UPDATE from page 94

less than a kilogram, so all they have to ingest is about the amount of diazinon that is equivalent to the amount of a baby aspirin.

Unlike the insolubles, the solubles can be absorbed through the skin. As a rule, one need not worry about the diluted spray, but must exercise caution in handling the concentrates. Wear protective clothing and a respirator when preparing the diluted mixture in the spray tank.

Let's consider a prominent soluble fungicide which has been around for many years. Despite a startingly high toxicity, you have used it successfully for decades without any fear that it is hazardous.

This product is Actidione TGF—an antibiotic! Antibiotics are safe; haven't we all taken antibiotics prescribed by doctors? Well, this one has a MLD₅₀ of two mg. per kg.! But Upjohn, the manufacturer, did an excellent job of formulating the product to market it in a form that was non-poisonous.

A product must bear a skull and crossbones label if the formulated material has an MLD_{50} . By diluting Actidione with inerts so that you received

a two percent mixture, the formulated product then had an MLD₅₀ of 100.

Upjohn asked the consumer to dilute the product with water at the rate of one oz. per three gallons of water. The diluted spray then had an MLD₅₀ of 37.500.

This example emphasizes the importance of exercising great care and caution working with the formulated concentrate and at the same time demonstrates the minimal danger of handling the diluted spray. Actidione was taken off the market because EPA challenged the risk factor and Nor-Am made the business decision to

drop the product.

I've included a table of the MLD_{50} 's of all the pesticides available to the golf course superintendent. This data was taken from W.T. Thomson's Agricultural Chemicals 1985-86 Revision. Bear in mind that the LD refers to the pure active ingredient, so that if you want the MLD_{50} of the formulated product, you divide by the percentage of active. For example, Caddy is 20 percent cadmium chloride solution. Since cadmium chloride has an MLD_{50} of 88, dividing by 0.2, the MLD_{50} of Caddy becomes 440.

Nothing in my talk should be interpreted as a suggestion that you can ignore safety in using pesticides. Read and follow the label instructions carefully! Read the Material Safety Data Sheet carefully! Follow the manufacturers' recommendations on personal protective equipment required. It is better to be overly safe than sorry. LM

The coming months in LANDSCAPE MANAGEMENT

OCTOBER

A special pull-out report on golf course management will be featured, along with our annual turfseed availability outlook. Also in the spotlight will be utility vehicles.

NOVEMBER

Use large equipment? Look for a special feature on backhoes and front-end loaders. Also, a pull-out section on lawn care, celebrating the annual Professional Lawn Care Association of America's convention and trade show.

DECEMBER

The green industry itself will be in the spotlight with our annual "State of the Industry" report, along with a pull-out report on government landscape management. And this will be a saveable issue with our annual Golf and Turf Calendar.

