



## MANURES AND COMPOSTS

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### The Danger of Artificial Manures

Probably the best manure suitable for the annual dressing of all soils is well-rotted farmyard or stable manure, care being taken that it contains no weed-seeds. A mixture of cow and pig dung may be recommended for most seaside soils. There is no doubt that artificial manures are somewhat heating, except on heavy soils; and on seaside courses, should there be a drying east wind at the time, much harm may be done to the greens. Another drawback to these manures is that their effect is more or less temporary; they do not help to build up a soil, and add no humus to it; on the other hand, they add considerably to the fertility of the soil, provided it has sufficient body to enable the roots to absorb them.

From this it will be seen that as a general rule most soils will need dressings of both natural and artificial manures. The natural manure will be stable or farmyard, well rotted, and a good artificial is Peruvian guano.

Greens should be top-dressed in the autumn or early spring with a compost made up of equal parts stable manure, sand and light soil, preferably of the links. The Peruvian guano, or other artificial manure, should be applied every other year, in the early spring. It should be made

into a compost with two or three times its bulk of sand or soil. These dressings will be found suitable for light and medium soils. For heavy soils equal parts of stable manure and sand will be suitable, and less soil may be used in the compost containing the artificial manure. On most soils the greens should also be dressed during the winter months with sea sand at the rate of about two tons to the green. Sea sand has the effect of "fining" the grass, and is therefore of the greatest value. It should be rubbed well into the surface with the back of a wooden rake or a flat board. Greens on clay soils need extra attention. The surface needs to be made firm and porous, and this should be done by top-dressing it two or three times from September to November in the following manner: Rub charcoal well into the soil, at the rate of 2 cwt. per green. Roll with a light roller, then apply sand at the rate of 2 tons per green, and rub it well in.

Composts made of vegetable ashes or malt culms and sand in equal parts are valuable for dressing greens. Leaf mould and light rich soil is excellent for sandy soils. The leaves should be collected, put into a pit, covered with soil, and left for a year or two, occasionally turning the heap over.

The composts with which the greens are dressed should be used in a very finely-sifted state, and worked into the soil by means of a stiff broom or bush harrow, in order not to interfere with the play of the green.

#### MAKING A COMPOST.

The method of making a compost is as follows: Heap up the sand or soil and manure in alternate layers of a few inches in thickness, and finish off the heap with soil, in order to prevent the loss of ammonia. Composts should be allowed to stand for a year or more. They may be turned over every few months. Liquid manure may be added. If the heap gives off a strong smell, it is a sign that the temperature is too high and ammonia is being lost; in this case the temperature must be reduced by adding water or more liquid manure.

It is advisable that all top-dressings should be washed into the soil as soon as possible, consequently the time

selected should be before or during a spell of wet weather.

As regards the fairway, heavy soils need less manuring than light soils. Artificial fertilizers may be used when the course is growing weeds rather than grass, owing to poverty of the soil from constant mowing and the removing of the cut grass. Here a dressing of sulphate of ammonia and super-phosphate, mixed with sand, at the rate of 2 cwt. or 3 cwt. per acre, may be applied in the early spring. It must be remembered that when a soil is never manured the gradual result will be a predominance of weeds and coarse grasses. Weeds are also encouraged by mowing in the spring with the box off, and by using natural manures containing seed weeds. The question of mowing fairways and greens with the box on or off (i.e., removing or leaving behind the cut grass) will be dealt with later.

