AGMIN NEWSLETTER No. 427

Control of Hydrilla with Kupramine®

Kupramine[®], a solution of chelated copper in water, is highly effective for the control of "Hydrilla" (Hydrilla verticillata) at a total copper concentration in the range 0.5 - 1.0 mg/L (0.5 - 1.0 ppm). The treated water may be used for domestic purposes, swimming, stock water and irrigation immediately after treatment. However, Kupramine [®] should not be used in soft water where trout are present, due to potential toxicity to fish in low alkalinity waters.

The copper-chelate in Kupramine $^{\circ}$ inhibits photosynthesis and is most active when plants are exposed to sunlight with adequate supplies of carbon dioxide and nutrients in the water body. The copper-chelate is absorbed by aquatic weeds, such as Hydrilla, within 12 hours of exposure. The decaying plant matter is absorbed into the sediments, where the copper is immobilised by clay, humic substances and naturally occurring chelating substances. The hydrilla plants drop below the surface within 3-10 days and full effects can be observed in 3-4 weeks.

Contained water bodies such as water reservoirs, recreation lakes, golf courses, ornamental lakes, irrigation dams and channels may be treated with Kupramine [®].

Application of Kupramine [®] is by boom-spray mounted on tractors or powerboats and by aerial spray.

If Hydrilla infestation is heavy, only a portion of the water body should be treated at intervals of 10 – 14 days to avoid excessive depletion of oxygen by decaying plants, leading to potential fish kills.

The most effective results are obtained by applying Kupramine [®] when Hydrilla growth first appears and when submerged plants are actively growing, at temperatures above 15^oC, preferably early in the day under sunny conditions. Kupramine [®] can also be used in the same manner to control Elodea canadensis (Canadian pondweed), an introduced aquatic weed.

Kupramine $^{\circ}$ should be applied at the rate of 5 – 10 litres per ML or 50 – 100 litres per Hectare-metre (1 hectare surface area to 1 metre depth).



