

## A change in chemistry . . . or in philosophy?

It has become motherhood and maple syrup for ministers of agriculture to state, when questioned on the subject of agricultural chemicals and the environment, that they are aiming for a 50% reduction in the use of herbicides by the end of the decade. The statement sounds very 'green' coming from a politician. The truth of the matter is that much of that objective is well on the way to being met because the new generation of herbicides is being applied at rates of grams per acre and not litres.

What that simple change in chemistry disguises is the fact that most farmers continue to rely in large part on herbicides for weed control and are still paying out hard cash to do it. While the reduction in the quantities of herbicide applied may appear to be an environmental blessing, the real question is will it have a major impact on reducing the social and environmental costs of pesticides (estimated to approach 1 billion dollars annually in the U.S.).

Environmental factor	Total cost (in 000 000 \$)
Human pesticide	250
Animal pesticide poisonings and contaminated livestock products	15
Reduced natural enemies	150
Pesticide resistance	150
Honey bee poisoning and reduced pollination	150
Losses of crops and trees	75
Fishery and wildlife losses	15
Government pesticide pollution regulations	150
Total	955

At the top of the list is the cost of human pesticide poisonings. In the U.S. it is estimated that about 45,000 accidental poisonings and an estimated 20,000 pesticide induced cancers occur each year. Will a simple change in the chemistry of herbicides reduce major social and environmental costs such as pesticide poisonings, pesticide resistance, effects on beneficial insects and the high cost of pesticide pollution regulation? Surely the concept of preventative) medicine needs to find its home in the area of weed control instead of continuing the reliance on "new drugs". Developing a new approach to understanding and managing weeds is a good place to start to get off the technology treadmill.

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