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The Hon. Tony Clement
Minister of Health
Government of Canada
House of Commons
Ottawa, Ontario K1A 0A6

Fax: (613) 992-5092

Dear Minister Clement:

I am writing in response to recent news reports that the Government of Canada intends to raise maximum residue limits (MRLs) for pesticides on fruits and vegetables in order to "harmonize" with weaker U.S. standards. On behalf of the David Suzuki Foundation, I urge you to abandon this misguided initiative.

Establishing the legal benchmarks for monitoring contamination by pesticides and other toxic substances is a key element in ensuring that Canadians are eating healthy food. Even exposure to very small amounts of some of these chemicals may be harmful.

It is our understanding that the proposal to raise the MRLs is related to priorities of the Security and Prosperity Partnership (SPP). The 2006 SPP report identified the need to "resolve differences in pesticide maximum residue limits that may be barriers to trade." The Canadian public is clearly concerned about health issues and the safety of food, so it is deeply concerning that controls on pesticide residues would be treated primarily as a trade technicality. As the Minister of Health, we believe it is your responsibility to ensure that the SPP will not be used to justify weakening Canadian standards.

In a study published last fall by the David Suzuki Foundation, *The Food We Eat: An International Comparison of Pesticide Regulations*, we compared the MRLs of Canada, the U.S., the European Union, Australia and the World Health Organization for 40 pesticide/food combinations. In our analysis we found that the U.S. had the weakest rules for more than half of the pesticide uses studied.



What's more, we found that Canadian MRLs are already weaker in many cases than parallel standards in the European Union and Australia. In some cases, Canadian standards do not even meet the minimum guidelines recommended by Codex Alimentarius.

Based on these findings, the David Suzuki Foundation continues to recommend that Canada review its MRLs and look to strengthening them to ensure that they are at least as protective as the strongest standards in place in other OECD countries. The recently reported SPP initiative is a step in the wrong direction.

Harmonization to the lowest common denominator is not in the best interests of Canadians. The David Suzuki Foundation asks you to assure Canadians that maximum residue limits for pesticides will not be weakened.

We would be happy to discuss our concerns with you or a member of your staff. Please do not hesitate to contact our Foundation's environmental health policy analyst, Lisa Gue, at 613-594-5428. Thank you for your attention to this important matter.

Sincerely,



Ann Rowan
Director, Sustainability Program

Cc: The Right Honourable Stephen Harper, Prime Minister (613) 941-6900
The Hon. David Emerson, Minister of International Trade (613) 943-0219
Ms. Bonnie Brown, Health Critic (613) 992-0520
Ms. Penny Priddy, Health Critic (613) 992-0252
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OCTOBER 2006

the food we eat

AN INTERNATIONAL COMPARISON
OF PESTICIDE REGULATIONS



A REPORT PREPARED FOR THE DAVID SUZUKI FOUNDATION
HEALTHY ENVIRONMENT, HEALTHY CANADIANS SERIES

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Maximum Residue Limits for Pesticides on Food

An essential element of ensuring food safety in a world dependent on industrial agriculture is monitoring food products to ensure that they are not unduly contaminated by pesticides and other toxic substances used in the growing, handling, preservation, transportation, and distribution processes. Health and/or environmental agencies in all industrialized nations have legislated responsibilities for establishing Maximum Residue Limits (MRLs) and ensuring that both domestic and imported food products comply with these rules. Although there is an international program established by the World Health Organization and the Food and Agriculture Organization that sets recommended MRLs, called the *Codex* program, nations retain the sovereign right to determine their own MRLs, resulting in widely divergent levels of health protection.⁵⁵

This study examines legally binding, enforceable MRLs in Canada, the U.S., the E.U., and Australia. The non-binding recommendations provided by *Codex* are also incorporated into the analysis. Different MRLs are established not only for hundreds of different pesticides, but for hundreds of different food products potentially contaminated by a specific pesticide, so there are literally thousands of MRLs in each nation. For example, for a specific pesticide such as azinphos methyl, there are different MRLs for grapes, apples, broccoli, cucumber, kiwi fruit, and peppers. This study compares MRLs for a small subset of the overall number of pesticide-food combinations. Many of the MRLs selected for this study involve pesticides that are still registered in Canada but have been prohibited in at least one OECD nation because of health and environmental concerns.

