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2-4-D Uppdate

An update of the chemical 2,4-D; as it is given yet another green light in both Canada and the USA!
by Art Drysdale

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Art Drysdale, a life-long resident of Toronto and a horticulturist well known all across Canada, is now a resident of Parksville, British Columbia on Vancouver Island, just north of Nanaimo. He has renovated an old home and has a new garden there. His radio gardening vignettes are heard in south-western Ontario over two radio stations: Easy 101 FM out of Tillsonburg at 2 PM weekdays and CD98.9 FM out of Norfolk County at 11:40 AM weekdays.

Art also has his own website at http://www.artdrysdale.com

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Above, a typical field of dandelions, and below, the effect, in just a few days, of an application of 2,4-D. Author photos.

There was a short, interesting item about Poison Ivy in the November issue of the Toronto Field Naturalist Newslet

As one of the "old-boys" involved with the use of 2,4-D for the past almost 50 years, for decades I've heard all the ar-guments from activists' and big brother politicians.

I was a good friend of Dr. R. Milton Carleton of Chicago, the Vaughan Seed Company's research director from the late 20s until his retirement in 1967. In the early 40s, he was the co-developer of 2,4-D. It was being formulated for wartime use, and he was brought in to work on the "aesthetic" domestic uses.

Here's how it happened, as he wrote to me in a personal letter in December, 1979: "I probably know more about the history and use of this chemical than anyone alive. Dr. Franklin D. Jones, who discovered its phytochemical properties and patented its use as a control for unwanted plants, walked into my office right after WWII.

"He said he had a marvelous weed killer for driveways! My answer was 'Frank, we have plenty of chemicals that will do that--even old crank case oil will do the job. What we need is a better control for crabgrass!'

"'Unfortunately,' he replied, 'it doesn't do too good a job on grasses; in fact they don't die unless you use so much that I suspect it's the carrier that kills, not the 2,4-D.'

"This set me to thinking--if it doesn't kill crabgrass, maybe it won't kill bluegrass, which proved to be true when I ran tests. That was the birth of modern selective weed killers."

'Milt' as he was affectionately known, usually carried a flask around with him that contained 2,4-D from which he would drink on request "just to prove it was harmless." Anyone who knew the distinctive smell of 2,4-D knew that he was actually drinking the real stuff. It didn't seem to harm him too much--he lived to the age of 87, and almost up to the end, drove annually to his summer home off the US east coast (he moved to Sarasota, Florida in 1980).

For well over two decades so-called environmentalists have been trying to get the herbicide 2,4-D banned because they say it causes cancer. And in that same time, the Pest Management Review Agency in Canada and the Environmental Protection Agency in the U.S. have been conducting tests, and examining scientific data and have yet to find anything that would lead to even the thought that 2,4-D might be a cancer carcinogen!

The US EPA recently announced: "The Agency has twice recently reviewed epidemiological studies linking cancer to 2,4-D. In the first review, completed January 14, 2004, EPA concluded there is no additional evidence that would implicate 2,4-D as a cause of cancer (EPA, 2004). The second review of available epidemiological studies occurred in response to comments received during the Phase 3 Public Comment Period for the 2,4-D Re-registration Eligibility Decision. EPA's report, dated December 8, 2004 and authored by EPA Scientist Jerry Blondell, Ph.D., found that none of the more recent epidemiological studies definitively linked human cancer cases to 2,4-D."

The EPA's announcement included this statement: "After examining the combined risk from exposure through food, drinking water and residential uses, with certain assumptions, the EPA concluded that 2,4-D would "not exceed" the Agency's level of concern. In addition, the EPA concluded that acute and short-term margins of exposure for homeowner applications of 2,4-D to lawns were "not of concern" when users follow product instructions."

In Canada, our Pest Management Review Agency has issued similar approvals for 2,4-D. In response to those individuals and organizations who still question the chemical and campaign for it to be banned, here is a small part of the PMRA's report following their re-examination of 2,4-D: "When re-evaluating a pesticide, the PMRA has access to the available scientific information on the product, including laboratory, epidemiology and toxicology studies, scientific reports and more. This allows the PMRA to conduct thorough scientific assessments to determine if a product is acceptable for use or not when used according to label directions. The PMRA also examines the product's uses, the amounts used and the label instructions for each product.

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"For 2,4-D, the PMRA carefully considered the epidemiology literature, some of which suggested weak associations, while others suggested no link between adverse health effects and the use of 2,4-D. In addition, the Agency reviewed the extensive database of toxicology information that specifically looked for the potential to cause adverse effects such as cancer.

"The PMRA concluded that 2,4-D does not cause cancer and it is acceptable for use by homeowners who choose to use it on their lawns when they follow the directions on the label.

"No other international regulatory body considers 2,4-D to cause adverse health effects such as cancer, birth defects or endocrine disruption. Based on all available and relevant data, the Agency agrees with this position."

And, is it not interesting that in citing various studies that ostensibly point to various negative responses and side affects of 2,4-D, various groups in opposition seem not to listen to any of the well-researched findings of unbiased scientists such as Bruce Ames of the University of California.

I have followed Bruce Ames' work for a couple of decades. He actually developed the test for carcinogenicity--reporting it in 1975. Then in 1987, Bruce and two colleagues at Berkeley published a systematic ranking of the relative dangers of carcinogens to which people are commonly exposed. Suddenly some environmental controversies looked a little silly.

"It is important," Bruce Ames wrote in 1989, "not to divert society's attention from the few really serious hazards, such as tobacco or saturated fat (for heart disease), by the pursuit of hundreds of minor or non-existent hazards." For Bruce Ames, it no longer made sense to fret about one molecule of a carcinogen. Although he acknowledges that some synthetic substances are dangerous, he now believes that man-made pollutants are generally insignificant risks to the pub-lic. He bases this not merely on his own results, but on statistics showing that the proliferation of synthetic chemicals in the past 30 to 40 years has not markedly increased the overall U.S. cancer rate.

One of Bruce's more recent statements that I noted had to do with the fact that an average American citizen digests more natural chemicals in a week of a diet of veggies than in a lifetime of exposure to pesticides.