The Use of the Mazide Range of Regulators in Golf Course Management

by D. H. Gooding Technical Director Synchemicals

For many years Synchemicals have marketed a range of products based on Maleic Hydrazide, a compound possessing certain growth inhibitory as well as herbicidal properties and widely used in Amenity Horticulture as a labour saving alternative to many routine maintenance operations.

These materials have many applications in modern golf course management, their main uses being as follows.

(a) To inhibit the growth of grass and thus reduce the frequency of cutting grassland areas where normal mowing is either impractical or undesirable. Steep banks, areas planted up with young trees, verges and areas of rough are all costly in both man hours and expense, requiring to be cut either by hand or with the smaller type mowing machines.

(b) To retard the growth of certain hedge plants such as Privet, Quickthorn and Pyracantha and thereby reduce the amount of trimming normally required.

(c) To reduce the amount of sucker growth on established trees improving the appearance of specimen trees and at the same time avoiding a build-up of low-level vegetation.

(d) A new development whereby Maleic Hydrazide has been found effective in preventing the fruit set on certain ornamental trees. Trials and commercial sprayings during this last season have shown that Horse Chestnuts, Gingko, Catalpa and Ash when sprayed during the flowering season have been successfully defruited. This has resulted especially with horse chestnuts in a great reduction in damage, no conkers being present in the Autumn.

Modern formulations of these growth regulators especially the introduction of weather-proofed or rainfast preparations have made treatments using Maleic Hydrazide far more reliable but it is important that the recommendations for use are carefully followed if the best results are to be obtained.

(1) **As a Grass Growth Regulator**

Spring treatment will inhibit the growth of grasses for up to 12 weeks and often longer after application whilst Autumn treatment will delay the start of growth for up to half this time at the beginning of the following season. Grass at the time of spraying should be up to 4–6 inches high and in an active state of growth, maleic hydrazide takes some 10 days to become fully effective and some further growth after spraying will occur. If treatment has been delayed the grass can be cut first and spraying carried out when the grass has recommenced growth.

High volume is recommended using a minimum of 40/50 gallons of water per acre, spraying carried out using cone type nozzles with the spray boom at a height of 15/18in. above the foliage.

In practice best results are obtained from the spring application (mid March/May) shortly after the grass has commenced to grow, and for areas where two applications per year are recommended a second spray 8/10 weeks later will then keep the grass retarded for the rest of the season.

Maleic Hydrazide although retarding some broad-leaved weed species, e.g. Cow Parsley and Hogweed, has little effect upon most broad-leaved weeds and for their effective control the addition of a selective weedkiller is necessary.

Application should always be made when the grass is in an active state of growth and spraying avoided during periods of drought. Rainfall within 24 hours of spraying will reduce the efficiency of treatment although the use of Mazide 3600 to which a special sticker has been added will greatly reduce the effects of adverse weather conditions. Ideally spraying should be carried out when the grass foliage is dry and the applied chemical able to dry before rain is expected.

Prepared spray although normally applied by tractor-mounted equipment can be applied using a Knapsack Sprayer to treat small areas or plots where tractor access is not possible. Coarse jets should be used and equipment calibrated to spray a minimum of 1 gallon of prepared spray per 100 sq. yds.

When preparing the concentrate for spraying the spray tank should be first half filled with water to which should be added the required amount of concentrate. This should be well mixed and if a selective weedkiller is also being used, this added in the same way. The concentrates added the spray tank should then be filled to the final required level and agitated or stirred thoroughly before spraying is commenced.

RATES OF APPLICATION PER ACRE

Size	Time of Application	Mazide	Mazide 36 or Mazide 3600	Mazide Selective
Areas of rough single application per annum, normally with selective weed killer	Mid March/ May	2 galls. Mazide plus, if required, 5 pts. Syford or 4 pts. Forester	1½ galls. Mazide 36 if required 5 pts. Syford or 4 pts. Forester	2½ galls. Mazide Selective
Tree plantings* Grass verges, bankings, etc. First spray normally with selective weed killer combined	Mid March/ May	10 pts. Mazide plus is required 5 pts. Syford or 4 pts. Forester	1 gall. Mazide 36 plus if required 5 pts. Syford or 4 pts. Forester	2 galls. Mazide Selective
Second spray: Grass regulator only	8/10 weeks after first treatment	10 pts. Mazide	1 gall. Mazide 36	1 gall. Mazide 36 or 8/10 pts. Mazide

* Areas planted with young trees, care should be taken if a selective weedkiller is to be added to the maleic hydrazide.

The recommended dosage rates listed above are per acre but can be scaled down for smaller areas using the fact that 2 gallons (16 pints) concentrate per acre is equivalent to 1 pint to treat 300 sq. yds.

(2) **Application to Retard Hedge Growth**

The dilute spray is prepared using 8 pints Mazide or 6 pints Mazide 36 in 50 gallons of water to treat 1 acre of hedge (calculated as the area of 2 sides and a top hence a hedge 6 ft. high and 3 ft. wide would have an area of 5 sq. yards per yard run). Smaller areas again can be treated using a knapsack sprayer with coarse nozzles using 3 fl. oz. Mazide or 2½ fl. oz. Mazide 36 in 1 gallon of water to treat 100 sq. yds. of hedge. All foliage should be sprayed to the point of run-off. Treatment is best carried out late April/May and treated hedges may be trimmed 10/14 days after spraying if required.

(3) **Application to Prevent Sucker Growth**

Existing sucker growth should be removed and the prepared spray either brushed on or applied as a coarse spray. All the bark should be thoroughly wetted to the point of run-off. Treatment is best carried out from March to May and because of the slow absorption of Maleic Hydrazide the use of Mazide 3600 is recommended. The dilute spray is prepared at the rate of 1½ pints Mazide 3600 to 1 gallon of water, a gallon of the prepared spray being sufficient to treat 80 sq. yds. of bark surface.

(4) **Application to Prevent Fruit Set on Ornamental Trees**

Here tentative recommendations used successfully during this season involved the use of 4 pts. Mazide or 3 pts. Mazide in 20 gallons of water, the prepared spray being applied as an overall mist spray during the flowering period.

The value of growth regulators in Amenity Horticulture is now generally accepted but as with all chemicals their value in practice depends on them being properly applied at the correct rate, and at the correct time of the year and when the weather conditions are suitable.