Maximum residue limits are set using toxicology data and human exposure assessments. Limits are recorded in parts per million and establish levels that theoretically prevent harm to human health. Unfortunately, this theory no longer holds water. In fact, for some substances, such as carcinogens (i.e. cancer causing chemicals), there is no safe threshold. For other substances, such as chemicals that disrupt the endocrine or hormonal system, seemingly tiny concentrations can produce adverse health effects. The pesticide atrazine, widely found in Canadian drinking water supplies, causes sexual deformities and reproductive

problems in frogs at concentrations measured in just a few parts per billion – concentrations that have been found in drinking water in Canada.⁵⁶ In other words, even exposure to an extremely small amount of some chemicals may have negative health effects. A recent report noted “hundreds of studies in the peer-reviewed literature show that adverse health effects from low dose exposures are occurring in the population, caused by unavoidable contamination with PCBs, DDT, dioxin, mercury, lead, toxic air pollutants and other chemicals.”⁵⁷ The old saying that “the dose makes the poison” must now be modified by recognition that other factors, including the timing of the exposure, combinations with other chemical exposures, and the genetic vulnerability of some individuals, also determine toxicity.

TABLE 2
International Comparison of Maximum Residue Limits for Pesticides
on Food Products⁵⁸

PESTICIDE	CODEX	E.U.	AUSTRALIA	U.S.	CANADA
Aldicarb					
Potatoes	0.5	0.5	-	1	0.5
Azinphos-methyl					
Grapes	1	-	2	4	5
Bromoxynil					
Eggs, milk	-	-	0.02	0.05	0.1
Meat	-	-	0.02	0.5	0.1
Captan					
Fruit	3-25	2-3	10-15	25-50	5
Carbaryl					
Fruit/vegetables	1-15	1-3	5-10	5-12	10
Carbofuran					
Strawberries	-	0.1	-	0.5	0.4
Chlorothalonil					
Celery	10	5	10	15	15
Chlorpyrifos					
Citrus fruit	1	0.2-0.3	0.5	1	1
Diazinon					
Apples	-	0.3	0.5	0.5	0.75
Apricots, strawberries	0.1	0.02	0.5	0.5	0.75
Dichlorvos					
Tomatoes	-	0.1	0.5	0.05	0.25
Dicofol					
Cucumber	0.5	0.02	5	-	3
Strawberries	1	0.02	1	-	3
Diquat					
Lentils	0.2	0.05	1	0.02	0.2
Diuron					
Asparagus	-	-	2	7	7
Endosulfan					
Fruit/vegetables	0.1-2	0.05-0.3	0.2-2	0.2-2	1-2

PESTICIDE	CODEX	E.U.	AUSTRALIA	U.S.	CANADA
Glyphosate					
Soybeans	20	20	10	20	20
Heptachlor					
Dairy products	0.006	0.004	0.15	0.05	0.1
Iprodione					
Lettuce	10	10	5	25	15
Lindane					
Pineapple	-	0.01	0.5	1	3
Malathion					
Apricots	-	0.5	2	8	8
Blueberries	10	0.5	0.5	8	8
Pineapple	-	0.5	2	8	8
Maleic hydrazide					
Onion	15	10	15	15	15
Methamidophos					
Broccoli	-	0.5	1	1	1
Methoxychlor					
Fruit/vegetables	-	0.01	-	-	14
Metolachlor					
Dry beans	-	-	0.05	0.2	0.3
Metribuzin					
Potatoes	-	-	0.05	0.6	0.5
Paraquat					
Fruit	0.05	0.05	0.05	0.05	1
Vegetables	0.05	0.05	0.05	0.05	0.7
Permethrin					
Leaf lettuce, spinach	2	0.05	5	20	20
Propiconazole					
Apricots, peaches, plums	1	0.05-0.2	2	1	1
Thiabendazole					
Apples, citrus, pears	10	5	10	10	10
Thiram					
Apples, peaches, tomatoes	2	3	3	7	7
Trifluralin					
Carrots	-	-	0.5	1	0.5
Vinclozolin					
Apricots	-	2	-	25	5
Cherries	5	0.5	-	25	3
Tomatoes	3	0.05	-	-	3
Ziram					
Fruit and vegetables	0.1-20	-	3	7	7

