

Control of Casting Worms

by

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The control of casting worms, *Allolobophora Longa* and *Allolobophora Nocturna*, has long been desirable from the greenkeeper's point of view. Trodden down and flattened, worm casts cause considerable damage to grasses and can lead to a course becoming virtually unplayable in the autumn or early spring when casting worms are most active.

Severe worm infestations are usually associated with soils with a high Ph factor so the long term aim for effective worm control must be to reduce the Ph factor on any area where worms are a continuing problem.

In the short term, several effective treatments are available using either traditional materials, such as Mowrah meal or Lead Arsenate, or the more modern insecticide chlordane and carbaryl.

Mowrah meal has proved a useful control agent for many years but its application is laborious and it has no residual effect. Lead Arsenate is certainly persistent and toxic to worms but its application to golf courses or playing fields accessible to the public is extremely hazardous.

Chlordane, an insecticide of the organo-chlorine group, has proved to be an easily applied residual worm killer and, used carefully, provides little danger to human or animal life. Its very persistence in the soil has, however, brought it into disfavour with some authorities.

Carbaryl is an effective, quick acting insecticide which will act much more quickly than chlordane and which has none of the disadvantages of chlordane. It is non toxic to birds or animals and can be safely used on public open spaces. However, it does not usually have such a long lasting effect as chlordane and normally an annual treatment is desirable although the writer has experience of one heavily infested course in North East London that was treated on two successive years in 1966 and 1967 and has not since required any further treatment.

Another characteristic of carbaryl is that due to its fairly rapid breakdown in the soil, it will only kill casting worms and not worms which are active at lower levels and which are wholly beneficial. This 'selective' kill is therefore an advantage, particularly on heavy soils which have a drainage problem.

Both chlordane and carbaryl will control leather jackets and wireworms, cluster flies and those species of mosquito which rest on grass.

Although chlordane and carbaryl have made worm control easier, it is still very necessary to carry out the work under the right conditions. In the autumn or early winter, from September to early December, worms become more active near the surface. Damp humid conditions after the fall of leaf favour worm activity while the ground is still fairly warm. Winter frosts drive worms underground and treatments should not be made in frosty weather.

Spraying machinery used for worm control should be of the high volume type with the capacity to apply 80-100 gallons of mixture per acre.

Inexplicable failures do sometimes occur with both chlordane and carbaryl. It must be admitted that we do not yet fully understand all the factors involved in a worm control treatment but our experience over the last few years has shown that worm control is now much more widely carried out, particularly where there is a heavy demand for good playing surfaces all the year round, and that in the majority of cases carbaryl and chlordane are very effective.

The general rules for successful worm control are:- use the best materials at the right dosage rate, at the right time, when worms are near the surface. Always treat as large an area as possible and try to treat the fairways as well as the greens and tees.

If in doubt about materials or equipment, there are several specialist contractors who will undertake this work on a contract basis and so leave the greenkeeper free to concentrate on his many other tasks.

SOME CURRENT WORM KILLERS

VITAX WORM KILLER AND INSECTICIDE (Contains Chlordane)

Vitax wormkiller has the advantage of killing the worms underground and also killing leather jackets, ants and chafer grubs at the same time. These grubs feed on the grass roots causing withered patches to occur. Damage is more severe if the autumn of the previous year has been wet.

The product is available in liquid or granular form. For the liquid formulation, the grass should be mown just before application and not mown for 3-4 days after application. This first mowing should be made without the box. On compacted areas, or where the sward is thick and matted, spiking prior to application and additional watering is advisable. The recommended rate of use is one gallon in at least 20 gallons of water per 1000 square yards.

M & B WORM KILLER

'M & B' Worm Killer is a wettable powder formulation containing 50 per cent of the active constituent carbaryl. This new product works quickly and effectively and eliminates the need for costly hand-sweeping operations.

One annual treatment, during September and October is usually sufficient, but heavily infested areas may require re-treatment in the following spring. Alternatively, the treatment may be initiated in the spring during March and April.

The worms die underground and results should be visible in four days.

Apply to freshly-mown turf when the ground is moist.

SYDANE 25 LIQUID WORMKILLER

One of the new range of Synchemicals professional user products

Sydane contains 2½ lb Chlordane per gallon. It is an oil emulsion and is diluted with water prior to spraying.

Sydane is applied at a rate of 1 gallon to 1300 sq yds (quart to 325 sq yds) being diluted with between 40/60 gallons of water depending on the type of spraying equipment being used. It is for use only as a turf wormkiller.

It is harmful to livestock and fish. Keep all livestock out of treated areas for at least 14 days and do not contaminate ponds, waterways and ditches.

KYPCHLOR 25E Containing 2.5 lbs Chlordane

Turf treatment with Kypchlor 25E should be carried out in late autumn or early spring for the control of earthworms.

Kypchlor 25E incorporated into the soil prior to laying new turf or sowing seed is a preventative measure which greatly assists in the establishment of a pest free sward.

The dosage for golf greens of 20 yds radius, 1260 sq yds is 10 pints Kypchlor 25E.

FISONS CHLORDANE WORMKILLER 25% w/w Chlordane

Fison wormkiller kills worms underground. The manufacturers recommend you mow.

Apply 3 fl ozs in 2 gallons of water per 20 sq yds; 1 gallon in 20 gallons of water per 1000 sq yds or 5 gallons in 100 gallons of water per acre.