## EARTHWORM CONTROL

## by R. H. Wharton

#### An important distinction

Worm control and wormkilling are not synonymous though in the minds of many people a clear distinction between the two is not drawn. Controlling earthworm activity by wormkilling normally becomes necessary only when worm control through management has not been satisfactory. On new turf areas wormkilling may be an entirely reasonable approach but on established grounds general maintenance of the turf should be so directed as to keep out earthworms thus making wormkilling operations unnecessary.

## Wormkilling — the lesser problem?

In some ways wormkilling is simpler than worm control. It is a reasonably straightforward business for many people with turf areas although the question of possible toxicity to humans and animals has to be taken into account. The two most popular materials are probably Chlordane and lead arsenate but occasionally either material can produce disappointing results. Chlordane has advanced in popularity in recent years, it being quite quick acting and reasonably long lasting while the material is usually quite convenient of application. The price per unit area tends to be lower than that with lead arsenate. Some of the few disappointments with Chlordane have perhaps stemmed from the material adhering to grass foliage and being mown off before being effectively washed into the soil. Chlordane is often applied as a liquid formulation but a dry formulation is also available and this may be particularly useful on some occasions.

Lead arsenate, of course, has been established as a useful material for many years and since it is usually quite long lasting, economics are sometimes in its favour despite its initial high price. Because of its high price and the occasional failure experienced it is advisable to carry out small trials in the first instance and not embark on large expenditure before the results of the trials are known.

There are quite a few other materials used for worm control, e.g., Derris Dust, Mowrah Meal, etc. and, of course, there is the new material, Sevin (carbaryl) which does not seem to persist very long in the soil.

Because of cost, wormkilling operations are frequently restricted to the relatively small areas of greens, approaches and tees, although with the increasing demand for better facilities more and more clubs are finding it possible to treat their fairways when necessary.

# Proper maintenance the first consideration

It is surprising how often maintenance techniques which are quite well known for encouraging earthworms are nevertheless persisted in. Particularly for those clubs who are short of money more attention to this aspect of the problem is well worth while.

Many tees are mown without the box on the mower and spreading the cuttings like this produces decomposing organic matter which encourages earthworm activity. Excessive use of decomposable organic materials of any kind is also liable to encourage earthworms, e.g., organic fertilisers and dried sewage, etc. Dried sewage frequently contains quite a lot of lime and lime applications (though sometimes essential) are known to favour earthworms.

Correct management practice in all its aspects should be aimed at producing a strong, hard-wearing turf and this in itself is often the best protection against a lot of the troubles which afflict us.

### Fairway improvement

In the last few years much more attention has been given to fairways

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## Earthworm Control continued

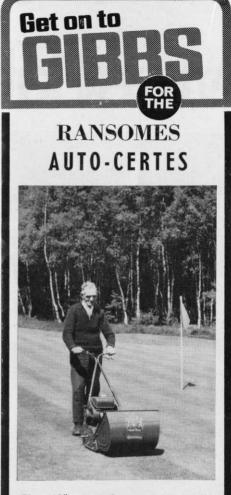
than previously. Many clubs have tended to let fairways carry on without any treatment with fertiliser, lime or anything else but with the advance of time and the demand for better conditions (coupled with increasing wear) clubs have had to face fairway treat. ment more and more. In this country most fairways tend to get more acid in course of time and this, together with poor supplies of plant foods, has resulted in very suitable swards often mainly of bentgrass. However, ultimately the conditions become too poor even for bentgrass and application of lime and/or fertiliser becomes necessarv. Unfortunately these treatments sometimes result in the incidence of earthworms and also disease. Expert advice can usually minimise these risks though not entirely eliminate them.

A treatment which has never been used extensively and has possibly been used even less in recent years is that involving finely ground sulphur. On wet, clay soils with a reasonable lime status treatment with sulphur can dry up fairways quite a lot and have the further effect of reducing weed and worm infestation. Sulphur treatment can cause a great deal of damage if used badly or under the wrong circumstances and before using it extensively smallscale trials are suggested. On these trials finely ground sulphur at rates of  $\frac{1}{2}$ , 1 and 2 oz. per sq. yd. can be spread in the spring and the effects noted over the following 12 months.

The sulphur should be well mixed with a large proportion of slightly damp compost or similar to facilitate spreading and minimise scorch risk (the latter being of a delayed action type, damage occurring on patches receiving excess application possibly several months after treatment).

### MISCELLANEOUS

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