NOTE: All MRLs are measured in parts per million. A dash (-) indicates that no specific MRL has been established for that particular pesticide-food combination.

Comparative Analysis of Maximum Residue Limits

This international assessment compares MRLs for 40 pesticide/food combinations (see Table 2). The European Union clearly has the strongest standards (i.e. the lowest MRL) for the majority of the pesticide/food combinations examined.⁵⁹ For 29 of the pesticide/food combinations in this study, the European Union had the lowest (i.e. strictest) MRL, in many cases by a substantial margin. Australia has the second strongest record, with the lowest MRL for 11 of the pesticide/food combinations. At the other end of the spectrum, Canada has the weakest standards of any of the jurisdictions examined in this study, with the highest (i.e. least protective of health) MRL for 24 of the pesticide/food combinations in the study. Similarly, the U.S. has the weakest MRL for 21 of the pesticide/food combinations examined.

In a head-to-head comparison with the E.U., Canada has a weaker MRL in 30 cases, a stronger MRL in zero cases, and the same MRL in two cases. In some cases the difference appears to be relatively modest, with the Canadian MRL being two to three times higher than the European MRL. However, even modest differences may be cause for concern when the pesticides involved are known or suspected carcinogens and/or endocrine disruptors. In other cases, the difference between the Canadian and European MRLs is enormous. For diazinon on apricots and strawberries, the Canadian limit is 38 times higher than the European limit. For lindane on pineapples, the Canadian limit is 300 times higher than the European limit. For permethrin on leaf lettuce and spinach, the Canadian limit is 400 times higher than the European limit. For methoxychlor on fruit and vegetables, the Canadian limit is 1,400 times higher than the European limit.

Canada also has significantly weaker protection for pesticide residues in food products than Australia. In a head-to-head comparison, Canada has a weaker MRL in 21 cases, a stronger MRL in only five cases, and the same MRL in four cases. The Canadian MRLs range from two to 20 times higher than the Australian MRLs. For example, the Canadian limit for paraquat on fruit is 20 times higher than the Australian limit.

Canada's MRLs for pesticide residues are closest to the MRLs of the United States, although there are still many significant differences between the standards set by the two countries. In a head-to-head comparison, Canada has the same MRL in 14 cases, a weaker MRL in nine cases, and a stronger MRL in nine cases.

Even compared to the recommendations of the international *Codex*, Canada fares poorly. The Canadian MRLs are weaker than the *Codex* recommendation in 11 cases, stronger than the *Codex* recommendation in only two cases, and the same as the *Codex* recommendation in eight cases.

Another significant concern is that Canada does not have specific MRLs for a number of pesticides despite the existence of MRLs for these pesticides in other nations. Instead, Canada uses a general MRL of 0.1 parts per million (ppm) for pesticides not specifically listed. The list of pesticide/food combinations that lack specific MRLs in Canada includes many pesticides that are used in Canadian agriculture.

PESTICIDES WITH MRLS SET BY OTHER INDUSTRIALIZED NATIONS BUT NOT CANADA

atrazine
bendiocarb
deltamethrin
dichlobenil
dichlorprop
ethylene dichloride
ethylene oxide
ferbam
hexachlorobenzene
hexazinone
linuron
mecoprop
metiram
monolinuron
oxamyl
paclobutrazol
propanil
propoxur
quintozene
simazine
terbacil
terbufos
triadimenol
triallate

Many pesticides on this list continue to be registered for use in Canada but have been banned in other industrialized nations.