the temperature should rise. It is important, therefore, that if you are not going to feed during the winter, you ensure that the grass has everything it requires during these months, so that should the temperature rise sufficiently it can make progress.

Remember we are not only talking about growth, in which sports turf growers are disinterested, but in the ability of the grass to repair damage, to resist and survive periods of stress and strain (such as too much water, too little water and physical damaging) and to keep up an attractive appearance. In these functions metabolic activity, and thus trace elements, are vitally important.

So, if your grass is going to survive the winter and all that the winter brings with it, it must have a full stock of trace elements. The time to apply these as a foliar feed or in any way is in the Autumn when the temperature is still sufficiently high and the metabolic activity of the plant great enough to absorb and utilise the trace elements. If you apply them during the colder months, the chances are that the metabolic activity of the grass will be so low as to absorb and utilise very little of the foliar feed you are applying.

To summarise, trace elements are vitally important as chemical constituents of enzymes, hormones, etc., which in turn are responsible for the metabolic activity that goes on

within the plant: trace elements thus promote the health of the plant, its ability to repair damage, to survive periods of stress and still look attractive. The best way to apply trace elements is as a foliar feed, preferably a seaweed extract, since this is a natural and balanced form of application and an important time to apply is in the Autumn so that a good supply of trace elements remains within the plant until next Spring.

Reseeding Golf Greens in the Autumn

by **R. W. Palin** *Sutton Seeds Ltd.*

We are all aware that it is dangerous to put new wine into old bottles, but it is often a good thing to put new grass into old greens.

Many of our greens, while offering excellent putting surfaces at certain seasons, are far from good at other times of the year. One of the main reasons for this changing pattern is the actual composition of the sward. There is scarcely a green without some *Poa Annua* in the herbage, and this insidious plant is a most prolific seeder, producing many generations in the course of a year, even under very close mowing. It colonises rapidly, to the disadvantage of the desirable *Agrostis* and *Festuca* species.

Being of annual duration and often short-lived, we have a changing pattern of colour and texture as one generation of *Poa* succeeds another. Nature has a habit of putting *new* grass into old swards, but not necessarily of the type we require for golf, and our answer, therefore, lies in oversowing periodically with the proper grass seeds, to produce the ideal turf.

Where the existing turf is really very sparse, it is necessary to scarify severely to remove the old plant debris and create a seed-bed – seldom looked upon with favour by the members, yet essential to the future of the course. The alternative is to give sparse areas a thorough spiker/slitting, or sarel rolling, to perforate the surface, and then sow the seed and literally rub it into the surface. In either case, a top-dressing of compost at about 5-7 lb. per square yard is necessary to cover the seed. September is the ideal month for such work, bearing in mind that the seeds will take a week or so to germinate, and the seedlings will need to be well developed before the onset of winter.

It is, of course, a good idea to mix some suitable seeds with the autumnal or early spring compost, and it is surprising how many plants and colonies of desirable grasses develop as a result, to the benefit of the turf as a whole.

RENOVATION

Even the finest putting surfaces can be improved by overseeding during Autumn renovations with **Mommersteegs** Golf Green mixture, sowing rate $\frac{1}{4}$ oz to the sq yd.

This is a mixture of 'Koket' Chewings Fescue, and 'Tracenta' Browntop, both varieties being internationally accepted in the OECD Certification Scheme. Its fine leaves, say Mommersteeg, have a proven persistence under close cutting conditions, an in-bred disease resistance, and its consistent dark green summer colour are some of the outstanding features in its rising popularity with leading professional Greenkeepers.

Carters recommend an oversow rate of $\frac{1}{2}$ oz per square yard any time from mid August to late October.

Oversowing for renovation should be carried out during showery weather or at any time if the course is equipped with an irrigation system.