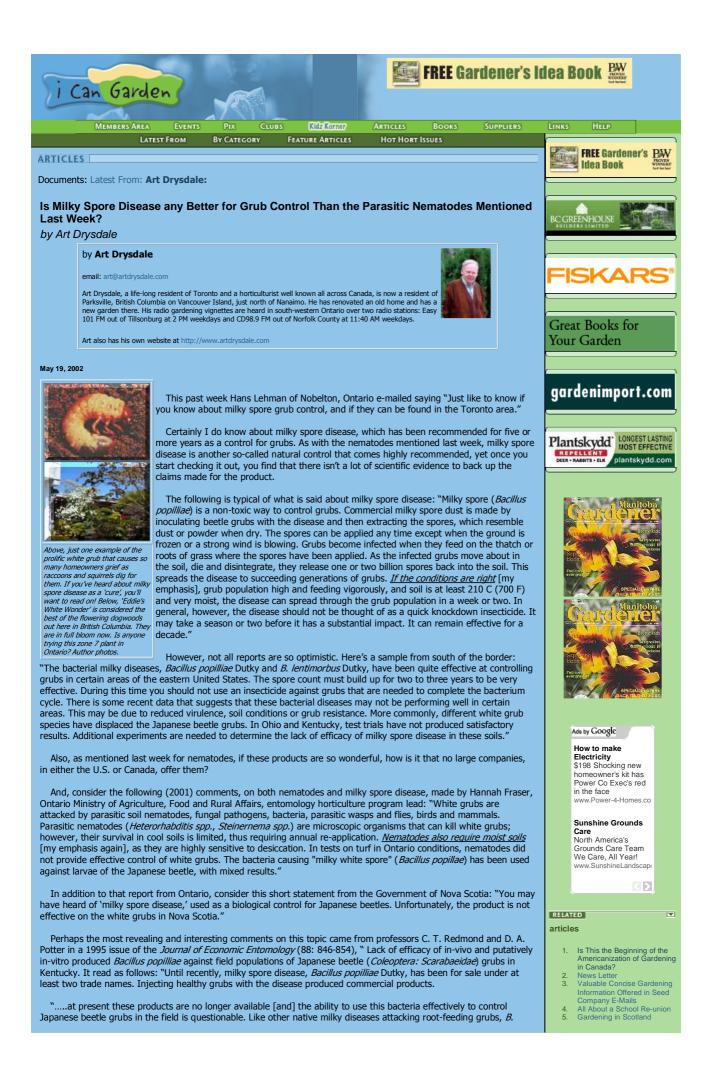
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popilliae infects Japanese beetle grubs when they consume bacterial spores while feeding on roots in the soil. These spores germinate in the gut from where bacteria invade the rest of the grub and kill it over a period of several weeks. At the end of this process, the grub's blood becomes filled with billions of white spores that give the normally clear blood a milky white appearance. Because viable spores persist in the soil, introducing the spores into a population of Japanese beetle grubs can spread the disease and ultimately control the grub problem.

"Although lasting control of high grub populations (>10/ft2) have been reported within one to three years after applications of a commercial preparation, control in the field has been variable. Researchers at the University of Kentucky tested commercial preparations to examine causes of this variability. Laboratory tests using [one commercial product] showed that the formulation was moderately infective with 39-44% of grubs becoming infested. Large-scale field tests conducted in plots with pre-existing Japanese beetle infestations failed to link milky spore disease to lower grub populations during the 3½-year study. Small plots, artificially infested with grubs, and laced with milky spore disease according to manufacturer recommendations also failed to reveal disease symptoms over a 17-month period. Finally, grubs infected with milky spore disease were found to consume the same quantity of roots as uninfected grubs.

"In summary, milky spore preparations were found to be ineffective when used according to label directions in the field. Reports of success by previous researchers were limited to very high infestations of grubs where other stresses may have increased their susceptibility to diseases. The only good news to report is that the commercially produced milky disease spores were able to infect grubs in the laboratory. The challenge that remains is to figure out how to get it to work in the field."

Finally, The use of milky spore disease against the Japanese beetle grub has been the subject of research and debate for decades. Mike Klein, research entomologist with the U.S. Department of Agriculture Research Service at the Ohio Agricultural Research and Development Center in Wooster, Ohio has been looking at it for a quarter century.

"Milky spore disease, first researched in Virginia, provided some amazing results in initial testing after its discovery. Part of the reason for its high activity back then, said Mike Klein, was that it was tested on highly infested plots. Unfortunately, the disease has not been nearly as effective in controlling smaller levels of infestation that still damage turf. In addition, keeping populations of milky spore disease significant and viable has also been a challenge.

"Despite the difficulties, Mike Klein said that work will continue on finding the best fit for milky spore disease as a Japanese beetle grub control product."

So there you have my comments on milky spore disease. In addition to all these negatives, to answer the original question, availability of the product is almost non-existent in Canada. Even the organic websites offer no help! My advice: forget about these products and concentrate on what is known to work such as GrubOut mentioned last week. And by the way, I went a little overboard in recommending watering in after the hose-end application of GrubOut last week. If it's applied to a wet lawn (not difficult this year!) with a ready-to-spray applicator, there is NO further need to water it in.

By Art C. Drysdale, 203 – 211 Moilliet Street, Parksville, B.C. V9P 1N8.

Art Drysdale was a life-long resident of Toronto and a horticulturist well known all across Canada. He is now a temporary resident of Parksville, British Columbia, preparing to build a new home and garden on Vancouver Island, just north of Nanaimo. He is heard Saturdays from 8:05 to 10 AM, with a live radio broadcast on Toronto's powerful and clear, AM740 CHWO Primetime Radio.



